



OSISKO
DEVELOPMENT

CARIBOO GOLD PROJECT

Health and Medical Services Management Plan

August 2025



Cariboo Gold Project

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EXECUTIVE SUMMARY

The Cariboo Gold Project (the Project) was granted an Environmental Assessment Certificate (EAC) #M23-01 on October 10, 2023, by the British Columbia (BC) Environmental Assessment Office (EAO). The Project is an underground gold mine with a maximum production capacity of 1,793,400 tonnes of mineralized material (ore) per year, and an estimated operational mine life of 12 years. The Project is located in the Cariboo Regional District (CRD), and within the District of Wells.

Condition #17 of the EAC requires the development of a Health and Medical Services Management Plan (HMSMP) for the development and delivery of health and medical services to Barkerville Gold Mines Ltd. (BGM) employees, residing locally and in camp, and their families, if staying locally temporarily while the employee is on shift. The development of the plan supports BGMBGM's commitment to minimize impacts to local non-urgent care services, and to meet the Project's workforce's urgent and non-urgent health care needs.

ABBREVIATIONS

Terminology used in this document has been defined where it is first used, while the following list has been presented to assist readers that choose to review only portions of the document.

Abbreviation	Description
AED	Automated external defibrillator
BC	British Columbia
BCCDC	British Columbia Centre for Disease Control
BGM	Barkerville Gold Mines Ltd.
CDCL	Communicable Disease Control Lead
CDMP	Communicable Disease Management Plan
CDMT	Communicable Disease Management Team
CRD	Cariboo Regional District
EAC	Environmental Assessment Certificate
EAO	BC Environmental Assessment Office
EAP	Employee Assistance Program
ETV	Emergency Transport Vehicle
FFGRD	Fraser-Fort George Regional District
FNHA	First Nations Health Authority
HMSMP	Health and Medical Services Management Plan
kV	kilovolt
LPN	Licensed Practical Nurse
m	metres
MBBR	Moving bed bioreactor
mm	millimetres
MSC	Mine Site Complex
MW	Megawatt
NHA	Northern Health Authority
NNPBC	Nurses and Nurse Practitioners of BC
NP	Nurse Practitioner
OFA	Occupational First Aid
PCP	Primary Care Paramedic
POC	Point of Care
PPE	Personal Protective Equipment

Abbreviation	Description
Project	Cariboo Gold Project
QR Mill	Quesnel River Mill
RN	Registered Nurse
SSERP	Site Specific Emergency Response Plan
STI	Sexually Transmitted Infection
SWI	Sustainable Workforce Initiative
TE	Transportation Endorsement
TNG	T̓silhqot'in National Government
UHNBP	University Hospital of Northern British Columbia
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
WTP	Water Treatment Plant

DEFINITIONS

“Family” – refers to an employee’s nuclear family, or those living within the same household united by ties of partnership and/or parenthood, who share resources and responsibilities of a shared address. A family may be a married couple and the children, if any, of either and/or both spouses; a couple living common law and the children, if any, of either and/or both partners; or a parent of any marital status in a one-parent family with at least one child living in the same dwelling and that child or those children. Children may be biological or adopted children, must be under the age of 25¹, live in the dwelling with the employee, and must not have their own married spouse or common-law partner. Grandchildren living with their grandparent(s) but with no parents present also constitute a family.

¹ Dependent children aged 21-24 must be full-time students to be covered by the services detailed in this plan.

1. INTRODUCTION

1.1 Purpose

This Health and Medical Services Management Plan (HMSMP; the Plan) outlines the plan for the development and provision of health and medical services to Barkerville Gold Mines Ltd. (BGM) employees and contract employees (both residing locally, and in BGM worker accommodations, including camps), and their families, if staying locally temporarily while the worker is on shift at the Cariboo Gold Project (the Project).

While BGM recognizes its responsibility to adhere to legislative WorkSafeBC requirements, it also acknowledges the need to move beyond these minimums given the semi-remote location of the Project, outcomes of engagement with various stakeholder groups and governmental agencies, and the limited health care services and resources available in proximity to the Project. These unique circumstances influence BGM's responsibility to develop a comprehensive HMSMP for the Project.

This Plan also meets condition requirements of Environmental Assessment Certificate (EAC) #M23-01, issued to BGM on October 10th, 2023. Condition 17 of Schedule B - Table of Conditions specifically stipulates the requirements of this plan as they pertain to the health and wellness of the Project workforce, linkages to Northern Health Authority (NHA) best practices, recommendations, and guidance documents, and ways in which the HMSMP will mitigate impacts to local non-urgent care services. BGM is a wholly-owned subsidiary of Osisko Development Corp.

The Project HMSMP also describes the measures that will coordinate and communicate health and medical service delivery by BGM on-site at the Project, with NHA, BC Ambulance Service, and the Participating Indigenous nations for the Project.

The provision of health and medical services, the assurance of safety while working, and overall workforce well-being are objectives BGM takes seriously, and which will require ongoing adaptation over time, across Project phases, and within this Plan to be achieved. This document and the services it details will adapt as needed to meet the health, medical, safety and well-being needs of the Project's workforce, and to ensure compliance with various WorkSafeBC regulations, the *Health, Safety and Reclamation Code for Mines in BC* (April 2024), and other relevant statutes and legislation. The contents of this plan, including mechanisms of communication, approaches to health and wellness, and roles and responsibilities will be part of an adaptive process designed to ensure the health and wellbeing of employees while on shift, and their families if residing locally temporarily while the employee is on shift, and to prevent any significant impacts to the provision of health and medical services by the NHA.

1.2 Qualifications

Jen Gebert, BA developed and authored this Plan, incorporating recommendations and guidance from a Registered Nurse (RN) based in Quesnel, with extensive experience providing health care in rural and remote settings, including to Nazko First Nation. Jen's work in the socio-economic, community well-being, mining, First Nations engagement, and environmental assessment spheres has provided her with the knowledge and awareness to write an effective HMSMP for the Project. Combined with the rural and remote healthcare recommendations from the RN contracted to support the development of this plan, this Plan is a key component of preventing unnecessary impacts to NHA services and infrastructure.

During operationalization of this Plan for the life of the Project, a contracted health and medical services provider, and associated physician will be utilized to execute the Plan, and adjust and adapt it as necessary to ensure functionality and efficacy.

1.3 Project Summary

The Project is an underground gold mine with a production capacity of 1,793,400 tonnes per year of mineralized material (ore) located in the District of Wells (Mine Site Complex; MSC), with part of the Project in the Cariboo Regional District (CRD), BC. The Project is located on the site of extensive historical mining and is comprised of several existing and to-be-built components.

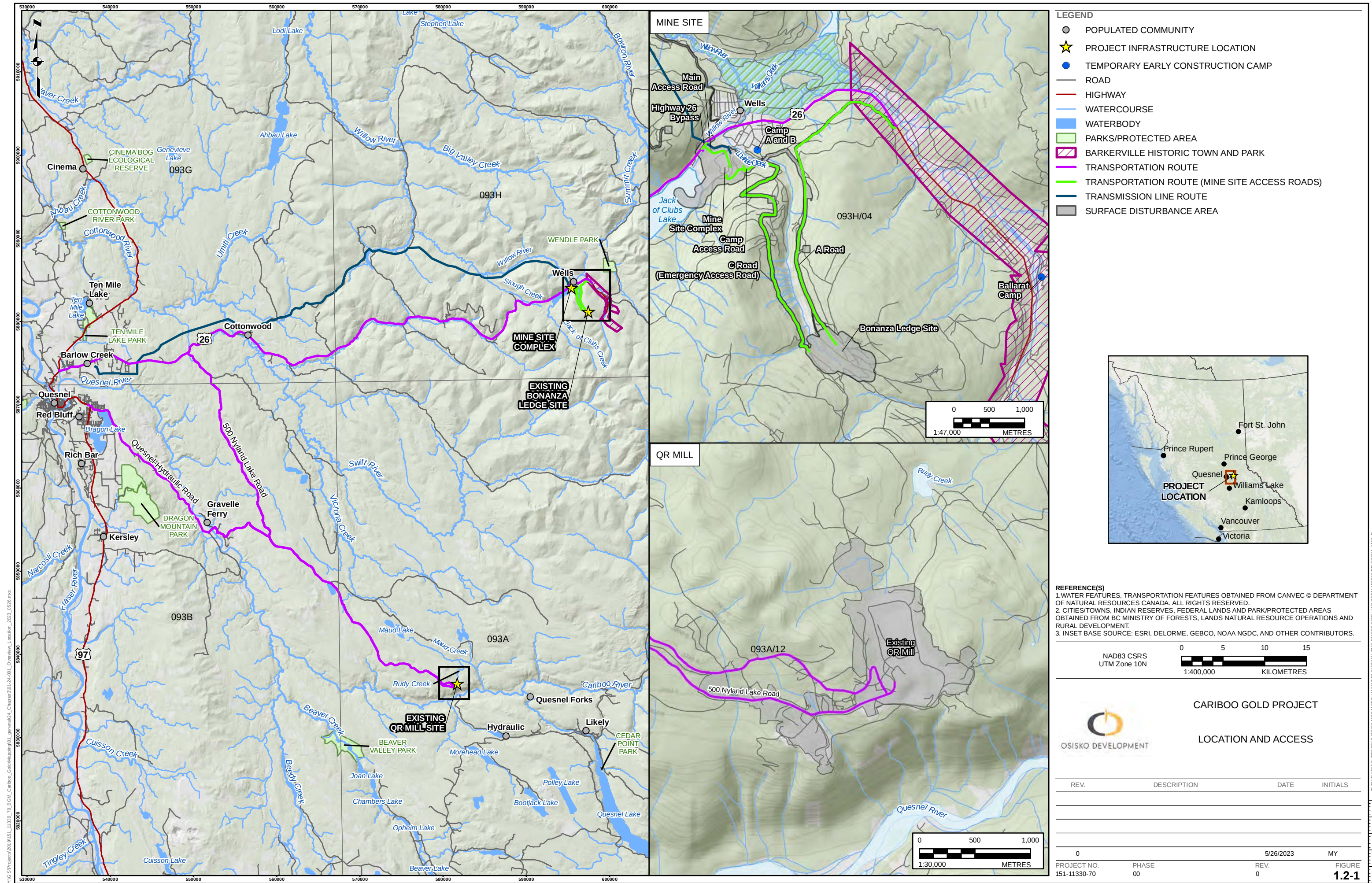
The District of Wells, the closest settlement to the Project, had a population of 218 individuals in 2021 (Statistics Canada 2022). The Bonanza Ledge site is located 4 km southeast of the Mine Site Complex (MSC) which is in the District of Wells, and the QR Mill site is 115 km driving distance from the MSC. The existing Ballarat Camp, which will be used to house workers during the Construction phase of the Project is located approximately 6 km from the MSC and is accessed along Bowron Lake Road from Wells. Existing and expanded access roads will be used to access Project sites, including portions of Highway 26 and the 500 Nyland Lake Forest Service Road.

Figure 1.3-1 below depicts the Project location, and key components.

Coordinates of key Project components are shown in Table 1.3-1 below.

Table 1.3-1 **Coordinates of Main Project Sites**

Project Site	UTM Coordinates (NAD 83)		
	Zone	Northing (m)	Easting (m)
Mine Site Complex	10	5884075	595581
Bonanza Ledge Site	10	5881371	596942
Cow Portal	10	5883605	596648
QR Mill	10	5836802	581716



1.3.1 Osisko Development Corp.

BGM is a mining company focused on the development of over 2,000 square km (km²) of mineral tenures in the Cariboo Mining District in BC, Canada. BGM is a Canadian company based in Wells, BC. BGM, now wholly owned by ODV, has been active in the Cariboo Mining District of BC since 1994 and has assembled a large package of land covering many historic gold mining properties that occur along the Cariboo Gold Belt near Wells.

BGM Site Office:

3700 Ski Hill Road
Wells, British Columbia, V0K 2R0
E-mail: feedback@osiskodev.com

ODV Corporate Office (Headquarters):

1100 Avenue des Canadiens-de-Montréal | Bureau 300
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1.3.1.1 BGM Representative Contact Information

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General Manager
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Permitting and Stakeholder Engagement Manager
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1.4 Scope

BGM is going to utilize on-site camp facilities as a component of worker accommodation for the Project and will use this Plan to support and direct approaches to the health, well-being, and medical needs of its workforce, protect worker safety, and mitigate impacts to existing local health infrastructure and services provided by the NHA.

This Plan has been developed to outline the delivery and development of health and medical services to individuals carrying out work on the Project. This includes BGM employees residing locally, in BGM-owned accommodation, and in camp, as well as their families, if they are residing

locally temporarily while the employee is residing in worker accommodation or employed on the Project.

The Project falls within the asserted traditional territory of the Lhtako Dené Nation, Xatsúll First Nation, and Williams Lake First Nation, all Participating Indigenous nations as part of the Environmental Assessment (EA) process, and BGM has been engaging with them since 2016. Indigenous nation perspectives on health and wellness have been considered throughout the development of this plan and related to the provision of health and medical services for the Project.

1.4.1 Environmental Assessment Certificate Conditions

EAC #M23-01, issued to BGM October 10, 2023, includes both the Certified Project Description detailing Project components and activities, and the Table of Conditions stipulating specific requirements. Condition 17 of the Table of Conditions for the Project pertains specifically to the development of a HMSMP for the development and delivery of health and medical services for the Project. In addition to specifics applicable to the HMSMP in Condition 17, elements from Conditions one to eight of the EAC also pertain to the HMSMP.

1.4.2 Northern Health Guidance

Condition 17.1 of EAC #M23-01 requires the incorporation of NHA guidance from the following documents:

- Health and Medical Services Plan Best Management Guide for Industrial Camps (NHA 2015);
- Communicable Disease Management Guide: Best Practices for Industrial Work Settings (NHA 2023); and
- Health and Safety During the Opioid Overdose Emergency: Northern Health's Recommendations for Industrial Camps (NHA 2018).

In addition to incorporation of guidance from the above documents, this HMSMP considers the unique situation, services, and context of the NHA service area presented in *Understanding Northern Health - The Northern Way of Caring* (NHA 2023) and *Understanding the State of Industrial Camps in Northern BC: A Background Paper* (NHA 2012). The Northern Health Authority and Health Emergency Management BC document, *Emergency Response Roles and Responsibilities* was also used in the development of this plan, and to capture appropriate contact information presented in Section 1.5.4.

1.4.2.1 Health and Medical Services Plan Best Management Guide for Industrial Camps

The NHA Health and Medical Services Plan Best Management Guide for Industrial Camps (the HMS Guide) guided the structure and contents of this HMSMP, as applicable, for the Project. Following recommendations and instruction from the HMS Guide, this HMSMP contains:

- **Project Information** (from Section 1 of the HMS Guide; see Sections 1.2, 1.3, and 1.4 of this HMSMP);
- Details on planned **Infrastructure** (from Section 2 of the HMS Guide) related to accommodations (see Section 2.1 of this HMSMP), sanitary facilities (see Section 2.2 of this HMSMP), laundry services (see Section 2.3 of this HMSMP), drinking water systems (see Section 2.4 of this HMSMP), food services (see Section 2.5 of this HMSMP), waste disposal (see Section 2.6 of this HMSMP) and other facilities the support positive health outcomes (see Section 2.7 of this HMSMP).
- **On-Site Programs and Services** (from Section 3 of the HMS Guide) including details of planned non-urgent care demands (see Sections 2.8.3, 2.8.4, 2.8.7, and 2.8.10), mental health and addictions (see Sections 2.8.4, 2.8.9, and 2.10), sexual health (see Section 2.8.6), diagnostics (see Section 2.8.7), bridging with providers in home communities and NH services (see Sections 2.8.10 and 2.8.11) privacy and confidentiality (see Section 2.8.12) management and alignment of company policies' requirements (see Section 2.8.13), disease and infection prevention and outbreak protocols (see Section 2.9 and Appendix B [BGM's Communicable Disease Policy and Procedure]), health promotion, disease prevention and on-site wellness programs (see Sections 2.9 and 2.10).
- **Collaboration, Communication and Problem-Solving** (from Section 4 of the HMS Guide) covering identification of communication pathways (see Section 3.1), patient flow information, trauma care and emergency response (see Section 3.2), hiring considerations (see Section 3.3), and quality improvement (see Section 3.4).

1.4.2.2 Communicable Disease Management Guide: Best Practices for Industrial Work Settings

The Communicable Disease Management Guide: Best Practices for Industrial Work Settings (the CDM Guide) was used for the development of Section 2.9 Disease and Infection Prevention and Outbreak Protocols, as well as the development of the Communicable Disease Policy and Procedure (Appendix B to this document).

Given BGM's experience operating several sites within the NH area, the CDM Guide informs the company's provision of first aid, and health and medical services for their current workforce in the Wells area. Guidance on privacy and confidentiality, reporting of persons exposed to a reportable communicable disease, management of employee records, risk management and prevention approaches to communicable disease, allocation of isolation spaces, and availability of hand hygiene and PPE, has been drawn from the CDM Guide.

The CDM Guide, and its best practices also informed ODVs plans related to the planning, design, and development of accommodation, mine dry, kitchen and dining room areas for the Project worker camp.

1.4.2.3 Health and Safety During the Opioid Overdose Emergency: Northern Health's Recommendations for Industrial Camps

NHA's Health and Safety During the Opioid Overdose Emergency: Northern Health's Recommendations for Industrial Camps (Overdose Health and Safety Recommendations) includes six (6) recommendations that already contribute to BGM's approach to health and wellness, and which have been incorporated into this HMSMP for the Project. BGM recognizes that overdose prevention is a shared responsibility among sectors, with employers utilizing industrial camps well placed to participate in many aspects of this work.

The six recommendations and the ways they have been incorporated into this HMSMP are detailed below.

1. Prevent Drug Use by Promoting Mental Wellness at Work and in Camp

Sections 2.7 and 2.10 of this HMSMP present BGM's approach to health and wellness for the Project, drawn from recommendation #1 of the Overdose Health and Safety Recommendations for the Project, this includes education and prevention, on-site wellness infrastructure, recreation programming, wellness initiatives, and collective messaging and communication. These initiatives support NH recommendations to provide healthy lifestyle activities, foster healthy organizational culture, ensure ease of access to company assistance programs, and also support regulatory health and safety requirements.

2. Foster an Open, Respectful, and Well-informed Working Environment Regarding Mental Health and Addiction

Section 2.8.5 of this HMSMP addresses BGM's approach to substance use disorders, and Appendix A presents the Project's Drug and Alcohol Program. BGM's approach to health and wellness is holistic, promoting mental, physical, spiritual, and cultural wellness as deterrents to substance use disorders and addictions. Recommendation #2 suggests providing employees with educational resources around drug and alcohol use. These resources will be available at the MSC and QR Mill First Aid rooms, with additional materials in high-traffic areas. Toolbox meetings will include safety shares around overdose signs and symptoms, Naloxone™ or Narcan™ use, and the location of these kits (see Section 2.8.5). Additionally, and in alignment with Recommendation #2 from the Overdose Health and Safety Recommendations, the BGM Drug and Alcohol Program includes guidance on self-help programs, recognizing the signs and symptoms of addiction, and links to company supports and approaches. Section 2.8.5 of this HMSMP also speaks to drug dependency as a preventable and treatable condition, which is in alignment with Recommendation #2. BGM will also provide confidential access to harm reduction supplies

through the in-house health and safety team, and will encourage use of supports as part of the Employee Assistance Program (EAP).

3. Prepare for the Possibility of an Opioid Overdose and the Need for Emergency Response

Section 2.8.5 of this HMSMP details BGM's preparation around the possibility of an opioid overdose in alignment with Recommendation #3 of the Overdose Health and Safety Recommendations. This includes that all first aid kits at the Project will include Naloxone™ or Narcan™, and all those with any level of first aid certification will be well versed in identifying the signs of opioid overdose and in administration of opioid antagonists. Safety shares as part of daily toolbox meetings, or other workplace safety education will include reference and discussion of opioid overdose signs and symptoms, notice of inclusion of Naloxone™ or Narcan™ in Project first aid kits, and directions to first aid kits in proximity to work areas.

4. Provide Confidential Access to Other Harm Reduction Supplies

Sections 2.8.5 and 2.8.6 detail BGM's approach to confidential access to harm reduction supplies, in alignment with Recommendation #4. Supplies are available through the in-house health, safety, and first aid team, and through the same avenue, those with substance use issues will be encouraged to seek help and made aware of supports available through the EAP. Sharps containers will be located in all communal washroom or mine dry spaces, and sexual health supplies (i.e., condoms, Plan B®) will be available from the health, safety and first aid team.

5. Support Employees with Addictions to Get Help

Sections 2.8.4 and 2.8.5 address ODVs approaches to employee supports for addictions and mental health, in alignment with Recommendation #5 of the Overdose Health and Safety Recommendations, which suggests that employees should be able to seek help confidentially before substance use affects work performance. BGM's sickness and disability benefits support employees to seek help, and all employees are made aware of the company's EAP. BGM's contracted health and medical services provider will also be well versed in respectful dialogue around substance use issues and relevant supports available.

BGM's Drug and Alcohol Program (Appendix A of this HMSMP) specifies that BGM will support the rehabilitation and return to work of employees who have had problems with alcohol and drug dependency.

6. Appropriately Manage the Risk of Impairment in Safety-sensitive Positions

BGM recognizes the risk to safety and the potential negative impacts to other employees, customers and the community if their workforce not be fit for work due to impairment or substance misuse. Section 2.8.5 of this HMSMP details BGM's approach to impairment prevention, managing risks to safety in the workplace related to impairment, and the implementation of safety precautions. BGM's Drug and Alcohol Program, developed using the

Overdose Health and Safety Recommendations, also refers to the Health, Safety and Reclamation Code for Mines in BC which does not allow impaired persons to enter, remain or be knowingly permitted to enter any mine, and also does not allow the possession of intoxicating liquor or illegal drugs at the site.

1.4.3 First Nations Health Authority Guidance

BGM strives for meaningful, positive, and long-lasting relationships with Indigenous nations, and follows the principles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). The proportion of the existing Project workforce that identifies as Indigenous has increased since 2016, suggesting that the application of First Nations Health Authority (FNHA) health and wellness guidance and approaches will result in better health outcomes for self-identified Indigenous and/or First Nations workers on the Project.

The FNHA plans, designs, manages, and funds the delivery of First Nations health programs, for First Nations, across BC. The FNHA incorporates Indigenous knowledge and ways of knowing into the provision and delivery of health services, approaching wellness by combining western science and Indigenous culture for a holistic approach. Their vision is for healthy, self-determining, and vibrant BC First Nations children, families, and communities. This is achieved through the application of their values of respect, discipline, relationships, culture, excellence, and fairness.

The FNHA takes an approach to health, wellness and the provision of services that incorporates the following concepts:

- **Cultural Humility and Safety:** outcomes based on respectful engagement that recognize and strive to address power imbalances inherent in the health care system. This includes processes of self-reflection to understand personal and systemic biases, and the development of respectful processes and relationships.
- **Holistic:** First Nations health is approached from the individual, family, and community levels, considering mental, emotional, physical, and spiritual health. The First Nations perspective on health and wellness values respect, wisdom, responsibility, and relationships.
- **Harm Reduction:** The FNHA approaches substance use as a health issue, not a moral issue, and strives to minimize harm and potential danger, meeting people where they are at with acceptance and compassion.

Consideration of FNHA approaches to health, wellness, and the provision of services creates a culturally safe space for people to receive health care. During the Project, all BGM employees will receive mandatory cultural awareness training, and will be required to adhere to the company's Cultural Training Awareness Policy, which is in development. This training will be developed in collaboration with the Participating Indigenous nations for the Project.

The Northern First Nations Health and Wellness Plan (2013) informed the content of this HMSMP and provides context for First Nations healthcare values and goals, and consideration of barriers by the Project's health, safety, and first aid team.

1.4.3.1 Northern First Nations Health and Wellness Plan

In alignment with the holistic approach to wellness championed in the Northern First Nations Health and Wellness Plan (FN Wellness Plan), BGM takes the same holistic approach to health and wellness considering balance among the emotional, mental, spiritual, and physical aspects of health and wellbeing. This HMSMP was developed in consideration of the northern First Nations Health Committee priorities captured in the FN Wellness Plan which apply to the provision of health care in NH's region. Of these priorities, cultural competency, primary health care, mental wellness and substance use, and communications are priorities supported by this HMSMP.

All BGM employees, including the medical, health, and first aid team, will receive cultural awareness training, which supports the FN Wellness Plan's priority of cultural competency. This training will also support the goal in the plan to support culturally responsive services delivery. Health, medical, and first aid services for the Project will be accessible and available for all employees, regardless of self-identification, and accommodations will be available (i.e., cultural days off policy, trauma-informed care) to ensure health and medical services are equitable, in alignment with values and guiding principles in the FN Wellness Plan.

BGM takes a holistic approach to health and wellness, and recognizes the value of this as a mechanism of harm reduction related to substance use. This approach is in alignment with the FN Wellness Plan and its associated goals related to mental wellness and substance use.

BGM's existing relationships with the Participating Indigenous Nations for the Project supports the communication goal drawn from the FN Wellness Plan, and also supports the opportunity for feedback and adaptation of the plan based on engagement with the nations.

Much of the FN Wellness Plan applies to public health for Indigenous peoples rather than industrial health and medical services, however the pieces of the plan detailed above are included here as they are relevant to this HMSMP and support BGM's public health approach to site health and wellness. Components directly applicable to other areas of First Nations health outside of the Project have not been included.

1.4.4 Participating Indigenous Nations

Lhtako Dené Nation, Xats'ull First Nation, and Williams Lake First Nation opted to be Participating Indigenous nations as part of the EA process, and BGM has been engaging with them since 2016. Their status as Participating Indigenous nations also provides them a mechanism to advocate

for the protection of their rights through the EA process, and to offer or withhold their consent for the Project.

Lhtako Dené Nation are members of the Southern Dakelh Nation Alliance, and the Carrier Chilcotin Tribal Council. Primary care services for Lhtako Dené Nation are provided by the FNHA, as well as the Lhtako Dené Nation Health Department. An RN performs health visits for community members in-community, with many Lhtako Dené Nation members visiting Quesnel for their health needs. Lhtako Dené Nation Indigenous interests pertaining to health, raised during the EA process, and captured in the Assessment Report (2023) for the Project included traditional land use practices, water quality and quantity, caribou, and community well-being (EAO 2023).

Both Xatśūll First Nation and Williams Lake First Nation are Secwépemc communities. Members access healthcare through the FNHA, nation health and social development departments, and Three Corners Health Services Society in Williams Lake. Health stations provide community health services to both Xatśūll First Nation and Williams Lake First Nation with a culturally relevant and adaptive approach to meet the needs of community members. The new Cwelcwélt Health Station is the hub of the Williams Lake First Nation community and provides Indigenous-led health and wellness to members on and off reserve. Xatśūll First Nation and Williams Lake First Nation raised the following health related Indigenous interests through the EA process, which are captured in the Assessment Report for the Project: cultural land use and heritage practices; economic development opportunities; land stewardship; and community health and safety (EAO 2023).

1.4.5 BGM Policies, Procedures and Plans

Several existing and in-development BGM Policies and procedures feed into or link with this HMSMP, supporting the provision of health and medical services for the Project, and satisfying Condition 17 of EAC #M23-01.

Table 1.4-1 Applicable BGM Policies, Procedures, and Plans

BGM Policy, Procedure, or Plan	Application or Linkage
Anti-bullying, Harassment and Violence Policy	In place to ensure zero tolerance for bullying, violence, and harassment, including sexual harassment, racial or national-origin harassment, harassment based on gender, race, colour, religion, age, national origin, disability, or sexual orientation, nor retaliation against anyone for making good-faith complaint of such harassment, or for cooperating in company investigations of such complaints.
Occupational Health and Safety Management Plan	Outlines BGM's health and safety policy for the Project, setting out responsibilities, processes, compliance mechanisms, risk management and prevention, and ways BGM can safeguard their workforce.
Prioritizing of Local and Indigenous Hiring	An important element of BGM values is to maximize local and Indigenous recruitment and actively work to provide local and Indigenous community members the opportunity for employment and training where possible.

BGM Policy, Procedure, or Plan	Application or Linkage
Communicable Disease Management Plan	Establishes BGM's approach and hierarchy of priorities in managing and preventing communicable diseases, based on current and well-informed medical judgements.
Exposure Control Plan	Establishes procedures and controls to eliminate or minimize the risk of occupational exposure to an infectious disease and reduce the risk of infection should exposure occur.
Policy on the Prevention of Psychological or Sexual Harassment in the Workplace and the Handling of Complaints	As BGM does not tolerate nor accept any form of psychological or sexual harassment, this policy affirms that commitment and establishes principles of intervention that are applied when a harassment complaint or situation is reported. The Policy applies to all personnel of BGM, at all levels.
Drug and Alcohol Policy	Staff must read and sign off on this policy, which enforces a zero-tolerance policy for drugs and alcohol while on-site or undertaking company tasks. BGM expects and requires that all employees assist in maintaining a work environment that is free from the impairment of alcohol and drugs.
Code of Ethics	This code establishes fundamental principles and values that guide moral and ethical decision-making of BGM's employees, as well as third-party consultants and contractors. It emphasizes integrity, honesty, fairness and respect for others in all actions and decisions. Each BGM employee and third-party consultants and contractors must sign off on this code to ensure compliance.
Code of Conduct	This code establishes specific rules and guidelines governing the behavior and actions of BGM's employees, as well as third-party consultants and contractors. It outlines expected standards of behavior and conduct both within the organization and in external interactions. Each BGM employee and third-party consultants and contractors must sign off on this code to ensure compliance.
Health and Safety Policy	Demonstrates BGM's commitment to health and safety through the provision of a protective work environment, training and equipping of team members, roles and responsibilities, and compliance with applicable health and safety laws, regulations, practices, plans, and procedures.
Emergency Response Plan	Created to address specific emergency response requirements for specific Project/BGM sites and to protect lives, identify risks, identify emergency and safety equipment and protocols, minimize damage, and clarify rapid recovery and restoration approaches.
Medical Surveillance Program	Developed to protect employees and others undertaking tasks at BGM sites from undue risks to their health and safety arising out of or in connection with activities at the mine, and its associated infrastructure.
Hiring Policy	The BGM Hiring Policy commits to equal opportunity employment, promoting from within, lateral job moves, training opportunities, matching applicants with roles based on skill set and interest.
Equal, Diverse, and Inclusive Employment Opportunity Policy	BGM is committed to providing equal opportunities to all existing employees and applicants related to employment and all persons are assessed on their individual merit and not on criteria unrelated to job performance. BGM is assessing pay equity and working to mitigate pay disparities to ensure that the work environment and relations between employees are free of discrimination. Related to this policy is BGM's zero tolerance policy on bullying and harassment. BGM is developing a process for hiring under-represented groups and seeking guidance from qualified professionals to guide this process. Processes for hiring underrepresented groups will be in place in time for the Project hiring process.

BGM Policy, Procedure, or Plan	Application or Linkage
Open Door Policy	This company-wide policy promotes transparency, honesty, timely responses to concerns, and effective, internal dispute resolution processes.
Community Ambassador Training	Guides employees on good conduct as it relates to interactions with local communities, social media use, and how to communicate about the Project.

1.4.6 Applicable Legislation

This HMSMP has been developed in response to conditions stipulated in EAC #M23-01 under the 2018 BC *Environmental Assessment Act*. Certain components as part of this Plan, including accommodation, food services, sanitary facilities, drinking water, waste management, and the provision of health and medical services are managed under provincial legislation, including, but not limited to the following:

- *Public Health Act* (2008)
 - Industrial Camps Regulation
 - Sewerage System Regulation
 - Food Premises regulation
- *Drinking Water Protection Act* (2001)
 - Drinking Water Regulation
- *Environmental Management Act* (2003)
 - Municipal Wastewater Regulation
- *Waste Management Act* (1996)
 - Municipal Wastewater Regulation
- *BC Workers Compensation Act* (2019)
 - Occupational Health and Safety Regulation
- Health, Safety, and Reclamation Code for Mines in British Columbia (2022)
- National Fire Code

More generally, BGM is subject to several laws and regulations with respect to the conduct of business that do not directly apply to the provision of health and medical services for Project workers. However, employees, contractors and other representatives undertaking work on behalf of, or for BGM are expected to maintain compliance with the letter and spirit of all laws governing the jurisdictions in which they perform their duties.

1.5 Project Details

1.5.1 Geographic Considerations

The community of Wells is considered a rural location in the NHA service area, being approximately 80 km driving distance from the nearest hospital in Quesnel, BC. Wells has a Primary Care Clinic located on the main floor of the Community Hall staffed by a Nurse Practitioner (NP), which is only open once per month. Most residents of Wells access their health services in Quesnel. The Wells clinic does have some clients from existing BGM operations, both from the local area as well as workers from other communities.

As the nearest service centre to the Project, Quesnel offers its residents and those in surrounding areas a full range of health services. G.R. Baker Memorial Hospital, intermediate and extended care facilities, senior's facilities, and an extensive range of medical and alternative practitioners and services are available in Quesnel. The nearest referral hospital to the Project sites is the University Hospital of Northern British Columbia (UHNBC) in Prince George, which is an acute care facility and Level III trauma centre. Major trauma cases beyond the service capabilities of G.R. Baker Memorial Hospital, occurring in the Quesnel area, are sent to UHNBC, and can then be sent to other hospitals if deemed necessary.

1.5.2 Project Timelines and Workforce

The Project will consist of five phases: Pre-Construction, Construction, Operations, Closure, and Post-Closure. Construction is scheduled for a duration of one year, Operations for an estimated 12 years, Closure for two years, and Post-Closure between five to ten years, or until closure objectives have been achieved.

The Pre-Construction Phase pertains to planning, permitting and development, and in terms of worker accommodation and health and medical services, there are no changes from current conditions; Camp A and B, Ballarat Camp, and existing BGM-owned accommodation in the community of Wells house the current workforce (see Figure 1.2-1).

The Construction Phase workforce is expected to be approximately 200 workers, peaking at 273 workers. A new 200-person Worker Accommodation camp is to be constructed at the MSC during the Construction Phase, to meet accommodation capacity needs in the Operations Phase. During Construction, existing BGM accommodation at the following locations is expected to meet accommodation demands:

- Camp A and B near the BGM office on Ski Hill Road: up to 44 rooms;
- Ballarat Camp, 6.6 km from the BGM office: up to 228 rooms;
- Hubs Motel in Wells: up to 23 rooms; and
- Various BGM-owned houses and apartments in Wells: up to 27 rooms.

Construction will be carried out 24 hours a day, seven days a week, 365 days per year, for the entirety of the one-year Construction Phase. Mine construction activities will be conducted using different rosters; Currently, a 5/2 (days working/days off) and a fly-in, fly-out schedule, working 14 days, and off for 14 days are planned to accommodate the workforce requirements of the Project. Determination of specific shift needs and rotations will be decided prior to Construction and Operations, however Operations are planned for 24 hours a day, seven days per week, 365 days per year.

The Operations workforce is expected to be 460 workers, with accommodation needs met by the new 200-person worker accommodation that will be constructed at the MSC and existing 75-person accommodation at the QR Mill Site. A detailed logistics plan will be developed at least three months prior to the initiation of Operations, to ensure adequate accommodations are available and maintained during the Operations Phase.

A workforce of 14 individuals is expected to be required for the Closure Phase of the Project, ten of which are expected to be contractor construction roles in the skilled trades.

BGM is expecting to require minimal workforce for the Post-Closure Phase of the Project; One Environmental Manager and two Environmental Technicians on rosters that will ensure post-closure functionality and monitoring. During the passive care part of the Post-Closure Phase, only one Environmental Technician is expected to be required.

1.5.3 Human Resources

BGM's vision for the Project is to develop a sustainable, mindful, long-life mining operation in collaboration with the local community, stakeholders, and Indigenous nations in the Cariboo region. BGM prioritizes the health and wellness of its employees and its broader workforce and is committed to minimizing impacts to non-urgent care services in the Project area, meeting the workforce's health care needs, and scaling services to meet these needs relative to the fluctuation of the workforce through the various Project phases described in Section 1.5.2 of this HMSMP. BGM will take an adaptive approach to health and medical staffing for the project, in alignment with NHA guidance, and in compliance with requirements of the *Health, Safety and Reclamation Code for Mines in British Columbia* (November 2022), and in alignment with Occupational First Aid (OFA) staffing requirements stipulated in the WorkSafeBC Occupational Health and Safety Regulations.

Health and wellbeing for the Project starts with BGM leadership, and the provision of a work environment that protects all employees from undue health risks. BGM promotes a culture of health and well-being, by ensuring personnel are aware of company-wide health goals, available health and wellness supports and services, and access the comprehensive benefits package that includes dentistry, optometry, physiotherapy, and access to counselling.

The Project utilizes a Health and Safety Department to support health and wellness for the Project workforce. This department will adapt and flex its composition to respond to Project and workforce needs. This includes increasing the number of Advanced or Level 3 OFA attendants as indicated in the WorkSafeBC Occupational Health and Safety Regulations, and/or increasing virtual access to the physician as part of the contracted Health and Medical Services provider. BGM's Health and Safety Department will be directed by the Project's General Manager, in close cooperation with BGM's Health and Safety Manager. Reporting to the Health and Safety Manager, Safety Advisors for each site will provide oversight, education, health and medical direction to the Project workforce and employees.

The roles and responsibilities of BGM employees and contractors charged with health and medical services provision for the Project are detailed below, including internal communication channels with the management team, and external communication with Northern Health, the Participating Indigenous nations for the Project, the local community, and broader public.,

All BGM personnel are to follow medical and emergency procedures outlined in the company's Site- Specific Emergency Response Plans (SSERP) and Mine Emergency Response Plan (MERP).

1.5.3.1 BGM First Aid and Medical Staff

BGM Management

The General Manager, along with the BGM Health and Safety Manager are responsible to provide overall health and wellness leadership and training as relevant, and promote a healthy work culture, leading by example, and considering health from a population perspective.

In addition, BGM Management will provide overall support for various health, well-being, and medical programs for employees, contractors and the broader workforce, and the families of this workforce when residing locally temporarily, while the employee is on shift. This will include awareness of company programs and policies, and promotion of relevant training opportunities to employees. Management will also be required to recognize behaviours that may indicate a substance use problem and prohibit any employee or contractor from undertaking work on behalf of BGM should they be unfit for work, as per BGM's Drug and Alcohol Policy (Appendix A).

Health promotion by management will include training in first aid, workplace ergonomics, mine rescue, Naloxone™ use, fatigue management and proactive and preventative initiatives including audiometric testing, hygiene, promotion of the company benefits package, and awareness of the specific counselling services offered through the EA (i.e., behavioural programs addressing sleep, weight management, smoking cessation, and mental health challenges).

The Company will be responsible to provide first aid and medical facilities in conjunction with the Health and Safety Department, and in consultation with the remainder of the First Aid and Medical staff retained for the Project. Included in this is ensuring the provision and proper use of personal

protective equipment (PPE), availability of educational materials in relevant locations, and maintenance of a communication and reporting function with the on-site Health and Safety team.

The General Manager and Health and Safety Superintendent are also responsible for communication with the remainder of the health and medical services team, the Joint Occupational Health and Safety Committee, and any other relevant BGM health or medical teams. This includes relaying any communications or updates from health authorities to the broader health and medical team, opportunities for training or education, or any communication around communicable disease outbreaks or management. The Health and Safety Superintendent is the first point of contact with Northern Health, and is responsible for coordination and collaboration with them.

Consulting Medical Doctor

BGM will secure a health and medical services company to provide physician consultations to employees and their families when residing locally, during all phases of the Project, and prior to construction of the MSC. In addition, this medical services company and its physician will provide guidance and oversight to BGM's Health and Safety department as appropriate. This health and medical services company and their medical professionals will provide return-to-work assessments, disease prevention approaches and strategies appropriate for a rural site with on-site accommodation, and prescription writing, if it be necessary, or unavailable from an employee's home healthcare provider. This health and medical services company will be experienced in remote, rural and industrial settings, and informed of the unique operational challenges and risks involved. This health and medical services provider will be utilized through all phases of the Project, and will have the capacity to scale their services to adapt to the needs of the changing workforce. This includes telemedicine and remote, virtual support and referrals by physicians or other medical personnel that ensures access to quality care, remote medical consultations, and immediate assistance in emergencies. The purpose of this consulting health and medical services company is to relieve the potential burden and mitigate any preventable impacts on NHA health services in the local area.

Occupational First Aiders

The Project will be staffed with Level 3 or Advanced OFA attendants in accordance with WorkSafeBC requirements and regulations, as well as with other staff with various other levels of OFA (See Table 2.8-1). First Aid attendants are responsible for all first aid treatment for workers, unless the patient/worker requires referral to a higher level of care deemed appropriate or necessary. Determination of the need for referral to a higher level of care or referral to Northern Health infrastructure and services will be carried out on a situational basis, according to the scope of practice of Advanced or Level 3 and other OFA attendants, and the areas of practice of the on-site health, safety and first aid team listed in Section 2.8.3.2 of this HMSMP. OFA attendants, as

part of their certification, are responsible to make decisions about when to refer injured or sick workers for further medical attention. They play a key role in assessment of injuries and determining whether further medical intervention is necessary.

Occupational First Aiders are responsible for scene assessments and management, activating emergency response systems, transport decisions, patient care, cardiac and medical emergency response, care of minor injuries, resuscitation, automated external defibrillator (AED) use, approach and care of severe and internal bleeding, sprain and strain management, mental health awareness, exposure (hot and cold) management and care, and multiple patient casualties.

Level 3 and other OFA attendants with Transportation Endorsement will be responsible to transport injured persons to the appropriate First Aid offices in a BGM Emergency Transport Vehicle (ETV), for subsequent hand off to an ambulance or person with higher, or equivalent medical or first aid certification, if deemed necessary. Injured persons will be transported to the nearest First Aid office, depending on proximity to each Project site (i.e., MSC, QR Mill, Bonanza Ledge).

Communicable Disease Management Team

As per the NHA guidance, *Best Practices for Industrial Work Settings No. 2—Communicable Disease Management Guide*, and in alignment with Section 3. b) Disease and Infection Prevention and Outbreak Protocols of the NHA *Health and Medical Services Plan Best Management Guide for Industrial Camps* BGM will assign roles and responsibilities to the BGM Health and Safety department, or other appropriate personnel prior to construction of the MSC. This team will have the responsibility to oversee communicable disease management as part of the site Communicable Disease Management Team (CDMT). The CDMT are responsible to organize any response required, in the event of an outbreak.

The CDMT will hold monthly team meetings to facilitate information sharing, ensure plans are implemented, training is updated, and that the Communicable Disease Management Plan (CDMP) is reviewed and updated as appropriate. In addition to the roles fulfilled by BGM personnel, support services managers/contractors will be expected to participate in CDMT meetings and communicable disease management prevention and preparedness training.

The CDMT will be comprised of the following roles fulfilled by BGM key personnel:

- **Executive Sponsor:** The on-shift Mine Manager will fulfill the role of the Executive Sponsor as part of the CDMT, and will hold the accountability for ensuring the CDMP is effectively implemented. The Mine Manager will make decision related to the plan, and will be responsible for its continuous improvement and updating. The Mine Manager will also be the point of contact or notifier to the medical health officer within 24 hours of a suspected outbreak or occurrence of communicable illness, above the incident level normally expected at an industrial camp.

- **Communicable Disease Control Lead:** As the Project will always be staffed with Level 3/Advanced OFA attendants in accordance with WorkSafe BC regulations, the OFA attendant on-shift with the highest level of OFA will fulfill the role of Communicable Disease Control Lead (CDCL). This person/role will oversee the day-to-day prevention and management practices related to disease prevention and preparedness. Monitoring and assessment activities related to CDMP updates and the implementation of any necessary policies and approaches to disease management.
- **Consulting Medical Doctor:** This role will be supplementary to the CDMT, and will act in an advisory role, supporting the development of outbreak prevention modifications (a combination of behavioural and environmental components) as well as educational and training programs for relevant personnel and CDMT members.

Employees and Contractors

Upon initiation of employment at the Project, all BGM employees and contractors will receive mandatory training and orientation that will include health and medical services orientation. As part of this orientation, workers will be made aware of health and medical services and supports available to them while engaged with the Project, wellness services available and how to initiate wellness initiatives, location of services, including First Aid, and how to access them, the Drug and Alcohol Policy, occupational health and safety awareness training, site specific orientation, and enrollment in the BGM benefits package and its associated initiatives.

1.5.4 Communication and Contact Lists

BGM will develop contact mechanisms and will maintain regular communication with its consulting physician, the BC Ambulance Service and BC Emergency Health Services, the Northern Health Authority, and the First Nations Health Authority prior to construction of the MSC. BGM will maintain communication with the Participating Indigenous nations for the life of the Project, to provide opportunity to give feedback on adaptive management or to share any updates on health and medical services related to the Project.

Communication infrastructure for the Project sites will include radios with specific communication channels, satellite phones, hard line phones, cell phones, and satellite internet. Telus Communications Inc. has installed a public telecom tower on-site, which includes a fibre optic cable facilitating high-speed wireless and internet connectivity. Telecommunication and high-speed internet upgrades for the Project allow workers to remain better connected socially to those not associated with the Project, potentially contributing to improved mental health outcomes. Improved connectivity also supports communication with NHA, other stakeholders, and the Participating Indigenous nations for the Project.

1.5.4.1 BC Ambulance Service/BC Emergency Health Services

While BGM will maintain open and consistent communication channels with BC Ambulance Service, dialing 9-1-1 will be used in case of emergency.

For immediate connection with Northern Health and Health Emergency Management BC (HEMBC), in the event of an emergency, the following on-call number should be used 24 hours per day, seven days a week:

HEMBC On-Call Phone Number: 855-554-3622 or 855-55-HEMBC

Station 550 of the BC Ambulance Service is in the community of Wells, and is staffed by its Unit Chief, who is also its lone Primary Care Paramedic (PCP). BC Ambulance Service has also hired an additional paramedic located in-community, as well as three new staff (Pers. Comm. 2023). BGM maintains communication channels with the Wells ambulance station as needed.

Wells Ambulance Service Contact Information:

Address:

Station 550

2509 Highway 26

Wells, BC

V0K 2R0

Phone: 250-994-3229

The community of Wells' ambulance station has one ambulance; however, it is out of service due to an ongoing staffing shortage. As the province transitions to a new staffing model for ambulance service, Wells will have a full-time Unit Chief and could have on-call staff, which could contribute to improved service. BGM will encourage those wishing to pursue paramedic training (i.e., advanced care, critical care, and community paramedics) to do so, to support the local community's medical and health needs, as well as supplemental support to the expanded workforce as part of the Project.

When emergency transport is required outside of what is provided by BGM and its ETVs, or when the Wells' ambulance is out of service, the Quesnel station of the BC Ambulance Service is utilized. This station is serviced by three ambulances, with two staffed 24 hours per day, seven days a week, with the third running if there is staff. The station is staffed by 20 full time paramedics, and 6 casual employees.

Quesnel Ambulance Service Contact Information:

Address:

Station 348

574 Carson Ave

Quesnel, BC

V2J 2B5

Phone: 250-255-5637

1.5.4.2 Northern Health Authority

The NHA provides diverse and extensive health and medical services to the communities in closest proximity to the MSC area, including Quesnel and Wells. BGM will collaborate with the NHA to mitigate any potential impacts to the provision of health care and medical services because of the Project. This may include communication of communicable disease outbreaks to the Medical Health Officer (MHO), numbers of employee visits to site-based or BGM-provided clinics or first aid visits, health reporting information as per Condition 17.3 9(f) i-iv, indicators of use of health services (i.e., referrals and transfers to NHA services and other health care providers), and any observational information related to the management of health and medical services pressures, or as requested by NHA.

In order to report a communicable disease outbreak or increase in communicable disease to the MHO of the NHA, the Communicable Disease Cases, Clusters and Outbreaks Regional Communicable Disease Hub contact information will be used. There is no specific number of illnesses that should trigger notification as that is dependent on the disease of concern (BC Ministry of Health 2022). BGM will err on the side of over reporting concerns about an increase in sick employees. It will be the judgement of the MHO to determine or declare that an outbreak situation exists. The Communicable Disease Unit is a central receiver of reports of communicable disease. It will direct all reports of, and inquiries related to, communicable disease to the appropriate departments within NH.

Regional Communicable Disease Hub

Email: RegionalCD.HubTeam@northernhealth.ca

Phone: 1-855-565-2990

In addition, and as required, any communicable disease outbreaks will also be reported to the MHO on call 24/7.

Phone: 1-833-214-3274

Northern Health Authority Contact Information

G.R. Baker Memorial Hospital:
543 Front St.
Quesnel, BC
V2J 2K7
Phone: 250-985-5600

University Hospital of Northern British Columbia:
1475 Edmonton St.
Prince George, BC
V2M 1S2
Phone: 250-565-2000

Quesnel Urgent Primary Care Clinic:

543 Front St.
Quesnel, BC
V2J 2K7
Phone: 250-991-7571

For non-urgent requests related to Emergency Response Plan's:

The Northern Health Office of Health and Resource Development
Email: resource.development@northernhealth.ca
Phone: 250-645-3131

Health Emergency Management BC North Director:
Phone: 250-645-3189 Email:
HEMBC@northernhealth.ca

Environmental Health Officer, Health Protection Central Line: 250-565-7322

1.5.4.3 Virtual and Telehealth Options

Like residents of many rural and remote locations in BC, telehealth and virtual medical appointments are used to meet health and medical needs. BGM will support its non-local workforce in accessing health and medical care in their home communities, and to encourage telehealth and virtual appointments, to minimize strain on local health services. Improved connectivity, planned as part of the Project, will improve worker access to virtual care and digital health supports, including to the physician accessible through the contracted health and medical services provider.

HealthLink, eligible to be used by BC residents, and reached via telephone/cell phone by calling 8-1-1 can be accessed to speak with a nurse, pharmacist, or dietician. HealthLink can also be used to locate a walk-in clinic, or Urgent and Primary Care Centre.

For residents of the NHA region, a Virtual Primary and Community Care Clinic is also available between 10am and 10pm by calling 1-844-645-7811. This virtual clinic provides access to a physician or Nurse Practitioner, who will work with one's health care team to complement care received in one's home community, or to provide support for those who do not have a family doctor.

BC Virtual Visit is a secure health platform that enables video visits with health care providers via smartphone, tablet, or computer. Users of the platform need to ensure that their health care provider or clinic perform virtual health care, and then download the app for access. The improved connectivity planned as part of the Project will enable this kind of health care, and BGM will make every effort to encourage its usage by the Project's workforce.

BGM and its health and medical services team will support personnel to access telehealth and virtual health options appropriate to their home region or province, should they not be from BC. BGM will facilitate space, appointment times, and connectivity to enable telehealth and digital health provision for its personnel, to mitigate any impacts to NHA service provision. BGM will also support access to digital health options through its contracted health and medical services provider, and consulting physician.

1.5.4.4 First Nations Health Authority

The FNHA plans, designs, manages, and funds the delivery of First Nations health programs, for First Nations, across British Columbia (BC).

Northern Operations Manager
Office Phone: 250-645-3019
Cell: 250-614-6942

Northern Region, Regional Mental Health Manager
Office Phone: 250-645-3044

As this Plan is updated and reviewed annually, any relevant reporting or information from the FNHA will be incorporated.

1.5.4.5 Participating Indigenous Nations

BGM will continue to maintain its relationships with the Participating Indigenous nations for the Project and will utilize existing communication and engagement mechanisms to share information and/or relevant updates related to the HMSMP.

Contact information of the health departments and relevant health agencies or representatives of the Participating Indigenous nations connected to the CGP EA are detailed as follows:

Lhtako Dené Nation Health Department:

Health Director: 250-255-7828

Xatśúll First Nation Health Station:

Phone: 250-989-2323

Williams Lake First Nation Cwelcwélt Health Station:

Health Station Coordinator:

Phone: 250-296-3532

Email: healthadmin@wlfm.ca

Three Corners Health Services Society (Secwepemc)- Williams Lake

Phone: 250-398-9814

1.5.5 Contract Service Providers

A contract service provider will be utilized to provide health and medical services above what is provided by BGM's OFA attendants and health, safety and first aid team to mitigate any potential impacts to Northern Health's infrastructure and services. Food Services and Camp Services will be provided by contractors to BGM, as is current practice for BGM's existing operations in Wells. It is expected that the Food Services and Camp Services contractors will adhere to any relevant regulations or requirements of their practice area.

1.5.5.1 Medical Services Contractors

Given that the workforce of the Project will fluctuate during different Project phases, and will likely see fluctuations in composition as well, BGM will consider the health and medical needs of its workforce through these phases. This will entail the identification of distinct, phase-specific health and medical needs, consideration of workforce numbers, and adaptation of services accordingly. Any adaptation of health, medical and first aid services will be carried out in collaboration with BGM's contracted health and medical services provider.

BGM is considering different health and medical service contractors that will be able to provide the support services required to meet the needs of its workforce, and to supplement the company's existing First Aid attendants' capabilities and the specialization of the existing Health and Safety Department.

1.5.5.2 Food Service Providers

Food services for the Project and associated camp facilities will be contracted out to a secondary service provider, equipped to provide full-service catering to the Project's workforce. It will be the responsibility of the contracted Food Service Provider to abide by all relevant regulations, NHA guidance and food service permits as required.

1.5.5.3 Camp Services Providers

Housekeeping, laundry, waste management and any other hygiene-related services required for the Project will be secured on a contract-basis by BGM, as needed, and in sufficient provision to ensure the cleanliness of worker living quarters, shared and communal spaces, and other Project spaces as appropriate.

As part of the contracting process for camp service providers, this HMSMP will be provided, with the expectation that potential service providers will have to demonstrate how they will use this

Plan, incorporate relevant procedures, adhere to regulations and policies applicable to the service they provide, including any other relevant NHA guidance applicable to their industry area.

As this Plan is adaptive, the provision of camp services will need to be adaptive to workforce fluctuations, composition, and other relevant contexts as appropriate.

2. INFRASTRUCTURE

2.1 Accommodation

Accommodation for the Project will consist of existing facilities at Camp A and B, Ballarat Camp, QR Mill, BGM-owned accommodation in the community of Wells, and at a new Worker Accommodation Camp at the MSC. The location of these existing and proposed accommodation facilities is generally shown in Figure 1.2-1.

Contracted camp service providers will continue to provide room laundry service and maintenance of bedding and pillows for worker accommodation at existing and proposed worker accommodation, in camp facilities and in BGM-owned, non-private lodging in the community of Wells. At a minimum, this maintenance will include changing bedding in the middle of the 14-day rotation, and when a worker vacates a room, in preparation for the next occupant. Workers wishing to refresh their bed linens or towels outside of when housekeeping is scheduled will have access to a laundry facility, as well as additional linens and towels.

Generators will be used for the provision of electrical power and lighting of worker accommodation at Ballarat Camp and Camp A and B, during the Construction Phase only. Electricity at the MSC will be provided by the new Transmission Line once it is in service for the Operations Phase of the Project, with generators available should there be a power outage related to the Transmission Line. QR Mill is powered by an existing powerline, which requires no upgrades for the Operations Phase of the Project.

Additional details on plans for Project accommodation components are described below in sections 2.1.1–2.1.4.

This Plan will be updated as details related to the design, construction, function, and utilization of the MSC, Worker Accommodation and Administration spaces are finalized. Every effort is being made to ensure the infrastructure meets or exceeds the requirements of an industrial camp that will protect worker health and well being.

2.1.1 Mine Site Complex

Existing Camps A and B are located adjacent to the location for the Project MSC and will provide Construction Phase accommodation for up to a total of 44 workers, in individual rooms. Existing full-service kitchen facilities and lunchroom will provide food service for workers during the Construction Phase of the Project.

The new 200-person Worker Accommodation at the MSC will include sufficient restroom and shower facilities for its capacity. BGM's plans for this accommodation infrastructure will ensure adequate space for the provision of food services, gym and recreation spaces, common areas,

and a social recreation space. Consideration is being made for ventilation, access and egress, heating and cooling, laundry, storage, and administration. It is BGM's intention that the new Worker Accommodation at the MSC is designed and constructed in compliance with all relevant legislation and regulations, following best management practices, and with overall health and well being in mind.

Camp accommodation rooms at the new Worker Accommodation at the MSC will range in size from approximately 11–15 m² of floor space. Rooms will be equipped with single beds, toilet, sink, shower, lighting, individual and secure dry storage, and a small table and chair. Each room will be self-contained and equipped with its own washroom facilities.

In addition, the new worker accommodation space will also include administrative office space for BGM, laundry room, conference and training room, and exercise and change rooms. The MSC will also be equipped with a Mine Dry consisting of segregated clean and dirty sides, as well as shower and laundry facilities. The building will be heated and ventilated to allow clothing to dry.

2.1.2 QR Mill Camp

Existing accommodation, kitchen, and lunchroom facilities at the QR Mill will be used during the Construction Phase of the Project, and will be sufficient to accommodate workers, with capacity for up to 75 individuals. The QR Mill includes a fully equipped Mine Dry and sanitary conveniences suitable for site personnel.

2.1.3 Other Camp Accommodation

BGM owns various lodging facilities near the MSC, including the existing Ballarat exploration camp, with a current 76-room capacity and an up to 228-room capacity. The Ballarat Camp will be used during the Construction Phase of the Project, and includes a kitchen, dining room, gym, and workout space, and Mine Dry containing necessary sanitary conveniences. This camp will remain during Operations as a contingency only to manage potential increases in the numbers of workers on site. A lunchroom and sanitary conveniences will remain on the Bonanza Ledge site during Operations for the WTP and waste rock-handling personnel.

In addition to the Ballarat Camp, BGM owns the Hubs Motel in Wells, as well as various houses and apartments. Between the Hubs Motel and other BGM-owned accommodation in the community of Wells, there is capacity for up to 50 individuals. BGM employees and contract staff not residing in camp facilities will continue to access food services and other wellness infrastructure provided at the MSC.

2.1.4 Employee Accommodation Strategy

BGM is interested in employing residents from the local area, including from the community of Wells, and the City of Quesnel, during the Construction and Operations Phases of the Project, and will work with local communities to discuss local hiring policies and supports. Given that the

workforce requirements are up to twice the population of the District of Wells, many workers will have to come from outside the local area. Employees not local to the area (from Wells or Quesnel) or employees and employee contractors working on a 14 days on/14 days off roster will be provided with accommodation in the new Worker Accommodation at the MSC, and at the QR Mill accommodation. To prevent the renting of local accommodation options by its direct employees during Construction and Operations, BGM will ensure there is sufficient capacity at the on-site Worker Accommodation or BGM-owned lodging for the duration of the Project.

BGM's objective is to source 75% of the Construction and Operations workforce for the Project, from the CRD region as well as from the Fraser-Fort George Regional District (FFGRD), and will prioritize qualified, local, residents first, then qualified regional residents, and lastly qualified workers from outside these areas to meet this commitment.

To meet the 75% local hiring objective, BGM is implementing a multi-channel recruitment strategy. In addition to hosting open houses and job fairs, BGM will communicate employment opportunities through the Project website, newsletters, social media, email distribution lists, and postings in local and regional newspapers and at employment centres. BGM will also work with Participating Indigenous Nations to circulate job postings through community-specific communication channels.

BGM has partnered with the Amata Transition House Society and other community organizations to support recruitment from underrepresented groups. Through these partnerships, BGM will seek guidance on additional outreach methods and tailored recruitment strategies to enhance workforce diversity and support local hiring. ODV's Sustainable Workforce Initiative (SWI), in collaboration with local training institutions and employment agencies, will further support the preparation of residents for project-related employment opportunities.

As the Project workforce fluctuates, and camp occupancy reflects this, BGM will notify the NHA, and the Wells and Quesnel Unit Chiefs of the BC Ambulance Service as per EAC #M23-01 Condition 16.3.

BGM will coordinate pickup locations in Quesnel, the Prince George airport or Wells and shuttle workers to and from the MSC or the QR Mill. A small proportion of the locally residing workforce may use personal transportation to arrive for their shifts; BGM will provide sufficient parking to accommodate those that drive personal vehicles to the site.

Existing and in-development BGM policies captured in Sections 1.4.5 and 3.3.3 of this HMSMP will continue to apply to the Project workforce, including employees, contract employees and others undertaking work on behalf of BGM, who are utilizing Worker Accommodation for the Project.

2.2 Sanitary Facilities

2.2.1 Mine Site Complex

The existing Ballarat Camp near the location of the MSC includes a Mine Dry with necessary sanitary conveniences. The camp has sufficient shower and restroom facilities for its 76-person capacity which can be expanded for up to a 228-person capacity.

Existing Camps A and B in Wells include the necessary sanitary conveniences, as does the Bonanza Ledge site.

As part of the new Services Building at the MSC, a new Mine Dry will be constructed, along with a Mine Rescue Services space. This new Mine Dry will consist of segregated clean and dirty sides, as well as shower and laundry facilities. The building will be heated and ventilated to allow for clothing to dry suitably.

2.2.2 QR Mill

The main entrance to the Mill at the QR Mill site contains a fully equipped Mine Dry suitable for site personnel, including laundry facility, showers and washrooms, lockers for clean clothes, as well as space for soiled clothing/uniforms and boots. Facilities also include sufficient ventilation, heating, and space to dry wet boots, as required.

2.2.3 Additional Accommodation

Additional BGM-owned accommodation in the community of Wells, including the Hubs Motel, apartments and houses are all equipped with typical motel or house bathroom facilities, with either showers and/or bathtubs and toilets, appropriate for the capacity of the lodging.

2.3 Laundry Services

The new Worker Accommodation at the MSC will include a laundry room, for use by Project employees and contract employees.

Additional laundry services for housekeeping, kitchen and catering, and any administration laundry needs will be met by the contract service provider undertaking housekeeping. BGM will liaise with this service provider to adapt services as needed to ensure hygiene and compliance with required permits and requirements.

2.4 Drinking Water Systems

The District of Wells sources its water from a single groundwater well, and there are several capacity, age, infrastructure and other challenges with the existing system. The current water system was found to be operating at or above capacity and cannot accommodate additional demand. BGM has committed to working with the District of Wells to upgrade existing water and sewer systems, and source a clean, sustainable source of potable water for the community.

As per Condition 18 of EAC #M23-01, BGM must develop a Drinking Water and Water Treatment Plan. This plan will include details on BGM's plans for the provision of potable water including:

- Description of the approach for identification and development of a drinking water supply source for the District of Wells and the MSC;
- Expected permitting and licencing of a new drinking water supply;
- Any holding tank storage required for potable water and associated capacity;
- Details on the distribution system;
- Sampling schedule;
- Quality and quantity of the water sources for the Project;
- Location of the potable water sources in related to potential sources of contamination; and
- Groundwater quality reporting.

2.4.1 Mine Site Complex

Potable water use at the MSC will be sourced from a newly drilled underground well, at a yet to be finalized location. Options for the potable water source will be assessed to evaluate the most appropriate source of drinking water for the MSC. This new well will be separate from the District of Wells water source, and will be permitted with a source approval, construction permit, and permit to operate a drinking water system from the NHA. BGM will be utilizing a potable WTP to ensure the capacity and quality of water will be sufficient to meet the domestic Maximum Day Demand of the Worker Accommodation (90 m³/day) and the Services Building's needs.

2.4.2 QR Mill

Existing potable water systems at the QR Mill will remain in place for the duration of the Project. Potable water at the QR Mill is sourced from a shallow underground well located 200 m northwest of the Filtered Stack Tailings Storage Facility. Both potable and non-potable water use for the Accommodations and office combined will be up to 24 m³/day sourced from the existing groundwater well and treated on-site at the QR Mill WTP. Sampling of the QR Mill for Total Coliform and E-Coli occurs monthly at the QR Mill, with samples sent to NH for testing.

A source approval and permit to operate a drinking water system will be obtained for the potable water system at the QR Mill, prior to operation.

2.4.3 Potable Water Testing Protocols

BGM will ensure that potable water testing protocols are undertaken following NHA requirements. Relevant BGM employees from the Environmental Department, or third-party contractors operating the Project's potable WTP will be well versed in the monitoring, sampling, and reporting

requirements associated with the Drinking Water and Treatment Plan and operation of any Project potable WTPs.

Any new water supplies utilized for the Project will require a Waterworks Operating Permit, which will come with associated NHA reporting requirements. The operator of the any new waterworks system will be responsible to undertake reporting requirements, and to adhere to any water quality sampling and reporting requirements detailed in the Waterworks Operating Permit(s) associated with potable water sources.

2.5 Food Services

Food services for the Project will be provided by a contracted catering or food services provider, who will also be responsible to hold the relevant operational permits related to food service, or operation of a food service facility, as required.

The food services contractor for the Project will prioritize the safety and health of all camp employees and contractors, and others residing at Project camp accommodations. It will be the responsibility of the food services contractor to provide and maintain a safe and healthy work environment while adhering to legislative (municipal, provincial, and federal) requirements, with BGM's support. The food services contractor will be responsible to ensure compliance with the Food Premises Regulation under the *Public Health Act*, and secure appropriate NHA permits to operate.

Propane is used to fuel the stoves and ovens at each of the existing camps and will be used for the new Worker Accommodation kitchen at the MSC during Operations.

The food services contractor will secure the necessary food service and industrial kitchen permits required through the NHA and will incorporate hygiene and safety systems into day-to-day operating practices. Every employee will be required to have Food Safe Certification and follow a food safety plan. A pest management and control company currently visits the existing camps and associated kitchens on a monthly basis and will continue to provide these services for the new Worker Accommodation at the MSC.

Food services contractors will be required to abide by industry accepted standard operating procedures around the following:

- Sanitizing and Disinfecting;
- Thawing foods;
- Personal hygiene;
- Hand washing;
- Cooking, holding, cooling and reheating foods; and

- Health reporting.

The full-service kitchen and dining room at the MSC is planned to be on the same site as the Services Building, and adjacent to the Worker Accommodation and offices. This kitchen and dining room facility will be equipped with sufficient restroom facilities to meet capacity and utilization requirements of the space, with sufficient egress and access for the safe movement of people in and through the facility.

2.6 Waste Disposal Systems

The waste management approach for the Project centres around practicing effective and environmentally sound waste handling and disposal methods. Solid waste management for the Project will be balanced through the minimization of waste generation, recycling of solid waste materials as practicable, reusing, and finally, disposal through off-site shipping.

BGM will ensure, through regular monitoring inspections, that all connections to sanitary sewers and storm water systems, and all on-site septic sewage disposal systems, are operated in compliance with applicable legislation and regulations of all authorities having jurisdiction, and with permits or approvals issued to BGM for the operations of such facilities.

2.6.1 Liquid Waste and Blackwater Management

A sewage and septic handling system will be located near the new Worker Accommodation at the MSC, with capacity to support the 200-person camp and be independent of the Wells sewage system. The treatment system will be located adjacent to the accommodation pad and will be built in compliance with the Municipal Wastewater Regulation (2012).

Wastewater from the kitchen/dining/recreation facility will pass through a grease trap prior to storage for settling, and subsequent release to the disposal fields.

The existing septic system at the QR Mill is under review, with upgrades planned for the sewage and septic handling system near the existing QR Mill accommodation facilities.

2.6.2 Solid Waste Management

BGM will not dump, burn, or allow others undertaking work on the Company's behalf to dump or burn garbage, or any other wastes, except in accordance with burn permits or other authorizations as may be obtained. BGM will arrange for disposal of all solid wastes including recyclable materials at permitted or approved local facilities, in compliance with applicable legislation and regulations of all authorities having jurisdiction.

All food wastes will be stored and disposed of in a manner that does not attract nuisance animals. Food waste from all work and access areas will be collected and placed in an appropriate receptacle daily. These collected food wastes are to be removed from the workplace at the end

of every shift and brought to centralized waste handling facilities at the BGM offices or taken directly for disposal at suitable facilities.

2.7 Other Facilities

2.7.1 On-Site Recreation Infrastructure

Recreation infrastructure at the MSC will include a gym, common area and game space, and media room. Current plans for the gym/work out space are in development, with plans for recreation and exercise machinery to be determined closer to Construction. The recreation room at the MSC will be located near the administration/office space and the new Worker Accommodation.

2.7.2 Outdoor Recreation

The Project is in an area of the CRD that is both remote and peaceful, and close to many outdoor recreation opportunities. BGM recognizes the value outdoor recreation to overall employee health and wellness and employees and contract staff are encouraged to safely partake in non-motorized outdoor recreation opportunities, including hiking, mountain biking, walking, cross country skiing in-season, and the like.

However, BGM's Recreational Land Use Policy and Training prohibits personnel from hunting and fishing within the Project footprint, and strongly discourages non-local employees from engaging in recreational hunting and fishing, and ATV and snowmobile use during their off-duty times during their rotation shift. This policy also applies to non-local employees while commuting to and from the Project sites.

2.7.3 On-Site Wellness Infrastructure

Positive health outcomes are important to BGM, as is mitigating impacts to health and medical services and infrastructure provided by the NHA. BGM recognizes that health is holistic, and can refer to spiritual, cultural, and mental aspects in conjunction with the physical. As such, wellness infrastructure will meet the needs of the Project workforce. Communal, quiet, and social spaces will be part of wellness infrastructure, and will consider spaces where employees can congregate, or where employees can connect with family members.

2.8 Health Services

BGM commits to the health and wellness of its employees and contract employees and recognizes that the remote location and rotational work associated with the Project require well-established health and safety procedures that address physical, mental, cultural, and spiritual health and wellness, to mitigate potential effects because of the type and location of the work.

BGM is committed to minimizing impacts to local non-urgent health care in the NHA area, and to continually improve on-site health service delivery to provide adaptive, high-quality occupational

illness prevention, high quality non-urgent care and health education, and to meet the general and primary care needs of its workforce.

BGM recognizes that rotational and shift work can also have an impact on family members of those undertaking that type of work and is committed to the provision of health and medical services to alleviate these impacts. Family members of employees, (as defined by BGM's benefits provider) have access to health benefits through BGM's benefits provider, including mental health supports and counselling.

BGM will develop and run health and medical services related to the Project in a self-sufficient manner, but recognizes that should care be warranted beyond what is practicable through the in-house medical team, BGM will collaborate with the NHA and BC Ambulance Service/BC Emergency Health Services to ensure effective transfer and provision of care.

2.8.1 Personnel

BGM will ensure sufficient health and safety staff, including OFA attendants are working for each shift, in alignment with requirements in the *Health, Safety and Reclamation Code for Mines in BC*, and WorkSafeBC Occupational Health and Safety Regulations. BGM wants to prevent any impacts to NHA services and infrastructure and will hire or train additional OFA attendants to meet the needs of its Project workforce and in alignment with the Occupational Health and Safety Regulation. Additionally, the contracted health and medical service provider and associated physician will also mitigate any impacts to Northern Health service.

Currently, BGM has 8 Level 3 or Advanced OFA attendants employed, and various other employees with lower levels of occupational and standard first aid. Currently, 4 first aid attendants have the Transportation Endorsement (TE) required for patient transport. These numbers continually change as tickets expire and are renewed, however BGM always ensures the provision of trained first aid attendants satisfies WorkSafeBC regulation requirements.

WorkSafeBC amended the Occupational Health and Safety Regulation, and developed a self-assessment procedure for sites based on work undertaken and location. The Project is classified as having a 'high' hazard rating because underground mining will be undertaken. Given its proximity to a BC Ambulance station (less than 30 minutes) it is considered 'not remote' however is considered 'less accessible.' Given these classifications, the following OFA minimum standards are required.

Table 2.8-1: Occupational First Aid Kit and Attendant Minimum Requirements- High Hazard Rating- Underground Mining

Number of Workers per Shift	Level of First Aid Certificate and Number of Attendants Required
2-9	- Intermediate first aid kit - Intermediate first aid attendant (transport)

Number of Workers per Shift	Level of First Aid Certificate and Number of Attendants Required
10-19	• Advanced first aid kit • Basic first aid attendant (transport) • Advanced first aid attendant
20-49	• Advanced first aid kit • Dressing station • Basic first aid attendant (transport) • Advanced first aid attendant
50-99	• Advanced first aid kit • First aid room • Intermediate first aid attendant (transport) • Advanced first aid attendant
100-199	• Advanced first aid kit • First aid room • 2 advanced first aid attendants
200-499	• Advanced first aid kit • First aid room • Intermediate first aid attendant (transport) • 2 advanced first aid attendants
500 or more	• Advanced first aid kit • First aid room • 2 Intermediate first aid attendant (transport) • 2 advanced first aid attendants

Source: Occupation Health and Safety Regulation, Table 3-3 (

Should a patient require healthcare or medical assistance outside of the scope of practice of BGM's Health and Safety Department and OFA attendants, employees will first be directed to their home healthcare provider, virtual options and BGM's consulting physician, or to NHA services, depending on urgency and assistance required.

BGM will ensure that its health, safety, and first aid employees are versed in managing rural, non-urgent health care needs of a typical industrial camp population and are also well versed in emergency management and responsive critical care, and occupational illness prevention.

All employees and workers are expected to undertake their work safely, adhere to the company's health and safety policies and procedures, identify any hazards or issues related to health and wellness during daily toolbox meetings or through other existing communication avenues, and generally promote a work culture built on respect, that champions health and safety.

2.8.2 Infrastructure

BGM will continue to use the existing First Aid room located adjacent to the main office, and the First Aid room at the QR Mill site. This First Aid room at the MSC will be considered the primary health and first aid facility for the Project, with supplemental and site-specific first aid provided at the QR Mill mine office. There is also a helipad at the QR Mill site, should emergency heli-vac be required.

The Health and Safety Department, OFA attendants, and other employees as relevant will continue to have access to the current first aid facilities associated with existing components, and at the QR Mill. The capacity and functionality of these facilities will be adapted in response to the Project workforce, and in compliance with requirements in the Occupational Health and Safety Regulation which indicates the capacity and first aid room requirements for projects based on workforce size and location (see Table 2.8-1 above).

The First Aid room at the MSC will meet or exceed all WorkSafeBC regulations in terms of contents including an Advanced First Aid kit and will be at a minimum, 9.3m². In addition to the basic requirements of storage cupboards, a counter, and restroom facility with running hot and cold water, the First Aid room at the MSC will include space for trauma management, observation, and space to monitor a patient overnight, should patient transport not be possible under extenuating circumstances.

The first aid room will be equipped with the appropriate "Point of Care" tests to help guide treatment decisions. First Aid and medical attendants will be trained accordingly.

The First Aid room at the MSC will be equipped to address a variety of common ailments and will be stocked with a wide array of non-prescription medications to manage common non-occupational illnesses, such as colds, flus, coughs, Plan B®, local skin infections and rashes, and the like. Part of the management of these common non-occupational illnesses will include tracking on the numbers and types of visits to the clinic, to adapt the medication supply, and ensure continuity of care. Sharps containers will be in lavatories site wide, as well as in the Mine Dry, and first aid spaces at the MSC and QR Mill. First aid supplies will be replenished as used, and will be sufficiently stocked to be able to respond to a communicable disease outbreak, mass casualty event, or other first aid emergency. The contents of the site first aid kits will be compliant with WorkSafeBC requirements as per the Occupational Health and Safety Regulation for workforce size.

2.8.3 On-Site Health and Medical Services

BGM's health, safety, and first aid team, will act as "physician extenders" in collaboration with the contracted health and medical services company and associated physician for the provision of primary and non-urgent care

2.8.3.1 Non-Urgent Care Demands

BGM seeks to minimize the burden on local health care services by managing non-urgent, non-emergency, and chronic conditions. The Level 3 or Advanced OFAs are equipped with the skills to manage complex medical and trauma emergencies, perform thorough patient assessments, and provide extended care until further medical assistance is available.

Employees with chronic conditions requiring prescribable medications or items will be expected to bring sufficient supply with them for their work rotation or expected time away from their home. If an employee requires a prescription renewal or additional prescribed medication, virtual mechanisms will be utilized until the employee is able to secure an appointment or prescription renewal with their home health care provider. Additionally, the contracted health and medical services company will be able to provide physician consultations to employees and their families when residing locally, during all phases of the Project.

The Health and Safety Department and BGM's OFA attendants will be knowledgeable about common chronic conditions, how they can present, on-site management strategies to support any employee navigating these conditions, and when care or management should be delegated to a higher level of care. Decision making and referrals to a higher level of care are key responsibilities of any OFA attendant, and part of all training for OFA.

Chronic conditions that can be co-managed between employees with chronic conditions and BGM's Health and Safety Department will include, but not be limited to, the following:

- Asthma and COPD;
- Diabetes;
- High blood pressure or hypertension;
- Depression and anxiety;
- Bone diseases;
- Kidney disease;
- Osteoarthritis/arthritis; and
- Gout.

BGM employees working on the Project are expected to be capable to manage their chronic conditions, bringing with them any supplies required while away from a home health care provider, and to notify the health, safety and first aid team of any potential needs or supports required while working on the Project. These expectations will be shared with employees as part of onboarding and orientation, ensuring personnel are aware of their responsibility for the provision of chronic condition management prior to arrival at the Project.

When an employee notifies the on-site health, safety and first aid team of a chronic condition not included here or not within the scope of the team, BGM's team will support the employee to liaise with their home health care provider or the contracted health and medical services provider for the Project. Additional support can include, but is not limited to, provision of space or technology to connect, coordination of schedules to speak with the health care provider during regular working hours, ergonomic or sensory adjustments, temporary modification of tasks/duties, and/or other flexible work arrangements.

2.8.3.2 Health, Safety, and First Aid Areas of Practice

The following will be within the scope of treatment and care for the in-house health, safety and first aid team:

- Treatment and care of illnesses, occupational injuries, and other issues treated with over-the-counter medications;
- Wound care;
- Sprains;
- Minor burns;
- Treatments outlined in Schedule 2 of the Emergency Medical Assistants Regulations under the Emergency Medical Assistant First Responder license category;
- Treatments outlined in the NNPBC (Nurses and Nurse Practitioners of BC) Decision Support Tools;
- COVID 19 and flu vaccination;
- Treatment and prevention of Sexually Transmitted Infections (STI);
- Sutures;
- Treatment for conditions requiring initial pain management such as lower back, musculoskeletal, overuse injuries and dental pain.
- Simple foreign body removal/lancing of abscesses/wound management;
- Short-term observation of various conditions such as minor head injuries, abdominal pain, or asthma exacerbation;
- Return to Work tele-physio facilitation;
- Lead or heavy metal testing;
- Urinary tract infections;
- Stomach pain; and

- Headaches and earaches.

This scope of practice can be adapted following the provision of care and documentation of common illnesses or issues, and a more thorough understanding of the Project workforce demographics, once established. Once 75% of the workforce for Construction (approximately 205 individuals) has been hired, the on-site health, safety and first aid department will collaborate with the contracted health and medical service provider to assess if the scope of practice requires adaptation, or if additional training of BGM personnel is required to meet the health and medical needs of the workforce.

It should be noted that some areas of care will be outside the scope of practice for the on-site medical team, including, but not limited to the following:

- Individuals requiring laboratory or radiological work;
- Individuals requiring prolonged observation or hospitalization;
- Those requiring embedded foreign body removal from the eye, and/or complex wound repair or care; and
- Fracture management.

2.8.4 Mental Health

The BGM health, safety, and first aid team will be well-versed in mental health issues, especially specific to resource extraction projects, rural and remote work, camp life, and shift work. While BGM strives to provide a healthy working environment for its workforce, it recognizes that employees and their families, residing locally while the employee is on shift, may require assistance in managing mental health issues.

BGM's health and medical team, along with management will collaborate with the NHA and BGM's Employee Assistance Provider (EAP) to distribute relevant educational materials that support mental health and wellness, especially as it pertains to camp life, remote living, and shift work.

BGM employees enrolled in the company's benefits package, and their immediate family members, have access to counselling. Though the BGM EAP, employees and immediate family members can receive counselling to address the following:

- Sleep issues;
- Career and financial planning;
- Weight loss;
- Smoking cessation supports;
- Life balance and family supports;

- New parent support;
- Transition planning;
- Relationship and couples supports; and
- Shift worker support.

On-site contractors will be responsible to have their own employee assistance programs, however, will have access to BGM's on-site wellness facilities and infrastructure.

BGM has policies and programs around inclusive employment that include commitments to creating a work environment where each employee is respected, feels safe, recognized, and valued at work. In addition, BGM has an anti-bullying and harassment policy which must be signed by all employees upon orientation. This policy outlines that there is zero-tolerance for sexual harassment, racial or national-origin harassment, any forms of harassment based on gender, race, colour, religion, age, national origin, disability or sexual orientation, and retaliation against anyone for making a good-faith complaint of such harassment or for cooperating in investigations of such complaints. BGM's Code of Ethics requires that all employees, contractors, and consultants comply with the principles within, including a non-discriminatory environment, harassment-free workplace, and workplace violence.

A respectful and positive camp environment will be promoted during daily toolbox meetings, upon hiring of new employees, as part of orientation for contractors, and woven into other company-wise programs. BGM will utilize its existing and in development policies and programs (i.e. Anti-bullying and Harassment, Inclusive Employment, Code of Ethics, Open Door, Cultural Awareness Training) to foster a safe, efficient, healthy work culture that avoids avoid social isolation, and the potential for increased drug and alcohol use, and decreased mental health and wellness.

2.8.5 Substance Use Disorders

The BGM health, safety and first aid staff will be well versed in the specific mental health and substance use issues relevant to camp life, shift work, and fly-in, fly-out scenarios. Recognizing the interrelationship between mental wellness and substance use is a key component of BGM's approach to camp management and overall employee health. NHA guidance explains that industrial camp environments (demographics, work shifts, working away from home environments) can be conducive to developing substance use disorders and dependencies. The NHA guidance presents a harm reduction approach, and BGM will use holistic wellness promotion as BGM's first level of substance use deterrence, which supports harm reduction through prevention. A Project-wide approach to health that includes the mental, physical, spiritual, and cultural wellness of the workforce will support better health outcomes overall. Educational materials relevant to substance use, and substance use disorders will be available from the MSC First Aid room and QR Mill First Aid space, with additional materials posted in high-traffic areas.

The BGM Drug and Alcohol Policy sets forth expectations and requirements regarding the maintenance of a safe, substance-free work environment to protect employee health and safety. BGM camps are “dry camps” meaning that the possession or consumption of alcohol, marijuana, illicit drugs, or the misuse of prescription or “over-the-counter” drugs is strictly prohibited on BGM premises and work sites. All camp and accommodation areas are recognized as BGM/work sites. All personnel sign the Drug and Alcohol Policy upon employee orientation or at site orientation.

BGM recognizes that the misuse of these substances can also negatively impact other employees, customers, and the community. The Drug and Alcohol Policy contains components pertaining to being “fit for work,” training to recognize the signs and symptoms of drug and alcohol use or substance use disorders, guidance on referral and self-help programs, and company supports and approaches to breaches of the policy. The Drug and Alcohol Policy is included as Appendix A to this document.

Each employee has a personal responsibility to themselves, other employees, and BGM, to help eliminate drug and alcohol misuse. Alcohol or drug dependency is a preventable and treatable condition, and early intervention greatly improves the probability of lasting recovery.

All first aid kits at the Project will include Naloxone™ or Narcan™, and all those with any level of first aid certification will be well versed in identifying the signs of opioid overdose and in administration of opioid antagonists. Educational materials related to opioid use, overdose, and the administration of Naloxone™ or Narcan™ will be available from the First Aid Room at the MSC and QR Mill. Safety shares as part of daily toolbox meetings, or other workplace safety education will include reference and discussion of opioid overdose signs and symptoms, inclusion of Naloxone™ or Narcan™ in Project first aid kits, and directions to first aid kits in proximity to work areas.

BGM will provide confidential access to harm reduction supplies through its in-house health, safety and first aid team. Through the same avenue, employees with substance use issues will be encouraged to seek help confidentially and made aware of supports available through BGM’s EAP (i.e., voluntary self-referral, family supports, sickness and disability benefits).

BGM is aware that impairment in the workplace is best detected by direct observation of behaviour and other physical indicators. In addition to health, safety and first aid staff, the management team, supervisors, and team leads will be educated on how to detect impairment from substances and be aware that BGM has a duty to investigate and promptly implement reasonable safety precautions. It is also the responsibility of the management team, supervisors, and team leads to ensure all workers in their area of responsibility understand and comply with BGM’s Drug and Alcohol Policy.

2.8.6 Sexual Health

Guidance documents from NHA explain that industrial camp environments can lead to poor sexual health choices similar to their conduciveness to contributing to mental health and substance use disorders. Given this, BGM is committed to ensuring the Project workforce has access to sexual health care services and education.

BGM will seek to ensure that their health, safety, and first aid team are trained to offer relevant sexual health supports on-site, including:

- STI treatment;
- Dispensing of Plan B®;
- Provision of safe sex educational materials;
- Adaptation of educational needs to the camp community and workforce composition;
- Direct employees to the EAP mechanism as appropriate; and
- Support for coordination with employees' home health care providers as required.

Should a patient have a potential STI, or sexual health issue outside of the scope of BGM's health, safety and first aid team, they will be offered available on-site supports, and be referred to virtual, telehealth, BGM's contracted health and medical services provider (i.e., consulting physician, nurse practitioner), or home health care provider options.

As is the case with all health and wellness provision for the Project, the health, safety and first aid team will focus on discretion, privacy, and confidentiality of its patients. Following NHA guidance, and recognizing that real or perceived concerns for discretion, privacy and confidentiality can hinder employees using or accessing on-site health care services, BGM will maintain strict standards around privacy and confidentiality; especially as they pertain to STI screening, mental health, harm reduction supplies, and substance use disorder and supports. Some sexual health harm reduction supplies will be available around camp in discreet locations.

2.8.7 Diagnostics

BGM has considered the potential diagnostic needs of its current and future workforce through all phases of the Project and recognizes the need to provide some on-site diagnostic services, in order to minimize impacts to NHA service provision, proactively manage potential communicable diseases and health issues, and promote the overall health of its workers.

The on-site First Aid room will be equipped with the necessary diagnostic tools within the scope of practice of the on-site health, safety and first aid team. This will include, but not be limited to thermometers, blood pressure monitor, stethoscopes, pulse oximeter, COVID-19 rapid tests, and an Automated External Defibrillator.,

BGM maintains a relationship with vendors in Quesnel that manage blood and urine sampling associated with current workplace health monitoring. BGM will continue to utilize these vendors to provide diagnostic testing or laboratory screening within their areas of service if an employee requires those services.

If any further diagnostic testing or screening is required outside of what BGM undertakes through vendors in Quesnel, employees will be directed to their home health care provider. If it is determined, through consultation with the BGM health, safety and first aid team, or through consultation with the contracted medical services provider that diagnostic testing or laboratory screening is more urgent or time sensitive and should be undertaken as soon as possible, NHA services in Quesnel or Prince George will be recommended as the subsequent option. This determination will be made on a case-by-case basis.

It has been determined that an on-site x-ray facility is not plausible for the Project, given the extensive requirements of accreditation for non-hospital facilities by the College of Physicians and Surgeons of British Columbia.

In addition, as part of its OHS program, BGM established a Medical Surveillance Program to protect employees and other persons from undue risks arising out of, or in their connection to activities at mines. The program includes audiometric testing by a WorkSafeBC-approved mobile industrial audiometric business, lead testing, and respiratory testing. BGM is working with the Quesnel Medical Clinic and G.R. Baker Memorial Hospital in Quesnel for its Pulmonary Testing and X-ray Program.

2.8.8 Culturally Safe Care

Given the location of the Project in the asserted traditional territories of three Indigenous Nations, BGM's relationships with the Participating Indigenous nations affiliated with the Project, and the company's commitment to inclusive, respectful, and positive work environments, culturally safe care will be a requirement of all health, medical, and wellness programs and services offered at the Project site.

All employees are required to take Community Ambassador Training to understand BGM's expectations around company policies and professional behaviour. BGM is developing a Cultural Training and Awareness Program and Policy that will be in place prior to the Construction Phase of the Project. This program and policy will be developed and implemented in collaboration with the Participating Indigenous nations for the Project. Cultural Training and Awareness will be mandatory training for all BGM employees and will include information on relevant themes and issues as they pertain to the history, diversity, and distinctions among Indigenous communities in the communities where BGM operates.

The FNHA promotes awareness of the First Nations perspective on health that considers the mental, emotional, spiritual, and physical health of individuals, families, the land, communities,

and Nations. The perspective is centred on the values of respect, wisdom, responsibility, and relationships all through a lens of humility. This approach and understanding of First Nations values will be considered when providing health or medical care to any BGM employee that identifies as Indigenous.

The Project health, safety and first aid team will consider the application and use of Indigenous Knowledge, and will be willing to blend western science-based medical services with Indigenous forms of medicine and health promotion for those that desire it. This could include the use of smudging, time off to participate in cultural or spiritual activities (i.e., sweats, culture camp, funerals) and recognition of other forms of medicine from a traditional perspective.

2.8.9 Care for Distinct Populations

BGM is committed to providing employment opportunities for traditionally underrepresented groups within the mining sector, including women, Indigenous peoples, and people with disabilities. BGM has partnered with the Amata Transition House Society in Quesnel, and other community organizations to support recruitment from underrepresented groups. Through these partnerships, BGM will seek guidance on additional outreach methods and tailored recruitment strategies to enhance workforce diversity and support local hiring.

This is set to be in place in time for the Project hiring process.

Given that BGM's approach to health and safety provides a work environment that protects all employees and other personnel, and that all workers should be able to undertake their work responsibilities free from harassment based on any distinctions, BGM will ensure the health, safety and first aid team are aware of any particular health care requirements for members of distinct populations employed on the Project.

Staff are encouraged to discuss employment-related concerns, questions, or suggestions with any member of Management or Human Resources.

Appropriate and effective health, medical, and wellness services will be provided for members of distinct populations employed on the Project, with these services determined in collaboration with any employee identifying as a distinct population. An internal and anonymous communication mechanism will be developed prior to the Construction Phase of the Project allowing employees to discreetly request particular health, medical, and/or wellness services that can be provided on-site in support of distinct populations, or those with diverse needs.

2.8.10 Bridging with Other Health Providers and Northern Health

BGM is aware that NHA funding is based on population size, and that temporary resident populations such as those in industrial camps are not accounted for in funding allocations for the provision of health and medical services. BGM recognizes this and will prevent impacts to NHA facilities and services by addressing non-urgent illnesses and injuries utilizing the in-house health

and safety team, the contracted medical services provider, or by referring these individuals back to their home communities for treatment.

In addition, BGM wants to hire 75% of the Project workforce from areas that are within the NHA service area. Prior to construction, when 70% or 191 individuals of the planned Construction workforce have been hired, this proportion will be assessed to determine if the target 75% deriving from the NHA area is projected to be met by the time 100% of the workforce for construction (273 individuals at peak Construction) have been hired/contracted. If at this point, when there are optics on 70% of the Construction workforce, and the 75% of that workforce are not from the NHA region, this HMSMP will be updated accordingly to prevent impacts to NHA service provision.

BGM has also considered that if new hires or employees and their families move to the NHA service area, they will contribute tax revenues, population numbers used to calculate NHA funding allocations, and will be considered contributing residents of the region.

The current condition of the medical system in BC is such that many individuals lack a family doctor or primary care provider. For employees or workers where this is the case, telehealth and virtual clinics will be suggested, including physician appointments through BGM's contracted health and medical services provider.

BGM's health, safety and first aid team will support employees and workers without a primary care provider, however there may be instances where support will not be possible due to scheduling, the severity of the particular medical issue (i.e., outside the scope of practice of BGM's health, safety and first aid team), or other extenuating circumstances. BGM's in-house health, safety and first aid team will collaborate with the employee and the BGM-contracted health and medical services provider to find a functional solution.

These functional solutions may include, but are not limited to the following:

- Work rotation or schedule accommodations to attend an appointment with BGM's consulting physician or other virtual healthcare provider,
- Allowing for time off to attend a walk-in clinic, or urgent and primary care facility
- Support for various virtual health care or specialist appointments through the EAP.
- Flexible requirements and reasonable accommodations related to doctor's notes and return-to-work assessments.
- Support for sick leave or leaves of absence; and
- Use of BGM's consulting physician through the contracted health and safety provider for the provision of prescription refills and specialist referrals.

In addition to the components of primary care to be provided by BGM's health, safety, and first aid team presented in Sections 2.8.3.1 and 2.8.3.2, supplemental primary care outside of the purview of this on-site team will be supported by the contracted health and medical services provider and associated consulting physician. The health and medical services provider will also support in the development of functional solutions and physician-based treatment plans for any employees or their families without a primary care provider, with primary health care needs that can not be met by the on-site team. The consulting physician will also be able to refer individuals to specialists or other medical professionals. If this approach utilizing the on-site health, safety, and first aid team in collaboration with BGM's consulting physician does not result in a functional primary care solution, the individual will be referred to Quesnel's Urgent and Primary Care Clinic, or the G.R. Baker Emergency Ward.

2.8.11 Collaboration with BC Ambulance Service

BGM will maintain its existing relationship with BC Ambulance Service, Wells, for the provision of emergency care and patient transfer, outside of the capabilities of the Project health, safety and first aid team. BGM will continue to liaise with the Wells station of BC Ambulance Service regarding and patient transportation in emergency situations. BGM will develop a functional communication strategy with BC Ambulance Service as appropriate, prior to Project Construction.

2.8.12 Privacy and Confidentiality

The BGM health, safety and first aid team will maintain discretion, privacy, and the confidentiality of its patients. Following NHA guidance, and recognizing that real or perceived concerns for discretion, privacy and confidentiality can hinder employees using or accessing on-site health care services, BGM will maintain strict standards around privacy and confidentiality. Employee interactions with the health, safety and first aid team will always be private and confidential. Any notes are password protected and owned by the on-site team. Any paper records will be kept in a secure storage area. The BGM Human Resources Department will only be involved on a need-to-know basis, with information that is relevant to an employee's ability to perform their job, or any occupational-related illnesses or injuries.

BGM is committed to establishing a workplace of discretion as it relates to health and wellness services, including anonymized reporting mechanisms as necessary. BGM is not legally permitted to access any employee's medical records without their express written consent.

2.8.13 Management of Company Policy Requirements

Requirements of company policies will be manageable and implementable via on-site medical staff, and not require the resources of the NHA or emergency departments. Employees will be encouraged to use their primary care providers in their home communities to complete any required return to work approvals, sick notes, or otherwise, when beyond the scope of practice of the on-site team.

All workers, if off work because of injury or illness, will require a doctor's note if off-site because of injury or sickness for more than five days. A note will also be required if the injury or sickness affects a worker's ability to perform regular duties or may be aggravated by the performance of regular duties. BGM's consulting physician may be used to fulfill the need for a doctor's note in alignment with BGM policies.

2.9 Disease and Infection Prevention and Outbreak Protocols

The unique location of the Project right in the District of Wells, as well as the Project's 200-person Worker Accommodation camp pose unique challenges for disease and infection prevention, and outbreak management. BGM is aware that the close confines of living and working in an industrial camp setting can make disease, infection, and communicable illness management more challenging. The proximity of the Worker Accommodation to the community of Wells is also worth considering regarding communicable disease management and prevention, and notification protocols.

BGM will approach any communicable disease, infection, or outbreak occurrences through rapid response, to minimize likelihood of these occurrences through preventative control measures, educational initiatives on-site, and in the local community, and hygiene promotion.

Through administrative, behavioural, and environmental modifications, BGM seeks to avoid the transmission of communicable disease, and produce the following benefits:

- Minimizing the number of workers who become infected with a communicable disease;
- Minimizing potential impacts to neighbouring communities and the health care system;
- Creating an internal management system that public health can readily and efficiently support to quickly contain the spread of infection; and
- Minimizing potential lost productivity and expenses incurred by cases, clusters, and outbreaks of infectious disease.

2.9.1 Administrative Modifications

As per NHA guidance documents, BGM has developed management plans, policies, and procedures in support of disease and infection prevention, communicable disease management, and outbreak management.

The following BGM policies and programs are administrative supports for disease and infection prevention, and outbreak management for the Project:

- Communicable Disease Policy and Procedure (Appendix B; implemented and developed following NHA guidance):

- Guides how BGM makes decisions involving persons who have communicable diseases based on medical judgements concerning the disease;
- Risk of transmission management and response;
- Details the responsibilities and site requirements (behavioural modifications, monitoring requirements, PPE selection and use;
- Infection control and testing protocols;
- Isolation and quarantine details, including designated rooms for isolation, duration, and supports to those isolated; and
- Communicable Disease Risk Assessment Tool (Appendix A of the CDMP).
- Exposure Control Plan—Blood Borne Pathogens (Appendix C):
 - Management and controls for avenues of exposure, and protection mechanisms;
 - Exposure control steps;
 - Training and education; and
 - Record keeping and incident documentation.
- Site Specific Emergency Response Plan (SSERP; Appendix D):
 - Notification protocols and First Point of Contact for incidents;
 - Medical aid response protocols;
 - General safety and hygiene procedures;
 - Contact lists; and
 - Post-incident procedures.
- Occupational Health and Safety Management Plan (Appendix E)
 - Site rules and health and safety program details;
 - New and young worker orientation;
 - Risk assessment;
 - Health and safety objectives; and
 - Safety data sheets, and locations.

The health, safety and first aid team will be educated on the identification, diagnosis, and treatment of common illnesses in an industrial camp setting, including upper respiratory tract infections, noroviruses, influenza, and gastrointestinal infections. They will maintain vigilance for all reportable illnesses listed on the BCCDC website, and proactively manage infections on a case-by-case basis, as is appropriate.

Responsibility to report an outbreak to the NHA will fall to BGM's Health and Safety Manager, if a [reportable disease](#), as per the *Public Health Act, is suspected*. Outbreaks can be reported to the Regional Communicable Disease Hub:

- Via email: regionalCD.HubTeam@NorthernHealth.ca;
- Via telephone: 1-855-565-2990; or
- Outside of business hours, the Medical Health Officer On-Call: 1-250-565-2000, press 7 for switchboard.

The BGM Health and Safety Department and health, safety and first aid team members will communicate educational topics around disease, illness and outbreak prevention to management, supervisors, and team leads as relevant, for incorporation into new employee orientation, daily toolbox meetings, site-specific education and health promotion materials, and other future avenues of information sharing.

2.9.2 Behavioural Modifications

The design of the new Worker Accommodation for the MSC complex includes single dorm rooms, each with a private sink, toilet, and shower. Hand washing locations will be available throughout the Services Building, including in restroom facilities in the kitchen/dining room, recreation space, Mine Dry, office administration, and First Aid room. The existing camp at QR Mill is structured similarly, with private rooms with in-suite sinks, toilets, and showers.

Hand hygiene dispensers have been installed in strategic locations at Bonanza Ledge, Ballarat Camp, Camps A and B, the QR Mill camp and mill building, and will also be installed at the MSC and new Worker Accommodation. Locations will include the entrances and egresses, in the dining and lunchrooms, high traffic areas, Mine Dry, and first aid rooms.

Educational materials regarding handwashing, the transmission of communicable disease, and other health promotion materials will be posted in high-traffic, strategic locations such as the dining rooms and lunchrooms, recreation space, office administration and meeting rooms, and in the mine dispatch room and Mine Dry areas. Safety shares and daily toolbox meetings will incorporate communications and education on health practices to minimize the transmission of illness including hand washing, cough etiquette, balanced nutrition and healthy eating, adequate rest, stress management and mental health supports,

Coordination of phased or staggered mealtimes and shift changeover times will be undertaken to minimize large components of the workforce from interacting unnecessarily, should this be prudent. Should the requirement for social distancing arise (i.e., directives are announced by the Provincial Health Officer), BGM will assess existing practices and schedules to ensure efficacy.

Following the COVID-19 pandemic, and resultant protocols and awareness around communicable disease prevention, BGM is prepared to enact any useful measures to protect worker health and minimize infection. These could include:

- Use of three-layer fabric or surgical masks;
- Temperature checks and testing protocols prior to site access;
- Increased cleaning of high-traffic and frequently accessed areas;
- Isolation/quarantine protocols;
- The use of PPE; and
- Increased hand hygiene and cleaning protocols.

PPE will be available to site health, safety and first aid staff, housekeeping/laundry personnel, or other employees involved in outbreak management. Outbreak/illness PPE includes gloves, 3-ply medical or N95 masks, facial protection, eye protection (i.e., face shields, or masks with visor attachments), and respirators, as required. Three-ply face masks will be available to individuals with a cough, or other symptoms of a potential respiratory illness, to reduce the risk of disease/illness spread.

2.9.2.1 Outbreak Management Steps

The BGM health, safety and first aid team, along with the Health and Safety Manager will ensure the following are in place in the event of an outbreak:

- Outbreak prevention practices are undertaken by the Project workforce;
 - A designate from the Health and Safety Department will be responsible for contact with the NHA;
- Communicable disease and outbreak protocols will be included in education and awareness programs as part of the OHS program and ERPs.
- NHA contact information will be prominently displayed for communicable disease cases/outbreaks, and the NHA will be contacted within 24 hours of a suspected outbreak.
 - The definition and criteria of outbreak for communicable disease will be available, along with illness tracking for monitoring and communication to NHA.
- Steps outlined in the Communicable Disease Policy and Procedure will be followed, with direction from the BGM health, safety and first aid team;
- The on-site health, safety and first aid staff will maintain vigilance for all reportable illnesses listed on the *Health Act* Communicable Disease Regulation (7/2015, O.C. 14/2015) under the *Public Health Act*.

BGM will notify the District of Wells of any concerning communicable disease cases, or outbreaks, and will collaborate with the community should an outbreak occur within the public and local community.

2.9.3 Environmental Modifications

BGM has undertaken outbreak and illness prevention modifications at its existing sites, sites which are also part of the Project. These modifications have included increased access to, and availability of PPE, social distancing, and modified transportation protocols, increased access to hand hygiene and hand wash stations, and adapted cleaning and laundry protocols.

The new Worker Accommodation at the MSC will have adequate ventilation, including the option of engaging air purifiers, should the situation warrant it. Situations where air purifiers may be used include, but are not limited to the following:

- A communicable disease outbreak of a respiratory disease affects a sufficient proportion of the workforce to cause impacts to productivity;
- Infectious disease or pandemic protocols have been recommended by the provincial MHO, or the NHA.
- The air quality health index in proximity to the MSC and worker accommodation is in the 7-10 range and above (High to Very High)

Appropriate ventilation will be implemented across the Project, including the use of natural ventilation when possible.

During the COVID-19 pandemic, BGM implemented the concept of crew bubbles, limiting the size and frequency of interactions among employees and contractors. These protocols now exist and can be initiated when necessary. BGM, in conjunction with NHA, offered COVID-19 testing for Wells and surrounding area community members to aid in the identification of community-related cases. BGM will continue to offer this support for community testing, if a pandemic or infectious disease outbreak is declared and the District of Wells seeks this support.

Isolation protocols for infectious individuals have been developed as part of the Communicable Disease Policy and Procedure. Rooms in the BGM-owned Hubs Motel in Wells, as well as rooms at the QR Mill camp can be set aside as isolation rooms, in the event that a worker develops a reportable illnesses listed in the *Health Act* Communicable Disease Regulation. Similar isolation room designations will be made for the new Worker Accommodation at the Project MSC.

2.9.4 Risk Management for Communicable Diseases

BGM recognizes that communicable disease outbreak and infection are a workplace hazard that have the potential to impact local health services and capacity should they not be appropriately managed and controlled. Effective communicable disease risk management for the Project will entail the following four phases:

1. **Prevention and Mitigation:** This is ODVs normal state of operations, focusing on prevention through both behavioural (i.e., hand sanitizer availability, quarantine precautions) and environmental (i.e., healthy meal options, mental health management training and strategies) mechanisms. All personnel will participate in this phase, and it will be reinforced through onboarding and at daily toolbox meetings as appropriate.
2. **Preparedness:** ODVs health and medical services team, with support of their contract medical services provider, and the CDMT will facilitate education and the practice of outbreak procedures to ensure familiarity and ease of implementation, in the event of an actual communicable disease outbreak. The phase includes reviewing the CDMP, and ensuring quarantine and environmental prevention mechanisms function through practice and familiarity.
3. **Outbreak Response:** The Mine Manager, acting as the Executive Sponsor as part of the CDMT is responsible to ensure the pre-planned response is undertaken as intended. Appropriate practices and procedures, as outlined in the CDMP, are implemented, and BGM personnel are directed to occupy their assigned roles as part of the CDMT. The Mine Manager/Executive Sponsor is also responsible to communicate with the medical health officer of the NHA authority.
4. **Recovery:** Following an outbreak response, this phase marks the de-escalation and return to BGM's normal state of operations, and review. This phase includes a collaborative review of what occurred, and the CDMP's efficacy during the outbreak. Any weak points in the phases and execution of disease management should be identified in this phase.

2.10 Health and Wellness Promotion

BGM has a commitment to health and wellness that extends beyond physical safety and recognizes the challenges of promoting and supporting this commitment given the location and type of work undertaken by the company. Rotational shift work and industrial camp life require strategic and well-established health and safety procedures and programs to avoid negative health implications. Several elements comprise BGM's approach to health and wellness promotion.

2.10.1 Education and Prevention

BGM recognizes that education and awareness are key components of the prevention of illness, sickness, undue risk, and injury. They are central to health and wellness, and part of the day-to-day operations that BGM undertakes.

The Health and Safety Department offers training courses throughout the year, pertinent to different positions and roles within the company. In the past, topics have included first aid, ergonomics, mine rescue, working with Indigenous Peoples, cultural awareness, and emergency preparedness. Training courses will continue to be offered to the workforce.

In addition to formal training, BGM promotes a culture of education and safety through the posting of informational posters in high traffic areas, and ensuring teams participate in daily toolbox meetings. Health and safety bulletin boards will be in high-traffic areas of the Project, with information reiterated through electronic communications, and reinforced at safety meetings.

Respect for oneself and others is an BGM value used to promote a culture of health and safety on Project sites, through the philosophy that health and safety are everyone's priority. BGM's health and safety program follows the *Health, Safety and Reclamation Code for Mines in British Columbia* (November 2022), which is reflected in BGM's policies and procedures. BGM will remain committed to providing employees with a continuing education program to improve their health, safety skills and knowledge, and reduce the potential for injury and illness through educational prevention.

New employee and contractor orientation includes mandatory training components, awareness of the employee benefits program and details on eligibility, and requirements of attendance at daily toolbox meetings.

Subjects for education and health promotion will be adapted based on the demographics, seasonality and specific characteristics of the Project workforce through all its phases. Collaboration with the NHA will be part of this adaptation, as information and concerns are shared between BGM and the NHA, as programming and education are responsive to changes in the environment, community health status, infrastructure improvements, and demographics. FNHA approaches to health and wellness, and educational materials from them will be available alongside other NHA and BGM-developed materials.

2.10.2 Wellness Initiatives

BGM recognizes that wellness initiatives can be contributing components to overall workforce health, and job satisfaction. They can also be central to managing some of the potentially detrimental aspects of shift work, rotational schedules, isolation, and time away from family and friends associated with the mining industry.

BGM has facilitated and supported wellness initiatives for its workforce across its existing projects in the Wells area, in response to interest and suggestions from employees and workers. This has included a company-wide softball tournament, games nights, providing space to hold Alcoholics Anonymous meetings, providing diverse meal options, and an exercise club. The BGM Community Office has facilitated and supported these initiatives in the past, and will continue to be the department responsible for future wellness initiatives. In the past, BGM wellness initiatives and supports have been implemented in response to interest areas expressed by employees.

As part of employee orientation and onboarding, personnel will be notified that wellness initiatives are carried out through BGM's Community Office, and that employees desiring a particular

initiative or program are welcome to use the Community Office to initiate or organize these initiatives.

Daily toolbox meetings will also be used to share information on a suite of topics, including sedentary behaviour, tobacco/smoking cessation, healthy eating, weight and obesity, mental health supports, and substance use, and other topics identified based on the workforce composition. Additionally, the MSC area will have a gym/fitness area with space to practice yoga, fitness/cardio machines, free weights, and a social space with TVs, and other recreation amenities, yet to be determined.

BGM will implement wellness initiatives to promote a healthy lifestyle, employee engagement, healthy behaviours, chronic condition management and support, social cohesion while in camp, and mental wellness overall. What wellness initiatives are developed or promoted will be determined in collaboration with employees throughout the life of the Project, will be reflective of workforce needs and wants, and facilitated through BGM's Community Department. The goal will be to embed positive health habits and choices into the workforce, such that they are innately shared back in home communities and groups.

Examples include, but are not limited to the following:

- Incorporation of health tips and safety shares into daily toolbox, regular health and safety meetings;
- Social or activity committee;
- Exercise or outdoor activity club;
- Incorporation of First Nations cultural practices, language, or traditional foods;
- Designated spiritual or quiet room;
- BGM sports teams or company-wide tournaments;
- Ongoing games tournaments/competitions;
- Facilitating access to substance use support groups, or providing space for these groups to occur.

Incorporation of First Nations cultural practices, language or traditional foods will be determined in collaboration with the Participating Indigenous Nations for the Project and in response to requests by First Nations employees. Inclusion of traditional foods is dependent on availability and seasonality.

2.10.3 Collective Messaging

BGM will continue aligning its policies, procedures, planning, and educational materials with the health education and promotional materials developed by Northern Health, the FNHA, and local

health departments of the Participating Indigenous nations. BGM's Health and Safety Department sees value in continuing to use NHA-developed health promotion approaches in conjunction with in-house developed materials.

As part of onboarding, weekly and daily toolbox meetings, WorkSafe training, and OFA training BGM personnel will be required to review all relevant management plans relevant to their position and role, including the Mine Emergency Response Plan, which contains the Project's emergency communications plan.

3. COLLABORATION, COMMUNICATION AND PROBLEM SOLVING

BGM understands the value of direct and effective communication and clear channels of communication in relationship development and maintenance, especially as they pertain to collaboration with the NHA. Collaboration and communication are central to BGM's approach to patient flow and trauma care, emergency response, educational and procedural adaptation and response, and program delivery in partnership with NHA and the BC Ambulance Service/BC Emergency Health Services.

3.1 Communication Pathways

3.1.1 Communication Protocols

BGM, its Health and Safety Department, and health, safety and first aid team will continue to use existing channels of communication, and will adapt communication channels and protocols with key stakeholders and services providers relevant to health, medical services, and well-being at its mine sites, and for the Project. Review of existing communication channels and protocols will be carried out at least annually, and at additional frequencies should that be requested by the involved parties.

BGM's Health and Safety Manager is the first point of contact/communication between the NHA and BGM, when matters are not urgent. The on-site first aid room at the MSC will be the main point of contact for healthcare issues related to work at the Project, supplemented by auxiliary first aid and health care from the QR Mill First Aid room.

As part of EAC #M23-01, BGM is required to develop communication strategies with the NHA and BC Ambulance Services on matters related to patient care and transfer, data collection, and reporting. BGM is prepared to collaborate with the NHA on a communication strategy for the Project. BGM will maintain its relationship and existing communication strategy with the Wells branch of the BC Ambulance Service. Given BGM's existing relationship with the Participating Indigenous Nations for the Project, ongoing communication will continue with them, and will include health, wellness, and medical topics as is relevant to their communities, and members from those communities employed at the Project.

BGM's health, safety and first aid team already documents and monitors employee/worker visits to the first aid rooms, emergency or urgent care visits to G.R. Baker Hospital or the Urgent and Primary Care Clinic in Quesnel, occupational and non-occupational visits to the BGM first aid room, and Northern Health services, use of BC Ambulance services, support given to B.C. Ambulance/District of Wells, and communicable disease cases., This existing data on BGM's

present workforce comprises the baseline information that can be used to support monitoring of the effectiveness of the objective of this HMSMP to prevent impacts to Northern Health infrastructure and services. This information is available to NH at their request, and forms part of what will be communicated in an ongoing manner.

As is required according to Condition 17.3(f) of EAC #M23-01, and as indicated by the NHA, BGM will monitor and collect information on the following, to be included in required reporting:

- Number of employee presentations to the first aid rooms and telehealth or virtual consultations accessed through the contracted health and medical services provider;
- Number of employee or Project referrals to Northern Health services or sites;
- Number of employee referrals and transfers to non-Project health care practitioners or services; and
- Other indicators of use of health services by employees during Construction and Operations IF requested by the NHA and approved by the EAO.

Additionally, and in support of Condition 17.3(f), BGM will monitor workforce size and number of workers residing in Worker Accommodation, categorization of on-site and remote or virtual/telehealth visits as occupational or non-occupational, and urgent or non-urgent. Number and frequency of any off-site facility visits will also be documented. The frequency of reporting on this monitoring as indicated by EAC #M23-01 will be quarterly during Construction, and then annually for the first five years of Operations.

The health, safety, and first aid team will also document all cases where employees/workers and their families while residing locally, make use of the contracted health and medical services provider, and associated physician, along with uses of any NH services or non-Project health care practitioners. This information will be available to NH at their request, and will be used to assess efficacy and adapt health, medical and wellness initiatives for the Project.

Once a point of contact has been established by Northern Health, BGM will provide quarterly update reports during Construction, and annually during the first five years of operations, presenting data and information indicated in Section 3.1.1. of this HMSMP, and any additional information requested by Northern Health or the EAO.

3.1.1.1 Northern Health Authority

BGM has an ongoing and collaborative relationship with NHA, primarily for information sharing, advisory, education, and notification purposes. As there is historical contamination within and near the town of Wells and plans to work on remediation with some provincial government agencies have been developed, BGM will provide outcomes and facilitate discussion with the NHA on the remediation.

BGM will maintain these bi-directional communication channels with the NHA and will collaborate with representatives from NH to develop a functional communication strategy, that will include components that ensure information needed by NH is made available, and that BGM has a point of contact to share and receive information.

Given that a dedicated point of contact for NH has not been indicated by NH for the Project, BGM will reach out to the NH contacts indicated in Section 1.5.4.2 of this HMSMP, according to relevance, and in relation to theme of the information or issue to be communicated..

If an emergency should occur, requiring transport to G.R. Baker Hospital, BGM will call ahead to notify the hospital.

BGM's communication strategy with Northern Health is as follows.

1. How

BGM will call, email or meet with an identified NH contact person outside of required reporting frequencies stipulated in Condition 17.3(f) of EAC #M23-01, to facilitate communication, using the most appropriate means according to urgency, type of information to be communicated, and any other contextual considerations.

2. What and When

BGM will call, meet with, or email an identified NH contact person outside of required reporting frequencies stipulated in Condition 17.3f should any of the following occur at the Project:

- Loss of life
- Serious personal injury
- Site evacuation
- Workforce surge
- Mass casualty incident
- Communicable disease/infection outbreak, as per the [Communicable Disease Control Manual](#) from the BCCDC
- Transfer of a worker/employee from BGM health and medical facilities to a NHA facility for a higher or more involved level of care; and
- Any other information requested from NH.

3. Who

BGM's Health and Safety Superintendent will be the primary point of contact for any health, safety, and medical related communication with NH. Additionally, the OFA attendant with the highest level of care on shift will be the alternate point of contact for BGM. BGM will communicate with the Office of Resource Development for Northern Health, as indicated by them, to ensure

communication about the health, medical and wellbeing of the Project workforce and infrastructure can occur effectively.

Condition 17.3f of EAC #M23-01 stipulates that during the Construction Phase, BGM will report quarterly, and subsequently, during Operations, on an annual basis on the following:

- Number of employee or contract employee presentations to site-based clinics/first aid rooms, and including any virtual access to services provided by BGM;
- Referrals and transfers of Project workers to non-BGM health care services or practitioners, including type and number.
- Any other relevant measurable indicators of use of health services if requested by NHA and approved by the Environmental Assessment Office.

NHA will communicate with BGM on observational information as it relates to the management of any health and medical services pressures in its facilities in proximity to the Project.

BGM remains in contact with the Chief Operating Officer of the NHA, and with the Administrator of Quesnel's G.R. Baker Hospital. In addition, BGM maintains communication with the Wells clinic.

3.1.1.2 BC Ambulance Service

Given the proximity of the Project to the community of Wells, the location of key pieces of existing mine infrastructure, and the provision of emergency medical services, BGM will maintain the existing, collaborative and interdependent relationship it has with the Wells station of the BC Ambulance Service.

Given the hiring and retention challenges affecting the Wells ambulance station, and BC Emergency Health Service in general, ambulance services are often accessed from Quesnel. BGM will maintain its relationship with the Quesnel station of the BC Ambulance Service as well, ensuring relevant updates, information, and issues are communicated as necessary.

BGM's communication strategy with the Wells and Quesnel stations of the BC Ambulance Service is as follows.

1. How

BGM will call, email or meet with the Wells and Quesnel Station Unit Chiefs, or indicated designate, to facilitate communication and information sharing using the most relevant mechanism, dependent on information being communicated.

2. What and When

BGM will call, meet with, or email Wells and Quesnel Station Unit Chiefs, or indicated designate should any of the following occur at the Project:

- Updates to the SSERPs that may affect emergency management and BC Ambulance

- Opportunities for collaboration or mutual aid related to the Project
- Communicable disease/infection outbreak, as per the [Communicable Disease Control Manual](#) from the BCCDC
- Transfer of a worker/employee from BGM health and medical facilities to a NHA facility for a higher or more involved level of care; and
- Any other information requested from either Unit Chief.

3. Who

BGM's Health and Safety Superintendent will be the primary point of contact for any health, safety, and medical related communication with BC Ambulance. Additionally, the OFA attendant with the highest level of care on shift will be the alternate point of contact for BGM. BGM has established relationships with both the Wells and Quesnel stations of BC Ambulance, with their contact information presented in Section 1.5.4.1 of this HMSMP.

3.1.1.3 Participating Indigenous Nations

BGM will continue its relationships with the Participating Indigenous nations for the Project to ensure bi-directional communication channels remain open, culturally safe care is appropriate and functional, and adaptation and appropriate responses are possible.

BGM will share relevant incident, outbreak, or health and medical service opportunities with the Participating Indigenous nations during existing regularly scheduled meetings. These meetings are also an opportunity for the Participating Indigenous nations to raise concerns and offer feedback. Should opportunity arise to incorporate Indigenous nation perspectives on health and wellness into BGM wellness or health programming or services, this will be initiated by BGM with the Participating Indigenous nations for the Project.

3.1.2 Community Effects Management Plan Correlations

A Community Effects Management Plan is developed to ensure any potential project effects to local communities are mitigated and addressed. EAC #M23-01 conditions related to a Community Effects Management Plan included conditions stipulating employee policies and commitments, management of employee recreation as it relates to the environment and nature, accommodation strategy, public engagement and response mechanisms, financial contributions to the community, traffic management approaches, noise and visual impact management, and various other supporting commitments.

Community and population health, as they relate to the Project, are directly tied to socio-economic commitments and management strategies that will be detailed in the Community Effects Management Plan and are also central to BGM's approach to health and medical services. Given that BGM seeks the overall health and wellness of its workforce and is committed to supporting

the families of its employees in their health and medical needs if residing locally, there will be synergies between the HMSMP and the Community Effects Management Plan. BGM will seek to align those synergies through communication with the District of Wells, Northern Health, the Public, the Participating Indigenous nations for the Project, and other stakeholders as they are identified.

3.2 Trauma Care and Emergency Response

3.2.1 Trauma and Emergency Assessment Protocols

If an emergency or trauma incident occurs, BGM's health, safety and first aid team will assess whether a higher level of care is required for patients involved and ensure the most efficient procedures are followed so that NHA resources and services are not unnecessarily taxed and are used in the most efficient means if required. Decision making around trauma, referrals and emergency management is part of all OFA training.

Level 3 or Advanced OFA attendants are trained to manage complex medical and trauma emergencies. In the event of a medical incident or emergency, the notification and activation protocols relevant to each CGP site are initiated as follows:

Initial Notification:

Person(s) reporting incident or emergency shall:

1. Make contact in person, by phone, and by radio to the 24/7 First Point of Contact

First Point of Contact- 24/7 Javad Azanchi/Emily Bailey	Radio: 1 Medic RP " CODE 1 – CODE 1 – CODE 1 " Office : 236-713-2019/236-713-2061 Cell : 778-951-9153/250-699-1183

2. Provide the following information :

- Who is calling?
- What has happened?
- When did the incident happen?
- Who/how many were injured?
- What is your location? What is the location of the emergency?
- What is the initial level of the emergency (1, 2, or 3)?
- What help is required?
- Are there any personnel that need to be evacuated?

3. Remain available.

4. If evacuation is required, all personnel to evacuate to designated muster station.

- On Scene Supervisors are responsible for accounting for people under their care at the muster station;
- Await further instruction—keep radio silence unless instructed to do so;
- Do not leave the muster station for any reason unless instructed to do so or it becomes unsafe; and
- Do not make any off-site phone calls with information related to the emergency.

URGENT:

ONCE THE EMERGENCY RESPONSE PLAN HAS BEEN ACTIVATED ALL WORK, VEHICLE TRAFFIC, AND RADIO CHATTER MUST CEASE (RADIO SILENCE)

MINE RESCUE WILL ASSUME RADIO CONTROL

(CHANNEL TO BE DETERMINED AT TIME OF EMERGENCY)

Following this the Incident Command System and Team are activated, and protocols in the SSERPs are to be followed.

3.2.2 Methods of Transfer During an Emergency

G.R. Baker Memorial is the nearest receiving hospital to the Project, for patients requiring care above the capabilities of the BGM health, safety and first aid team, or for a mass casualty incident. Ground ambulance will be the preferred emergency transport option when a higher level of care is required.

BGM's current approach to patient transfer and transport to date includes the following:

1. For urgent/trauma/emergency cases, ground transfer by BC Ambulance Service, using the nearest available ambulance, to G.R. Baker Memorial Hospital in Quesnel will be used.
2. For non-urgent or stable patient transfer, BGM's ETV or a private vehicle will be used, and the patient will be accompanied by an BGM first aid attendant.
3. For all unstable or trauma patients, a BGM OFA Level 3 attendant will accompany the patient for the duration of the transportation.
4. Yellowhead Helicopters out of McBride are available should air transport be required. BGM has an on-call contract with them for the provision of heli-transport services from the QR Mill site, where a helipad is located.
5. Air transport will only be utilized if it is deemed more efficient than ambulance or surface transport.
 - a) Given that a heli-pad is only located at the QR Mill site, heli-transport will only be used as a last resort.

3.2.3 Communication

BGM has internal communication protocols and an emergency communication plan within the Mine Emergency Response Plan (MERP; BGM 2022a) and in the SSERPs, in the event of an emergency, disaster, or crisis. These plans detail chains of contact and order of notification, as well as roles and responsibilities around notification and the incident command system. The incident command system, to be used in an emergency is presented below in Figure 3.2-1 . BGM's Communications Lead from the Emergency Management Team will also liaise with the community during and after a mine emergency, including with Northern Health, Health and Emergency Management BC, the Wells location of the BC Ambulance Service.

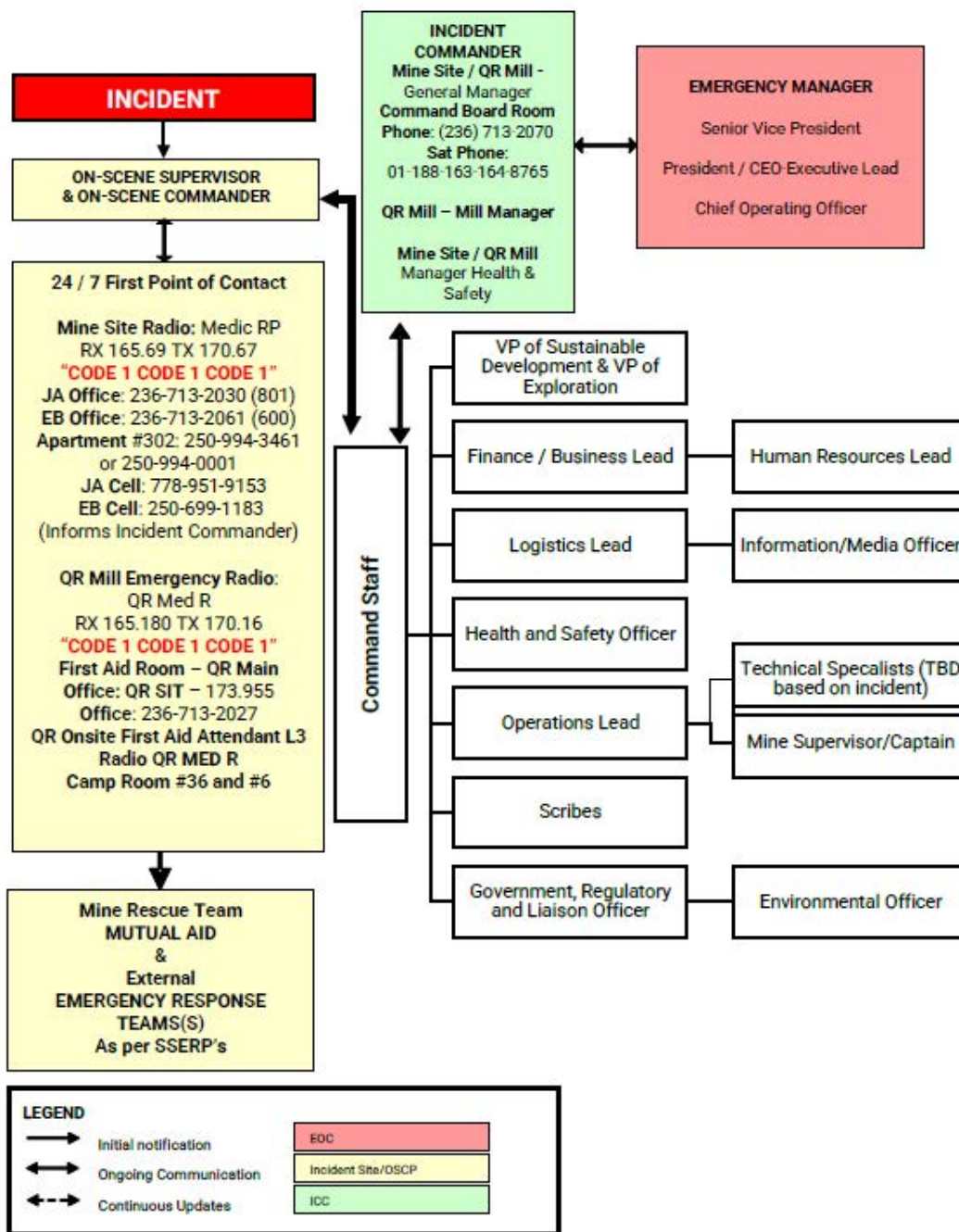


Figure 3.2-1: Incident Command Team Notification [Placeholder]

Personnel shall use the following guidelines for internal communications related to a medical emergency (i.e., a workplace injury, or a non-occupational illness):

1. Call for help (on-site medic/OFA attendant), and notify the site supervisor;
2. Apply basic first aid and CPR (Circulation, Pulse, Respiration) if possible, or assist the site medic until 9-1-1 EMS arrives.
3. If advanced medical care is needed, outside the scope of practice of the on-site Level 3/Advanced OFA attendant, immediately contact 9-1-1.
4. Ensure someone waits for the ambulance of BGM ETV, and directs medical response personnel to the injured person/medical emergency
5. Assist emergency service responders, as directed.

Following any medical emergency, an Accident/Incident Reporting Form **MUST** be completed and signed by the employee, supervisor, and any witnesses. If the following occurs: fatalities, critical injuries, lost time, occupational illness, property damage, fire, and environmental release, refer to the Accident/Incident Investigation procedure. An investigation is required, and the completed Investigation Report is then distributed to the appropriate parties including the employee, manager/supervisor, health and safety, and the Joint Occupational Health and Safety Committee for review. Follow-up may be required following the review.

The SSERPs detail procedures for non-fatal trauma (i.e., bodily harm resulting from severe exposure to an external force or substance [mechanical, thermal, electrical, chemical, or radiant] or a submersion), multiple injured persons, fatality, and disturbance/distraught person. The Communicable Disease Procedure and Policy details BGM's communication and incident command for any infectious disease outbreak. All personnel are required to acknowledge, read and understand the SSERPs and Communicable Disease Policy and Procedure as part of onboarding and employee orientation.

BC Ambulance Service and Northern Health Authority will be notified immediately by BGM's 24/7 Point of Contact, the Incident Commander or the Health and Safety Superintendent in the event of a medical emergency that could tax, or cause strain on NHA facilities and services. Medical emergencies that may trigger communication with Northern Health and the BC Ambulance Service (Wells) include, but are not limited to the following: non-fatal trauma, multiple injured persons or mass casualty event, infectious disease outbreak, or fatality.

This notification is a communication component of BGM's emergency response plan. G.R. Baker Memorial Hospital and the UHNBC have been identified in the ERP, in addition to Provincial Emergency Services, as parties requiring notification.

BGM will organize and facilitate quarterly meetings during Construction with an assigned representative of the NHA and relevant contacts from the Health and Safety Department, to

review the provision of health and medical service delivery, identify any issues or concerns, and collaborate on strategies for improvement or to mitigate challenges.

3.2.4 Referral to a Northern Health Facility

Referral to a Northern Health facility of an non-local worker employed on the Project, or their family, outside of medical emergencies requiring a 9-1-1 call, will only occur if the following criteria are met:

- The level of care required is outside of the scope of practice of the on-site health, safety and first aid team, including Level 3/Advanced OFA attendants
- Individuals are unable to access services in their home community, or this access is not feasible;
- Individuals are without a family doctor
- Telehealth and virtual options are not available, OR following a telehealth/virtual medical appointment, the medical practitioner/specialist on the virtual/telehealth appointment indicates that an in-person medical appointment is recommended or required; and
- The consulting physician of BGM's contracted health and medical services provider indicates attendance at a medical facility (i.e., urgent and primary care, emergency room, in-person appointment).

If these criteria are met, and a patient is transferred or referred to a NHA facility, BGM will ensure follow up processes minimize burdens on local resources by carrying out the following:

- Post-discharge/assessment by NHA, patients are referred to their home community for any follow-up care, if required.
- Accommodations will be considered to make access to healthcare services possible for patients in their home community, rather than in Northern Health's jurisdiction; and
- Return to work and fit for duty assessments are carried out in-house or by BGM's contracted health and medical services provider (i.e., consulting physician)

3.3 Hiring Considerations

BGM is aware of the hiring constraints and struggles affecting the current medical system in BC, and of the specific hiring and retention struggles of NHA and BC Ambulance Service. BGM is committed to minimizing impacts to both health and emergency services because of Project activities. BGM takes its responsibility to ensure that its workforce and employees, and their families have access to the health and medical services they require to meet their health and wellness needs seriously. To ensure this access, BGM will contract a health and medical services provider and associated consulting physician, and ensure that OFA attendant levels are appropriate based on workforce numbers detailed in Table 2.8-1. This is a key component of

minimizing impacts to health service delivery in NHA areas because of the Project. BGM wants to operate its Project such that it is an attractant for medical professionals to the NHA region.

3.4 Quality Improvement and Effectiveness Monitoring

BGM is a company that is committed to the health and safety of its employees, and to the wellbeing of the communities in which its projects are located, and recognizes that health is a holistic concept, influenced by a myriad of factors. To uphold this commitment, it will be necessary to respond to unanticipated issues and opportunities, and to pivot plans and approaches.

BGM will utilize the talents of its workforce, specialized knowledge of its health, safety and first aid team, ongoing professional and educational development and training, and relationships with stakeholders and Participating Indigenous nations to develop adaptive responses and effective mechanisms of change and quality improvement to BGM's provision of health and medical services.

An adaptive approach will be implemented for quality improvement and effectiveness monitoring that uses health and medical data, the number of medical incidents occurring between HMSMP reviews, and feedback received from various stakeholders to identify trends, areas needing improvement, educational and professional development opportunities, and mitigations to be implemented.

The BC Ministry of Environment and Climate Change Strategy outlines the key steps of an adaptive management cycle:

Assess: define the issue and identify how the actions to mitigate the issue will be evaluated.

Design: design the plan that will achieve the desired outcomes.

Implement: implement the plan and document if there are deviations from the plan.

Monitor: monitor the effectiveness of the plan and assess whether changes are needed to improve the effectiveness of the plan.

Evaluate: assess results against the predictions and determine if the desired outcome was achieved or if there were unexpected outcomes. Identify learnings to support decision making and reduce uncertainty in management practices.

Adjust: based on the results of the evaluation, make changes to the management practices to better achieve the desired outcomes. Refine monitoring strategies to improve future evaluations and make any necessary revisions to the plan.

Figure 3.4-1 below illustrates an adaptive management and monitoring approach.

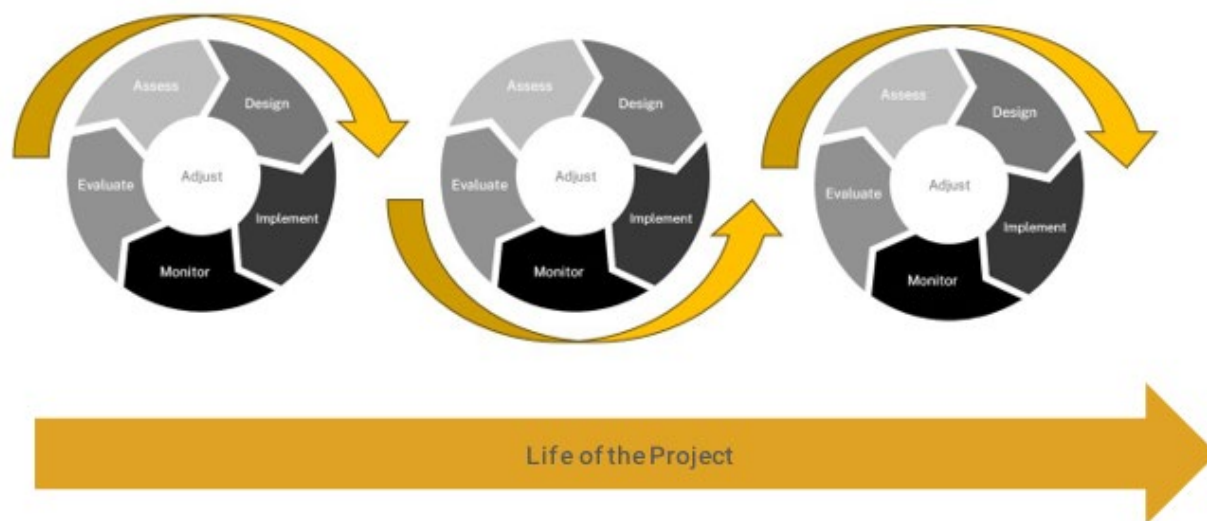


Figure 3.4-1: Adaptive Management Process

BGM documents the following presently:

- Employee/worker visits to the BGM first aid rooms
 - Whether the visit is occupational or non-occupational
- Employee/worker visits to Northern Health facilities and services
 - Whether the visit is occupational or non-occupational
 - Whether the visit is urgent, emergency, or otherwise
- Use of, or support to BC Ambulance Service; and
- Communicable disease cases/outbreaks

This data will be used to establish baseline health and medical conditions prior to Construction. Through Construction and Operations, this data will continue to be tracked, along with use of the consulting physician and associated services contracted by BGM, and the use of telehealth and virtual health options. This information will be reported quarterly during Construction, and annually during Operations, for the first five years. Changes to health and medical services use and access will be assessed, in consultation with Northern Health, to determine what constitutes an impact to Northern Health Services. Any potential impacts to Northern Health services will be considered in light of workforce origin (i.e., whether a worker is a normal resident of Northern Health's service area), use of Northern Health services, and use of any on-site and/or contracted health and medical services.

Internally:

The BGM health, safety and first aid team will review this HMSMP at a minimum, annually, following a Project-related medical emergency, or if a non-local employee is referred to or must access a NH facility.

Review of the HMSMP will include the following:

- Evaluation of the HMSMP's application and success in achieving the objective of minimizing impacts to Northern Health facilities and services
- Review of any incident forms related to medical emergencies or infectious disease outbreaks that were generated in the time since the last plan review
- Review of any referrals to Northern Health facilities or services by any non-local employees or their families
- Identification of any unexpected outcomes, weak components of the plan, or updates to best industry practices
- Identification of any themes or areas for educational or professional development opportunities
- Consideration and incorporation of any feedback received from external stakeholders
- Updating contact names and numbers, if relevant.
- Review of appendices and supporting plans to identify updates required or recommended.

With External Stakeholders:

BGM will provide the internally reviewed, and updated HMSMP to the NHA, BC Ambulance Service, BC EAO, and Participating Indigenous nations on an annual basis for review and feedback.

Workforce demographics, hiring constraints, supply chain limitations, global pandemics, climate and weather events, financial events, and politics among other elements can all contribute to the need to reassess how, and to whom BGM can provide health and medical services. These factors will be considered during review processes.

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APPENDIX A DRUG AND ALCOHOL POLICY

DRUG AND ALCOHOL PROGRAM

Ensuring the Health, Safety, and well-being of our employees, our customers and the public is a major commitment of ODV. ODV recognizes the misuse of alcohol and drugs as a health, safety, and security problem. ODV expects and requires that all employees assist in maintaining a work environment that is free from the impairment of alcohol and drugs.

The Drug and Alcohol Program, in addition to setting forth ODV requirements and expectations regarding maintaining a safe work environment, is committed to protecting the health and safety of its employees in accordance with this Policy. These principles outline how ODV will meet this commitment.

The Health, Safety and Reclamation Code for Mines in BC, Part 3 states the following regarding Impaired persons and Drugs and Liquor:

3.1.1 “No person shall enter, remain, or be knowingly permitted to enter or remain in any mine if, in the opinion of management, his/her ability is so impaired as to endanger his/her health or safety, or that of another person.”

3.1.2 “No person shall possess intoxicating liquor or illegal drugs in or about a mine.”

The possession or consumption of alcohol, illicit drugs, or the misuse of prescription or “over-the-counter” drugs is strictly prohibited on ODV premises and work sites. The use of illicit drugs, the inappropriate use of alcohol, marijuana, and the misuse of medications and other substances may have serious adverse effects on an employee’s health, safety, and job performance. Misuse of these substances can also negatively impact other employees, customers, or the community.

All camp/accommodation areas are recognized as ODV/work sites. Each employee has a personal responsibility to themselves, other employees, and ODV, to help eliminate drug and alcohol misuse. Alcohol or drug dependency is a preventable and treatable condition, and early intervention greatly improves the probability of lasting recovery.

ODV will:

- Promote an environment that does not tolerate inappropriate use of alcohol or other drugs.
- Support the rehabilitation and return to work of employees who have had problems with alcohol or drug dependency.
- Conduct comprehensive investigation of work-related incidents including the possibility that the use of alcohol or drugs may have been a contributing factor.
- Undertake alcohol and drug testing in specific circumstances.

- Reserve the right to conduct lawful searches for alcohol, drugs, or drug paraphernalia on company-owned or controlled vehicles and premises.
- Ensure our operations comply with legislation, company policy, and industry standards.
- Prohibit the possession, use, distribution, or sale of illicit drugs, marijuana, and alcoholic beverages on company premises.
- Prohibit being unfit for work because of the misuse of drugs or alcohol.
- Prohibit the intentional misuse of medications on company premises.
- These principles apply to all ODV employees and to others engaged on ODV's behalf. Violations of these principles are grounds for disciplinary action, up to and including termination of employment and contract. All management, supervisors, workers, and contractors allow ODV. to conduct the above testing at any time. By signing the training orientation, all workers agree to abide by this policy.
- Based on reasonable cause, ODV reserves the right to conduct lawful searches for alcohol, drugs, or drug paraphernalia on ODV premises and work sites.
- ODV will not allow a person to work or to remain on ODV premises, or on Mine worksites, if there is reasonable cause to believe that the person has consumed alcohol, marijuana, or illicit drugs, or has used any prescription or "over-the-counter" medication such that the person's ability to perform his or her work functions properly and safely are impaired.
- For this Program, "reasonable grounds" shall mean any observation of impaired motor skill proficiency, impaired judgment or unusual conduct, or any reliable information provided to ODV of consumption of alcohol, illicit drugs either at work or an inappropriately short time prior to reporting for work.
- All employees are expected to perform their duties with the required skill and diligence for that job. Diminishing work performance due to substance abuse will be addressed initially in the same manner as performance decline for any other reason in which disciplinary action may be taken.
- However, the use of alcohol or illicit drugs on ODV worksites, in ODV (whether owned or contracted), or while on ODV business is a violation of this Program and will be cause for disciplinary action, which can include termination.
- Any employee taking a legal drug or medication, whether or not prescribed by a licensed medical practitioner, which the worker knows, or has reason to believe, may affect or impair his or her judgment, coordination, or perception so as to adversely affect his or her ability to perform work in a safe and productive manner, must notify his or her supervisor of the fact he or she is taking a drug and its effect prior to performing any work.

- The employee is not required to inform the supervisor of the specific drug being taken or the condition for which it is being taken.
- The supervisor will determine whether the employee can perform his or her usual work or whether work restrictions or modifications are required, and may, if necessary, in order to make this determination, ask for the employee's authorization to seek further information regarding the drug's effects from his or her physician.

Reporting to Work for an Emergency

- Employees that are contacted to report for work for an emergency or other unscheduled reasons must not accept a work assignment if they have reason to believe their ability to work safely and effectively may be impaired by the consumption of alcohol or illicit drugs or the use of prescription or "over-the-counter" drugs.
- An employee contacted to report in such circumstances must refuse the assignment and advise the person contacting them that their refusal is based on a belief that they may be impaired. Employees refusing a work assignment on this basis will not be subject to discipline for their refusal, though they may, be referred to the Employee Assistance Program.

Employee Responsibilities

It is the responsibility of individuals to ensure their own safety and health at work and to avoid adversely affecting the health and safety of any other person. To fulfill this responsibility, everyone has the following obligations:

- Employees must arrive fit to work and remain fit to work during their shift and be free from the adverse performance effects of drugs and/or alcohol.
- No employee shall report to work, or be at work, with any alcohol level in their blood. Any reading above zero (0) mg per 100 ml will be cause for investigation.
- Employees are expected to cooperate fully during investigations where the suspicion exists or where there is sufficient evidence indicating contravention of this policy.
- As a condition of his or her continued employment, an employee who receives treatment for a substance abuse problem must comply with the terms and conditions of any program established to help the employee.
- Employees are encouraged to seek assistance from ODV before drug or alcohol problems lead to performance issues. If an employee comes forward to seek assistance, ODV will not list the drug problem as part of the employee's workers file; it will not be used as a basis for disciplinary action or used against the employee in disciplinary proceedings.
- An employee has the right to representation from another employee of the organization. The representative may:

- Assist employees with any matter arising under the application of this Program.
- Attend meetings/discussions at the employee's request, providing attendance does not cause undue delay in the time at which the meeting takes place.
- Employees must use prescription and over the counter medications responsibly and be aware of potential side effects. They must notify site medical workers and supervision of any potentially unsafe side effects.
- Failure to comply with this Drug and Alcohol Program will be cause for disciplinary action, which could result in termination of employment.
- All individuals must notify their supervisors of any situation in which this Program may have been breached. This includes:
 - Any situation wherein other persons may appear unfit for work;
 - The unauthorized possession or consumption of drugs on the worksite or during the work period by another individual; and
 - Any other apparent breach of the Program.

Note: All such information will be dealt with in the strictest confidence in accordance with the *Freedom of Information and Protection of Privacy (FOIP) Act*.

Supervisor Responsibilities

Supervisory staff is responsible for the effective implementation of, and adherence to the program on their sites, including the briefing of all employees, the provision of appropriate education and training resources and the review of the Program's application and effectiveness in their areas of responsibility.

Supervisory staff is responsible for ensuring that all individuals in their area of responsibility understand and comply with the requirements of this Program.

Communications of confidential material is on a need-to-know basis only. In general, supervisory staff will only be provided with functional ability information. However, if the supervisory staff is in a position where they have knowledge of or are required to receive sensitive medical or other information of a confidential nature, then they are responsible for establishing appropriate procedures and facilities to ensure that this information is safeguarded as required by this Program.

- Be knowledgeable about ODV, Drug and Alcohol Program and procedures.
- Recognize symptoms of the inappropriate use/abuse of drugs and alcohol.
- Understand ODV's performance management procedures.
- Act on performance deviations.

- Act on reported or suspected drug and/or alcohol use by employees.
- Handle all sensitive information in a confidential manner; and
- Treat all employees with respect and dignity.

Drug and Alcohol Training

Project managers, superintendents and foremen will receive training to ensure that they have:

- An understanding of the purpose of the Drug and Alcohol Program and the requirements established by this Program.
- An understanding of some common drug and alcohol-related terms.
- An awareness of the effects of drug and/or alcohol use on work performance.
- An ability to recognize behaviors that may indicate a drug or alcohol related problem.
- An understanding of denial, enabling, and the importance of avoiding behaviours, which allow problems related to drugs and alcohol, to continue.
- An understanding of their roles and responsibilities in addressing performance problems that may be related to drug and alcohol use; and
- Access to and understanding of the available resources for employees who may have a substance abuse problem.

Employees

Will receive awareness training to ensure they

- Understand and know the purpose of this Drug and Alcohol Program.
- Have awareness of their responsibilities to meet the work standards under the Drug and Alcohol Program, and to ensure safety of themselves, others, and work site.

Referral/Self-Help

Employees are encouraged to seek assistance from ODV before drug problems lead to performance problems. When an employee comes forward to ODV, the employee's decision to seek assistance will not become part of their workers file, will not be used as a basis for disciplinary action, and will not be used against the employee in any disciplinary proceedings.

However, the fact that the employee came forward to ODV for assistance will not be a defence to imposition of disciplinary action where evidence of a violation of this policy is obtained outside of ODV's efforts to assist the employee. Employees participating in a treatment program may be granted leave with a conditional return to work dependent upon such employee's successful completion of an appropriate treatment regime, which is determined by a Substance Abuse Professional.

Possession of Drugs and/or Alcohol

Being in possession of drugs or alcohol while on ODV's site or property is a contravention of the Drug and Alcohol Work Rule. An employee shall not have on his person any amounts of drugs or alcohol while on a ODV work site. If discovered, the drugs or alcohol will be confiscated from the employee by a supervisor.

The supervisor and his/ her superior will make the decision about whether to contact the local authorities. The drugs or alcohol will be photographed and tagged, for evidence to support disciplinary action. If the authorities are not contacted, the evidence is to be disposed of after being photographed and documented, lest a supervisor now is found to be in possession.

Employees who have been found with drugs or alcohol in their possession but were not found in the act of using the drugs, are not to be tested, and their employment is to be terminated. If the employee was found using the drugs or alcohol and has some remaining in their possession, the remaining amounts will be confiscated following the above-mentioned procedure, and the employee will be asked to test, as per the reasonable ground's procedure.

Search Requirements

ODV reserves the right, as a condition of employment or as a term in the contract between ODV and a contractor or Subcontractor, to conduct unannounced searches for the seizure of alcohol, drugs, or drug paraphernalia on ODV premises where there are reasonable and probable grounds to believe that they may be present and there has been a suspected breach of this program.

Such searches may include searches of individuals and their personal property brought onto the work site. The employee and contractor acknowledge that their entry onto ODV premises is deemed consent to a search and seizure at any time while entering on or leaving ODV premises and when carried out pursuant to the program.

The employee and the contractor, or sub-contractor expressly acknowledge that their right to privacy and to be secure against unreasonable search or seizure is expressly subject to the right of ODV to maintain a safe workplace and to ensure that there are no violations of ODV policies and/or no laws are being violated.

Where searches and seizures are conducted with the employee, contractor, or sub-contractor present, the RCMP may be called to assist, and the individual will be informed of the following prior to the search and seizure:

- That a search and possible seizure is being conducted.
- The reason for the search.
- There are reasonable and probable grounds to believe the individual has alcohol, drugs or drug paraphernalia in their possession and is suspected to be in breach of this policy.

- That the individual need not cooperate or provide any statement unless they so choose, but that appropriate law enforcement agencies may be contacted.
- That the search and seizure is a condition of employment or is a term in the contract between ODV and contractor, whichever is applicable, and
- That the individual has the right to retain and instruct counsel without delay.

When searches of employee's personal property occur, without the employee or contractor present, ODV will advise the affected individual as soon as reasonably possible after the search and seizure as to what has occurred.

Any attempt without just cause, by an employee, contractor, or sub-contractor, to impede or prevent a search and seizure of alcohol, drugs, or drug paraphernalia on ODV premises carried out pursuant to this program will be considered a serious breach of this Program and may at ODV sole discretion, result in disciplinary action up to and including termination for cause on the case of an employee, or immediate termination of the contract in the case of the contractor, or sub-contractor.

Any seized items which violate the terms of this Program will be immediately impounded and tagged as to date, names of persons present and general description of the item and then sealed in a container or bag and turned over to the appropriate law enforcement agency where appropriate to do. The seized items will be kept in the exclusive possession of the ODV superintendent or security designated in a locked place unless transferred to the appropriate law enforcement agency. The employee of contractor or Subcontractor will be given a receipt for the seized item.

Conditions for Continued Employment

An employee who has been disciplined for drugs or alcohol, or has voluntarily come forward with an abuse problem, and who has successfully completed rehabilitation, will be required to submit to drug and alcohol testing, prior to returning to work and may be required to submit additional follow-up testing as part of conditions of a continued work plan.

- A Conditions for Continued Employment Form must be completed and signed by the employee then faxed to the Substance Abuse Prevention coordinator at (to be determined) prior to the employee resuming work duties on site.
- The onsite contact person must have written confirmation from the Safety Manager that a treatment program has been successfully completed.
- ODV Safety Coordinator will interface with the superintendent, or designate, to ensure there is work available. If there is no suitable work available, a designated supervisor will contact the employee to inform him of such.

- The employee will be tested following the completion of a treatment program prior to commencing their first shift.
- Failure to comply with the terms outlined in the Conditions for Continued Employment will result in termination of employment.
- The employee may be subject to follow-up testing without prior notification as per the Conditions for Continued Employment.
- Follow-up and post-treatment programs are based on the recommendations of the Substance Abuse Professional.

Definitions for Drug and Alcohol

Alcohol: A beverage alcohol that is designed and manufactured for human consumption.

Drugs: A substance, chemical or agent which the use of, or possession of, is unlawful in Canada or requires a personal prescription from a licensed treating physician, any non-prescription medication lawfully sold in Canada or any drug paraphernalia.

A drug is any substance, including alcohol, illicit drugs, or medications in which the user has the potential to change or adversely affect a person's physiological and/or psychological state. Drugs of concern are those that potentially inhibit a person's ability to perform their job safely and productively.

Specific drugs of concern include but are not limited to alcohol, marijuana, cocaine, opiates, phencyclidine, and amphetamines.

Drug Paraphernalia: Any personal property, which is associated with the use of any drug, substance, chemical, or agent, the possession of which is unlawful in Canada.

Drug or Alcohol Test: A scientifically recognized test, which analyses an individual's urine, breath, or other bodily fluid samples for evidence of drug or alcohol use.

ODV Property and Workplace: All personal property, construction camps facilities, buildings, equipment, containers, vehicles, vessels, boats, and aircraft whether owned, leased or used by ODV and wherever it may be located.

Contractor refers to:

- Any corporation and/or its employees doing business with ODV.
- The individual person doing business with ODV and whose pay is not subject to deductions for income tax, E.I and CPP; or
- Any person who would otherwise be in regular employment with ODV but does not receive ODV benefits.

Employee: Any person on ODV payroll.

Medical Review Officer: The licensed physician who is designated to fill the position of Medical Review Officer under the mandatory guidelines of this Program.

Medication: A substance used for medicinal purposes.

Negative Test Result: A report from the Medical Review Officer that the employee, who provided a specimen for drug and/or alcohol testing, did not have a drug or alcohol concentration level more than cut-off levels.

Owner: The person in legal possession of a workplace.

Positive Test Result: A report from the Medical Review Officer that the employee, who provided a specimen for drug and/or alcohol testing, did have an alcohol or drug concentration level more than the cut-off level.

Reasonable Grounds: Information established by the direct observation of the employee's conduct or other indicators, such as:

- The physical appearance of the employee;
- His/her attendance record;
- Changes in the speech pattern or behaviour of the employee;
- Circumstances surrounding an accident;
- Near miss or potentially dangerous incident;
- Presence of alcohol, drugs or paraphernalia near an employee or work area.

Rehabilitation Program: A program tailored to meet the needs of an individual, which may include education, counselling and residential care offered to assist a person in complying with the drug and alcohol program.

Supervisor: The person who directs the work of others and may, depending on the nature of ODV structure, include the foreman, general foreman, supervisor, and superintendent and team leader.

Work: Training and any other breaks from work while on ODV property or a ODV work site. All such information will be dealt with in the strictest confidence in accordance with Freedom of Information and Protection Act

APPENDIX B COMMUNICABLE DISEASE POLICY AND PROCEDURE



OSISKO
DEVELOPMENT

CARIBOO GOLD PROJECT

Communicable Disease Management Plan

March 2025



Cariboo Gold Project

PO Box 250
3700 Ski Hill Road
Wells, BC V0K 2R0



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Appendices

Appendix A	Communicable Disease Risk Assessment Tool
Appendix B	Daily Self-Monitoring Form for COVID 19

REVISION HISTORY

Rev. No.	Date	Author	Description
1	August 1, 2021	Bonnie Watkiss, RN	Version 1- COVID-19 response
2	August 16, 2021	Bonnie Watkiss, RN	Revisions to Rev. 1 as part of the CGP EAC Application
3	February 28, 2025	Emily Bailey, CGP Health & Safety Superintendent	Update to align with SOPs and best practices.
4	March 4, 2025	Jen Gebert, Human Environment Specialist, Falkirk Environmental	Edits to content in response to EAC Application review.

ABBREVIATIONS

Terminology used in this document has been defined where it is first used, while the following list has been presented to assist readers that choose to review only portions of the document.

Abbreviation	Description
CDMP	Communicable Disease Management Plan
CDMT	Communicable Disease Management Team
ml	Milliliters
NHA	Northern Health Authority
ODV	Osisko Development Corp.
PPE	Personal Protective Equipment

1. WHAT IS A COMMUNICABLE DISEASE?

A communicable disease is an illness that can be contracted and spread through contact with a human or animal, their discharges, or contaminated items carrying an infectious agent. An infectious agent is a disease-causing organism, such as a bacteria, virus, or parasite. Once a person has contracted a communicable disease, they can then pass it on to others.

Communicable diseases identified as likely or more possible in an industrial or work camp setting include, but are not limited to:

- Influenza
- Tuberculosis
- Viral Hepatitis A or B
- Norovirus
- Measles
- Severe Acute Respiratory Syndrome

Communicable disease risk management should not only focus on prevention, controlling exposure, but also on increasing working immunity. The most effective method for preventing the spread of communicable diseases is frequent handwashing and staying home when you are sick. Template

1.1 Symptoms of Concern

Several communicable diseases may be anticipated and planned for within the context of industrial or remote camp settings, and include various symptoms. Northern Health Authority (NHA) guidance on communicable diseases in industrial settings suggests that gastrointestinal illness, influenza-like illness, and sexually transmitted infections may be anticipated, but that preparations should not be limited to just for these clusters of communicable diseases.

Osisko Development's *Communicable Disease Risk Assessment Tool* (the *Tool*; Appendix A of this document) can be used for assessment and to consider approaches based on observed symptoms, with low, medium and high risk. Subsequent approaches to communicable disease management are associated with the various levels of risk based on symptoms presenting.

2. OBJECTIVES

This Communicable Disease Management Plan (CDMP)

ODV will make decisions involving persons who have communicable diseases based on the following:

- Current, observational, and well-informed medical judgments concerning the disease
- Risks of transmitting the illness to others
- Symptoms (See Appendix A)
- Special circumstances of everyone who may have the communicable disease
- Careful weighing of the identified risks; and
- Available response alternatives for personnel with communicable disease symptoms.

ODV will not discriminate against any employment applicant or employee based on the individual having a communicable disease. However, ODV reserves the right to exclude a person with a communicable disease from the workplace facilities, programs, and functions if the organization finds that, based on a medical determination and presentation of symptoms, such restriction is necessary for the welfare of the individual with the communicable disease and/or the broader welfare of the workplace.

ODV will comply with all applicable statutes and regulations that protect the privacy of persons who have a communicable disease. Every effort will be made to ensure procedurally sufficient safeguards to maintain the personal confidence of persons who have communicable diseases. Existing ODV confidentiality and information management practices will apply to the management of health and patient data.

3. SCOPE

This procedure applies to all ODV personnel, including employees, contractors and consultants, and all visitors to all ODV sites. This procedure must be read, understood, and signed by all those coming to or working on-site.

All communicable disease- related illnesses will be reviewed on a case-by-case basis and next steps will be at the discretion of on-site healthcare professionals. It is ODV's aim to work with employees to find a balance that keeps all employees safe at the worksite while continuing to produce quality work in a positive workplace.

4. ROLES AND RESPONSIBILITIES

4.1 Manager/Superintendent/Supervisor/Foreman:

Responsible for implementing the policy and procedure and ensuring personnel comply. The Mine Manager also holds the role of Executive Sponsor within the CDMP, and is the point of contact for the NHA Medical Health Officer.

4.2 Employees/workers/visitors:

Responsible for following company policies and procedures and complying. The employee on-shift with the highest level of Occupational First Aid will occupy the role of Communicable Disease Control Lead, overseeing the day-to-day prevention and management practices related to disease prevention and preparedness.

4.3 All Other ODV Personnel

All ODV personnel, and those working on ODV sites, have a social responsibility to keep themselves, their co-workers, and the communities in which they work safe and healthy. By reporting communicable diseases and complying with ODV policies and procedures, the spread of communicable diseases can be mitigated.

5. RISK MANAGEMENT FOR COMMUNICABLE DISEASES

ODV recognizes that communicable disease outbreak and infection are a workplace hazards that have the potential to impact local health services and capacity should they not be appropriately managed and controlled. Effective communicable disease risk management for the Cariboo Gold Project will entail the following four phases.

5.1 Prevention and Mitigation

This is ODV's normal state of operations, focusing on prevention through both behavioural (i.e., hand sanitizer availability, quarantine precautions) and environmental (i.e., healthy meal options, mental health management training and strategies) mechanisms. All personnel will participate in this phase, and it will be reinforced through onboarding and at daily toolbox meetings as appropriate.

5.2 Preparedness

ODV's health and medical services team, with support of their contract medical services provider, and the Communicable Disease Management Team (CDMT) will facilitate education and the practice of outbreak procedures to ensure familiarity and ease of implementation, should an actual communicable disease outbreak occur. This phase includes reviewing the CDMP and ensuring quarantine and environmental prevention mechanisms function.

5.3 Outbreak Response

The Mine Manager, acting as the Executive Sponsor as part of the CDMT is responsible to ensure the pre-planned response is undertaken as intended. Appropriate practices and procedures, as outlined in the CDMP, are implemented, and ODV personnel are directed to occupy their assigned roles as part of the CDMT. The Mine Manager/Executive Sponsor is also responsible to communicate with the medical health officer of the NHA authority, should the situation indicate the necessity.

5.4 Recovery

Should an outbreak response be required, this phase marks the de-escalation and return to ODV's normal state of operations, and review. This phase includes a collaborative review of what occurred, and of the CDMP's efficacy during the outbreak. Any weak points in the phases and execution of disease management should be identified in this phase.

6. SITE REQUIREMENTS

ODV workers and/or personnel with communicable disease symptoms will be assessed using ODV's *Tool* (Appendix A of this document). Those workers/personnel presenting symptoms assessed as medium or high according to the *Tool*, will be asked to either self-isolate at home or in worker accommodation, or refrain from presenting for work/shift. If symptoms begin after the worker/personnel has reported for work or their shift, the situation will be discussed with their direct supervisor, and the on-site health and medical services team, as appropriate. A first aid/health/symptom assessment will be carried out, and the individual may be referred to a higher level of care, or be required to self-isolate. The CDMT and/or health and medical services team will assess and consider the best course of action to maintain individual and workforce health, and mitigate the spread of communicable disease.

7. MONITORING AND EMPLOYEE ATTENDANCE

Signs and symptoms of illness will be assessed on a case-by-case basis by a designated member of the ODV health and medical services team, Advanced/Level 3 OFA attendant, or the Communicable Disease Control Lead. Employees and supervisors shall assess whether employees are cleared to stay at work based on the *Tool* (Appendix A) guidance chart, which classifies low, medium and high-risk symptoms and whether there is risk of transmission.

Workers that are in the medium to high-risk categories will be asked to isolate/stay home until symptoms have resolved. Self-isolation rooms will be provided for those unable to return home because of their symptoms, until they are able to return to their own residence, or until symptoms subside for a minimum, 24 hours.

8. PERSONAL PROTECTIVE EQUIPMENT RECOMMENDATIONS

In addition to the consistent application of routine practices, ODV personnel will be required to follow contact and droplet precautions. This is intended as disease transmission prevention. The following is a guide for appropriate selection and the use of the following personal protective equipment (PPE).

Nitrile Gloves:

- Required for all kitchen and cleaning staff when prepping, handling, and serving food, using cookware, and utensils.
 - Cleaning/housekeeping staff working in the kitchen or dining area are required to wear gloves while working in those areas.
- Gloves are to be changed regularly.

Mask and other PPE:

Face shield and gown use is at the discretion of the Advanced or Level 3 OFA/medic or nurse when providing care for someone who feels ill and communicable disease is suspected.

9. VACCINATIONS

While everyone has the right to self-determination and autonomy, it is strongly recommended that all ODV employees be vaccinated against COVID-19. ODV also encourages everyone to be vaccinated against influenza and ensure tetanus vaccinations are up-to-date.

10. INFECTION CONTROL PLAN

All workers are expected to practice good hygiene and cleaning, including frequent handwashing or hand sanitizing. This will continue indefinitely.

It is the responsibility of Osisko Development to provide clean, handwashing facilities, or access to alcohol-based hand sanitizers when regular washing facilities are not available.

All workers are to help in cleaning objects that are touched frequently, such as doorknobs, handles, railings, kettles, etc., more often with household disinfectants or bleach solution (5 milliliters (ml) of (5%) bleach per 250 mL of water).

10.1 Vehicles

ODV trucks/vehicles will contain disinfecting wipes, with the expectation that high-touch and high-use areas on the inside of company vehicles will be wiped down after use. The same is expected for use of all mics and radios—they should be disinfected with sanitizing wipes before and after use. High touchpoints in trucks will be sanitized before and after use by the driver of the truck before they pass off to a co-worker.

If there is a lack of materials or supplies preventing compliance with the infection control program, notify your Supervisor and the Joint Occupational Health and Safety Committee Representative and ensure the materials have been replaced or ordered.

10.2 Common Areas

Employees must clean common or shared surfaces and areas (i.e., laundry area), and work tools must be sanitized at the beginning and end of each shift.

Communal areas are to be sanitized after every use, with this recorded when completed by ODV and Evolution cleaning staff (wear nitrile gloves if helping to clean).

Common and communal surfaces include washrooms, offices, tables and desks, light switches, handrails, and door handles.

10.3 Tools/Hand Tool Use

Where possible, each employee will have a set of their own tools throughout the duration of their shift.

When not possible, the shared tools and equipment will be wiped down and cleaned with a disinfecting agent such as a wipe or cleaner after use.

Employees will receive training on cleaning tools from their supervisor/managers.

10.4 Work Crews

Employees are being asked to sanitize shared areas, this includes trucks.

All multi-person use areas will be stocked with sanitizing wipes and hand sanitizer, which are all available through the Health and Safety department. If these sanitation supplies run out, please come ask for more supplies. Please take extra precaution to wipe down headsets, radios, and mics, as they are all susceptible to be exposed to droplets.

11. OUTBREAK MANAGEMENT PLAN

When an outbreak has been detected within the Osisko Development workplace, or there is reasonable cause to engage in outbreak management protocols. The following steps will be taken:

1. The General Manager and CDMT will be made aware of the situation and assume responsibility for the organization and delegation of the outbreak management plan. They will do so under the guidance of a medical professional when necessary.
2. The CDMT will communicate to the company, health care partners, CDC, first-nation partners, and community with any necessary and appropriate information.
3. A risk assessment will be completed for the outbreak, to assess any interactions on-site and the likelihood of exposures to the infectious agent.
4. Additional infection prevention and controls will be put in place for first aid attendants, and all employees or groups that may be exposed based on risk ranking and infectious agent.
5. The CDMT will complete a logistics plan to ensure there is appropriate care, housing, isolation locations, and supply inventory for the outbreak and for the outbreak to expand. If the outbreak is predicted to exceed Osisko Development resources, then the CDMT must contact the healthcare partners immediately for guidance.
6. The CDMP will ensure that there is appropriate signage and communication provided about the risk, exposure hazards, and prevention measures in place.

12. USEFUL HEALTH LINKS

Organization/Site	Contact Information
HealthLink BC	https://www.healthlinkbc.ca/
BC Nursing Hotline	811
Regional Communicable Disease Hub	Email: RegionalCD.HubTeam@northernhealth.ca Phone: 1855-565-2990
WorkSafeBC	https://www.worksafebc.com/en
COVID-19 Testing—Lifelabs	1-877-313-4982
NHA Quesnel Virtual Clinic	1-844-645-7811
Urgent Primary Care Clinic, Quesnel	250-991-7571

13. ACKNOWLEDGEMENT OF RECEIPT

I have read, understood, and agree with ODV's Communicable Disease Management Plan.

Employee Name (Print)	Employee Signature	Date

Failure or refusal to sign does not relieve employee of their responsibilities under this CDMP.

APPENDIX A COMMUNICABLE DISEASE RISK ASSESSMENT TOOL

The Communicable Disease Risk Assessment Tool is designed to be used for symptom guidance and assessment. Please seek first aid advice if you are feeling any symptoms of illness. Stay home if you have any of the symptoms below, or consult with the CDMT to determine next steps. In order to return to work, worker/employees/personnel must be symptom free for 24 hours prior to return-to-work.

LOW RISK	MEDIUM RISK	HIGH RISK
Fatigue	Runny nose or congestion	Loss of smell or taste
Upset stomach	Sore throat	Diarrhea
Rashes	Low to Mid-grade fever (Between 37 to 38°C)	Vomiting
Identified allergy symptoms	Loss of appetite	Coughing
Environmental factors (Heat or cold related, dehydration, smoke related)	Sneezing	High fever (greater than 38°C)
Body aches and pains	Close contacts not feeling well	Difficulty breathing
Dizziness	Conjunctivitis (pink eye)	Chest pain when breathing or coughing
Nausea	Headache	

APPENDIX B DAILY SELF-MONITORING FOR COVID-19

Use this form if you show any signs and symptoms as per ODV questionnaire and are self-isolating at home or in quarantine or were exposed to COVID-19.

1. What is self-monitoring?

Self-monitoring for symptoms as per the questionnaire or COVID-19 means you pay attention to your health and record your temperature daily and any of the symptoms. If you are showing any signs and symptoms, you must notify your health authority, or Osisko Development, and they will arrange to have you tested for COVID 19. If you test positive, please inform the company.

2. Worsening Symptoms?

If your symptoms worsen or if you are concerned, notify your health authority, the mine site, or call 8-1-1 or 9-1-1.

If your symptoms worsen, it is important to seek medical help early. Please consult your family doctor or nurse practitioner. If you are unable to reach your regular care provider, seek care at a Primary Care Centre or Emergency Department.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MMM/DD														
Temp (° C)														
No Symptoms														
Symptoms	Pay attention to your health! Write YES or NO for each symptom each day.													
Chills														
Conjunctivitis (Pink Eye)														
New or Worse Cough														
Diarrhea														
Fatigue														
Runny Nose														
Shortness of Breath / Difficulty Breathing														
Sore Throat														
Other (add in notes)														

Notes:

APPENDIX C EXPOSURE CONTROL PLAN

	Cariboo Gold Project Exposure Control Plan

REVISION HISTORY

Rev	Date	Name	Comments
1	February 4, 2025	Emily Bailey	Review and updates
2	March 2, 2025	Hayley Archer	Formatting to new template

	Cariboo Gold Project Exposure Control Plan	Document No:	XXX-SOP-000X
		Revision:	2
		Regulatory:	Any Relevant Information such as Mines Codes, etc.
Owner: Emily Bailey	Approver: Javad Azanchi	Creation Date:	2024-01-26

APPROVALS

Title	Name	Signature	Date
Health & Safety Superintendent	Emily Bailey		
Mine General Manager	Javad Azanchi		
General Manager, Mine Development	Peter Prochotsky		
JOHSC Representative	Lynnette Candy		

1. Objective

The purpose of an exposure control plan is to have procedures and controls in place to eliminate or minimize the risk of occupational exposure to an infectious disease, as well as to reduce the risk of infection should exposure occur.

Anyone who encounters blood, other bodily fluids, or biological substances* has the potential to be exposed to infectious disease. Exposure can occur while providing first aid to co-workers or while performing the cleanup.

2. Procedure

2.1 Basic Steps for Exposure Control

- A.** Fluids present = wear gloves
- B.** Mask
- C.** Eye Protection
- D.** No Unnecessary Risks!
- E.** All gauzes, bandages, etc. contaminated through treatment of a patient are to be bagged, sealed, and identified as hazardous waste.
- F.** All contaminated items must be disposed of either at the local hospital, community health clinic, or in a manner acceptable to the local health authority.
- G.** If you are exposed to blood, bodily fluids, or biological substances where there is risk of infection or illness, report it to Health & Safety and WorkSafe BC (form 7).

	Cariboo Gold Project Exposure Control Plan	Document No:	XXX-SOP-000X
		Revision:	2
		Regulatory:	Any Relevant Information such as Mines Codes, etc.
Owner: Emily Bailey	Approver: Javad Azanchi	Creation Date:	2024-01-26

2.2 Controls and Personal Protective Equipment

- A.** First aid kits can contain objects which are sharp, or sharp objects may be encountered while performing first aid. Sharps containers are available in the first aid rooms.
- B.** Personal protective equipment (PPE) must be worn and will be provided at no cost to first aid attendants. PPE supplies can be located at the warehouse.
- C.** PPE specific to first aid is available in the first aid room, Safety glasses, goggles, face mask, nitrile gloves, and paper coveralls with feet and hood.
- D.** Waste will be disposed of in waste bags and bags will be identified as hazardous waste. If uncertain, treat it as contaminated waste.
- E.** All reusable first aid equipment will be disinfected as soon as possible after contamination and on a routine basis.

3. Training and Education

Proof of certification must be always available, either posted in the first aid room or on the attendant's person. Workers will be provided site-specific training about the exposure control plans, the risks and hazards associated with Blood-Borne pathogen and the controls available.

4. Facilities

Handwashing facilities are in the first aid room, all offices, with hot and cold running water, and waterless hand cleaners also being available. Waterless hand cleaners/towelettes are provided if hand washing facilities are not immediately available.

5. Vaccination

First aid attendants will be offered the hepatitis A-B vaccination at no cost to them. Attendants may decline. Record of the vaccination or refusal of the vaccination will be recorded.

6. Recordkeeping

Exposure incident records must be kept. Records can include first aid record and incident reports. Records documenting first aid attendant education and training on infectious disease and this exposure control plan must be maintained.

	Cariboo Gold Project Exposure Control Plan	Document No:	XXX-SOP-000X
		Revision:	2
		Regulatory:	Any Relevant Information such as Mines Codes, etc.
Owner: Emily Bailey	Approver: Javad Azanchi	Creation Date:	2024-01-26

ACKNOWLEDGEMENT OF RECEIPT

I have read, understand, and agree with Cariboo Gold Project's Exposure Control Plan.

_____	_____	_____
Employee Name (Print)	Employee Signature	Date
_____	_____	_____
Trainer Name (Print)	Trainer Signature	Date

Failure or refusal to sign does not relieve any employee of their responsibilities under this Plan.

APPENDIX D SITE SPECIFIC EMERGENCY RESPONSE PLANS



OSISKO DEVELOPMENT

CARIBOO GOLD PROJECT

**SITE-SPECIFIC EMERGENCY RESPONSE PLAN
– MINE SITE (WELLS)**

May 2023



OSISKO DEVELOPMENT

Cariboo Gold Project

PO Box 250
3700 Ski Hill Road
Wells, BC V0K 2R0

EMERGENCY CONTACTS

Osisko Development - Cariboo Gold Project

Last update: November 27, 2024



EMERGENCY RADIO	Channel 1, MEDIC RP (RX 165.69 TX 170.67)		
FIRST AID TRAILER	236-713-2014	Line not monitored – use MEDIC RP in emergency	
MAIN OFFICE	3700 Ski Hill Road, Wells, BC V0K 2R0		
BALLARAT CAMP	4050 Bowron Lake Road, Wells, BC V0K 2R0		
SITE COORDINATES	BONANZA LEDGE	53.0738, -121.5511	
	MOSQUITO CREEK	53.1072, -121.6009	
	AIRPORT BY BALLARAT	53.088056, -121.515277	

WELLS SITE-WIDE PROTOCOL: IN-CASE OF EMERGENCY

SPEAK CLEARLY AND CALMLY INTO THE RADIO MICROPHONE

“CODE 1, CODE 1, CODE 1”

state your emergency

WHEN CODE 1 IS CALLED, SUPERVISORS SWITCH TO CREW CHANNEL AND ALERT WORKERS CODE 1 HAS BEEN CALLED AND TO STAND DOWN.

WELLS OPERATIONS

General Manager	Javad Azanchi	Office: 236-713-2030 (801)	Mobile: 778-951-9153
Manager of Mine Development	Peter Prochotsky	Office: 250-470-8718	Mobile: 778-594-6637
Mine Manager Designate(s)	John Aitken	Office: 778-414-8489 (704)	Mobile: 778-258-0347
	Luc Richard	Office: 236-713-2066 (816)	Mobile: 438-401-8354
Consulting Engineer(s)	Guillaume Breton-Vincent	Office:	Mobile: 514-503-1654
	Guillaume Debellefeuille	Office:	Mobile: 450 807-2280
Surface Ops Superintendent	John Aitken	Office: 778-414-8489 (704)	Mobile: 778-258-0347
Human Resources	Jorleen Russell	Office: 778-414-8499 (102)	Mobile: 250-255-8855
Command Centre - Wells	ERP Command Centre Satellite Phone #2	Office: 236-713-2070 (610) 01-188-163-164-8765	Radio: MEDIC RP

HEALTH & SAFETY

Health & Safety Superintendent	Emily Bailey (OFA 3)	Office: 236-713-2061 (600)	Mobile: 250-699-1183
ON-SITE OFA 3 ATTENDANT(S)	Steven Lalonde (OFA 3)	Office:	Evening: 250-365-6772/MEDIC RP
	Anthony Flegg (OFA 3)	Office:	Evening: 306-250-2718/MEDIC RP
	Adam Saxler (OFA 3)	Office: 236-713-2025 (813)	Evening: 250-316-0667/MEDIC RP

ENVIRONMENT

Environmental Superintendent	Kayly Phipps (OFA 3)	Office: 778-414-8488	Mobile: 250-488-7768
Environmental Coordinator(s)	Mathieu Perrault	Office: 778-414-8485 (403)	Mobile: 250-641-1135
	Ryan Boudens (OFA 3)	Office:	Mobile:

QR MILL SITE

Mill Supervisor	Shea Kadar (OFA 3)	Office: 236-713-2032 (802)	Mobile: 250-255-3978

EXPLORATION

Exploration Manager	Eryn Doyle	Office: 778-414-8496 (503)	Mobile: 604-328-0558

COMMUNITY RELATIONS OFFICE

Community Relations	Hayley Archer	Office: 778-414-8484 (205)	Mobile: 778-414-8484
	Lynnette Candy	Office: 778-414-8497 (200)	Mobile:
Community Feedback Line (voicemail box)		Office: 778-414-8493 (202)	

EXTERNAL EMERGENCY SERVICES

Service	Emergency Number	Non-Emergency Number
BC Ambulance	9 1 1	
Air Ambulance (Helicopter)	9 1 1	
Yellowhead Helicopters (McBride, BC)	250-963-9884	250-963-9884
RCMP	9 1 1	250-994-3314
Wells Volunteer Fire Brigade	9 1 1	250-944-3363
BC Wildfire Reporting	1-800-663-5555 OR *5555 (on Cell Phone)	
Poison Control	9 1 1	1-800-567-8911
HOSPITAL G.R. Baker (Quesnel, BC)	250-985-5600	250-985-5600
Provincial Emergency	1-800-663-3456	

ON-SITE RADIO FREQUENCIES

Site Channel	Name	Frequency	Description / Use
1	MEDIC RP	RX 165.69 TX 170.67	First Aid primary channel for Day Shift/Night Shift & Emergency Response.
3	EXPL RP	RX 162.36 TX 167.34	Exploration Dept. primary channel - core compound and Geologist activity.
5	STD Drilling	RX 166.11	Drill Access Roads (KM calling for F Rd, B Rd, C Rd, & Hard Scrabble Rd).
	RR31	RX 151.52	For A Road to BL (KM calling for A Rd. from 0 KM to 4.5 KM stop sign).
6	MOP RP	RX 162.355 TX 168.375	Bonanza Ledge – change to 6 MOP RP (channel 6) at A Rd. 4.5 km stop sign; this channel for any operations chatter on BL (past 4.5 km on A Rd.).
9	RR1/500 FSR	RX 150.08	For 500 Road to QR (KM calling for 500 Rd. from 0 KM to QR gate).
10	QR Site	RX 173.955	QR Site main channel (change to this at QR gate).
11	QR Mill	RX 171.345	QR Mill radio channel.
12	QR Medic RP	RX 165.18 TX 170.16	First Aid primary channel for Day Shift/Night Shift & Emergency Response.

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- APPENDIX 9** Procedures – Adverse Weather

ABBREVIATIONS

Terminology used in this document has been defined where it is first used, while the following list has been presented to assist readers that choose to review only portions of the document.

Abbreviation	Description
BC	British Columbia
BGM	Barkerville Gold Mines Ltd.
BL	Bonanza Ledge
BMP	Best Management Practice
DFO	Fisheries and Oceans Canada
EMT	Emergency Response Team
ENV	Ministry of Environment and Climate Change Strategy (British Columbia) – formerly Ministry of Environment
ERP	Emergency Response Plan
ICS	Incident Command System
ICT	Incident Command Team
km	kilometre
Ltd	Limited
m	Metre
EMLI	Ministry of Energy, Mines and Low Carbon Innovation (BC)
LPG	Liquid Propane Gas
MOF	Ministry of Forests
MWh	Megawatt Hour
ODV	Osisko Development Corp.
Project	Cariboo Gold Project (proposed)
QR Mill	Quesnel River Mill
SSERP	Site-Specific Emergency Response Plans
TSF	tailings storage facility

1. PURPOSE

This Site-Specific Emergency Response Plan (SSERP) is created to address the Mine Site (also referred to herein at times as “Wells”) site-specific emergency response requirements needed to meet the Ministry of Energy, Mines and Low Carbon Innovation Mine Emergency Response Plan requirements and use the ODV Emergency Response Plan (ERP) as a reference and resource when responding to any level of emergency. It includes the Mine Site (Mine Site Complex near Wells and Bonanza Ledge Site), as well as infrastructure, Transportation Route, and access roads.

2. OBJECTIVES

This SSERP outlines the following measures. The objectives in effectively managing any incident are to:

- Protect lives (workers, responders, public);
- Know and identify site-specific hazards and risks;
- Know and identify site-specific rescue equipment;
- Effectively rescue and treat casualties;
- Minimize environmental impacts;
- Minimize damage to company, contractors, public and private property;
- Protect shareholder value; and
- Facilitate rapid recovery and restoration from emergency occurrences.

3. ROLES AND RESPONSIBILITIES

See the Project Emergency Response Plan for Roles and Responsibilities.

4. EMERGENCY SITUATIONS

The Cariboo Gold Project Mine site operation has the potential for emergencies that may include, but are not limited to, the following:

- Personal injury;
- Loss of life;
- Unexpected/unintentional explosion;
- Surface or underground fire/heat or smoke;
- Equipment failure, vehicle accident;
- Release of poisonous fumes, flammable or explosive gases;
- Structural failures;
- Landslide or avalanche;
- Flammable or poisonous liquid spill, liquid spill over 100L;
- Major power outage;
- Missing person(s); and
- Alarm of unknown origin.

Possible emergency situations that could develop at the Mosquito Creek Tailings or Water Management Structures are as follows:

- Dam Breach – large and rapidly increasing uncontrolled release of water and tailings due to failure of the dam;
- Unusual Conditions that could lead to a dam breach – any condition that could result in dam failure and uncontrolled release of water and tailings from the reservoir;
- Earthquake – an earthquake alert exists or in an earthquake is felt at the QR Mine Site which may lead to damage which may range from mild to severe;
- Severe Flooding – conditions which are outside of the normal operations conditions specified in the OMS manual which may lead to slumping of dam slopes, significant seepage, or extreme run-off and discharge from the facility; and
- Uncontrolled effluent discharge from impoundment – release of effluent water from tailings facility, pit, pond, or treatment system not meeting water quality requirements for discharge.

5. NOTIFICATION AND ACTIVATION

5.1 Initial Notification

Person(s) reporting incident or emergency shall:

1. Make contact in person, by phone, and by radio to the 24/7 First Point of Contact.

First Point of Contact – 24/7 John Kimmie/Emily Bailey	Radio: 1 Medic RP " CODE 1 - CODE 1 - CODE 1 " Office: 236-713-2019/236-713-2061 Cell: 250-316-0702/250-699-1183

2. Provide the following information:

- Who is calling?
- What has happened?
- When did the incident happen?
- Who/how many are injured?
- What is your location? What is the location of the emergency?
- What is initial Level of Emergency (1, 2, or 3?)
- What help is required?
- Are there any personnel that need to be evacuated?

3. Remain available.

4. If evacuation is required, all personnel to evacuate to designated muster station.

- On Scene Supervisors are responsible for accounting for people under their care at the muster station;
- Await further instruction – keep radio silence unless instructed to do so;
- Do not leave the muster station for any reason unless instructed to do so or it becomes unsafe; and
- Do not make any off-site phone calls with information related to the emergency.

URGENT:

**ONCE THE EMERGENCY RESPONSE PLAN HAS BEEN ACTIVATED
ALL WORK, VEHICLE TRAFFIC, AND RADIO CHATTER MUST CEASE (RADIO SILENCE)
MINE RESCUE WILL ASSUME RADIO CONTROL
(CHANNEL TO BE DETERMINED AT TIME OF EMERGENCY)**

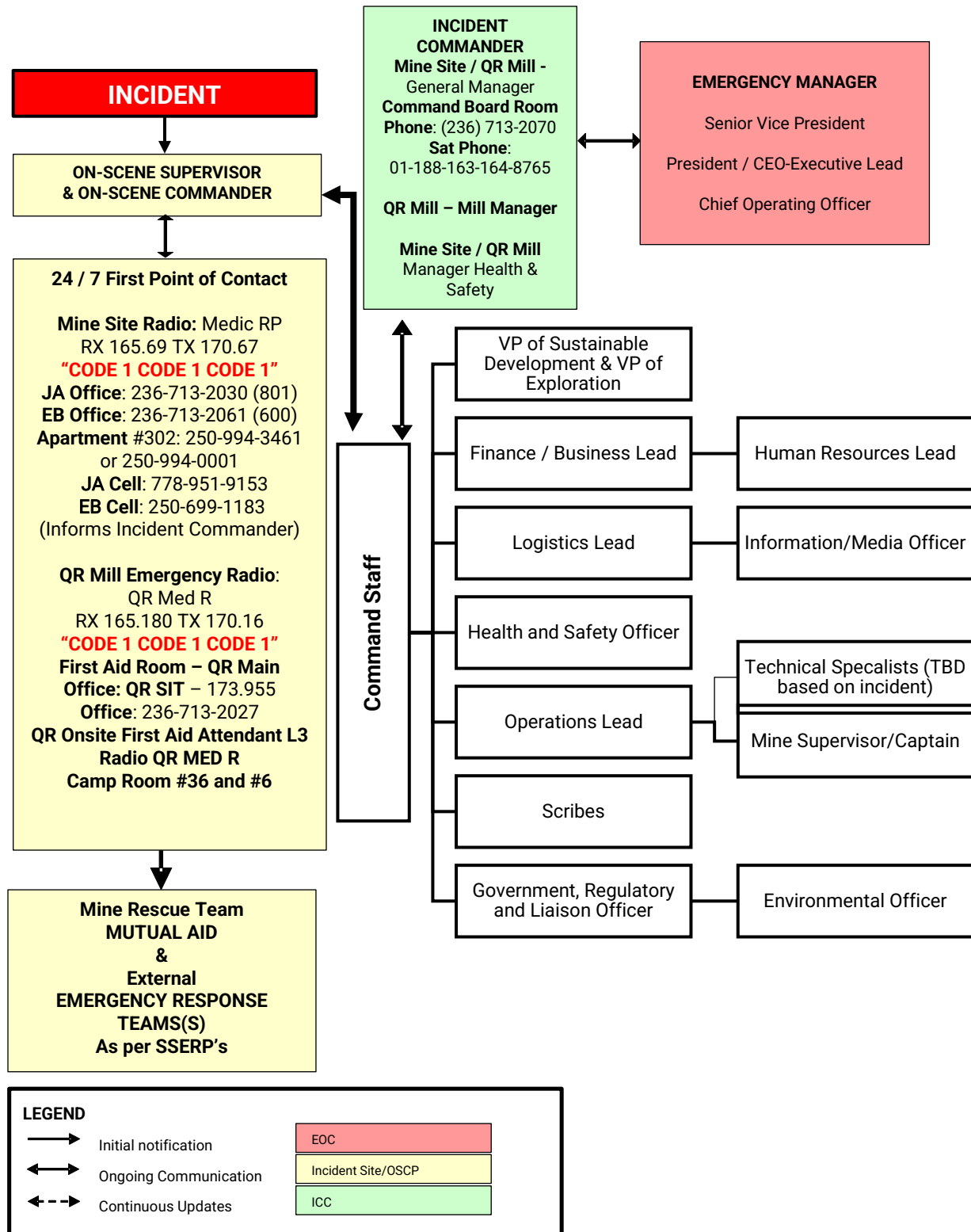


Figure 5.1-1 Incident Command Team

5.2 Incident Command System (ICS) Response Facilities

Facility	Purpose	Key Activities	Location
On-Site Command Post (OSCP)	Manages all operations on-site related to the incident except for public safety	- Control and containment - Worker safety - Monitoring to define hazard area - Establish roadblocks at the perimeter of hazard zone, as required - Record workers' access in and out of the hazard zone - Liaison with on-site government representative(s)	- BGM Sites - Close and safe proximity to the incident site - Typically, where the On-Scene Supervisor is located
Incident Command Centre (ICC)	- Manages overall incident and provides support to OSCP - Manages initial communication and sheltering / evacuation activities	- Direct overall response efforts of Incident Command Team (ICT) - Coordinates public contacts (i.e. residents, industrial operators) - Immediate source for public/ media information (upon advice from BGM EMT) with regards to known facts	- BGM Admin Office Boardroom - Where the Incident Commander, Command Staff and Incident Command Team are located
Emergency Operations Centre (EOC)	Provides support and advice to local response personnel (ICT / Incident Commander)	- Directs corporate response - Identifies and provides support to ICT - Assesses current and potential corporate risk to the Company - Directs employee and media communications - Provides advice regarding key stakeholder relations - Provides policy and regulatory guidance - Approves capital financial support	- BGM Head Office, Toronto - Where the Emergency Management Team are located
Unified Command Centre / Mutual Aid (UCC)	Established when both BGM and other agencies or companies have jurisdictional or functional responsibilities for the incident	- Establishes a common set of objectives and strategies that all can subscribe to – a single, coordinated Incident Action Plan - Unified decision-making process	- Located at BGM Incident Command Centre (ICC) - If not practical, BGM representatives sent to external UCC

6. EMERGENCY ALARM SIGNALS – STENCH GAS RELEASE

In ALL cases of Underground Emergency, Stench Gas will be released to notify all personnel in the mine that muster/evacuation is required. See Stench Gas Procedure (ERP-SGP-021)

1. Initial Notification:

- a) Give name, location, nature of emergency;
- b) Initiate Emergency Response Plan;
- c) Contact Mine Manager and Health and Safety Coordinator;
- d) Mobilize Mine Rescue.

2. Initial Response:

- a) Deploy Stench Gas Injection

See Appendix 1 of this SSERP – Stench Gas

7. EVACUATION – MEDICAL AND SECURITY

7.1 Employee Safety during Evacuation

Despite incident severity and/or perceived patient status, all designated emergency responders will ensure that reasonable steps are taken to protect their own safety, and the safety of their co-workers. All personnel will meet at the Primary or Secondary Meeting Point as designated by the ODV Site Supervisor and await further instructions from the ICT.

7.2 Tag Board/Muster Station/Evacuation Roll Call

If a “Muster” is necessary, all non-essential personnel will immediately proceed to the Primary Muster Point if safe to do so. The most senior person available will take a headcount and advise the On-Site Supervisor of the findings.

All essential personnel will secure the workplace then proceed to the nearest Muster Point and wait for instruction by the On-Site Supervisor. The most senior person available will take a headcount and advise the On-Site Supervisor of the findings.

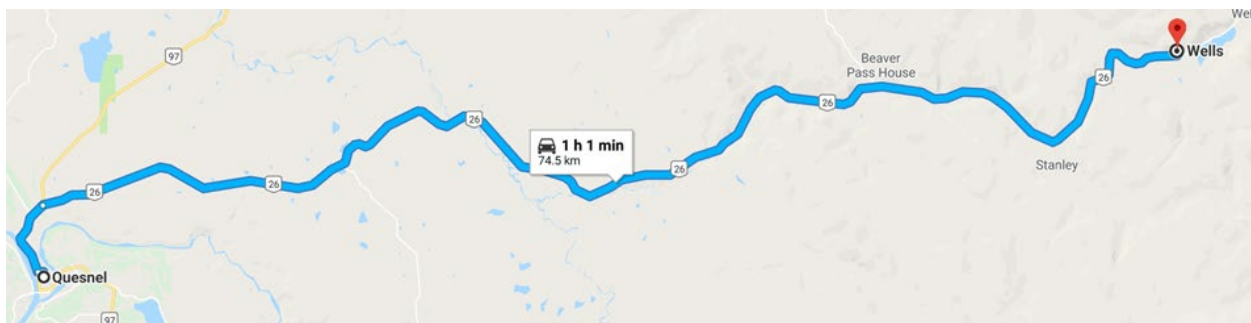
If a Site Evacuation is necessary, there will be a Primary and Secondary Evacuation Area. If the ODV Site Supervisor calls for a site evacuation, they MUST designate either the Primary or the Secondary area (as dependent upon the emergency). The Supervisor will be required to organize the transport of all personnel to the designated Evacuation Area. All personnel will then proceed in a calm and organized manner and wait for further instruction. The most senior person available will take a headcount and advise the On-Site Supervisor of the findings. **The On-Site Supervisor will ensure everyone on site is accounted for.**

The meeting areas for Cariboo Gold Project are as follows:

Primary: Lot C Parking

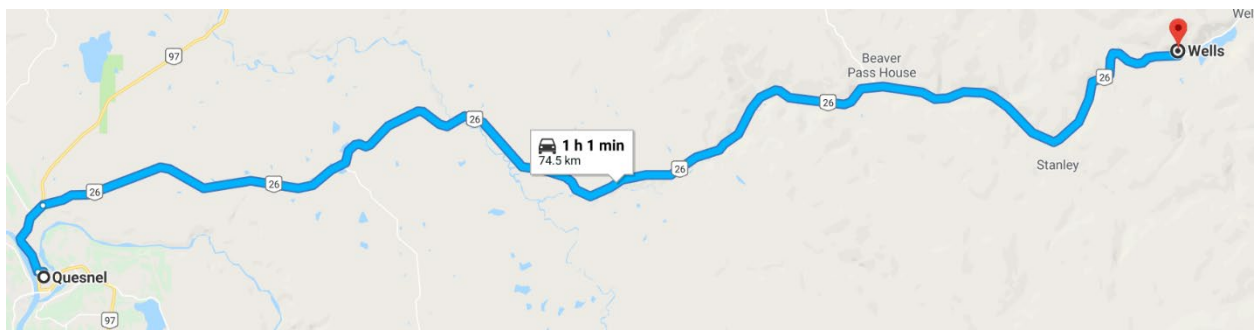
Secondary: Temporary Office parking

7.3 Directions to Cariboo Gold Project (Mine Site Complex)



- **From Quesnel** – turn right onto Highway 26 following signs for Barkerville Historic Town
 - Passing by the Visitor’s Information Center parking lot at the Jack-o-Club Lake follow the signs onto the Cariboo Gold Project.
- **From Prince George** – turn left onto Highway 26 following signs for Barkerville Historic Town
 - Passing by the Visitor’s Information Center parking lot at the Jack-o-Club Lake follow the signs onto the Cariboo Gold Project.

7.4 Directions to Cow Portal and Bonanza Ledge Site



- **From Quesnel** – turn right onto Highway 26 following signs for Barkerville Historic Town
 - Pull into the Visitor’s Information Center parking lot at the Jack-o-Club Lake and an escort vehicle will guide up to Cow Portal and Bonanza Ledge.
- **From Prince George** – turn left onto Highway 26 following signs for Barkerville Historic Town
 - Pull into the Visitor’s Information Center parking lot at the Jack-o-Club Lake and an escort vehicle will guide up to Cow Portal and Bonanza Ledge.

7.5 GPS Coordinates

Table 7.5-1 provides the site GPS coordinates for muster stations.

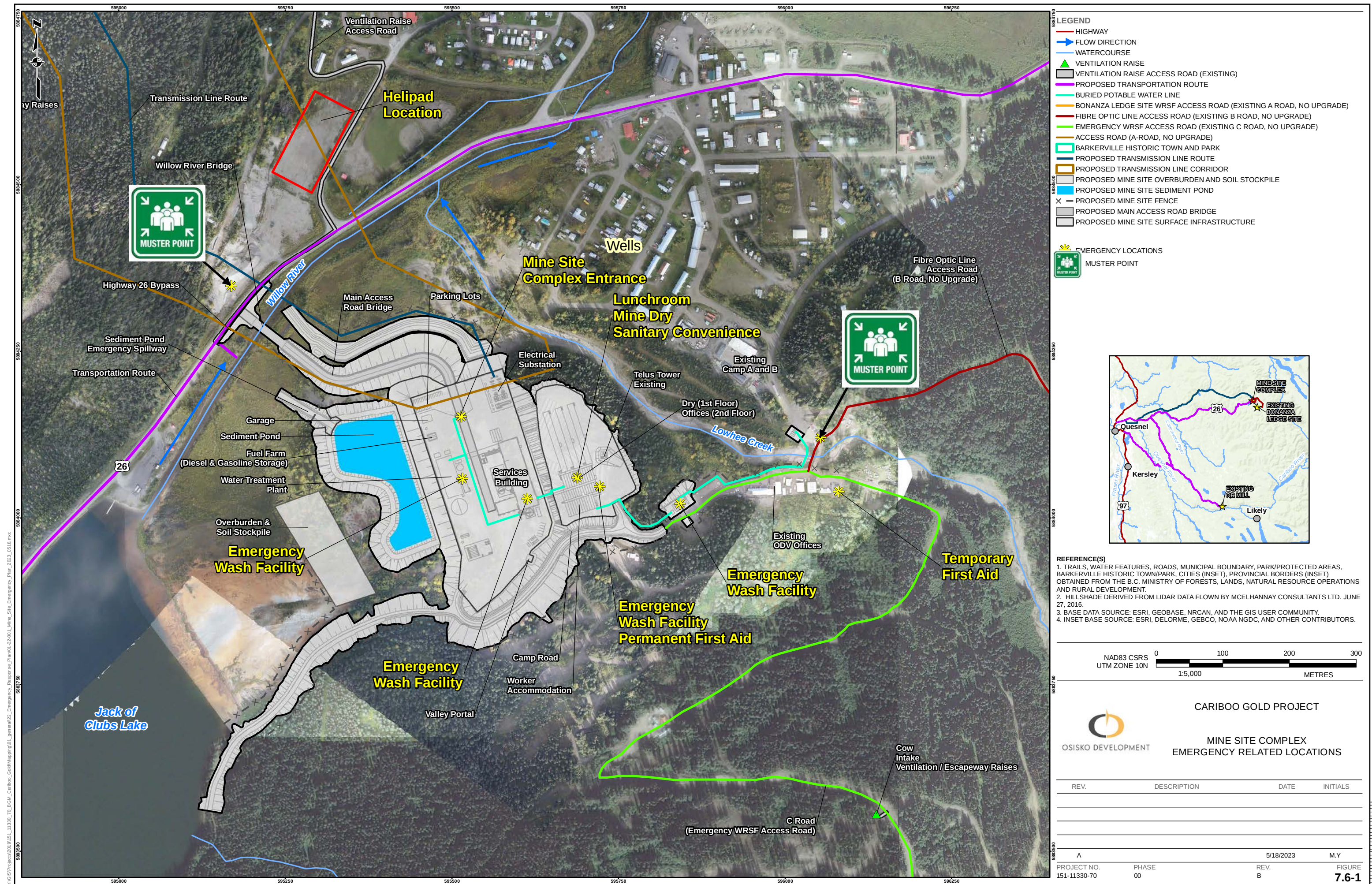
Table 7.5-1: Site GPS Coordinates for Muster Stations and Entrance Gate

Site	Latitude	Longitude	Altitude (m)
Bonanza Ledge Offices	53.07200	-121.54893	1,470
B lot	E 595303	N 5884596	1,100
Bonanza Ledge A-5 Surface Ops Laydown	53.07359	-121.55019	1,490
Bonanza Ledge A-0 (Bottom of A Road)	53.10168	-121.53776	n/a
Thyssen Office	53.07064	-121.54784	1,451

Site	Latitude	Longitude	Altitude (m)
BL Mine Portal (Entrance)	53.07029	-121.54655	1,437
Cow Portal (Entrance)	53.09318	-121.55681	1,342
Mine Site Complex	53.0985	-121.5752	1,225

7.6 Mine Site Layout with Muster Points

Figure 7.6-1 provides the muster points and other emergency related locations at the Mine Site Complex. Figure 7.6-2 provides the Bonanza Ledge Site (applicable to Cow Portal) first aid locations.



7.7 Cow Portal

Figure 7.6-2 provides the Emergency related locations at the Bonanza Ledge Site, including the location of the Cow Portal.

7.8 First Aid and ERT Temporary Offices



Figure 7.8-1 First Aid and ERT Temporary Offices

8. CONTACT INFORMATION

8.1 Site Personnel

Table 8.1-1 provides the contact information of the site personnel.

Table 8.1-1: Site Personnel Contact Information

First Point of Contact – 24/7 John Kimmie/Emily Bailey		Radio: MEDIC RP “CODE 1 CODE 1 CODE 1” Office: 236-713-2019/236-713-2061 Cell: 250-316-0702/250-699-1183	
Name	Position	Location	Contact Numbers
Paul Ratte	General Manager	Wells Main Office	On-Site: (236)-713-2016 (702) Off-Site: (289)-923-8252
John Renaud	Manager Health and Safety	Wells Main Office	Office: (778)-414-8490 (601) Off-Site: (250)-572-1057
Kayly Phipps	Environmental Superintendent	Cariboo Gold Project/QR	On-Site: (778) 414-8488 (402) Off Site: (250) 488-7768 (cell)
Ryan Boudens	Environmental Coordinator	Wells Environment Office	On-Site: (778)-414-8485 (403)
John Aitken	Surface Ops Superintendent	Wells Main Office	On-Site: (778)-414-8489 (704) Off-Site: (778)-258-0347 (cell)
Phillipe MacKay	Underground Superintendent	Wells Main Office	On-Site: (778) 414-8487 (706) Off-Site: (514) 974-4349 (cell)
John Kimmie Emily Bailey	Health and Safety Officer	Wells Main Office	Office: (236)-713-2019 (602) Office: (236)-713-2061 (600)
Jorleen Russell	Human Resources	Wells Main Office	On-Site: (778)-414-8499 (102)
Chris Pharness	VP Sustainability Information/Media Officer	Sanders Office	Office: (236)-713-2018 (203)
	Yellowhead Helicopters	McBride	(250) 963-9884 - McBride

8.2 Local Medical and Emergency Services

Table 8.2-2 provides the contact information of local medical and emergency services.

Table 8.2-1: Local Medical and Emergency Services

Name	Position	Location	Contact Number
G.R. Baker Memorial Hospital	Quesnel	543 Front Street Quesnel, BC V2J 2K7	Phone: (250) 985-5600 Fax: (250) 992-5652
University Hospital of Northern B.C.	Prince George	1475 Edmonton Street Prince George, BC V2M 1S2	Phone: (250) 565-2000 Fax: (250) 565-2343
EMERGENCY Ambulance, Police, Fire Department		DIAL 9-1-1	

Name	Location	Non-Emergency Contact Number
Wells Volunteer Fire Brigade	2314 Baker St, Wells, BC V2N 1X4	Fire Chief: 250-994-3363
Quesnel Volunteer Fire Department	310 Kinchant St. Quesnel, B.C. V2J 2R4	250-992-5121
Wells RCMP	12491 Barkerville Hwy Wells, BC V0K 2R0	250-994-3314
Quesnel RCMP	584 Carson Ave Quesnel, BC V2J 2B5	(250) 992-9211

8.3 Transportation Services

Name	Position	Location	Contact Number
Yellowhead Helicopters	Med-Evac Service	McBride	(250) 963-9884

8.4 Mine Rescue Team

Table 8.4-1 provides the Mine Rescue Team.

Table 8.4-1: Mine Rescue Team

Name	Position	Location	Contact Number
Aitken; John	Surface Superintendent	Wells	Phone: (778) 414-8989 (704) Cell: (778) 258-0347 Email: jbaitken@osiskodev.com
Bailey; Brendan	Associate	Wells	Phone: (250) 994-0001
Bailey; Emily	Safety Advisor	Wells	Phone: 236-713-2061 (600) Cell: 250-699-1183 Email: elindstrom@osiskodev.com

Name	Position	Location	Contact Number
Boudens; Ryan	Environmental Coordinator	Wells/Quesnel	Phone: 778-414-8485 (403) Email: rboudens@osiskodev.com
Flegg; Anthony	Surface Supervisor	Wells/Quesnel	Cell: (306) 250-2718 Email: aflegg@osiskodev.com
Flynn; Riley	Environmental Technician	Wells/Quesnel	Phone: Email: rflynn@osiskodev.com
Kadar; Shea	Mill supervisor	QR Mill/Quesnel	Phone: (236) 713-2032 (802) Cell: (250) 713-3978 Email: skadar@osiskodev.com
Kimmie; John	Safety Advisor	Wells/Quesnel	Phone: (236) 713-2019 Cell: (250) 316-0702 Email: jkimmie@osiskodev.com
Olson; Lloyd	Electrician	QR Mill/Quesnel	Phone: (236) 713-2029 (809) Cell: (778) 316-2226 Email: jolson@osiskodev.com
Renaud; John	Safety Manager	Wells/Barrier	Phone: (778) 414-8490 (601) Cell: (250) 572-1057 Email: jrenaud@osiskodev.com
Saxler; Adam	Mechanic	QR Mill/Quesnel	Phone: (236) 713-2025 Cell: (250) 316-0667 Email: asaxler@osiskodev.com
Vaughan; Melissa	Environmental Technician	Wells/Horsefly	Phone: Cell: Email: mvaughan@osiskodev.com

8.5 Regulatory Contact Information

Table 8.5-1 provides the regulatory contact information.

Table 8.5-1: Regulatory Contact Information

Agency	Name	Address	Contact Number
Ministry of Environment	n/a	Cariboo Regional Office: 400 - 640 Borland Street Williams Lake, BC V2G 4T1	Office: 250-398-4530 General Inquiries: 1-800-663-7867 Email: EnquiryBC@gov.bc.ca

Agency	Name	Address	Contact Number
Ministry of Forests		Cariboo-Chilcotin Natural Resource District (DCC) 200 - 640 Borland Street Williams Lake, B.C. V2G 4T1 Quesnel Natural Resource District (DQU) 322 Johnston Avenue Quesnel, B.C. V2J 3M5	Office: 250-398-4574 Email: FLNR.AdminServicesCariboo@gov.bc.ca Office: 250-992-4400 Email: Forests.QuesnelDistrictOffice@gov.bc.ca
EMLI – Chief Inspector of Mines	Hermanus Henning	PO Box 9320 Stn Prov Govt Victoria, B.C. V8W 9N3	Office: 250-419-8659 Email: Hermanus.Henning@gov.bc.ca
EMLI – Mines Inspector	Chris LeClair - Inspector of Mines, Health, and Safety	2nd Floor, 441 Columbia Street Kamloops, BC V2C 2T3	Office: 250-312-6728 Email: Chris.leclair@gov.bc.ca
EMLI – Mines Inspector	Brent Beattie – Sr. Geotechnical Inspector	PO Box 9395 Stn Prov Govt Victoria, B.C. V8W 9M9	Office: 778-698-7151 Email: Brent.Beattie@gov.bc.ca
EMLI – Mines Inspector	Kirsti Medig– Sr. Environmental Geoscientist	PO Box 9320 Stn Prov Govt Victoria, B.C. V8W 9N3	Office: 250-420-1844 Email: Andrew.Craig@gov.bc.ca
Ministry of Transportation	n/a	5th Floor 410 Kinchant St Quesnel, BC V2J 7J5	Office: 250-983-7210 General Inquiries: (250) 387-3198 Email: TRAN.WEBMASTER@gov.bc.ca
Environmental Violations	BC Government Hotline	n/a	1-800-663-9453
Fisheries and Oceans Canada	Area Director – BC Interior Angela Bate		Office: 604-666-6478 General Inquiries: 1-800-663-7867 Email: angela.bate@dfo-mpo.gc.ca
Ministry of Labour	Employment Standards Office	1577 7th Avenue Prince George, BC V2L 3P5	General Inquiries: 1-800-663-7867 Email: LBR.Minister@gov.bc.ca
Province of B.C. Emergency Spill Reporting	BC Government Hotline	n/a	1-800-663-3456 Fax: 250-612-4171

9. EMERGENCY RESPONSE EQUIPMENT

The emergency response equipment is listed in Appendix I (Emergency Response Equipment) of the Project ERP.

10. MEDICAL AID RESPONSE

10.1 Medical Assessment

- Injury – An event that results in physical harm to an employee.
- Illness – A deviation from the normal, healthy, state of the body.

A medical assessment is a set of testing run on employees to determine their overall medical condition and determine their general health state. An employee who sustains an injury or becomes ill because of workplace conditions or work activity must verbally report the injury or illness to 24/7 On site first aid attendant immediately and then notify a supervisor.

The medic will perform any required first aid and then perform an assessment of the employee and make recommendations regarding additional medical treatment or returning to work. This evaluation includes ABC's (Airway, Breathing, Circulation), a behavior status inventory, general impressions, signs and symptoms (chief complaint and pertinent findings), allergies (Are you allergic to anything?), medications (What prescription medications do you take on a regular basis?), history (Has anything like this happened before?), last oral intake (When was the last time you had anything to eat or drink?), events (What was going on just prior or leading up to the problem today?), vitals, and if there is a need for transportation to the hospital.

An Accident/Incident Reporting Form MUST be completed and signed by the employee, supervisor, and any witnesses. If the following occurs: fatalities, critical injuries, lost time, occupational illness, property damage, fire, and environmental release, refer to the Accident/Incident Investigation procedure. An investigation is required, and the completed Investigation Report is then distributed to the appropriate parties including the employee, manager/supervisor, health and safety, and the Joint Occupational Health and Safety Committee for review. Follow-up may be required following the review.

10.2 Medical Response

A medical emergency may include a workplace injury or a non-occupational illness at the Mine Site. When a medical emergency occurs, personnel shall use the following guidelines:

- Call for help (on-site medic) and notify the ODV Site Supervisor
- Apply basic first aid and CPR (Circulation, Pulse, Respiration) if possible or assist the site medic until the 9-1-1 EMS arrives
- If advanced medical care is needed, immediately contact 9-1-1.

- Ensure someone waits for the ambulance and directs medical response personnel to injured person(s)
- Assist emergency service responders, as directed

ODV Incident Commander will notify Emergency Manager to notify next of kin, when a situation is confirmed as serious by medical personnel, ERP is deployed, and ICS used to respond to emergency.

An Accident/Incident Reporting Form **MUST** be completed and signed by the employee, supervisor, and any witnesses. If the following occurs: fatalities, critical injuries, lost time, occupational illness, property damage, fire, and environmental release, refer to the Accident/Incident Investigation procedure. An investigation is required, and the completed Investigation Report is then distributed to the appropriate parties including the employee, manager/supervisor, health and safety, and the Joint Occupational Health and Safety Committee for review. Follow-up may be required following the review.

11. SAFETY PROCEDURES

11.1 General Response

1. Notify ODV 24/7 First Point of Contact
 - **In-Person:** Health and Safety/Wells Office
 - **Radio:** Medic RP "CODE 1 CODE 1 CODE 1"
 - **Office:** 236-713-2019 or 236-713-2061
2. **DO NOT PUT YOURSELF AT RISK**
3. Once Incident Commander and or On Scene Commander respond;
 - Ensure any rescue operations are safe;
 - Treat any injuries and provide ambulance/hospital service if necessary;
 - Account for personnel;
 - Implement emergency plan;
 - Assess damage;
 - Assess damage effects;
 - Check communication systems;
 - Make recovery plans.

11.2 Fire Extinguisher Use

A dry chemical ABC extinguisher will extinguish fires involving wood and paper products, as well as flammable liquids, oil, and grease.

To extinguish a fire:

- Check the extinguisher to ensure it is charged;
- Strike the base against a firm surface to free compacted powder;
- Pull pin and squeeze trigger;
- Aim the nozzle at the base of the fire;
- Use a sweeping motion from left to right;
- Always keep the fire in front of you;

- Avoid walking through fuel sources; and
- Attack the fire from the upwind side if possible.

Home extinguishers should be readily available by the door. Vehicles and equipment should all be equipped with fire extinguishers. All generators and fuel tanks **MUST** have fire extinguishers. Extinguishers (6.0kg dry chemical ABC) should be mounted near each office and/or accommodation entrance.

11.3 Fire and Explosions

DO NOT PUT YOURSELF AT RISK

If a fire has occurred, all personnel needs to be removed from site and brought to a safe location/Muster Station. Identify the products involved before an attempt is made to extinguish a fire. Consult with the Site Supervisor or On Scene Commander if any uncertainty exists. If it is safe to do so, personnel may attempt to put the fire out using fire extinguishers. If the fire cannot be put out or contained specialized firefighting personnel will be mobilized to fight fire.

See Appendix 2 – Fire

- Surface Infrastructure Fire (ERP-SIF-004);
- Underground Fire (ERP-UGF-017);
- Forest Fire (ERP-FF-005).

Do not extinguish burning leaks if the leak or supply to the leak cannot be stopped. Fires in proximity to pressurized vessels, (e.g., Propane storage tanks are extremely dangerous and can result in tremendous explosions) require evacuation to an adequate area away from the incident.

Identify the products involved before an attempt is made to extinguish a fire. Consult with the Site Supervisor or On Scene Commander if any uncertainty exists. First responders are to be informed about any hazards associated with the fire or explosion. They will not be allowed to enter the emergency zone without the appropriate training and equipment.

Do not approach fires involving toxic materials, (e.g., hazardous wastes) unless properly masked-up for toxic emissions. Consider the direction and range of drift smoke and fumes when assessing the need to evacuate the public

11.4 Floods and Spills

DO NOT PUT YOURSELF AT RISK

If you are the responsible for a spill or recognize “deposits out of the normal course of events” notify your supervisor immediately and they will notify environmental staff for further action. Deposits out of normal course of events may include, but are not limited to:

- Water collected from within the contact ditch system not directed into the approved water treatment system;
- Mine water flowing out of the underground workings via the decline portal not directed into the approved water treatment system; and
- Spills or releases of dangerous goods and hazardous materials.

ALL spills are required to be appropriately contained and cleaned up. Spills 4 L and over are required to be reported to the Environmental Manager and undergo inspection. Spills 100 L and over, and/or those that enter a waterway, are also required to be reported to the Ministry of Energy and Mines and the Ministry of Environment. A formal incident investigation is required.

In the event of a flood or washout, all personnel, contractors, and visitors shall proceed to safe Muster Stations. ODV will ensure, to the best of its ability, that infrastructure/equipment, the surrounding environment, the community of the District of Wells, and Barkerville Historic Town are kept as safe as possible in the case of a surface flood in or around any mine property.

See Appendix 3 – Spills/Floods

- Surface Spill Response (ERP-SSR-008);
- Underground Spills (ERP-UGS-019);
- Surface Flood (ERP-SFR-003);
- Underground In-Rush of Water (ERP-UGF-016).

11.5 Vehicle/Equipment Accidents

DO NOT PUT YOURSELF AT RISK

Vehicle accidents for the ERP pertain to ODV Light Duty Vehicles, Heavy Equipment, Taxi/Transport Vehicles, and Helicopters that are either owned by the company or contracted and/or rented by the company. In all cases of vehicle/equipment accidents the scene must be frozen, expect regarding lifesaving activities, and the Medic and Supervisor must be contacted immediately.

See Appendix 4 – Vehicle Incidents

- Light Vehicle Accident (ERP-LVA-009);
- Underground Equipment Accident (ERP-UGA-022);
- Bus Accident (ERP-BA-010);
- Helicopter Accident (ERP-HA-011).

11.6 Ground Stability

DO NOT PUT YOURSELF AT RISK

Ground Stability can be affected by natural, man-made hazards, or mineral extraction within the vicinity of a property.

See Appendix 5 – Ground Stability

- Underground Ground Fall (ERP-GF-018);
- Earthquake (ERP-EQ-023);
- Avalanche or Landslide (ERP-ALS-040).

11.7 Injuries/Traumas

DO NOT PUT YOURSELF AT RISK

An injury is the harm or damage to someone's body caused by an accident or an attack.

A trauma refers to physical injuries of sudden onset and severity which requires immediate medical attention. The result may cause systemic shock and may require immediate interventions to save life and limb.

See Appendix 6 – Injuries/Trauma

- Non-Fatal Trauma (ERP-NFT-024);
- Fall/High Angle Rescue (ERP-FHA-012);
- Multiple Injured Persons (ERP-MIP-025);
- Fatality-Murder-Suicide (ERP-FMS-026).

11.8 Power Failures

DO NOT PUT YOURSELF AT RISK

Few situations can occur underground which would cause the ventilation system to shut down, one exception is a power failure. Should an underground power failure occur, air quality may be affected. Stench Gas must be deployed immediately, and all personnel mustered/evacuated.

See Appendix 7 – Power Failure

- Surface Power Failure (ERP-SPF-006);
- Underground Power Failure (ERP-UGP-020).

11.9 Threats/Civil Disturbances

DO NOT PUT YOURSELF AT RISK

No other personnel besides R.C.M.P, the On-Scene Supervisor, and First Aid/Medic are allowed at the scene unless otherwise instructed by ODV Management or the R.C.M.P. Take whatever steps can safely be taken to reduce or eliminate the risks to people, property, and process without putting anyone in danger. Personnel may require evacuation before the situation can be assessed for further action.

See Appendix 8 – Threat/Disturbance

- Bomb or Armed Threat (ERP-BAT-013);
- Civil Disturbance/Distraught Person(s) (ERP-CD-014).

11.10 Adverse Weather

DO NOT PUT YOURSELF AT RISK

Adverse weather conditions such as heavy rain, white outs, extreme temperatures, high wind, dust, and thunder and lightning storms occasionally disrupt work schedules and interfere with normal work-related activities. An adverse weather plan permits some flexibility in adjusting works schedules and implementing emergency response.

See Appendix 9 Procedures – Adverse Weather

- Extreme Weather (ERP-EW-007).

11.11 Overdue Crew/Vehicle

If the driver of the vehicle or occupants have not checked in via phone or radio within an hour or are 1 hour past their estimated time of arrival, immediately call ODV 24/7 First Point of Contact and await the Incident Commander or On-Scene Commander response for further instructions.

While waiting for further instructions, make attempts to call missing personnel by phone or two-way radio until such a time that you reach them, or they reach the work site. If you reach the missing person(s), immediately call the ODV Incident Commander or On Scene Commander and give them an update on the situation.

Site-Specific Emergency Response Appendices

APPENDIX 1 PROCEDURES – STENCH RELEASE

I. Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will make sure that all personnel with the potential to go into the underground workings are trained in the location of the stench gas stations and release procedure and protocol.

II. Procedure

A. The priority sequence is as follows:

1. Initial Notification:

- b) Give name, location, nature of the emergency to decide on the suitable response.
 - i) In-rush of water.
 - ii) Cave in
 - iii) Fire on the surface or underground.
- c) Initiate Emergency Response Plan. CODE 1, CODE 1, CODE 1.
- d) Contact Mine Manager and Health and Safety Manager/Coordinator.
- e) Mobilize Mine Rescue.

2. Initial Response:

Deployment of Stench Gas.

- a) Upon smelling stench or notification of emergency all underground workers must immediately stop all work and move to safest/quickest escape route to the surface, Tommy Knocker, or emergency tent;
- b) Warn fellow workers along the route of travel.
- c) If in smoke or feeling effects of carbon monoxide immediately don Self Rescuer.
- d) When using mobile equipment to evacuate the mine, never block travel ways and never travel in smoke.
- e) Once on the surface immediately report to the closest muster station for roll call.
- f) Once in the Tommy Knocker refuge or emergency tent.

3. Ensure safety, protect life, and prevent injury:

- a) Ensure all personnel are out of immediate danger and are accounted for with Roll Call.
- b) Isolate personnel not involved in emergency response.
- c) Restrict access to the scene.

- d) Identify and ensure first aid is administered to casualties.
- e) Health and Safety Coordinator to do an initial investigation.
- f) Initial assessment to be conducted on the threat to site and access roads.
- g) Management to be informed of the situation and updated on changing conditions.

4. Secondary Response:

- a) Initial contact with offsite resources and mutual aid to confirm availability of assistance if required.
- b) Scene to be monitored constantly.
- c) Crisis Communication Plan to be put in effect.
- d) Limit traffic to and from the site until fire is under control.
- e) Monitor status of Emergency Responders.
- f) Monitor status of Electrical Generator system (backup included)
- g) Monitor status of the ventilation system.
- h) Contact necessary government authorities.

5. Minimize disruption to work: (when Health and Safety Manager gives all clear)

- a) Maintenance dept to flush out compressed air lines with neutralizer and winter Green then install a freshly charged cylinder – resetting the stench deployment system before any workers return to work underground.
- b) The maintenance dept will contact the H&S Manager when done.

B. The priority sequence for DEPLOYMENT OF STENCH GAS is as follows:

1. Initial Notification:

- a) Give name, location, nature of the emergency to decide suitable response.
- b) Initiate Emergency Response Plan.
- c) Contact Mine Manager and Health and Safety Manager/Coordinator.
- d) Mobilize Mine Rescue.

2. Initial Response:

- a) Deploy Stench Gas Injection:
 - i) Deploy personnel to the location of the main mine ventilation/heater fan located on Rainbow contact Road above the PIT.
 - ii) Locate cabinet attached to building to heated air intake cabinet at main ventilation fan location (Plate 1).



Location 1: Ventilation

Location 2: Warehouse

Plate 1. Deployment Locations of Stench Gas

- iii) Open grey box labeled STENCH GAS. Use the supplied screwdriver to rotate the key slot and turn to open the door (Plate 2).



Location 1: Ventilation

Location 2: Warehouse

Plate 2. Gray Box

iv)

- STEP 1

Open the Stench Gas Bottle. Turn counter clockwise to open. Open cylinder valve fully. There may be safety wires attached turn until they brake

- STEP 2

Observe the pressure gauge. Pressure gauge should read minimum of 150 psi and fully charged bottle is 240 psi.

- STEP 3

Open the "MANUAL BYPASS" valve by sliding the clip up out of the way

- STEP 4

When the system pressure decreases to zero close valve. The system is discharged. Close both the bottle and butterfly valves.

- STEP 5

REPORT TO SUPERVISOR. STENCH GAS RELEASED.

v) Inform immediate supervisor that Stench Gas has been initiated and recording time.

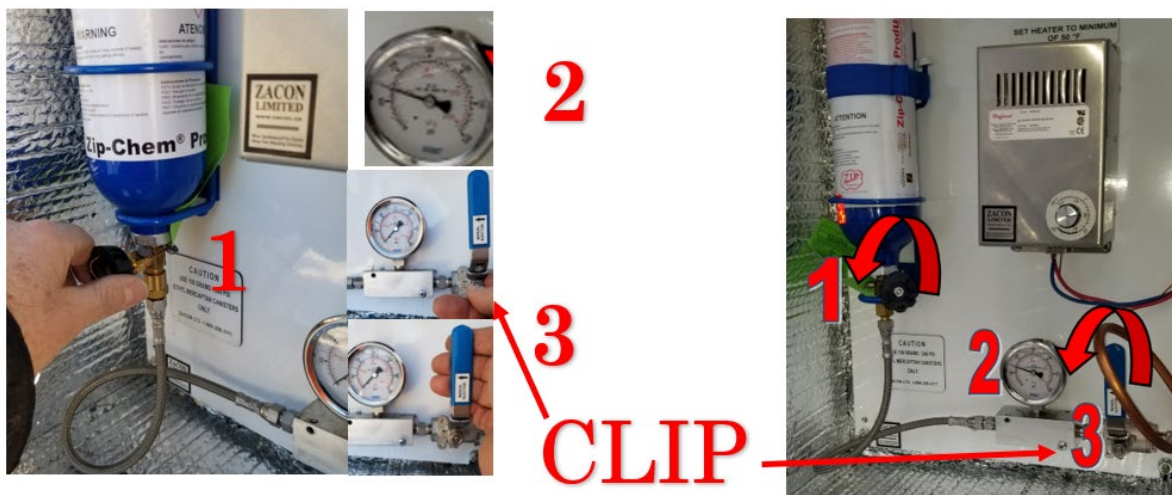


Plate 3. Steps 1 to 3

3. Secondary Response:

b) Report immediately reporting to the closest muster station for roll call.

4. Minimize disruption to work: (after emergency is over and the Incident Commander gives the all-clear)

- a) The maintenance department will be tasked to flush and recharge the stench systems.
- b) Immediately replace any empty canisters with charged ones.
- c) Check expiry dates and inform the purchaser of the remaining number of canisters;
- d) Supervisors are to have **compressed air lines** flushed with Anti-Stench MWD-100-A-134A-SC-240 (Anti-Stench) and then install the stench deployment system with a fresh charged cylinder of PART # MWD-100-E-134A-SC-240 (Ethyl Mercaptan)
- e) **Main Underground fresh air** is flushed out with Wintergreen stench (MWD-100-W-134A-SC-240) then a fresh charged cylinder MWD-100-E-134A-SC-240 (Ethyl Mercaptan) is installed in the deployment cabinet. Date the bottle on the day of installation. Use two wrenches to connect steel braided line to bottle.
- f) Do not tighten any other fittings as they are sealed with a very special thread sealant and will be damaged and leak if moved.
- g) After all steps have been completed all clear is release to incident commander so exercise can be called off.

5. Three types of Mine warning Device gas.

- a) Stench - MWD-100-E-134A-SC-240 (Plate 4) used as definitive warning to let all workers underground know of an emergency, and that safety pre-cautions need to be taken.
- b) Anti-Stench - MWD-100-A-134A-SC-240 used for neutralization of residual stench on the interior of pipe walls of all compressor lines.
- c) Wintergreen - MWD-100-W-134A-SC-240 used to act as a mask or deodorizer of the Ethyl Mercaptan

The expiry tag is read as good for 24 months from date stamped on tag.

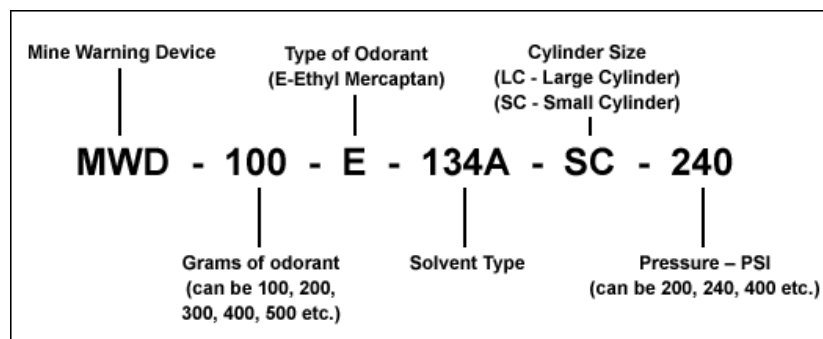


Plate 4. Stench Types of Mine Warning Device Gas

APPENDIX 2 PROCEDURES – FIRE

I. FOREST FIRE PARTNERSHIP WITH DISTRICT OF WELLS (ERP-FF-005)

Purpose

This plan aims to provide a process for all foreseeable emergencies in order to minimise loss to persons, property, or process. This means having a comprehensive system that links the emergency response plan, the emergency response, and emergency response teams on site and in the District of Wells. This will provide a capability to address, on a proactive and strategic basis, the many issues that will cause or arise from an incident or emergency.

This plan is applicable across the ODV site and the surrounding local areas where emergency support is required. It also covers all personnel whether they are an employee, contractor, or a visitor. The major emergency scenarios covered within this plan were identified as being those which pose the greatest potential threat to the site based on the outcomes of a risk assessment process. While this list is by no means exhaustive, the plan does also provide the framework and guidelines for the organization to respond any incident irrespective of its nature.

In the event of a proximal forest fire the following steps will be taken to ensure the safe and timely evacuation of the ODV property to the nearest local community with emergency services. Managers will continuously monitor the BC Wildfire rating, weather conditions, and any fires in the Cariboo area to assess the risk to personnel, contractors, and equipment of ODV

Managers will communicate with local authorities in the event of a proximal wildfire to ensure proper lines of communications are established and heed the following levels of evacuation as posted by the Cariboo Regional District. Initial contact with offsite resources to confirm availability of assistance if required (i.e., extra busing, hotel availability, flights, etc. in case workers are required to be removed from site for safety).

Safety Considerations

1. Conduct helicopter investigation if possible (evaluated by Cariboo Regional District);
2. Begin to determine fuel, food, and other support supplies currently on site and days available in case of road closure – by Emergency Command Group;
3. Mine Rescue (back-up for crowd control) and Wells Volunteer Fire Brigade (for the District) – will work together on a small fire if safe and possible;

4. Begin moving personnel to rally point and designated camp staging area (middle of the camp yard);
5. Managers to determine number of owned vehicles with available seating for personnel;
6. ODV management will maintain situational awareness;
7. Communicate and control information passage to employees to limit rumours and possible panic;
8. Crisis communications plan to be put into effect – from the Emergency Response Plan (handed out to the Emergency Command Group);
9. HR to prepare communication statements to outside agencies;
10. Organize off site transportation assistance – this determination should be done immediately as it will take time to move additional resources to site;
11. RCMP to assist in controlling traffic and notifications;
12. Fuel supplier may be required to move to underground lay down area if on site;
13. Medical/Health authority, Employment Standards, RCMP, other outside agencies may be required depending on reason for evacuation – ODV management will organize.

Other Key Considerations

- Good communication always;
- Rumour control;
 - Only direct supervisor(s) may inform their groups about evacuation alerts or orders. Staff who hear about such events must inform their supervisor immediately, and not disseminate to other staff members. This is to prevent confusion and undue panic, and to ensure that we operate as a united group in the event of an emergency.
- Early determination of evacuation needs and contacting outside resources immediately on identifying the need to evacuate;
- Immediate shut down of all equipment site-wide. This includes heavy mobile equipment, generators, pumps, and the like. To be completed by area supervisors (Mine General Foremen, Lead Core Cutters, Exploration Field Supervisors), and heavy equipment operators.
- Positive control of all movement off site to insure full usage of all available seating.

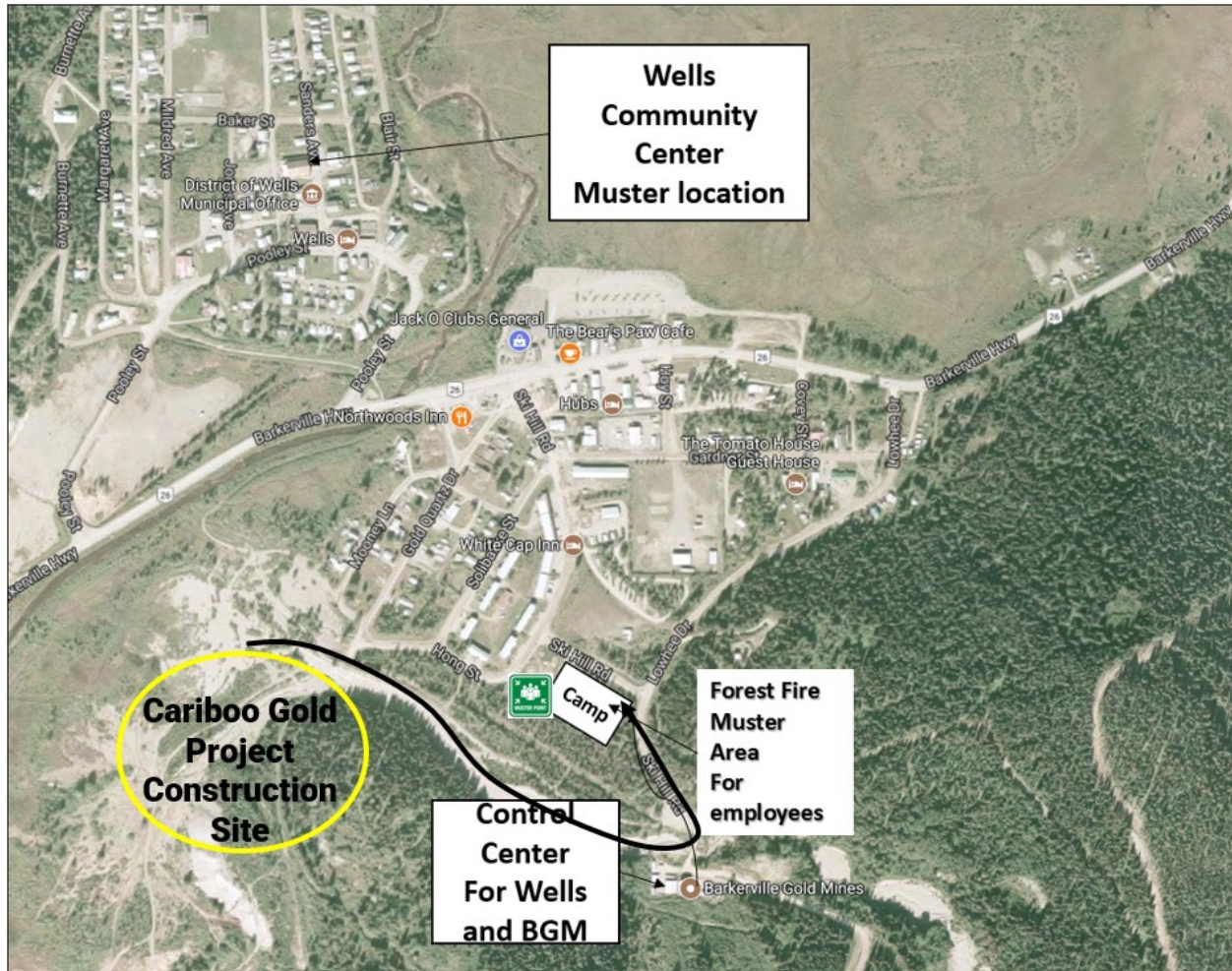
Policy

ODV Managers and District of Wells staff will continuously monitor BC Wildfire ratings, weather conditions, and any fires in the Cariboo area to assess the risk to personnel, contractors, and equipment of ODV. If a site is threatened by an external fire, advise ODV Incident Commander and Health and Safety Coordinator. Active the ERP.

Procedure

STAGE 1	EVACUATION ALERT (MUSTER UNDER THE REGIONAL DISTRICT COMMAND)
	A consistent format and process will be used to alert the population at risk of potential need for evacuation. The alert highlights the nature of the danger, and that people should be prepared to evacuate the area. The Evacuation Alert may allow for the population at risk to begin an orderly preparation to voluntarily leave the affected area, within a specified time frame. However, the reality of the situation may require immediate action with very short notice. Site Personnel • Personnel will muster on main floor of Office for a head-count/sign-off to be conducted. • The tag board will be checked, and personnel will remove tags after being accounted for and signing off on the head-count. • All personnel will load into truck fleet, drive to LV SHOP, and walk up the hill to CAMP. • One Manager will accompany the evacuated staff to the shop and camp. • One Manager will remain in the office with the other department managers, to assist with planning and logistics.
STAGE 2	EVACUATION ORDER (LEAVE UNDER COMMAND GROUP AND REGIONAL DISTRICT DIRECTION)
	Evacuation Route Maps – handed out and discussed at Muster Station. The population at risk is ordered to evacuate the area specified in a formal written order. This is an order and as such does not allow for any discretionary decision on the part of the population at risk. They must leave the area immediately. A statement must be included in all bulletins, pamphlets, warnings, and orders that makes it very clear to all that, while the evacuation order is in effect, the area in question will have controlled access and that a pass may be required to regain access to the area.
STAGE 3	EVACUATION RESCINDED
	The population at risk can return to the area previously evacuated, having been advised that the danger has passed. There is the possibility that the danger may re-manifest itself and the Evacuation Alert or Evacuation Order might need to be reissued.

II. SURFACE INFRASTRUCTURE FIRE (ERP-SIF-004)



Purpose

ODV (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, visitors, infrastructure/equipment, and the surrounding environment and community are kept as safe as possible in the case of a fire on any mine property.

Procedure

1. Initial Notification:
 - a) Give name, location, and estimated aggressiveness of fire to decide suitable response;
 - b) Contact Incident Commander and Health and Safety Coordinator.
2. Ensure safety, protect life, and prevent injury:
 - a) Evacuate affected areas;

- b) Ensure all personnel are out of immediate danger and are accounted for with Roll Call;
 - o Stop work immediately;
 - o Stay calm and WALK – do not run;
 - o Shut down workplace and proceed to safest exit towards the closest muster station;
 - o Last person out closes door to signal empty office/building;
 - o Warn others in the vicinity and on route to muster station of the situation;
- c) Isolate personnel not involved in emergency response;
- d) Restrict access to scene;
- e) Identify and ensure first aid administered to casualties.

3. Initial Response:

- a) Call 911 for Fire Department Assistance;
- b) Health and Safety Coordinator to do initial investigation;
 - o Initial assessment to be conducted on threat to site and access roads;
 - o Management to be informed of fire and updated on changing conditions.

4. Secondary Response:

- a) Initial contact with offsite resources and mutual aid to confirm availability of assistance if required;
- b) Protect mine infrastructure by setting up sprinklers where possible – protect equipment by moving it from effected areas IF safe and possible;
- c) Scene to be monitored constantly;
- d) Limit traffic to and from site until fire is under control;
- e) Contact necessary government authorities, including BC Wildfire Service – to advise if risk of escalating to forest fire

APPENDIX 3 PROCEDURES – SPILL/FLOOD

I. PROPANE LEAK (ERP-PLR-040)

Purpose

The purpose of this procedure is to make employees aware of their responsibilities and procedures, so ODV can ensure that mine site employees and contractors are knowledgeable and accountable to act consistently with the requirements of the Environmental Management Act - Spill Reporting Regulation which stipulates:

"Where a spill occurs, the person who immediately before the spill had possession, charge or control of the spilled substance shall take all reasonable and practical action, having due regard for the safety of the public and of himself or herself, to stop, contain and minimize the effects of the spill."

The measures outlined in this plan are intended to comply with this regulation, as well as to minimize potential effects to the environment and/or human health following a leak. The immediate priority is to ensure human safety and limit environmental damage, followed by the implementation of action plans for spill containment clean up and site remediation measures.

Liquid Propane is stored under pressure. If the tanks are compromised, pressure will be released, and the liquid propane will be vapourized. Soil contamination may be possible in the immediate area because of an emergency in these locations, however the larger environmental impact will be in the atmosphere, which would be relatively insignificant.

Propane is a colourless and odourless gas in a natural state. When stored under pressure, propane can be either a colourless liquid or vapour. Commercial propane has an odorant added to help identify if propane is present.

The main hazards from a propane leak are:

- Gas exposure,
- Fire/explosion and
- Frost bite.

Propane is stored in six locations around the Cariboo Gold Project site:

- Liquid Propane Gas (LPG) Tank 1 - Ore Sorter/BL Office (1000 US Gallons)
- LPG Tank 2 - Thyssen Shop (1000 US Gallons)

- LPG Tank 3 - Thyssen Shop (1000 US Gallons)
- LPG Tank 4 - Thyssen Shop (1000 US Gallons)
- LPG Tank 5 - Thyssen Office (1000 US Gallons)
- LPG Tank 6 – A4 ½ (Heater for UG Vent) (30,000 US Gallons)
- LPG Tank 7 – A2 ½ (Heater for UG Cow Portal) (30,000 US Gallons)

Tanks are identified by the UN 1075 petroleum gases, liquefied placard

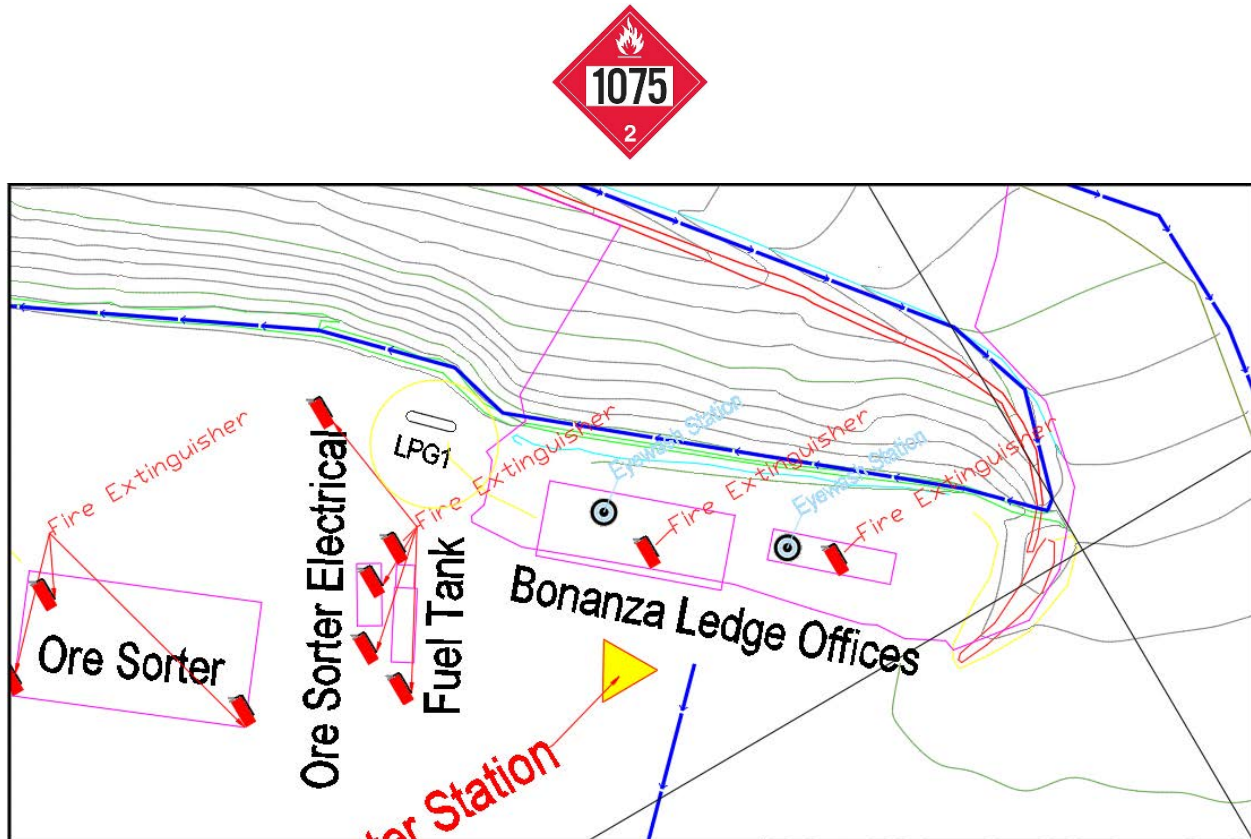


Figure 1: LPG1 near BL Offices/Ore Sorter

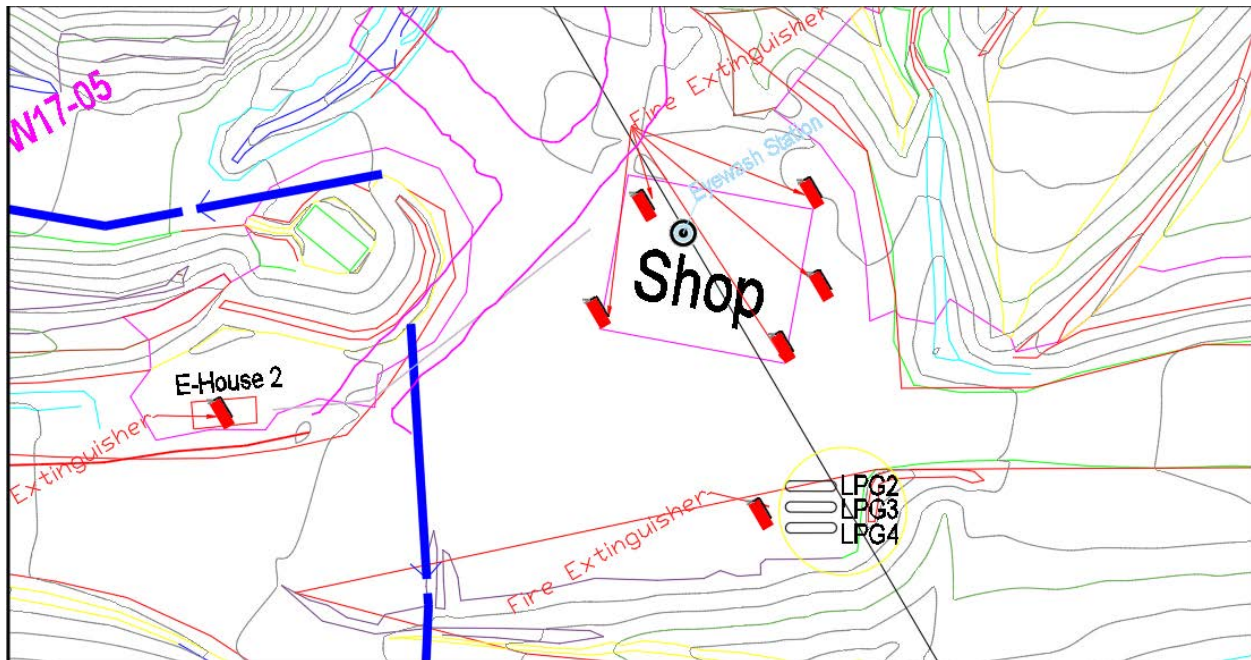


Figure 2: Tanks LPG2,3and4 near Thyssen Shop

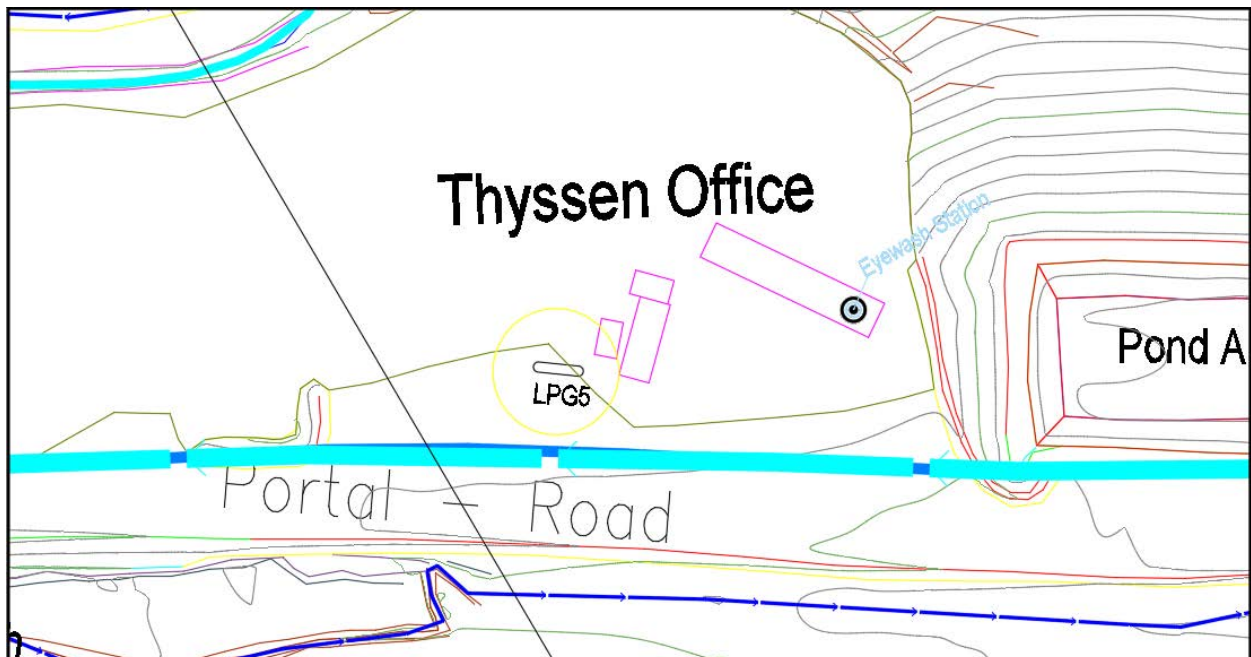


Figure 3: LPG 5 near Thyssen Office



Figure 4: LPG6 near A4 ½



Figure 5: LPG 7 near A 2 ½ km

Procedure

1. Initial Notification;
 - a) Give name, location, spill material and estimated volume to determine suitable response;
 - b) Initiate Emergency Response
 - c) Contact Superior Propane (1-877-873-7467)
 - d) Contact Environment Canada Spill Reporting Line (1-800-663-3456)
2. Ensure safety, protect life, and prevent injury;
 - a) Set up initial perimeter of at least 200m
 - b) Restrict access to scene;
 - c) Keep all ignition sources away from the scene and approach scene upwind if possible.
 - d) On-scene command areas shall be positioned uphill and upwind
3. Protect the environment;
 - a) Stop the source if safe/possible and contain the spilled materials with spill kits;
 - b) Emergency Response Team will oversee the scene/spill for containment once they arrive.
4. Protect infrastructure;
5. Reclaim area;
 - a) Remove spilled and contaminated materials;
 - b) Collect samples to determine impact of the spill;
 - c) Complete spill reports.
6. Minimize business activity disruption.
 - a) Restrict access to spill area until all clean up and investigation activities are complete.

II. SURFACE FLOOD (ERP-SFR-003)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, visitors, infrastructure/equipment, and the surrounding environment and community are kept as safe as possible in the case of a surface flood in or around any mine property.

Procedure

1. Initial Notification:
 - a) Give name, location, and estimated volume flowing to determine suitable response;

- b) Initiate Emergency Response Plan;
- c) Initiate Surface Groundwater Management Plan, and;
- d) Mobilize Environmental Department staff.

2. Ensure safety, protect life, and prevent injury:

- a) Evacuate the underground workings;
- b) Ensure no one is in any immediate danger and all employees are accounted for;
- c) Isolate personnel not involved in emergency response;
- d) Restrict access to scene;
- e) Identify and ensure first aid administered to casualties.

3. Protect the environment:

- a) Environmental Manager to assess risk of floodwaters entering waterways, underground workings, and the levels of the ponds;
- b) Environmental staff to take appropriate samples;
- c) Contact the necessary external resources.

4. Protect infrastructure:

- a) Waste dump materials may be used to construct temporary berms;
- b) Stockpile riprap may be used to reinforce containment structures.

5. Reclaim area:

- a) Remove spilled and contaminated materials;
- b) Collect samples to determine impact of the spill;
- c) Complete spill reports.

6. Minimize business activity disruption:

- a) Restrict access to flood area until all clean up and investigation activities are complete;
- b) Keep isolated personnel informed;
- c) Continually assess weather conditions for changes;
- d) Monitor flood levels;
- e) Assess containment levels in ponds.

III. UNDERGROUND FLOOD (ERP-UGF-016)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, visitors, infrastructure/equipment, and the

surrounding environment and community are kept as safe as possible in the case of an underground flood in or around any mine property.

Procedure

1. Initial Notification:

- a) Give name, location, nature of flooding to decide suitable response;
- b) Initiate Emergency Response Plan;
- c) Mobilize Mine Rescue.

2. Ensure safety, protect life, and prevent injury:

- a) Evacuate the mine following evacuation procedures;
- b) Tell anyone you see along the way about the flooding
- c) Ensure all personnel are out of immediate danger and are accounted for with Roll Call;
- d) Isolate personnel not involved in emergency response;
- e) Restrict access to scene;
- f) Identify and ensure first aid administered to casualties.

3. Deploy Stench Gas;

- a) Upon smelling stench or notification of an emergency miners must immediately stop what they are doing and proceed to the safest and quickest escape route to the surface or refuge station;
- b) Warn fellow workers along the route of travel;
- c) If you are in smoke or feel the effects of carbon monoxide immediately don your Self Rescuer;
- d) Never block travel ways with equipment;
- e) Once on the surface immediately report to the closest muster station for roll call;
 - o Once at the refuge station:
 - First person to the refuge station is in charge;
 - Complete the roll call form;
 - Wait to be contacted for roll call;
 - Wait for further instructions.
- f) Health and Safety Coordinator to do initial investigation and deploy Mine Rescue Team;
- g) Management to be informed of fire and updated on changing conditions.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;

- Lead COMPANY investigation and clearing of the scene;
- Inform Emergency Command Group of incident conclusion.
- b) Limit traffic to and from site until flood is under control;
- c) Monitor status of Emergency Responders;
- d) Monitor status of ventilation system;
- e) Contact necessary government authorities

IV. SURFACE SPILL (ERP-SSR-008)

Purpose

The purpose of this procedure is to make employees aware of their responsibilities and procedures, so ODV can ensure that mine site employees and contractors are knowledgeable and accountable to act consistently with the requirements of the Environmental Management Act - Spill Reporting Regulation which stipulates:

"Where a spill occurs, the person who immediately before the spill had possession, charge or control of the spilled substance shall take all reasonable and practical action, having due regard for the safety of the public and of himself or herself, to stop, contain and minimize the effects of the spill."

The measures outlined in this plan are intended to comply with this regulation, as well as to minimize potential effects to the environment and/or human health following a spill. The immediate priority is to ensure human safety and limit environmental damage, followed by the implementation of action plans for spill containment clean up and site remediation measures.

Procedure

If you are the responsible for a spill or recognize "deposits out of the normal course of events" notify your supervisor immediately and they will notify environmental staff for further action. Deposits out of normal course of events may include, but are not limited to:

- Water from within the contact ditch system not directed into approved water treatment system;
- Mine water flowing out of the underground workings via the decline portal not directed into the approved water treatment system; and
- Spills or releases of dangerous goods and hazardous materials.

ALL spills are required to be appropriately contained and cleaned up. Spills 4 L and over are required to be reported to the Environmental Manager and undergo inspection. Spills 100 L and

over, and/or those that enter a waterway, are also required to be reported to the Ministry of Energy and Mines and the Ministry of Environment. A formal incident investigation is required.

The main hazards from a fuel spill/leak are:

- fume exposure, and
- fire/explosion.

Fuel is stored in the following locations around the Bonanza Ledge site are:

- Bonanza Ledge Underground Shop
 - o Tank # 91 Gasoline - Fuel Dispensing
 - o Tank # 93 Diesel - Fuel Dispensing
- Bonanza Ledge E House site – for Electric Generators
 - o Tank #7 Diesel
- Bonanza Ledge Ore Sorter Bonanza Ledge
 - o Tank # 6 Diesel – Fuel Dispensing
- Cow Portal Area
 - o Tank # 14 Diesel – fuel for Electric Generators
 - o Tank #15 Diesel – Fuel Dispensing

Tanks are identified with the petroleum gases placard



The priority sequence for ON-SITE SPILL is as follows:

1. Initial Notification;
 - a) Give name, location, spill material and estimated volume to determine suitable response;
 - b) Initiate Spill Contingency Plan and mobilize Environmental Department staff.
2. Ensure safety, protect life, and prevent injury;
 - a) Ensure no one is in any immediate danger and all employees are accounted for;
 - b) Restrict access to scene;
 - c) Keep all ignition sources away from the scene and approach scene upwind if possible.

3. Protect the environment;
 - a) Stop the source if safe/possible and contain the spilled materials with spill kits;
 - b) Environment will oversee the scene/spill for containment once they arrive.
4. Protect infrastructure;
5. Reclaim area;
 - a) Remove spilled and contaminated materials;
 - b) Collect samples to determine impact of the spill;
 - c) Complete spill reports.
 - d) Restrict access to spill area until all clean up and investigation activities are complete.

The priority sequence for OFF-SITE SPILL is as follows:

1. Initial Notification:
 - a) Give name, location, spill material and estimated volume to determine suitable response;
 - b) Initiate Spill Contingency Plan and mobilize Environmental Department staff.
2. Ensure safety, protect life, and prevent injury:
 - a) Ensure no one is in any immediate danger and all employees are accounted for;
 - b) Restrict access to scene, if required contact RCMP to help restrict access;
 - c) Keep all ignition sources away from the scene and approach scene upwind if possible.
3. Protect the environment:
 - a) Stop the source if safe/possible and contain the spilled materials with spill kits;
 - b) Environment will oversee the scene/spill for containment once they arrive.
4. Reclaim area:
 - a) Remove spilled and contaminated materials or contact external resources if support is required;
 - b) Collect samples to determine impact of the spill;
 - c) Ensure scene photographed and witness statements are obtained;
 - d) Media – Do not allow unauthorised people to take photographs, this includes the media;
 - e) Complete spill reports.
5. Minimize disruption:
 - a) Restrict access to spill area until all clean up and investigation activities are complete.

V. UNDERGROUND SPILL (ERP-UGS-019)

Purpose

The purpose of this procedure is to make employees aware of their responsibilities and procedures, so ODV can ensure that mine site employees and contractors are knowledgeable and accountable to act consistently with the requirements condition D of the Mines Act Permit M-238.

Condition D. 1 Environmental Management System of Mines Act Permit M-238 states:

The Permittee shall ensure that all mine site employees and contractors are knowledgeable and accountable to act consistently with the requirements of the Environmental Management Plans and Standard Operating Procedures that form the Environmental Management System.

The Environmental Management Act Spill Reporting Regulation stipulates:

"Where a spill occurs, the person who immediately before the spill had possession, charge or control of the spilled substance shall take all reasonable and practical action, having due regard for the safety of the public and of himself or herself, to stop, contain and minimize the effects of the spill."

The measures outlined in this plan are intended to comply with this regulation, as well as to minimize potential effects to the environment and/or human health following a spill. The immediate priority is to ensure human safety and limit environmental damage, followed by the implementation of action plans for spill containment clean up and site remediation measures.

Procedure

If you are the responsible for a spill or recognize "deposits out of the normal course of events" notify your supervisor immediately and they will notify environmental staff for further action. Deposits out of normal course of events may include, but are not limited to:

- Mine water flowing out of the underground workings via the decline portal not directed into the approved water treatment system; and
- Spills or releases of dangerous goods and hazardous materials.

ALL spills are required to be appropriately contained and cleaned up. Spills 4 L and over are required to be reported to the Environmental Manager and undergo inspection. Spills 100 L and over, and/or those that enter a waterway, are also required to be reported to the Ministry of Energy and Mines and the Ministry of Environment. A formal incident investigation is required.

The priority sequence is as follows:

1. Initial Notification:

- a) Give name, location, spill material and estimated volume to determine suitable response;
- b) Contact Mine Manager and Health and Safety Coordinator;
- c) Initiate Spill Contingency Plan and mobilize Environmental Department staff.

If Level of Alert is HIGH:

2. Deploy Stench Gas;

- a) Upon smelling stench or notification of an emergency miners must immediately stop what they are doing and proceed to the safest and quickest escape route to the surface or refuge station;
- b) Warn fellow workers along the route of travel;
- c) If you are in smoke or feel the effects of carbon monoxide immediately don your Self Rescuer;
- d) Never block travel ways with equipment;
- e) Once on the surface immediately report to the closest muster station for roll call;
 - o Once at the refuge station:
 - First person to the refuge station is in charge;
 - Complete the roll call form;
 - Wait to be contacted for roll call;
 - Wait for further instructions.
- f) Health and Safety Coordinator to do initial investigation and deploy Mine Rescue Team;
- g) Management to be informed of fire and updated on changing conditions.

If Level of Alert is LOW:

1. Ensure safety, protect life, and prevent injury;

- a) Ensure no one is in any immediate danger and all employees are accounted for;
- b) Restrict access to scene;
- c) Keep all ignition sources away from the scene and approach scene upwind if possible.

2. Protect the environment;

- a) Stop the source if safe/possible and contain the spilled materials with spill kits;
- b) Environment will oversee the scene/spill for containment once they arrive.

3. Reclaim area;

- a) Remove spilled and contaminated materials;
- b) Collect samples to determine impact of the spill;

- c) Complete spill reports.
- 4. Minimize business activity disruption.
 - a) Restrict access to spill area until all clean up and investigation activities are complete.

APPENDIX 4 PROCEDURES – VEHICLE INCIDENTS

I. BUS/VAN INCIDENT (ERP-BA-010)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, visitors, the environment, and surrounding communities are kept as safe as possible in the case of a transport van, bus, or contracted taxi van incidents that occur while conducting COMPANY business.

Procedure

1. Initial Notification:

- a) Give name, location, number involved, any injuries etc. to determine suitable response;
- b) Call Incident Commander, Health and Safety Coordinator, and Environmental Manager; and,
- c) Mobilize First Aid – Get medical support to the scene as soon as possible.

2. Initial Response:

- a) Ensure safety, protect life, and prevent injury and all employees are accounted for;
- b) Call external emergency services if required;
- c) Health and Safety Coordinator assesses scene and check for immediate hazards (be aware of fuel and other flammable liquid being stored or transported).
- d) Restrict access to scene;
- e) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - o Move any evidence,
 - o Leave the scene,
 - o Clear the scene.

3. Protect the environment:

- a) If there is a spill or fire:
 - o Stop the source of the spill if safe/possible and contain with spill kits;
 - o Attempt to put out the fire if safe/possible or call emergency services;
- b) Environment will oversee the scene/spill for containment once they arrive.

- Remove spilled and contaminated materials;
- Collect samples to determine impact of the spill;
- Complete spill reports.

4. Secondary Response:

- a) Health and Safety Coordinator will:
- Maintain control of scene and continue with scene management;
 - Assist police as needed with obtaining witness statements or take contact details;
 - Preserve evidence at the scene and ensure scene photographed;
 - Lead COMPANY investigation and clearing of the scene;
 - Inform Emergency Command Group of incident conclusion.

5. Minimize business activity disruption.

- a) Restrict access area until all clean up and investigation activities are complete;
- b) Ensure area is safe before recommencing work or leaving the area.

II. HELICOPTER INCIDENT (ERP-HA-011)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, visitors, the environment, and surrounding communities are kept as safe as possible in the case of a helicopter incident.

Procedure

1. Initial Notification:

- a) Give name, location, number involved, any injuries etc. to determine suitable response;
- b) Initiate Emergency Response Plan;
- c) Mobilize First Aid – get medical support to the scene as soon as possible.

2. Initial Response:

- a) Coordinate with owner company and confirm flight plan and last known location
- If crash site not known, no attempt to provide search and rescue should be attempted until flight plan, travel direction, or other useful information is provided;
- b) Initiate search and rescue and coordinate movement to search location;
- c) Ensure safety, protect life, and prevent injury and all employees are accounted for;
- d) Call external emergency services if required;

- e) Restrict access to scene;
- f) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - o Move any evidence,
 - o Leave the scene,
 - o Clear the scene.

3. Protect the environment:

- a) If there is a spill or fire:
 - o Stop the source of the spill if safe/possible and contain with spill kits;
 - o Attempt to put out the fire if safe/possible or call emergency services;
- b) Environment will oversee the scene/spill for containment once they arrive.
 - o Remove spilled and contaminated materials;
 - o Collect samples to determine impact of the spill;
 - o Complete spill reports.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;
 - o Assist police as needed with obtaining witness statements or take contact details;
 - o Preserve evidence at the scene and ensure scene photographed;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.

5. Minimize business activity disruption.

- a) Restrict access area until all clean up and investigation activities are complete;
- b) Ensure area is safe before recommencing work or leaving the area.

III. LIGHT VEHICLE ACCIDENT (ERP-LVA-009)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, visitors, the environment, and surrounding communities are kept as safe as possible in the case of company vehicle incidents.

Procedure

The priority sequence for an **ON-SITE VEHICLE INCIDENT** is as follows:

1. Initial Notification:

- a) Give name, location, number involved, any injuries etc. to determine suitable response;
- b) Initiate Emergency Response Plan;
- c) Call Mine Manager, Health and Safety Coordinator, and Environmental Manager; and,
- d) Mobilize First Aid – Get medical support to the scene as soon as possible.

2. Initial Response:

- a) Ensure safety, protect life, and prevent injury and all employees are accounted for;
- b) Call external emergency services if required;
- c) Restrict access to scene;
- d) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - o Move any evidence,
 - o Leave the scene,
 - o Clear the scene.
- e) Health and Safety Coordinator assesses the scene and check for immediate hazards.

3. Protect the environment:

- a) If there is a spill or fire:
 - o Stop the source of the spill if safe/possible and contain with spill kits;
 - o Attempt to put out the fire if safe/possible or call emergency services;
- b) Environment will oversee the scene/spill for containment once they arrive.
 - o Remove spilled and contaminated materials;
 - o Collect samples to determine impact of the spill;
 - o Complete spill reports.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;
 - o Assist police as needed with obtaining witness statements or take contact details;
 - o Preserve evidence at the scene and ensure scene photographed;
 - o Lead COMPANY investigation and clearing of the scene;

- Inform Emergency Command Group of incident conclusion.
- 5. Minimize business activity disruption.
 - a) Restrict access area until all clean up and investigation activities are complete;
 - b) Ensure area is safe before recommencing work or leaving the area.

The priority sequence for an OFF-SITE VEHICLE INCIDENT is as follows:

1. Initial Notification:
 - a) Give name, location, number involved, any injuries etc. to determine suitable response;
 - b) Initiate Emergency Response Plan;
 - c) Call Mine Manager, Health and Safety Coordinator, and Environmental Manager; and,
 - d) Mobilize First Aid – Get medical support to the scene as soon as possible;
 - e) Call 911 - Any motor vehicle accident off the mine property must be reported to the proper authorities.
2. Initial Response:
 - a) Ensure safety, protect life, and prevent injury and all employees are accounted for;
 - b) Restrict access to scene;
 - c) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - Move any evidence,
 - Leave the scene,
 - Clear the scene.
 - d) Health and Safety Coordinator assesses the scene and check for immediate hazards: self, others, and victims (Be aware of fuel and other flammable liquid being stored or transported).
3. Protect the environment:
 - a) If there is a spill or fire:
 - Stop the source of the spill if safe/possible and contain with spill kits;
 - Attempt to put out the fire if safe/possible or call emergency services;
 - b) Environment will oversee the scene/spill for containment once they arrive.
 - Remove spilled and contaminated materials;
 - Collect samples to determine impact of the spill;
 - Complete spill reports.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;
 - o Assist police as needed with obtaining witness statements or take contact details;
 - o Preserve evidence at the scene and ensure scene photographed;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.

5. Minimize business activity disruption.

- a) Restrict access area until all clean up and investigation activities are complete;
- b) Ensure area is safe before recommencing work or leaving the area.

IV. UNDERGROUND VEHICLE ACCIDENT (ERP-UGA-022)

Purpose

Accidents involving personnel and motor vehicles can occur at any time or place either on the mine site or off. For Osisko Development Corp. (herein referred to as THE COMPANY) the main aim in responding to an incident is to establish if injury has occurred and to preserve life and render prompt and effective assistance.

Emergency Level

- Low:
 - Vehicle accident with no injury.
- Medium:
 - Single serious injury, fire, spill, or significant property damage.
- High:
 - Multiple serious injuries, fire, spill, or at least one fatality.

Procedure

1. Initial Notification:

- a) Give name, location, number involved, any injuries etc. to determine suitable response;
- b) Establish level of emergency;
- c) Mobilize First Aid and Mine Rescue – get medical support to scene as soon as possible.

Initial Response if LOW level of emergency:

2. Initial Response if LOW level of emergency:

- a) Ensure safety, protect life, and prevent injury and all employees are accounted for;
- b) Restrict access to scene;
- c) Health and Safety Coordinator assesses the scene and check for immediate hazards: self, others, and victims (Be aware of fuel and other flammable liquid being stored or transported).

3. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;
 - o Assist police as needed with obtaining witness statements or take contact details;
 - o Preserve evidence at the scene and ensure scene photographed;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.

4. Minimize business activity disruption.

5. Restrict access area until all clean up and investigation activities are complete;

- a) Ensure area is safe before recommencing work.

Initial Response if MEDIUM level of emergency:

1. Deploy Stench Gas;

- a) Upon smelling stench or notification of an emergency miners must immediately stop what they are doing and proceed to the safest and quickest escape route to the surface or refuge station;
- b) Warn fellow workers along the route of travel;
- c) If you are in smoke or feel the effects of carbon monoxide immediately don your Self Rescuer;
- d) When using mobile equipment to evacuate the mine, never block travel ways and never travel in heavy smoke;
- e) Once on the surface immediately report to the closest muster station for roll call;
- f) Once at the refuge station:
 - o First person to the refuge station is in charge;
 - o Complete the roll call form;

- Wait to be contacted for roll call;
 - Wait for further instructions.
 - a) Health and Safety Coordinator to do initial investigation;
 - b) Deploy Mine Rescue Team;
 - c) Management to be informed of fire and updated on changing conditions.
2. Secondary Response:
- a) Health and Safety Coordinator will:
 - Maintain control of scene and continue with scene management;
 - Assist police as needed with obtaining witness statements or take contact details;
 - Preserve evidence at the scene and ensure scene photographed;
 - Lead COMPANY investigation and clearing of the scene;
 - Inform Emergency Command Group of incident conclusion.
 - b) If there is a spill or fire:
 - Stop the source of the spill if safe/possible and contain with spill kits;
 - Attempt to put out the fire if safe/possible or call emergency services;
 - c) Environment will oversee the scene/spill for containment once they arrive.
 - Remove spilled and contaminated materials;
 - Collect samples to determine impact of the spill;
 - Complete spill reports.
3. Minimize business activity disruption.
- Restrict access area until all clean up and investigation activities are complete;
 - Ensure area is safe before recommencing work

Initial Response if HIGH level of emergency:

1. Deploy Stench Gas;
- a) Upon smelling stench or notification of an emergency miners must immediately stop what they are doing and proceed to the safest and quickest escape route to the surface or refuge station;
 - b) Warn fellow workers along the route of travel;
 - c) If you are in smoke or feel the effects of carbon monoxide immediately don your Self Rescuer;

- d) When using mobile equipment to evacuate the mine, never block travel ways and never travel in heavy smoke;
- e) Once on the surface immediately report to the closest muster station for roll call;
- f) Once at the refuge station:
 - o First person to the refuge station is in charge;
 - o Complete the roll call form;
 - o Wait to be contacted for roll call;
 - o Wait for further instructions.
- g) Health and Safety Coordinator to do initial investigation;
- h) Deploy Mine Rescue Team;
- i) Call external emergency services if required;
- j) Restrict access to scene;
- k) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - o Move any evidence,
 - o Leave the scene,
 - o Clear the scene.
- l) Management to be informed and updated on changing conditions.

2. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;
 - o Assist police as needed with obtaining witness statements or take contact details;
 - o Preserve evidence at the scene and ensure scene photographed;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.
- b) If there is a spill or fire:
 - o Stop the source of the spill if safe/possible and contain with spill kits;
 - o Attempt to put out the fire if safe/possible or call emergency services;
- c) Environment will oversee the scene/spill for containment once they arrive.
 - o Remove spilled and contaminated materials;
 - o Collect samples to determine impact of the spill;

- o Complete spill reports.
- 3. Minimize business activity disruption.
 - o Restrict access area until all clean up and investigation activities are complete;
 - o Ensure area is safe before recommencing work

APPENDIX 5 PROCEDURES – GROUND STABILITY

I. AVALANCHE/LANDSLIDE (ERP-ALS-040)

Purpose

An avalanche is a rapid, downslope movement of snow, with varying proportions of ice, water, rock, soil, and vegetation. A landslide and other mass movements, such as mudslides, or rock slides, snow is not the major component.

In Canada, avalanches are most common in the mountainous regions of British Columbia, Alberta, and the Yukon. Landslides may happen anywhere in which downward movement of earth and material can occur, especially when weather may be a major contributing factor.

In accordance with Occupational Health and Safety Regulations in BC, ODV provides the following procedure, in conjunction with the Emergency Response Plan, for an instance in which an avalanche or landslide occurs.

Procedure

1. Notification

- a) Give name, location, and nature of emergency to decide suitable response;
- b) Activate the ERP.

2. Ensure safety, protect life, and prevent injury:

- a) Evacuate affected areas and underground workings;
- b) Ensure all personnel are out of immediate danger and accounted for with Roll Call;
- c) Isolate personnel not involved in emergency response and restrict access to scene;
- d) Identify and ensure first aid administered to casualties.

3. Secondary Response

- a) Health and Safety Coordinator to do initial investigation;
 - o Initial assessment to be conducted on threat to site and access roads;
 - o Management to be informed and updated on changing conditions;
- b) Contact offsite resources/mutual aid to confirm availability of assistance if required;
- c) Limit traffic to and from site;
- d) Stop any spills IF safe and possible;

- e) Environmental Manager and staff to assess risk of contaminants entering waterways, underground workings, and the levels of the ponds;
- f) Put out any fires IF safe and possible;
- g) Utility Emergency Shut-down:

****The shutdown of these utilities in catastrophic events remains the responsibility of the facility maintenance personnel in conjunction with the Mine Rescue Team****

1. PROPANE/NATURAL GAS:

- 1 Main tank control panels
- 3 Main property distribution shut-off valves
- Main building feed valves

2. FIRE WATER SYSTEM:

- Main supply valves at water tank (This will be done only on a management decision)
- Main building shutoff

3. PROCESS WATER SYSTEM:

- Handling of hazardous materials is of prime consideration in process shutdown (i.e., pH balance for cyanide).
- Main supply valves and pumps

4. ELECTRICAL SYSTEM:

- Main transformers.
- Equipment and area disconnect below 500v rating.
- In catastrophic situations, electrical/maintenance personnel, in conjunction with the Mine Rescue, will assume responsibility for all main property and main building disconnects.
- The master power substations, MCC rooms and the emergency power require the skills and knowledge of electrical personnel. Only trained Electrical, Maintenance are responsible for starting emergency power.
- Contact necessary government authorities.

II. EARTHQUAKE (ERP-EQP-023)

Purpose

An earthquake is a sudden, rapid shaking of the ground caused by the breaking and shifting of rock beneath the Earth's surface. This shaking can cause damage to buildings and bridges;

disrupt gas, electric, and phone service; and sometimes trigger landslides, avalanches, flash floods, fires, and huge, destructive ocean waves (tsunamis).

In accordance with Occupational Health and Safety Regulations in BC, ODV provides the following procedure, in conjunction with the Emergency Response Plan, for an instance in which an earthquake occurs.

Level of Emergency

- **LOW**
 - A Magnitude which is characterized as being felt by most people; windows and doors are rattled; creaking walls and/or a sensation like a heavy truck striking a building; and vehicles are noticeably rocked. No injuries, severe property damage or disruption to operations.
- **MEDIUM**
 - A Magnitude which is characterized as being felt by all people; many people are frightened and run outdoors; some windows broken; cracked plaster on building walls; unstable objects overturned; sloughing of ore on the heap; sliding or rock falls within the pit; and disturbance of tall objects is noted. Injury or severe property damage occurs, disruption to operations.
- **HIGH**
 - A Magnitude which is characterized as being felt by all people; some people are knocked off balance; create changes in the water depths of wells; considerable damage occurs in buildings; panel walls are thrown out of frames in buildings; heavy furniture is overturned; the ground cracks conspicuously; waves can be seen on the ground surface; and underground pipes are broken.
 - Severe injuries or fatality, widespread property damage, operations severely affected or shut down. In the event of an earthquake, there are actions to be taken during the quake and there are actions that should be done immediately following the quake. Please note that an earthquake is unpredictable and therefore, stay alert and aware of your surroundings.

Procedure

1. Initial Response:

If You Are Inside a Building:

- Crouch under a heavy desk or table or stand in a doorway and brace yourself;
- Move away from windows or other objects that could break, fall or shatter;

- Expect fire alarms and sprinkler systems to activate;
- WALK – do not run for the exits;
- Be prepared for aftershocks.

If You Are Outside:

- Stay away from the collapse zone – buildings, utility poles/lines, other structures that may fall;
- Stay low to the ground – staying low will reduce the severity of a fall;
- Be prepared for aftershocks.

If You Are in a Vehicle:

- Stop the vehicle and stay inside until the shaking stops;
- Do not stop near structures or buildings that could fall;
- Be prepared for aftershocks.

If You Are at a Drill

- Get away from the drill rig;
- Hit the emergency shut-off if you have time – the drill tower poses a serious threat;
- Keep at least the height of the tower away from the rig until the shaking has stopped and the rig has been inspected;
- Stay low to the ground – staying low will reduce the severity of a fall;
- Be prepared for aftershocks.

If You Are Underground

- Stench Gas will be injected;
- Shut-off if you have time;
- Move quickly, but do not run – you may increase the risk for injury if you fall;
- Proceed to refuge stations or exits;
- Be prepared for aftershocks.

2. Notification

- a) Give name, location, and nature of emergency to decide suitable response;
- b) Activate the ERP.

3. Ensure safety, protect life, and prevent injury:

- a) Evacuate affected areas;
- b) Ensure underground workings have been evacuated;
- c) Ensure all personnel are out of immediate danger and accounted for with Roll Call;
- d) Isolate personnel not involved in emergency response and restrict access to scene;
- e) Identify and ensure first aid administered to casualties.

4. Secondary Response

- a) Health and Safety Coordinator to do initial investigation;
 - o Initial assessment to be conducted on threat to site and access roads;
 - o Management to be informed and updated on changing conditions;
- b) Contact offsite resources/mutual aid to confirm availability of assistance if required;
- c) Limit traffic to and from site;
- d) Stop any spills IF safe and possible;
- e) Environmental Manager and staff to assess risk of contaminants entering waterways, underground workings, and the levels of the ponds;
- f) Put out any fires IF safe and possible;
- g) Utility Emergency Shut down:

****The shutdown of these utilities in catastrophic events remains the responsibility of the facility maintenance personnel in conjunction with the Mine Rescue Team****

1. PROPANE/NATURAL GAS:

- 1 Main tank control panels
- 3 Main property distribution shut-off valves
- Main building feed valves

2. FIRE WATER SYSTEM:

- Main supply valves at water tank (This will be done only on a management decision)
- Main building shutoff

3. PROCESS WATER SYSTEM:

- Handling of hazardous materials is of prime consideration in process shutdown (i.e., pH balance for cyanide).
- Main supply valves and pumps

4. ELECTRICAL SYSTEM:

- Main transformers.

- Equipment and area disconnect below 500v rating.
- In catastrophic situations, electrical/maintenance personnel, in conjunction with the Mine Rescue, will assume responsibility for all main property and main building disconnects.
- The master power substations, MCC rooms and the emergency power require the skills and knowledge of electrical personnel. Only trained Electrical, Maintenance are responsible for starting emergency power.
- Contact necessary government authorities.

III. UNDERGROUND GROUND FALL (ERP-GF-018)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a policy that protects employees and property in the event of a ground fall underground.

Emergency Level

- **Low Level:**
 - Failure causing no injuries or damage, little or no disruption of operations.
 - Small scale bench or ground failure or impoundment leak.
- **Medium Level:**
 - Failure which causes property damage to temporarily disrupt operations.
 - No serious injuries or property damage.
 - Large scale bench(s) or ground fall failure or possibility of impoundment failure.
- **High Level:**
 - A serious large-scale wall or ground failure or impoundment failure, in terms of injuries, damage, or disruption of operations.

Procedure

1. Initial Notification:
 - a) Give name, location, nature, and cause of ground fall;
 - b) Initiate Stench Gas Procedure;
 - c) Contact Mine Manager and Health and Safety Coordinator;
 - d) Mobilize Mine Rescue.
2. Ensure safety, protect life, and prevent injury:
 - a) Ensure all personnel are out of immediate danger and are accounted for with Roll Call;

- b) Isolate personnel not involved in emergency response;
- c) Restrict access to scene;
- d) Identify and ensure first aid administered to casualties.

3. Initial Response:

- a) Deploy Stench Gas;
 - o Upon smelling stench or notification of an emergency miners must immediately stop what they are doing and proceed to the safest and quickest escape route to the surface or refuge station;
 - o Warn fellow workers along the route of travel;
 - o If you are in smoke or feel the effects of carbon monoxide immediately don your Self Rescuer;
 - o When using mobile equipment to evacuate the mine, never block travel ways and never travel in heavy smoke;
 - o Once on the surface immediately report to the closest muster station for roll call;
 - o Once at the refuge station:
 - First person to the refuge station is in charge;
 - Complete the roll call form;
 - Wait to be contacted for roll call;
 - Wait for further instructions.
- b) Health and Safety Coordinator to do initial investigation;
- c) Deploy Mine Rescue Team;
- d) Management to be informed of fire and updated on changing conditions.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Maintain control of scene and continue with scene management;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.
- b) Contact offsite resources and mutual aid to confirm availability of assistance if required;
- c) Limit traffic to and from site until fire is under control;
- d) Monitor status of Emergency Responders;
- e) Monitor status of ventilation system;
- f) Contact necessary government authorities:

POST-INCIDENT PROCEDURE

Slope Failure:

- If a slope failure has occurred/is imminent, remove all personnel from the area;
- The supervisor will take a head count to assure that all personnel in the area are accounted for;
- The supervisor will immediately notify the Mine Manager and Health and Safety Coordinator;
- The situation will be analyzed by the Engineering Department and appropriate action taken;
- No personnel shall be allowed in the area unless working as directed to correct the problem;
- All corrective action taken shall be done in a safe manner;
- Slope failure or potential slope failure creating an imminent danger will be reported by the Health and Safety Coordinator and the Ministry of Energy and Mines per their reporting requirements;
- An imminent danger as defined as “the existence of any condition or practice in a mine which could reasonably be expected to cause death or serious physical harm to any worker if mine operations were to proceed in the affected area or if workers were to enter the affected area before the condition or practice was eliminated.”

Impoundment Failure:

- If an embankment failure occurs, the supervisor will immediately notify the General Foreman, Mine Manager, Technical Services Manager and Environmental Manager;
- If an embankment failure occurs the Environmental Manager must be notified;
- Ministry of Energy and Mines and Ministry of Environment should be informed;
- If the embankment failure has released chemicals or other materials into the surrounding area the Spill Response Plan must be followed.

Fall of Ground:

- Employee that notices ground fall should notify supervisor;
- Supervisor to inspect make necessary contact and supervisor will sign off area with hazard posted.

APPENDIX 6 PROCEDURES – INJURIES/TRAUMA

III. High Angle Rescue (ERP-FHA-012)

Purpose

It is ODV's objective to provide prompt medical treatment when a worker is injured on the jobsite. To do this, workers may have to perform a working at heights rescue to bring down a worker who has fallen and is suspended in a safety harness.

Procedure

1. Initial Notification:
 - a) Give name, location, and nature of emergency to decide suitable response;
 - b) Mobilize First Aid.
2. Ensure safety, protect life, and prevent injury:
 - a) Ensure no one else is in any immediate danger and all employees are accounted for;
 - b) Restrict access to the area.
3. Initial Response:
 - a) Contact Health and Safety Coordinator takes control of the situation;
 - b) All workers in the immediate vicinity of the incident stop working;
 - c) Evaluates the situation and identifies any further hazards that could arise;
 - d) Call 911 to notify local police, fire, and ambulance if required.

Elevating Work Platform Rescue – if an elevating work platform (EWP) is available on site and the suspended worker can be reached by the platform, follow the procedure below:

1. Bring the EWP to the accident site and use it to reach the suspended worker;
2. Ensure rescue workers are wearing full-body harnesses attached to appropriate anchors in the EWP;
3. Ensure the EWP has the load capacity for both the rescuer(s) and the fallen worker. If the fallen worker is not conscious, two rescuers will probably be needed to safely handle the weight of the fallen worker;

4. Position EWP platform below the worker and disconnect the worker's lanyard when it is safe to do so. When worker is safely on the EWP, reattach lanyard to appropriate anchor point if possible;
5. Lower the worker to a safe location and administer first aid (treat for suspension trauma);
6. Arrange transportation to hospital if required.

Ladder Rescue – if an elevating work platform is not available, use ladders to rescue the fallen worker with the procedure outlined below:

1. If the fallen worker is suspended from a lifeline, move the worker (if possible) to an area that rescuers can access safely with a ladder;
2. Set up the appropriate ladder(s) to reach the fallen worker;
3. Rig separate lifelines for rescuers to use while carrying out the rescue from the ladder(s);
4. If fallen worker is not conscious/cannot reliably help with rescue, at least two rescuers are needed;
5. If the fallen worker is suspended directly from a lanyard or a lifeline, securely attach a separate lowering line to the harness;
6. Other rescuers on the ground (or closest work surface) should lower the fallen worker while the rescuer on the ladder guides the fallen worker to the ground (or work surface);
7. Once the fallen worker has been brought to a safe location, administer first aid and treat the person for suspension trauma and any other injury;
8. Arrange transportation to hospital if required.

Rescue from Work Area or Floor Below – if the fallen worker is suspended near a work area and can be safely reached from the floor below or the area from which they fell, use the following procedure:

1. Ensure that rescuers are protected against falling;
2. If possible, securely attach a second line to the fallen worker's harness to help rescuers pull worker to a safe area. You will need at least two workers to pull someone up to the level from which they fell;
3. Take up any slack in the retrieving line to avoid slippage;
4. Once the worker has been brought to a safe location, administer first aid and treat the person for suspension trauma and any other injury;

5. Arrange transportation to hospital if required.

Basket Rescue – if a worker has fallen and is suspended in an inaccessible area, you may need to perform a basket rescue. Always keep the following items in the rescue basket.

- First-aid kit;
- Three lanyards equipped with shock absorbers;
- One full-body harness;
- Tag line always attached to the basket;
- Descent controller rescue device in good working condition;
- Secondary safety line to tie the basket above the headache ball of the crane.

To perform a basket rescue, follow the steps below:

1. Make sure preferred methods A, B, and C are not possible;
2. Notify the crane operator right away to position the crane to attach the basket;
3. While the basket is being attached, the crew leader checks that all safety rigging is done, and all the required safety equipment is available;
4. With two rescuers in the basket, hoist it to a position that is above and as close as possible to the fallen worker. A designated worker on the ground guides the basket with a tag line. The designated worker must make sure that when the rescue basket reaches the right elevation, the door of the basket is facing the structural steel to provide an easy exit for rescuer #1;
5. Rescuer #1 must always be tied-off to either the structure or the rescue basket before exiting the rescue basket to a position to reach the fallen worker;
6. Rescuer #2, who is still in the rescue basket, lowers the line that will be used to retrieve the worker and attaches an extra lanyard to the line if required;
7. Rescuer #1 assesses the fallen worker for injuries and then decides how to proceed (i.e., treat injuries first, guide the fallen worker into the rescue basket, or lower the basket to the ground with the fallen worker attached to it);
8. Once worker has been brought to a safe location, administer first aid (treat for suspension trauma);
9. Arrange transportation to hospital – a designated worker must accompany the injured worker.

If the basket rescue is the method used, keep the following points in mind:

- Perform a basket rescue only when it is not possible to use conventional equipment to rescue the fallen worker in a safe manner;
- Never exceed the maximum number of workers in the basket as indicated on the nameplate;
- Ensure that a competent worker inspects the crane and equipment being used prior to lifting rescuers;
- Always equip the crane with a fail-safe mechanism to prevent the boom from descending in the event of a power source or system failure;
- Always maintain an adequate means of communication between the rescuers in the basket and the crane operator;
- Always ensure that workers in the rescue basket wear full-body safety harnesses attached to a lanyard and anchored to appropriate points in the basket;
- Make sure that all rigging used to attach the rescue basket to the hook of a load line has a safety factor of 10 against failure. There should be a safety line attached to the load line directly from the basket;
- Do not allow cranes to travel while rescuers are in the basket;
- Do not use suspended rescue baskets during high winds, electrical storms, snow, ice, sleet, or other adverse conditions that could affect the safety of personnel on platform or in the basket.

10. Minimize business activity disruption:

- a) All non-affected workers should remain in the designated safe gathering zone until notified;
- b) Begin the accident investigation;
- c) Ensure the area is cleaned-up and safe before recommencing work.

IV. Non-Fatal Trauma (ERP-NFT-024)

Purpose

A non-fatal injury is bodily harm resulting from severe exposure to an external force or substance (mechanical, thermal, electrical, chemical, or radiant) or a submersion. This category will also include heart attacks, strokes, and/or loss of consciousness. Osisko Development Corp. (herein referred to as THE COMPANY) provides the following procedure to handle situations in which a person has been injured and requires medical attention. The following procedure assumes that the injured person remains alive.

Procedure

1. Initial Notification:

- a) Give name, location, and nature of emergency (give as much information as possible);
- b) Mobilize First Aid – get medical assistance to site as soon as possible.

2. Ensure safety, protect life, and prevent injury:

- a) Ensure all personnel are out of immediate danger and are accounted for with Roll Call;
- b) Isolate personnel not involved in emergency response and restrict access to scene;
- c) Identify and ensure first aid administered to casualties.

3. Initial Response:

- a) Call 911 for patient transfer to ambulance OR call air ambulance for Evac;
- b) Health and Safety Coordinator to do initial investigation;
- c) Initial assessment to be conducted on threat to site and access roads;
- d) Management to be informed of situation and updated on changing conditions.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Establish identification of victim(s)
 - o Maintain control of scene and continue with scene management;
 - o Preserve evidence at the scene;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.

5. Minimize business activity disruption.

- a) Restrict access area until all clean up and investigation activities are complete;
- b) Ensure area is safe before recommencing work

V. Multiple Injured Persons (ERP-MIP-025)

Purpose

A non-fatal mass casualty requires triage and carefully coordination. Osisko Development Corp. (herein referred to as THE COMPANY) provides the following procedure to handle situations in which multiple persons have been injured and require medical attention. The following procedure assumes that the injured persons remain alive.

Procedure

1. Initial Notification:

- a) Give name, location, and nature of emergency (give as much information as possible);
- b) Activate Emergency Response Plan;
- c) Mobilize First Aid – get medical assistance to site as soon as possible.

2. Ensure safety, protect life, and prevent injury:

- a) Ensure all personnel are out of immediate danger and are accounted for with Roll Call;
- b) Isolate personnel not involved in emergency response and restrict access to scene;
- c) Identify and ensure first aid administered to casualties.

3. Initial Response:

- a) Health and Safety Coordinator assesses the accident scene and all physical evidence;
- b) Call 911 for patient transfer to ambulance OR call air ambulance for Evac;
- c) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - o Move any evidence,
 - o Leave the scene,
 - o Clean-up the scene.
- d) Accident site visits will be limited to only necessary emergency response personnel and appropriate management;
- e) Management to be informed of situation and updated on changing conditions.

4. Secondary Response:

- a) Contact external resources if required;
- b) Health and Safety Coordinator will:
 - o Establish identification of victims;
 - o Maintain control of scene and continue scene management/preserve evidence;
 - o Lead COMPANY investigation and clearing of the scene;
 - o Contact appropriate Ministry officials;
 - o Inform Emergency Command Group of incident conclusion.
- c) HR will be responsible to notify next of kin for all employees/contractors on site.

5. Minimize business activity disruption.

- a) Restrict access area until all clean up and investigation activities are complete;

- b) Ensure area is safe before recommencing work

Purpose

Accidents which result in fatalities require special action due to local law. If the injured party is clearly and deceased, the remains are not to be moved until authorization is received from the Coroner and applicable regulatory agencies. The RCMP. and Ministry of Energy and Mines must be contacted immediately. Osisko Development Corp. (herein referred to as THE COMPANY) provides the following procedure to deal with an on the job fatality.

Procedure

**No information will be given out without authorization from
VP Sustainability and Community Relations, Mine Manager, and CEO.**

1. Initial Notification:

- a) Give name, location, and nature of emergency to determine suitable response;
- b) Initiate Emergency Response Plan;
- c) Mobilize First Aid – Get medical support to the scene as soon as possible.

2. Initial Response:

- a) Ensure safety, protect life, and prevent injury;
- b) Ensure all employees are accounted for;
- c) FREEZE THE SCENE (except for actions necessary for life saving first aid) – DO NOT...
 - o Move any evidence,
 - o Leave the scene,
 - o Clean-up the scene.
- d) Accident site visits will be limited to only necessary emergency response personnel and appropriate management;
- e) Health and Safety Coordinator assesses and **restricts access to scene** to preserve the accident scene and all physical evidence;
- f) Contact the RCMP;
- g) Contact Coroner.

3. Secondary Response:

a) Health and Safety Coordinator will:

- o Maintain control of scene and continue with scene management;
- o Assist police as needed with obtaining witness statements or take contact details;
- o Preserve evidence at the scene and ensure scene photographed;
- o Lead COMPANY investigation and clearing of the scene;
- o Inform Emergency Command Group of incident conclusion.

4. Minimize business activity disruption.

- a) Restrict access area until all investigation activities are complete;
- b) Ensure that crisis counseling is available for co-workers and response personnel, as soon as practical, after the accident;
- c) Contact appropriate agencies;
- d) Contact corporate legal to discuss the work-related fatality.

APPENDIX 7 PROCEDURES – POWER FAILURE

I. Surface Power Failure (ERP-SPF-006)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, and visitors are kept as safe as possible in the case of a power outage.

Procedure

1. Ensure safety, protect life, and prevent injury:
 - a) Ensure no one is in any immediate danger and all employees are accounted for.
2. Initial Response:
 - a) Contact the site Electrician by radio for initial investigation;
 - b) Initiate emergency generators;
 - c) Assess if it is an internal issue or external issue;
 - d) Make repairs if safe.
3. Secondary Response:
 - a) Contact BC Hydro to determine nature and estimated duration of outage;
 - b) During the outage, maintain emergency load within the capacity of the emergency generators;
 - c) If outage is expected to last several hours or days, plan to have fuel delivered to site regularly to maintain emergency generator in operation;
 - d) Stay in contact with BC Hydro.
4. Minimize business activity disruption.

II. Underground Power Failure (ERP-UGF-020)

Purpose

Few situations can occur underground which would cause the ventilation system to shut down, one exception is a power failure. Osisko Development Corp. (herein referred to as THE COMPANY) will provide a procedure to keep all personnel safe while crews prioritize the restoration of power to the ventilation system.

Procedure

1. Initial Notification:

- a) Give name, location, nature and cause of ground fall;
- b) Initiate Stench Gas Procedure;
- c) Mobilize Mine Rescue.

2. Initial Response:

- a) Deploy Stench Gas;
 - o Upon smelling stench or notification of an emergency miners must immediately stop what they are doing and proceed to the safest and quickest escape route to the surface or refuge station;
 - o Warn fellow workers along the route of travel;
 - o If in smoke or feel the effects of carbon monoxide immediately don your Self Rescuer;
 - o Never block travel ways with equipment and never travel in heavy smoke;
 - o Once on the surface immediately report to the closest muster station for roll call;
 - o Once at the refuge station:
 - First person to the refuge station is in charge;
 - Complete the roll call form;
 - Wait to be contacted for roll call;
 - Wait for further instructions.
- b) Health and Safety Coordinator to do initial investigation and deploy Mine Rescue Team;
- c) Management to be informed of fire and updated on changing conditions.

3. Ensure safety, protect life, and prevent injury:

- a) Evacuate the mine following evacuation procedures;
- b) Ensure all personnel are out of immediate danger and are accounted for with Roll Call;
- c) Isolate personnel not involved in emergency response and restrict access to scene.

4. Secondary Response:

- a) Health and Safety Coordinator will:
 - o Lead COMPANY investigation and clearing of the scene;
 - o Inform Emergency Command Group of incident conclusion.
- b) Health and Safety Coordinator and Electrician to do initial investigation;
- c) Monitor status of Emergency Responders;

d) Monitor status of ventilation system.

5. Minimize disruption to work:

a) Site and equipment must be inspected and certified operational before commencing work.

APPENDIX 8 PROCEDURES – THREAT/DISTURBANCE

I. Bomb/Armed Threat (ERP-BAT-013)

Purpose

The purpose of the procedure is to ensure that all Osisko Development Corp. (herein referred to as THE COMPANY) employees and the community of Wells, BC are safe in the event of a bomb or armed threat.

Procedure

REMEMBER: DO NOT PUT YOURSELF AT RISK

The priority sequence for an ARMED THREAT is as follows:

1. Initial Notification:

- a) Give name, location, number involved, any injuries etc. to determine suitable response;
- b) Initiate Emergency Response Plan;
- c) Mobilize First Aid – get medical support to the scene as soon as possible.

2. Initial Response:

- a) Health and Safety Coordinator to confirm armed threat;
- b) Open dialogue with threat as/if needed;
- c) Clear area immediately of all non-essential personnel;
- d) Contact RCMP to take over incident on arrival.

No other personnel besides RCMP, Health and Safety Coordinator, On-Scene Commander, and First Aid are allowed at the scene unless otherwise instructed by ODV Management or RCMP.

3. Secondary Response:

- a) Maintain contact with threat if possible, but do not interfere;
- b) Allow RCMP to deal with incident;
- c) Communicate with Management, and other outside organizations as needed.

BOMB THREAT LEVEL

- Low:
 - Threat without specifics, or a demand of any kind, assessed as low danger.

- No evacuation or search may be warranted.
- Medium:
 - Threat involves some specifics, as above, but assessed low danger.
 - Evacuation and search may be warranted.
- High:
 - Threat involves specifics and is assessed as credible.
 - Evacuation and search are required.

If any person should receive a threat of a bomb, the following procedures shall be followed, and the Rapid Response System must be initiated.

The priority sequence for a **BOMB THREAT** is as follows:

1. Initial Notification:

- a) Give name, location, estimated level of threat etc. to determine suitable response;
- b) Initiate Emergency Response Plan;
- c) Mobilize First Aid – stand-by to get medical support to the scene as soon as possible;
- d) Pass caller to Health and Safety Coordinator.

2. Initial Response:

- a) Shut down all mobile and base station radio transmissions in the area (300 feet of the affected area, if known);
- b) DO NOT under any circumstances, touch, disturb or attempt to disarm the device;
- c) Health and Safety Officer to determine level of threat;
- d) Contact RCMP;
- e) Immediately withdraw all persons from the area under threat (personal items such as purses, briefcases and lunch boxes should be left inside the building).

3. Secondary Response:

- a) Ask the caller to repeat the message. Record every word spoken by the person making the call, if possible;
- b) Try to have the caller give the location or area of the bomb and the possible time of detonation;
- c) Pay attention to any strange or peculiar background noises;
- d) Listen closely to the voice (male, female, etc.), voice quality, accents and speech impediments;
- e) Ask the following questions:

- Where is the location of the bomb?
- What kind of bomb is it?
- Can you describe the bomb to me? What does it look like?
- What time is detonation?
- Why was the bomb planted?
- How do you know about the bomb?

II. Disturbance/Distraught Person (ERP-CD-014)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, and visitors are kept as safe as possible in the case of a civil disturbance and/or distraught person on Mine property.

Threat Level

- LOW:
 - A distraught person is causing a non-violent disturbance, no threats against persons or property; the person is a contract employee or community member
 - Individuals are congregating, or credible reports indicate a demonstration may take place
 - No disruption of operations other than nuisance level
 - Minor criminal acts such as ingress/trespassing, verbal assaults, threats etc. exist
 - No National or International implications
 - No publicity involved or likely to occur
 - Can be handled at the local level
- MEDIUM:
 - A distraught person causing trouble cannot be persuaded to leave an area, threats against property or persons have been made
 - Serious criminal acts have taken place e.g., actual violence against persons, damage to property, disruption to processes beyond a nuisance etc.
 - Refusals to leave property after reasonable negotiations have taken place
 - Medium sized demonstration e.g., approximately 50 to 100 persons
 - Publicity involved or likely will be

- Implications at National level
- Potential for violence likely
- HIGH:
 - Distraught person/s becomes violent with associated life threatening or significant harm to property and processes actions taking place
 - Large-scale e.g., more than approximately 100 person's violent demonstration putting the security of your mine personnel and property at risk
 - Requires, or will likely require, security assistance by outside authorities. Sustained disruption of operations
 - Significant publicity already or likely

Procedure

1. Initial Notification:

- a) Give name, location, and nature of emergency to determine suitable response;
- b) Contact Mine Manager to assess activation of ERP.
- c) Ensure no one is in any immediate danger and all employees are accounted for;
- d) Restrict access to scene.

2. Initial Response:

- a) Health and Safety Coordinator to observe and assess the situation;
- b) Take whatever steps can safely be taken to reduce or eliminate the risks to people, property, and process without putting anyone in danger;
- c) Give those involved a location/time where the issues can be dealt with calmly and logically;
- d) If there is a confrontation, try to calm the situation or disengage from the confrontation;
- e) Contact RCMP to explain the situation and request their immediate response;
- f) Keep Management informed to the situation.

3. Secondary Response:

- a) If there is a refusal to disperse, the emergency moves to a moderate level;
- b) Secure the area;
- c) Remove people, equipment, and protect processes that are at risk due to the disturbance;
- d) When authorities arrive, they assume control of the situation.

4. Minimize business activity disruption.

- a) Restrict access to area affected;
- b) If low or medium level threat work in other areas/sites may continue.

APPENDIX 9 PROCEDURES – ADVERSE WEATHER

I. Extreme Weather (ERP-EW-007)

Purpose

Osisko Development Corp. (herein referred to as THE COMPANY) will maintain a procedure to ensure that all COMPANY personnel, contractors, and visitors are kept as safe as possible in the case of extreme weather conditions.

Procedure

The priority sequence for HIGH WINDS is as follows:

1. Initial Notification:

- a) Mine Manager to notify Foremen and Department Managers of impending wind storm.
- b) Ensure no one is in any immediate danger and all employees are accounted for.

2. Initial Response:

- a) Contact Health and Safety Coordinator for initial investigation;
- b) Relocate loose outdoor equipment, machinery, and other debris indoors or fasten securely, including any equipment belonging to outside contractors;
- c) Outdoor structures, such as trailers, should be properly anchored;
- d) Designate a person to monitor the status and location of the windstorm, keeping management and maintenance personnel updated as needed.

3. Secondary Response:

- a) If wind storm continues to develop:
 - o All ground equipment should be secured – high-lift vehicles lowered, and stabilizers deployed, including any equipment belonging to outside contractors;
 - o Protect exterior windows and doors;
 - o Shut down all non-critical/non-essential electrical equipment;
 - o Emergency response personnel should remain at the facility, if safe to do so, and be prepared to respond.
- b) If wind becomes extreme – shut down all operations.

4. Minimize business activity disruption:

- a) If safe to do so, conduct an immediate damage assessment, paying attention to:
 - o Structural damage to the building and roof coverings,
 - o Utilities including electricity, gas, water, etc. (isolate as necessary).
- b) Call in key personnel and notify contractors to begin major repairs;
- c) Make sure facility safety procedures are fully implemented before work commences;
- d) Review the effectiveness of the windstorm emergency plan and revise as needed.

The priority sequence for LOW VISIBILITY is as follows:

(Low visibility can be caused by several factors/weather conditions)

1. Initial Notification:

- a) Give name, location, and visibility concerns;
- b) Contact Mine Manager and Health and Safety Coordinator.
- c) Ensure no one is in any immediate danger and all employees are accounted for.

2. Initial Response:

- a) Contact Health and Safety Coordinator for initial investigation;
- b) Equipment (heavy and light duty) operating speeds must be considerably reduced;
- c) Equipment (heavy and light duty) need all running lights on during low visibility operations;
- d) Equipment (heavy and light duty) operators must take extra caution at all intersections;
- e) Designate a person to monitor the status of the weather/conditions, keeping management and maintenance personnel updated as needed.

3. Secondary Response:

- a) If visibility low, use extra care to ensure equipment (heavy/light duty) windshields are clean;
- b) If visibility low, shut down all non-critical/non-essential equipment (heavy and light duty);
- c) Emergency response personnel should remain at the facility, if safe to do so, and be prepared to respond;
- d) *If visibility continues to worsen – shut down all operations.*

4. Minimize business activity disruption:

- a) Make sure facility safety procedures are fully implemented before work commences.

The priority sequence for SNOW and ICE CONDITIONS is as follows:

1. Initial Notification:

- a) Give name, location, and snow and/or ice concerns;
- b) Contact Mine Manager and Health and Safety Coordinator.
- c) Ensure no one is in any immediate danger and all employees are accounted for.

2. Initial Response:

- a) Contact Health and Safety Coordinator for initial investigation;
- b) Equipment (heavy and light duty) operating speeds must be considerably reduced;
- c) Equipment (heavy and light duty) must be equipped with chains;
- d) Equipment (heavy and light duty) operators must take extra caution at all intersections;
- e) Designate a person to monitor the status of the weather/conditions, keeping management and maintenance personnel updated as needed.

3. Secondary Response:

- a) Personnel should allow extra time for activities;
- b) Ensure all equipment (heavy and light duty) are properly fitted out for winter activities;
- c) If situation requires to shut down all non-critical/non-essential equipment – do so;
- d) Emergency response personnel should remain at the facility and be prepared to respond;
- e) If conditions continue to worsen – shut down all operations.

4. Minimize business activity disruption:

- a) Personnel should be in suitable clothing to be able to maintain efficiency;
- b) Make sure facility safety procedures are fully implemented before work commences.

The priority sequence for AIR QUALITY is as follows:

1. Initial Notification:

- a) Give name, location, and air quality concerns;
- b) Contact Mine Manager and Health and Safety Coordinator.
- c) Ensure no one is in any immediate danger and all employees are accounted for.

2. Initial Response:

- a) Contact Health and Safety Coordinator for initial investigation;
- b) Designate a person to monitor the status of the weather/conditions, keeping management and maintenance personnel updated as needed.

3. Secondary Response:

- a) If situation requires to shut down all non-critical/non-essential outdoor operations – do so;
- b) Keep all windows and doors closed;
- c) Emergency response personnel should remain at the facility and be prepared to respond;

d) If air quality conditions continue to worsen – shut down all operations.

4. Minimize business activity disruption:

- a) Personnel should be issued suitable PPE to be able to maintain efficiency;
- b) Make sure facility safety procedures are fully implemented before work commences

APPENDIX E OCCUPATIONAL HEALTH AND SAFETY PLAN



OSISKO DEVELOPMENT

CARIBOO GOLD PROJECT

**OCCUPATIONAL HEALTH AND SAFETY
MANAGEMENT PLAN**

March 2025



OSISKO DEVELOPMENT

Cariboo Gold Project

PO Box 250
3700 Ski Hill Road
Wells, BC V0K 2R0

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REVISION HISTORY

Rev. No.	Date	Author	Description
0			

The signatures below indicate that (i) this document has been reviewed and accepted, and (ii) the signatories are aware of all the requirements contained herein and are committed to ensuring their provision.

PREPARED BY		REVIEWED BY	APPROVED BY
Name:	John Renaud	Paul Ratte	Paul Ratte
Position:	Manager health and safety	General Manager	General Manager
Date	April 20, 2023	April 20, 2023	April 20, 2023
Signature			

ABBREVIATIONS

Terminology used in this document has been defined where it is first used, while the following list has been presented to assist readers that choose to review only portions of the document.

Abbreviation	Description
°C	Degrees Celsius
µg	Microgram
BC	British Columbia
CO	Carbon Monoxide
CO ²	Carbon Dioxide
CSA	Canadian Standards Association
dBA	Decibels
EMLI	BC Ministry of Energy, Mines and Low Carbon Innovation
ERP	Emergency Response Plan
FLHA	Field Level Hazard Assessment
HCN	Hydrogen Cyanide
IDLH	Immediately Dangerous to Life or Health
JHA	Job Hazard Analysis
JOHSC	Joint Occupational Health and Safety Committee
Km	kilometre
kph	Kilometre per hour
L	Litre
lb	Pound
m	metre
MSD	Musculoskeletal disorders
NaCN	Sodium Cyanide
NC	Non-Conformity

Abbreviation	Description
NIOSH	National Institute for Occupational Safety and Health
NO	Nitrous Oxide
NO ₂	Nitrogen Dioxide
ODV	Osisko Development Corp.
OEL	Occupational exposure limit
OHSMP	Occupational Health and Safety Management Plan
OHSR	Occupational Health and Safety Regulations
PAH	Polycyclic Aromatic Hydrocarbons
PNOC	Particulates Not Otherwise Classified
PPE	Personal Protection Equipment
ppm	Parts per million
QA/QC	Quality Assurance/Quality Control
RCS	Respirable Crystalline Silica
SCBA	Self-contained breathing apparatus
SDS	Safety Data Sheets
SEG	Similar exposure group
SiO ₂	Silicon Dioxide
SO ₂	Sulphur Dioxide
SWP	Safe Work Practice
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Values
WBGT	Wet Bulb Globe Temperature
WCA	<i>Workers' Compensation Act</i> (BC)
WHMIS	Workplace Hazardous Materials Information System

DEFINITIONS

Contractor: is a person or company that carries out specialty work for ODV.

Employer: is a person who manages mining operations and supervises management through the planning and coordination of the projects.

Manager: is a person whose principal employment responsibility consists of supervising or directing, or both supervising and directing, human or other resources or a person employed in an executive capacity.

Multiple employers: is a workplace where workers of two or more employers working at the same time.

Prime Contractor: is a person who performs a complete contract and employs one or more contractors to carry out specific parts of the contract (in relation to a multiple-employer workplace).

Subcontractor: is a person or company retained by a Contractor to carry out specialty work.

Supervisor: is a person who instructs, directs, and controls workers in the performance of their duties.

Supplier: is a person or entity that is the source of goods or services.

Visitor: is a person who does not work for ODV but spends a short amount of time in the company's facilities.

Worker is a person who works part-time or full-time under a contract of employment, whether oral or written. He or she performs a specific or necessary task or completes tasks in a certain way.

1. INTRODUCTION

1.1 Purpose

Every employee has the right to a healthy and safe work environment. The purpose of this Occupational Health and Safety Management Plan (OHSMP) is to outline Osisko Development Corp (ODV) Health and Safety Policy for the Cariboo Gold Project (Project).

The OHSMP will:

- Define responsibilities, processes, and procedures for achieving the Policy commitments and the ODV health and safety objectives, including regulatory compliance.
- Define and document the risk-based approach to health and safety planning, assurance, and control of the ODV health and safety risks and opportunities.
- Document project-level Health and Safety Program elements required under the Ministry of Energy, Mines and Low Carbon Innovation (EMLI), ODV Safety Management Plan and WorkSafeBC.
- Provide guidance to the Project participants about best health and safety practices where no explicit regulatory requirements exist.

1.2 Scope

Protecting employees and all other persons from undue risks to their health and safety arising out of or relating to activities at ODV mining sites is a fundamental task of the company. ODV is also devoted to safeguarding the public and local, nearby communities from risks arising out of, or regarding, activities at mining and/or exploration sites, including the protection and the reclamation of the land and watercourses affected by mining activities.

This OHSMP applies to all ODV, Contractor and Subcontractor construction activities with health and safety risks throughout ODV.

Should any conflict exist between the requirements of this document, the safety rules or statutory requirements/regulations, the higher standard shall apply, unless such conflict is brought to the attention of ODV, and an alternate direction is provided.

The OHSMP is subject to annual review for continued applicability and continual improvement.

1.3 Policy Statement



BARKERVILLE GOLD MINES INC. (BGM) HEALTH AND SAFETY POLICY

BGM is committed to the health and safety of our employees, contractors and visitors to our sites.

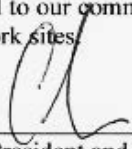
We demonstrate this commitment by:

- providing a work environment that protects all employees and personnel from undue health and safety risks arising from any activities on our sites; and
- ensuring that employees and other personnel are equipped and trained to achieve our health and safety goals and priorities.

All personnel on our sites have a role in safeguarding the health, safety and welfare of those who work at or visit our sites.

1. As President and Chief Executive Officer of Barkerville Gold Mines, I am committed to providing active leadership in maintaining a safe and healthy workplace which, at a minimum, complies with applicable health and safety laws and our corporate commitments.
2. Supervisors and managers have specific roles, including responsibility for ensuring the health and safety of all personnel under the supervisor or manager's supervision and ensuring that personnel comply with applicable health and safety laws, legislative requirements, and the highest industry standards and guidelines.
3. Every employee, contractor and visitor is responsible for protecting their own health and safety by complying with applicable health and safety laws, safe work practices and procedures established by Barkerville Gold Mines, and by speaking up and reporting unsafe work practices or environments.

Our success requires active participation and a shared commitment to this policy by all personnel. Therefore, all employees, including senior management, contractors and visitors to our sites must be dedicated to our commitment to continuously improve and reduce risk of injury, incidents and illnesses at our work sites.

Signed:  Chris Lodder
President and Chief Executive
Officer Barkerville Gold Mines
Inc.

Adopted by Barkerville Gold Mines Inc. March 22, 2020

1.4 Organization

The chart below depicts the structure and composition of the Health and Safety Team to guide, support and oversee health and safety performance at ODV:

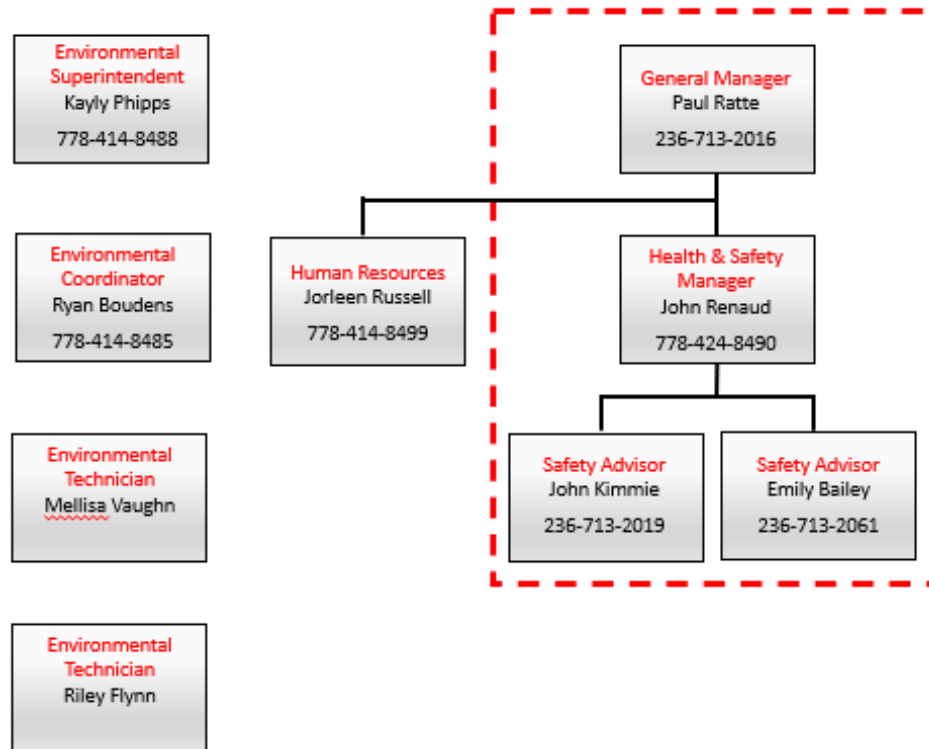


Figure 1.4-1 Health and Safety Organization Chart

2. APPLICABLE LEGISLATION AND LAWS

2.1 Legislation

ODV's Health and Safety Management Program aims to demonstrate compliance with:

Table 2.1-1 Provincial Legislation

Provincial Regulator	Legislation
Health, Safety and Reclamation Code for Mines in British Columbia (BC)	Occupational Health and Safety Regulation.
WorkSafeBC	The BC Workers Compensation Act and Occupational Health and Safety Regulation.

Table 2.1-2 Federal Legislation

Federal Regulator	Legislation
Transport Canada	Transportation of Dangerous Goods (TDG) Regulations
National Research Council of Canada	National Fire Code

ODV will treat the standards set in the Health, Safety, and Reclamation Code for Mines in BC (the Code) as the minimum safety standards to be complied with. In the absence of any legal standards, "best practices" within the mining industry will be reviewed and considered for use and implementation into the company's health and safety management system.

2.2 General Laws

ODV is subject to several laws, rules, and regulations with respect to the conduct of its business. Representatives are expected to maintain compliance with the letter and spirit of all laws governing the jurisdictions in which they perform their duties.

This OHSMP does not purport to address all areas of law that representatives might encounter in the day-to-day business of ODV. However, the following areas are worth specifically mentioning:

2.2.1 Human Rights Laws

ODV values the diversity of its representatives, customers, and suppliers, and is committed to providing equal treatment in all aspects of the business. Abusive, harassing, or offensive conduct is unacceptable, whether verbal, physical, visual, or otherwise. ODV will not tolerate discriminatory conduct, harassing or otherwise compromises individual human rights.

2.2.2 Privacy Laws

ODV is committed to maintaining the accuracy, confidentiality, security, and privacy of the personal information of its customers, suppliers, and representatives. Representatives who have

access to personal information are expected to support ODV's efforts to develop, implement and maintain procedures and policies designed to manage personal information.

2.2.3 Health and Safety Laws

ODV complies with all applicable health and safety laws and regulations as part of its commitment to providing its representatives with a safe and healthy work environment. Representatives have a responsibility to maintain this work environment. In this regard, representatives are expected to work in a safe manner with due regard for their personal safety as well as that of their co-workers and to report accidents, injuries, hazardous equipment, and unsafe practices. Representatives are prohibited from engaging in the business of ODV while under the influence of alcohol or illegal drugs.

2.2.4 Environmental Laws

Cognizant of its responsibility to the environment, ODV strives to conform to all applicable environmental laws and regulations and promote the respect of the environment in its activities. Representatives are expected to support ODV's efforts to develop, implement, and maintain procedures to protect and preserve the environment.

2.2.5 Securities Laws

ODV is committed to protecting security holder investments and expects all representatives to comply with the applicable reporting obligations and trading restrictions imposed by Barkerville Gold, a securities commission or stock exchange. Representatives in possession of material information about ODV must not trade in securities of ODV until such information is generally and publicly available. Providing inside information to others who then trade on it is also strictly prohibited. Representatives should make themselves familiar with ODV's Disclosure Policy.

2.2.6 Competition Laws

Competition laws are enacted to limit practices that are seen to impair the function of a free and open marketplace. A complete description of these laws is beyond the scope of this OHSMP; however, they include price fixing, bid rigging, price discrimination, allocation of markets and boycotting of certain suppliers or customers. Representatives having regular dealings with customers and suppliers should become familiar with the laws applying to these practices, as non-compliance can result in severe penalties being imposed on both ODV and the individuals involved.

3. RESPONSIBILITIES

ODV and Contractor employees have specific responsibilities described in this plan. In certain instances, these responsibilities may be delegated to other qualified workers; however, accountability for compliance is NOT transferable.

- It is expected that all Project personnel will follow the standards contained in this plan and adhere to all applicable codes and government legislation.
- All employees, including senior management, supervisors, and operators, shall receive and review safety training that defines their specific health and safety responsibilities. All workers shall be held individually accountable for fulfilling these responsibilities. Appropriate action shall be taken against any person who engages in a sub-standard act or who fails to comply with established safe work practices and procedural standards. Performance with respect to health and safety shall be an important ongoing criterion in evaluating job performance, progression, and promotion.

Under this OHSMP, health and safety responsibilities have been assigned to the following ODV and Contractor Project workers, which shall not in any way detract from the individuals' basic obligation to display due diligence in all matters relating to health and safety.

3.1 Management Responsibilities

ODV Management will be accountable for health and safety management and the performance of the Project. Specifically:

- Provide health and safety leadership and promote safety culture.
- Champion regulatory compliance and continual health and safety improvement. This includes implementation and completion of health and safety objectives and corporate health and safety initiatives at the project level.
- Provide adequate resources to reduce health and safety risks of normal and upset work conditions to acceptable levels.
- Delegate health and safety responsibilities to ODV for effective and consistent implementation of this OHSMP.
- Ensure the health and safety of all company workers employed by ODV, and any other workers present at a workplace at which employer's work is being carried out.
- Remedy any workplace conditions that are hazardous to the health or safety of Management's workers and ensure that Management's workers:

- are made aware of all known or reasonably foreseeable health or safety hazards to which they are likely to be exposed by their work, comply with the Health, Safety and Reclamation Code for Mines in BC and any applicable orders, and
- are made aware of their rights and duties under the Health, Safety and Reclamation Code.
- Establish occupational health and safety policies and programs in accordance with the Health, Safety and Reclamation Code for Mines in BC.
- Provide and maintain protective equipment, devices and clothing in good condition as required by regulation and ensure that these are used by Management's workers.
- Provide to Management's workers the information, instruction, training, and supervision necessary to ensure the health and safety of Management's workers and other workers at the workplace.
- Make sure the Health, Safety and Reclamation Code for Mines in BC, and WorkSafeBC Regulations is readily available for review by Management's workers by keeping a copy at each workplace where workers are regularly employed and posting a permanent notice advising where the copy is available for review,
- Consult and cooperate with the JOHSC and worker health and safety representatives for workplaces of Management.
- Cooperate with the Mine Inspector, Board Officers and any other person carrying out a duty under the Mines Act or WCB Act.
- Ensure that the JOHSC is functional and providing necessary resources for this committee to function adequately.
- Establish and maintain a comprehensive occupational health and safety management system.
- Support supervisors, safety advisors and workers in their health and safety activities.
- Take immediate action when a worker or supervisor tells you about a potentially hazardous situation.
- Initiate an immediate investigation into accidents.
- Report accidents/incidents as required to the appropriate agency (Mine Inspector, WorkSafeBC, Transport Canada).
- Provide adequate first aid facilities and services.
- Ensure that all safeguards, safety appliances and devices, including personal protective equipment necessary for the protection of workers, are available and being used by the workers.

- Ensure the adequate direction and instruction of workers in the safe performance of their duties.

3.2 Supervisor Responsibilities

Supervisors play a key role with very specific health and safety responsibilities. A supervisor is a person who instructs, directs, and controls workers in the performance of their work duties. A supervisor can be any worker – management or staff – who meets this definition if they have the supervisor's title.

The Supervisor is committed to, and is accountable to, ensuring that healthy and safe work conditions are maintained in his or her assigned work area.

The Supervisor will:

- Ensure the health and safety of all workers under his or her direct supervision.
- Ensure they understand and follow all ODV standards and rules.
- Be knowledgeable about the Health, Safety and Reclamation Code for Mines in BC.
- Ensure that workers under his or her direct supervision:
 - are made aware of all known or reasonably foreseeable health or safety hazards in the area where they work, and
 - comply with the Health, Safety and Reclamation Code for Mines in BC and WorkSafeBC Regulations and any applicable orders.
- Consult and cooperate with the joint committee or worker health and safety representative for the workplace.
- Cooperate with the Mine Inspector, Board Officers and any other person carrying out a duty under the Mines Act or WCB Act.
- Ensure that all workers use and wear personal protective equipment assigned to them.
- Ensure new employees, sub-contractors and visitors have adequate training and safety orientation before they begin work.
- Ensure all workers attend daily toolbox talks and weekly safety meetings.
- Be knowledgeable about the legislation applicable to the work being conducted.
- Ensure only authorized, trained, and competent workers operate machinery, tools, and equipment.
- Perform regular, planned, and informal workplace inspections.
- Provide in-field training and guidance to workers.

- Rectify any unsafe condition immediately.
- Correct unsafe acts, conditions, work practices and hazards reported to them.
- Facilitate and participate in accident, incident investigations, and ensuring adequate investigations are completed within the 48- hour and 72-hour timeline.
- Immediately report any Incident, Accident, Near Miss to ODV Management and Safety Department.
- Set a good example.

3.3 Employee Responsibilities

As a worker, you play an important role in making sure you and your fellow workers stay healthy and safe on the job. As a worker, you must:

- Carry out his or her work in accordance with established Safe Work Procedures as required by the Health, Safety and Reclamation Code for Mines in BC and WorkSafeBC Regulations.
- Be alert, to hazards and report them immediately to your supervisor or employer.
- Always follow safe work procedures and act safely in the workplace.
- Use protective clothing, devices, and equipment as required. Ensure you wear, use, and maintain these in the prescribed manner.
- Cooperate with the Joint Occupational Health and Safety Committee (JOHSC) or workers' health and safety representative for the workplace.
- Cooperate with the Mine Inspector, Board, Officers of the Board, and any other person carrying out a duty under the Mines Act or WCB Act.
- Not engage in horseplay or similar conduct that may endanger the worker or any other person.
- Correct or report unsafe acts and conditions or any other hazard that is likely to endanger the worker or any other person to his or her supervisor or employer.
- Ensure that ability to work without risk to his or her health or safety, or to the health or safety of any other person, is not impaired by alcohol, drugs, or other causes.
- Report to the supervisor or employer:
 - Any contravention of the Health, Safety and Reclamation Code for Mines in BC or an applicable order of which the worker is aware.
 - The absence of or defect in any protective equipment, device, or clothing.

- The existence of any other hazard that the worker considers likely to endanger the worker or any other person.
- Refuse any unsafe work or act.
- Participate in toolbox talks and safety meetings.
- Carry out assigned work in accordance with approved controls and fulfill any specific responsibilities assigned to you within such controls.
- If applicable, complete critical tasks as per Safe Work Practices (SWP) and Job Hazard Analysis (JHA).
- Immediately report incidents, near misses, unsafe conditions, and absence/defect anywhere on the site and in any protective equipment, device, or clothing to your supervisor.
- Do not operate equipment or tools unless they are authorized, trained, and competent to do so, all safeguards are in place and functional, and no person will be endangered.
- Use tools in accordance with safe work practices and manufactures recommendations.
- Repair or remove from service unsafe tools and tag out as required.
- Set a good example.

3.4 Safety Advisor's Responsibilities

- Ensure new employees, Subcontractors and visitors have a safety orientation and adequate training before they begin work.
- Ensure timely and thorough management of change in all aspects related to health and safety, including corrective actions in response to detected non-conformities.
- Support supervisors in daily informal toolbox talks to communicate recent and relevant health and safety information, and coordinate health and safety activities among those present on the project site.
- Ensure work is performed without undue risk.
- Notify the supervisor of situations where workers are using unsafe work procedures.
- Inspect the work site for hazards to workers and visitors.
- Inform the employers, workers, and visitors of worksite hazards.
- Ensure that all safety hazards are controlled or eliminated.
- Participate in accident investigations or ensuring adequate investigations are completed.
- Take the initiative to ensure all company responsibilities are met.

- Ensure compliance with the Occupational Health and Safety Regulation.
- Support and coordinate safety activities undertaken by operations.
- Support and coordinate safety training.
- Support and coordinate the claim management process.
- Support, coordinate and undertake safety audits.
- Review, support, and coordinate accident investigations.
- Participate in and support industry safety initiatives.
- Research and provide Management, Supervisors and workers with answers related to safety.
- Support and coordinate JOHSC.
- Support safety-related initiatives as required.
- Set a good example.

3.5 First Aid Attendant Responsibilities

The First Aid Attendant is responsible, and has full authority, for all first aid treatment of an injured worker until responsibility for treatment is accepted,

- at a place of medical treatment;
- by an acceptable ambulance service; or
- by a person with higher or equivalent first aid certification.

The decision of an Attendant relating to treatment or transport must not be overruled except by persons listed above.

If a worker reports to an Attendant with an occupational illness or injury requiring first aid treatment, the Attendant must not refer the worker back to work until the Attendant is satisfied that the first aid treatment is complete.

The Attendant does not have the authority to overrule a worker's decision to seek, or choice of, medical attention.

The Attendant must show proof of qualification by carrying their first aid certificate at all times.

The Attendant will:

- Advise the worker's supervisor of the first aid visit when the injury is an occupational injury.
- Complete the first aid record form and any other required paperwork.

- Make sure each company provides to the worker Medical Assessment Report (modified return to work paperwork) when an injured worker intends to seek medical aid. 09o
- Not undertake activities that will interfere with the ability to respond to a request for first aid service; and
- Respond to a request for first aid in an as clean and sanitary manner as possible (in the circumstances).

3.6 Visitor and Consultants Responsibilities

All visitors must follow ODV's health and safety policies and procedures, as well as all applicable government legislation and regulations. They must follow the instructions of the ODV site representative.

Visitors are responsible for safeguarding their own health and safety and the safety of the project employees, supervisors and workers are expected to intervene if they observe a visitor in peril.

Visitors entering the worksite shall ensure they:

- Do not enter the work area without the proper authorization to do so.
- Report to the project site office and obtain permission for entry into the project site.
- Comply with Health and Safety Program requirements and the Occupational Health and Safety Regulation.
- They wear the required approved personal protective equipment (PPE).
- Tag and sign in and sign out daily.
- Have an escort when on-site and follow their directions. The escort is to be approved by ODV Superintendent or Safety Department.
- Participate in the site Visitor Orientation.
- Participating and complying with environmental and safety directives received from ODV Project Management.
- Comply with the Safety Rules and applicable controls.
- Report any unsafe acts or conditions to the Construction Superintendent.
- Report any injuries sustained on the site to the Construction Superintendent & Safety; and
- Participate in daily toolbox meetings.

3.7 Contractor's and Subcontractor's Responsibilities

Contractors will be required to have a Health and Safety Program that will comply with the requirements of the appropriate health and safety legislation prior to starting work at any ODV

operations. Contractors and their employees, including Subcontractors, will perform work in compliance with all applicable safety regulations and ODV policies and procedures. Contractor and Subcontractor responsibilities shall include, but not necessarily be limited to, the following:

- Contractors that do not have a health and safety Program must follow ODV's Health and Safety Policies and Procedures, as well as all applicable government legislation and regulations. Contractors must follow the instructions of the ODV site representative.
- Provide work plans and/or permits applicable to his or her job duties.
- Contractors and Subcontractors must participate in ODV safety program activities such as safety meetings, daily hazard assessments, and safety inspections, as required. All completed safety forms shall be scanned and submitted to ODV on the following schedule:

Table 3.7-1 Health and Safety Meeting Schedule

Toolbox/Tailgate meetings	Daily
Safety Meetings	Weekly
Workplace Inspections	Weekly
JOSHC	Monthly
Site Orientations	Each worker, prior to site entry

- Contractors and Subcontractors must ensure that their employees are orientated and trained in regard to the site OHSMP. Workers must be informed of all safety policies, rules, PPE requirements, practices, procedures, emergency procedures/signals and hazards before they begin work on the jobsite.
- Contractors and Subcontractors are responsible for using ODV's or their own safety system to identify hazardous conditions, safety rule violations, and unsafe work practices in their own areas.
- All Contractor and Subcontractor workers must have the required training certification prior to working on site. Contractors and Subcontractors cannot back charge ODV for required training, including:
 - Fire extinguisher training,
 - Lockout tag out training,
 - Spotter training,
 - Wilderness awareness training (bear aware),
 - Fall Protection (if applicable),
 - Confined Space,
 - Workplace Hazardous Materials Information System (WHMIS) 2015, and

- Comply with all requirements of the Health, Safety and Reclamation Code for Mines in BC.
- Use all required risk controls, including the use of PPE.
- Record, correct and report all unsafe conditions and unsafe acts observed.
- Maintain good housekeeping and general orderliness. Special attention shall be given to maintaining clear walkways, removal of trash, removal of tripping hazards, and proper storage of materials. Failure of the Subcontractor to maintain good housekeeping conditions may result in ODV arranging for clean-up at the Subcontractor's expense.
- Temporary material storage areas must always be requested and cleared through the ODV superintendent or manager.
- Contractors and Subcontractors shall provide the address and telephone number of their site representative who can be contacted during and after hours in case of an emergency involving the Contractor or Subcontractor's job or equipment.
- Contractors and Subcontractors shall ensure they provide and enforce the use of the appropriate level of PPE, as specified in the ODV Health and Safety Manual, Safety Data Sheets (SDS), and as required by EMLI and WorkSafeBC.
- Contractors and Subcontractors shall comply with WHMIS and TDG requirements, including providing appropriate training for their workers as per SDS.
- Subcontractors must provide SDS for all controlled material (WHMIS) anticipated to be used on the job site and ensure that the workers and public are not adversely affected.
- Subcontractors must provide the ODV Superintendent/Manager with notice of any planned procedure that may create a hazard to other workers on-site. Work activities must be coordinated to mitigate or reduce hazards.
- Subcontractors must immediately inform the ODV Superintendent/Manager of any contravention, non-compliance, hazardous condition, or emergency.
- Subcontractors must report and investigate all accidents, incidents, and near misses, and correct unsafe work practices or conditions.
- Failure to follow safe work and environmental rules, practices and procedures will result in disciplinary action up to and including removal from site.
- Ensure Contractor employees are provided with adequate supervision at all times.
- Cooperate with Management in the coordination of work activities.
- Ensure contractor employees have received appropriate training and orientation.
- Set a good example.

4. THE CONTRACTOR/SUBCONTRACTOR

As the prime contractor ODV places the highest importance on safety at all times during the execution and performance of all work activities at the site. The Contractors and Subcontractors are responsible for the Health and Safety performance of their own workforce and staff and shall perform the services in strict compliance with the ODV Health and Safety Program, WorkSafeBC act and regulations, CSA Standards, and local regulation applicable to each scope of work. Failure to comply strictly with its obligations under this article shall constitute a default.

Each Contractor and Subcontractor shall:

- Develop their Safety Management Plan for the Project and submit it to Health and Safety Team or the Health and Safety Manager for review of conformance with this OHSMP and approval prior to starting the Project.
- Understand the Project's critical tasks.
- For critical tasks, develop and maintain safe work practices and JHAs. Each SWP is subject to review and acceptance by ODV prior to use.
- Ensure that their workforce has been oriented and possesses appropriate training, certification, and competencies to complete the work in a safe, technically correct and environmentally sound fashion.
- Understand the key commitments, rights, and responsibilities documented in the Project's health and safety Policy.
- Provide management and worker representatives for the Project's JOHSC.
- Observe the site Safety Rules and disciplinary actions for violations of the Safety Rules
- Carry out JHAs and submit the JHA documentation to ODV Health and Safety Manager for approval prior to embarking on specific jobs.
- Carry out daily Field Level Hazard Assessment cards (FLHA) and submit weekly scans of completed FLHA to ODV Supervision.
- Inspect work of their workforce, independently from inspections and observations carried out by ODV, and within 24 hours submit scans of completed inspection reports to ODV Health and Safety Manager.
- Report incidents and near misses upon their occurrence.
- Designate and maintain their own qualified First Aid providers as per WorkSafeBC.

- Contractors shall provide ODV with monthly Health and Safety statistics for self and each of its Subcontractors as per the template provided by ODV. Health and safety statistics are due no later than the fourth day of the next month. Completed STATS form emailed to the Health and Safety Team bgmsafety@osiskodev.com
- Provide SDS for all WHMIS controlled materials that will be on site to the ODV Health and Safety Team prior to storage or use of the materials on site.

Contractors shall appoint a qualified and experienced person(s) to provide such First Aid service as may be required given the nature of the jobsite and government regulations. The person(s) appointed to this position shall possess an appropriate Level 3 Certificate in First Aid in compliance with accordance with the BC Workers Compensation Act Part 3, Sections 3.14-3.21 (Occupational First Aid), and must be available at all times to administer first aid.

Responsibilities include:

- Administer first aid as required;
- Maintains a first aid log, keeping the records confidential;
- Coordinate the transportation of injured employees to a physician's office or hospital;
- Assist Site Safety team when necessary;
- Hold regular daily "toolbox" safety meetings to ensure unsafe working conditions and practices are adequately addressed.
- Instruct their workers in ODV Health and Safety Program requirements and applicable sections of the OHS Regulation and secure compliance from them.
- Provides health education materials or instruction to all on-site employees as required.
- Demonstrate support for the health and safety program by showing an exemplary attitude toward the health and safety of workers and the protection of the environment.
- Assume responsibility for the coordination of their sub-Subcontractors compliance with the requirements of this program and the OHS Regulation.

Subcontractors that engage in unsafe work practices will be notified in writing that they are/were in breach of ODV Health and Safety Program requirements and/or the OHS Regulation. Receipt of such notification will require a written response specifying what actions have or will be taken to rectify the situation.

The Contractors are required to provide suitably qualified health and safety Coordinator for the purpose of ensuring the coordination of health and safety activities for the location to provide up to date information, to guide, support and oversee the Contractor's health and safety performance. Where the Contractor/Subcontractor has more than 20 workers, they shall provide

at least one suitably qualified health and safety Advisor and be able to cover rotational roster requirements. The Project Construction Manager, in consultation with the health and safety Manager, approves all Contractor supervision.

ODV Construction and health and safety Manager reserves the right to approve Contractor and Subcontractor health and safety Coordinator (s)

Interactions with Regulators

ODV welcomes inspections, site visits, and business meetings with regulatory agencies overseeing ODV Sites. Officers representing regulatory agencies have the mandate and authority to conduct unannounced inspections of the Project's worksite, equipment, and vehicles.

The following outlines' ODV's interface with agency officers on site:

- During all interactions with regulators, ODV and Contractor employees shall be courteous, respectful, professional, cooperative, responsive and demonstrate a commitment to regulatory compliance.
- Upon an Officer's communication of intent to perform an inspection, the employee with whom the Officer made contact shall provide all reasonable means to facilitate the inspection immediately and shall notify their superior.
- The Health and Safety Manager (or delegate) shall accompany officers performing an inspection. In the event of an emergency situation or any other urgent reason that prevents this, Officers have the authority to proceed without direct ODV accompaniment.
- The Health and Safety Manager (or delegate) must communicate all hazards that could pose a risk to the Officer and provide all reasonable means to facilitate the inspection.
- Officers/inspectors performing a site inspection or consultation leaves a report of their activities on-site, or provide a verbal summary, with a report sent subsequently by email, fax, or email to the General Manager, who should:
- Immediately respond to and correct any identified non-compliance if practicable to do so.
- Immediately post the inspection report locally and forward it and any other related documentation to line management and the Health and Safety Manager.
- Submit a Notice of Compliance when requested by the Officer and forward a copy to General Manager and the Health and Safety Manager.
- ODV posts and provides copies of inspection reports and Notice of Compliances to the Client upon request.

ODV ensures that if it or any Contractor or Subcontractor receives an order issued by a regulatory agency, ODV will, as soon as practicable, and within 24 hours of receiving the order, notify ODV in writing of the order.

Prime Contractor

ODV is the Prime Contractor as defined by Section 118, *"Coordination at multiple-employer workplaces,"* of Part 3 Division 3 of the BC *Workers Compensation Act*.

As the Prime Contractor, ODV will work cooperatively with the Contractors and Subcontractors to maintain a safe and healthy workplace for all on-site workers, visitors, and suppliers at all times.

The Contractors and Subcontractor must give ODV the name and phone number of the person (s) whom they have designated to supervise their workers involved in the Project.

ODV will install and maintain consistent signage that clearly identifies ODV as Prime Contractor and contact information for key safety resources at main gate entrances/exits from the Project site, and at other locations as appropriate.

The Prime Contractor Signage includes:

- The name of Prime Contractor (ODV);
- Phone number and email of site Community contact;
- Construction Manager Phone number is available 24 hours a day; and
- PPE Requirements.

Subcontractor Controls

As part of the ODV policy, all direct hire and Subcontractor employees are entitled to work in a safe environment. To achieve this, every reasonable effort shall be made to eliminate/reduce hazards and prevent incidents that cause injury to workers, environmental damage, and property damage. This effort shall include controls applied both before awarding a subcontract and during the execution of the work.

ODV believes that incidents are preventable. It is the duty of every Subcontractor, in the performance of their subcontract, to cooperate with ODV and comply fully with ODV Health, Safety Program and Provincial Health, Safety and Regulations.

See Appendix 10 Contractor/Subcontractor

5. JOINT OCCUPATIONAL HEALTH AND SAFETY COMMITTEE

See Appendix 5 Joint Occupational Health and Safety Committee

A Joint Occupational Health and Safety Committee (JOHSC) shall be established to

- (i) Raise awareness of health and safety issues across ODV;
- (ii) Identify workplace health and safety risks; and
- (iii) Develop recommendations for ODV to address these risks.

The JOHSC is composed of management and an equal or greater number of worker representatives. The committee shall have worker representatives, chosen by the workers, and two co-chairpersons, one is a worker representative and the other a management representative. The JOHSC meeting is held each Month - one at Wells and one at QR Mill.

JOHSC activities are guided by the Health, Safety, and Reclamation Code for Mines in BC and the ODV Health and Safety Manual and related workplace policies and procedures. The JOHSC will provide leadership and direction to promote and sustain the health and safety of all workers at ODV. The JOHSC will engage and educate all employees in safe and healthy practises with the goal of creating a safety culture that is distinguished and extends beyond the workplace.

It is the JOHSC's objective to enable every employee to return safely to their families at the end of every working day.

5.1 Education and Training for Committee Members

ODV's Health and Safety Coordinator shall arrange for a qualified person to provide the JOHSC with training sessions a minimum of three times per year, which includes the mandatory Joint Occupational Health and Safety Regulations Section 3.27 mandatory training sessions.

The JOHSC will receive mandatory training and instruction on the following topics:

- The duties and functions of a joint committee.
- The rules of procedure of the joint committee.
- The requirements around conducting incident investigations.
- The requirements around conducting regular workplace inspections, and how to make regular inspections.
- The requirements around responding to a refusal of unsafe work.

- The requirements for annually evaluating the joint committee.

5.2 Work Site Inspections

It is ODV's policy to ensure that safety inspections comply with the requirements of the EMLI Mine Chief Inspector; therefore, the committee shall inspect as many of the work sites as it considers appropriate every month and after the inspection, they will meet to discuss the findings and any other matters concerning health and safety. Minutes must be kept of the meeting, including a description of conditions found during the inspection.

A review of the information from these regular inspections by the JOHSC takes place to identify where corrective action is needed, compare to historical inspections and incidents to determine if appropriate actions have been taken and determine their effectiveness. The analysis will be used as part of the continual improvement process for the Mine Health and Safety Program.

As trends will be identified by the statistics, the JOHSC will conduct their own inspections to better understand how controls can be planned, developed, and implemented. These JOHSC reviews and inspections are also important because they allow ODV to:

- Listen to the concerns of workers and supervisors.
- Gain further understanding of jobs and tasks.
- Identify existing and potential hazards.
- Determine the underlying causes of hazards.
- Recommend corrective action; and
- Monitor steps taken to eliminate hazards or control the risk (e.g., engineering controls, administrative controls, policies, procedures, PPE).

5.3 Cooperation with the Committee

Management and all persons working at the mine shall cooperate fully with the JOHSC by allowing the Committee to carry out its inspections and investigations in all work areas, allowing access to all reports, plans, records, and standards relevant to the work of the Committee, and by, without delay, correcting the safety hazards noted in the minutes by the date agreed by the JOHSC committee.

5.4 Annual Reporting and Review of OHSP

Reporting

On an annual basis, the JOHSC will provide a comprehensive report to the Manager that will include, but not be limited to the following information:

- Statistical report outlining

- Lagging indicators
- Injuries
- Damaged or loss of assets integrity
- Near miss statistics
- Leading Indicators
- Health Surveillance results
- Maintenance records of safety-critical equipment
- Hazard reporting from the statistics of the FLHA Card reporting.

Basic characterization of exposures was undertaken by conducting a preliminary walk around survey of the ODV operations (prior to operation), interviews with managers and workers, reviewing process flow diagrams and engineer reports, and conducting a literature review.

Monitoring of Physical Agents

- Respirable Dust
- Crystalline Silica
- Welding Fume
- Asbestos
- Noise
- Light *
- Heat and Cold Stress
- Ergonomics

*There are no unusual lighting features at the ODV Mine and until required by circumstances, light will not be monitored at this site.

Monitoring of Chemical Agents**

- Diesel Exhaust
- Hydrogen Cyanide Gas
- Sulphur Dioxide Gas
- Litharge (PbO)

*Chemical Agents tend to be more site-specific than physical agents. See the SDS Binder.

Review of the ODV Occupational Health and Safety Management Plan

This Plan shall be reviewed annually by the JOHSC.

See Appendix 5 – Joint Occupational Health and Safety Committee

6. MINE HEALTH AND SAFETY PROGRAM

6.1 Site Absolutes Rules

ODV requires that our workforce, Contractors, and Subcontractors understand and follow the nine Site Absolute Rules below without exception. Site Absolute Rules interpret ODV applied Health and Safety rules and have been designed due to the severity of the hazard associated with them.

The new Site Absolute Rules are linked to those activities within the industry that have the highest historical potential for life-threatening incidents.

Violation of a Site Absolute Rule will result in an investigation and the application of appropriate consequences, which could result in disciplinary action up to and including termination. These rules protect not only you but your colleagues.

It is important that everyone understands the importance of complying with the Site Absolute Rules, as the rules have been put in place to protect you and your co-workers.

For more information on the changes to Site Absolute Rules, contact your Supervisor or the health and safety representative for your area.

Table 6.1-1 Site Absolute Rules

	Drugs and Alcohol: Remain Drug and Alcohol Free on Work Site No person shall enter or be permitted to remain in a workplace while in possession of or using, selling, or distributing a substance likely to have an affect on any person's safety is strictly prohibited. • All employees, contractors and visitors are to report to their workplace in a fit for work condition. • Workers found using or under the influence of these substances will be denied access to ODV sites. • No alcohol or marijuana on ODV sites including, camp & hubs.
	Smoking On Site Smoking in designated areas only. • NO Smoking in any personal vehicle, company vehicles, or equipment that may be used on ODV site. • NO Smoking within 6 meters (18 feet of any doorway, window, or air intake). • NO marijuana (NO Medical Marijuana). • NO Electronic Cigarettes including Vaping units, no chewing tobacco.

	Electronic Devices (phone, camera, music) Electronic devices permitted onsite, for authorized staff for company business. • Use of ear buds, headphones, Bluetooth, MP3 players, iPods, DVD players, iPads, any music devices, cameras, commercial radio's, laptops are NOT allowed on ODV site. • Camera use onsite requires a camera permit which can be obtained from ODV Safety Dept. • Use of cellular phones including texting onsite is strictly prohibited.
	Barricading <u>Yellow Caution Tape</u> warns of a hazardous condition or activity. A tag must accompany barricade ribbon. Only cross yellow ribbon when safe to do so and after reading the tag. <u>Red Barricade Tape</u> warns of a Dangerous condition or activity. A tag must accompany barricade ribbon. Individuals not directly involved in the work must contact the person who placed the barricade tag for permission to cross the red barricade tape.
	Lockout Never work on or near high voltage equipment without authorization A Personal Lock and Lockout Tag must be placed on each energy isolating device. Lock removal by anyone other than the owner is forbidden and will generate an incident report. Lock Out procedures & plan must be available, approved and followed, JHA, & FLRA must be done
	Energy Isolation Never override or disable safety critical equipment without authorization. Never tamper with, cut, or remove safety critical equipment unless you have appropriate authorization by a supervisor to perform a specific task and adequate controls are in place. Follow the lock removal Safe Operating Procedure with your supervisor
	Personal Protective Equipment Approved Hard Hat, CSA 6-inch steel toed boots, Safety glasses, High vis vest, yellow/orange, gloves. Long pants and short sleeve shirts (6" over shoulder) NO Hoodies over or under hard hats. NO Baseball hats, NO thick toques under hard hats. Task Specific PPE Life Jackets, fall Protection gear, face shield, respirators, welding helmets
	Confined Space DO NOT enter a confined space unless you obtain Authorization before entering a Confined Space. A confined Space Entry Permit, a JHA, a FLHA The confined space atmosphere is safe and other hazards have been assessed and controlled. Do not proceed with work in a confined space unless you are trained, certified & competent to do the work Timely rescue can be performed. An escape plan has been verified and tested.
	Working at Heights Wear site required PPE, and as necessary specialized PPE. You must be trained, competent and certified and follow a fall protection plan when work is done at a place from which a fall of 3 m (10 ft) or more may occur, or where a fall from a height of less than 3 m involves a risk of injury. A written fall protection plan must be available and approved and followed, JHA, & FLRA must be done

6.2 Site Safety Rules

Employers, managers, supervisors, and employees will be held accountable for following all rules, practices, and procedures. These rules are communicated to workers during employee orientation and are to be posted in a conspicuous area at each job site. Managers and Supervisors will promote work rules and safe work practices, and if non-compliance is observed, shall ensure enforcement of policy and procedures.

It is ODV's policy, pursuant to complying with Part 3 Section 1 of the Health Safety and Reclamation Code for Mines in BC, that the following rules that apply to ODV sites:

- Other than an Inspector, all other persons may enter a mine only when authorized by the Manager.
- Orientation is required to enter the mine. Do not bring unauthorized workers or visitors to the Project site(s).
- All persons on ODV property are required to adhere to the Tag Board Policy and Procedure to account for all persons on the mining property.
- No person under the age of 18 years at a mine will be employed at a mine site.
- Accidents, injuries, and near-miss incidents, regardless of severity, shall be promptly reported to supervisors.
- Clothing shall be appropriate to duties being performed and sufficient for the weather conditions. Long pants and long sleeve shirts will be required while working outside, and short sleeve shirts six inches over the shoulder for inside building are the minimum requirements.
- All unsafe acts and conditions including "near miss" incidents are to be reported immediately to management.
- All accidents, injuries and near misses must be reported to your supervisor immediately.
- First aid treatment is to be obtained promptly for any injury if required, and all injuries are to be reported immediately.
- All incidents that result in damage or injuries must be reported to the Supervisor immediately.
- Smoking is permitted only in designated areas. "Strike anywhere" matches are strictly prohibited.
- Fighting, horseplay, practical jokes, or otherwise interfering with other workers is prohibited.
- Misuse of company equipment or property will result in disciplinary action.

- Safety glasses, goggles, and face shields will be worn when breaking rocks, chipping metal, welding, grinding, and for other operations where a hazard to eyes exists.
- Entry into excavations greater than 1.2 m deep is strictly prohibited unless it is appropriately sloped or shored.
- Running is not permitted anywhere except in the case of emergency.
- Confined space entry procedures must be followed when entering a confined space.
- Lockout procedure must be followed every time you could be affected by a hazardous energy source.
- Seatbelts must be worn when operating vehicles and equipment.
- Cell phones, earbuds, music or radio headsets are not allowed on site under any circumstances.
- Theft, vandalism, removal or tampering with safety devices or any other abuse or misuse of company property is prohibited.
- Violence of any type (threatening, physical or verbal) committed by or against an employee is prohibited and will not be tolerated.
- Hand tools shall not be used for any purpose other than the intended purpose. All damaged or worn parts shall be promptly repaired or replaced.
- Power tools shall be operated only by authorized and trained workers, and all manufacturers' guards shall be in place.
- Unauthorized removal or disengagement of any safeguard, locks, tags or other protective devices is prohibited.
- All electrical hand tools shall be grounded or double insulated.
- Explosive/powder actuated tools shall be used only by persons who have been instructed and trained in their safe use.
- Compressed gas cylinders shall be stored and secured in an upright position.
- Possession or use of illegal drugs, drug paraphernalia or alcoholic beverages while on the job, or reporting for work while under the influence of either, is strictly forbidden and constitutes grounds for termination of employment.
- No person shall enter, remain, or be knowingly permitted to enter or remain in any mine if, in the opinion of management, his/her ability is so impaired as to endanger his health or safety, or that of another person.
- Welding and burning operations shall be carried out only by authorized workers with appropriate personal protective equipment.

- Horseplay, fighting, gambling and possession of firearms are strictly forbidden on the job and constitute grounds for termination of employment.
- No riders allowed in/on the beds (backs) of trucks or on equipment not designed for passengers.
- All excavation work shall be carried out in accordance with the written instructions of a professional engineer where:
 - the excavation is more than 6m deep;
 - timber shoring is used in excavations exceeding 1.4m in width;
 - improvements/structures near to the excavation could endanger persons; and
 - the excavation is subjected to the vibration of hydrostatic pressure.
- Portable concrete barriers shall be placed around all liquid propane tanks including and in excess of 45 kg (100 lb) capacity to prevent tank damage.
- Before a worker is required or permitted to enter a confined space, the worker must complete a confined space entry program consisting of 6 to 8 hours of Classroom and Practical training.
- Before a worker is required or permitted to put themselves in a fall protection situation, the worker must complete a fall protection training program consisting of 6 to 8 hours of Classroom and Practical training.
- When working alone, one may not be able to secure assistance in the event of an injury or other misfortune, the manager shall ensure that a means exists for checking the well-being of the worker and interval checks does not exceed 2 hours.

NOTE: *All Lone Workers need to be identified and be risk assessed and processes established for each Lone Worker type.*

- No person shall, without cause, render ineffective any device, equipment, or material provided for the protection of the health and safety of persons employed in, on or about a mine, or the safety of the public.
- The use of colours to identify hazards shall agree with local government standards: red for danger/stop, yellow for caution/slow, green for safe areas/proceed.

NOTE: *Additional rules may be developed to address project-specific requirements.*

6.3 Disciplinary Actions

If an employee or Contractor/Subcontractor violates any Site Safety rules or engages in unsafe behaviours, this person is subject to a disciplinary action proportionate to the severity of the violation.

Disciplinary rules are an integral part of the OHSMP, as they provide a code of conduct that each worker must follow for the benefit of their own safety and that of other workers. To provide an opportunity to correct inappropriate behaviour, avoid incidents, and reduce property damage, at ODV, we do not view discipline as a form of punishment but as a system of rules governing conduct to eliminate unsafe and harmful circumstances.

ODV believes that education is the key to establishing proper disciplinary procedures and holding all employees accountable to our company's health and safety policy and program, as well as to applicable regulatory requirements.

The main objective of our disciplinary program is to ensure that ODV 's rules and safe work practices are taken seriously by all employees and contractors and are followed. Where disciplinary action is deemed to be appropriate, it shall be conducted in a timely manner. Trying to correct unsafe behaviour by waiting allows the behaviour to become more ingrained.

Discipline shall be kept as positive as possible. The goal is to correct a problem, action, or behaviour. The discipline shall fit the severity of the misconduct and shall be conducted in private.

Rule infractions will be investigated when they occur. If it is determined, there is no fault; then, no disciplinary actions will be taken. Where the incident is found to be a result of breaking a rule or safe work procedure, management will review on a case-by-case basis to determine the appropriate level and form of discipline.

To ensure that all employees and contractors have the opportunity to be educated about and to correct their sub-standard actions (such as not wearing a hard hat or not following the designated lockout procedure); a progressive discipline system may be used. The severity of the act will determine the level of discipline and start point within the procedure.

Where there is a blatant disregard for company rules, immediate and more serious action may be taken at any infraction up to and including termination of employment. Certain offences may result in one or more of the disciplinary sequence steps being by-passed.

Table 6.3-1 Progressive Discipline

Level	Disciplinary Action(s)
Level 1: Verbal Reprimand	The supervisor: • Discusses and informs the worker verbally of the safety rule violation • advises the worker that future violations will result in suspension or discharge • verbal reprimand is documented, and copy sent to the health and safety Manager • Copy of the verbal reprimand will be put in the worker's file

Level	Disciplinary Action(s)
Level 2: Written Reprimand	The supervisor: • informs the worker in writing of the safety rule violation • advises the worker that future violations will result in suspension or discharge • forwards a copy of the written reprimand to the health and safety Manager • Copy of the written reprimand will be put in the worker's file
Level 3: Suspension	The supervisor: • informs the worker in writing of the safety rule violation • Advises the worker that he/she have been suspended from work without pay for a specific period of time, and any future violations may result in discharge. • Forwards a copy of the written reprimand to Human Resources and Health and Safety Manager • However, management reserves the right to modify the suspension period based on the degree of the infraction and the worker's history.
Level 4: Discharge	Employment shall be terminated as a result of a serious safety rule violation or an ongoing pattern of safety rule violations. Project management shall determine if this course of action is warranted.

The process must adhere to the following requirements:

- Rationally execute the process, avoiding volatile situations.
- Relate to expectations that have been communicated to the worker(s).
- Based on objective evidence.
- Proper documentation.

All written warnings must be signed off by a person in authority over the person being disciplined.

A Contractor/Subcontractor worker should be disciplined by their own company. Should the contracted company fail to do so, then disciplinary action could be taken by a ODV Superintendent or Manager. A failure to discipline by a contracted company will also result in a written warning or formal letter issued to said company.

As health and safety workers do not have direct authority over workers, it is not appropriate for them to discipline individual workers. The exception to this is when disciplinary action is taken by a health and safety Manager regarding the conduct of a Health and Safety Coordinator over whom they have direct authority.

6.4 Worker's Rights

Workers have the right to know:

- About the hazards present on the job, and how these hazards can affect them. Workers learn about the hazards at the health and safety orientation, during health and safety training sessions and through on-the-job instructions. The hazards associated with the

work being undertaken must be identified prior to starting the task and updated as conditions change.

- The required controls to perform the work safely.

Workers have the right to participate:

- All employees have the right to take part in health and safety activities. For example, you can be chosen to be a health and safety representative or a member of a committee. Safety meetings and crew talks will happen regularly, and employees are encouraged to participate.
- All workers have the right to participate in workplace health and safety programs, initiatives, and recommendations.

Workers have the right to refuse:

- All employees have the right to refuse if they have “reasonable cause to believe that to do so would create an undue hazard to the health or safety of any person.” However, if you do, you must report the unsafe condition to your supervisor immediately and comply with the respective “Right to Refuse” legislation. The regulation also outlines that no discriminatory action can be taken against any employee that exercises their right to refuse.
- The use of machinery or equipment that poses an undue hazard.
- A condition exists that poses an undue hazard.
- Workers must report the hazard to their supervisor, who will investigate and remove the hazard.
- Until the hazard has been appropriately addressed, the worker shall not do that work.
- Where work has been refused, a supervisor must not ask another worker to perform the task without first explaining the first worker’s refusal.

Procedure for Refusal of Unsafe Work:

This process must be strictly followed and documented.

- A person must not carry out or cause to be carried out any work process or operate or cause to be operated any tool, appliance, or equipment if that person has reasonable cause to believe that to do so would create an undue hazard to the health and safety of any person.
- A worker who refuses to carry out a work process or operate a tool, appliance, or equipment pursuant to the above must immediately report the circumstances of the unsafe condition to his or her supervisor or employee representative.

- A supervisor or employer receiving a report must immediately investigate the matter and
 - ensure that any unsafe condition is remedied without delay, or,
 - If, in his or her opinion, the report is not valid, must so inform the person who made the report.
- If the above procedure does not resolve the matter and the worker continues to refuse to carry out the work process or operate the tool, appliance or equipment, the supervisor must investigate the matter in the presence of the worker who made the report and in the presence of:
 - a worker member of the JOHSC, or
 - If there is no joint committee or the worker is not represented by a trade union, any other reasonably available worker selected by the worker.

***NOTE:** At this step, the management-supervisor-worker may consider contacting the HR Manager or Safety Manager for additional input.*

- If all these steps are followed, and the matter isn't resolved, and the worker continues to refuse to carry out the work process or operate the tool, appliance, or equipment, both the supervisor, or the employer, and the worker must immediately notify the Joint Occupation Health Committee member. The JOHSC must investigate the matter without undue delay and take actions as deemed necessary.

No Discriminatory Action

- A worker must not be subject to discriminatory action because the worker has acted in compliance with the workers' rights or with an order made by an authority.
- A worker may temporarily be assigned to alternative work at no loss in pay until the matter is resolved.
- Employees also have the right to report unsafe practices and conditions without concern of reprimand.

6.5 Bullying, Harassment, Violence in the Workplace

6.5.1 Bullying and Harassment

Bullying, harassment, and violence are neither acceptable nor tolerated on any ODV project/workplace. If you experience or witness any such behaviour, contact your Supervisor and Human Resources Department.

Any inappropriate conduct or behaviour will not be tolerated from anyone that intimidates, threatens, harasses, abuses, bullies, injures, or makes comments; or by a person that by displays,

actions, any acts of violence, gesture, verbal aggression, or insults, hazing or initiation practices or otherwise victimizes our employees/contractors.

What is not bullying and harassment:

- Job duties or the work to be performed.
- Workloads and deadlines.
- Layoffs, transfers, promotions, and reorganizations.
- Work Instructions, supervision, or feedback.
- Work evaluation.
- Performance management.
- Discipline, suspension, or terminations.
- Expressing differences of opinion.
- Offering constructive feedback, guidance, or advice about work-related behaviour or performance.

6.5.2 Violence in Workplace

The Occupational Health and Safety Regulations define violence in the workplace as follows:

The attempted or actual exercise by a person, other than a worker, of any physical force so as to cause injury to a worker and includes any threatening statement or behaviour which gives a worker reasonable cause to believe that he or she is at risk of injury.

Dealing with the public increases an employee's risk of experiencing workplace violence. Frustrated delivery drivers and pedestrians are prime examples. If confronted, calmly back away, DO NOT enter any situation or location where you feel threatened or unsafe. You must report any incident to your supervisor.

6.5.3 Firearms

Pursuant to Part 1.6.9 of the Health, Safety and Reclamation Code for Mines in BC, ODV will maintain a policy that prohibits hunting and shooting within the mine lease area. ODV will strictly enforce this policy.

ODV's objective is to maintain a firearm and weapons-free workplace and prohibit the possession of firearms and/or weapons regardless of any license or permit that an individual may have, which would otherwise authorize the individual to carry firearms or weapons. This is to ensure all employees, contractors, the public, and the surrounding environment are safe.

All ODV staff, employees, contractors, and visitors are required to comply with this policy. The following are exceptions to the policy:

- Those performing their official government roles, the Royal Canadian Mounted Police and Wildlife Conservation Officers, are permitted to carry required issued firearms within the mine lease area.
- Bear deterrents issued by ODV is permitted within the mine lease area.

For reasons of general safety within the mine lease area, no persons, including mine workers, are permitted to hunt.

Every employee of ODV shall receive a copy of this policy at the time of his/her hire and shall sign a copy of the acknowledgment. Employees who were employed before the effective date of this policy shall be required to sign a copy of the acknowledgment. The signed acknowledgment shall be maintained in each employee's workers file.

A copy of this policy shall be included in the safety in-doc of each contractor and visitor. The contractor shall be responsible for communicating this policy to their employees while doing contracted work for ODV.

Prohibited Conduct

The transportation of firearms or weapons in ODV's vehicles, personal vehicles, and/or contractor vehicles is prohibited. This includes but is not limited to:

- To and from work
- When conducting ODV business
- Within the mine lease area
- The carrying of permitted and/or non-permitted firearms or weapons while at ODV offices, parking lots, sponsored events, and/or other job sites.
- Use of a firearm or weapon for hunting within the mine lease area; and
- The discharge of a firearm or use of a weapon within the mine lease area.

Definitions

Firearm: A weapon, a pistol or rifle, whether loaded or unloaded, capable of firing a projectile and using an explosive as a propellant.

Weapon: For purposes of this policy, a "weapon" is an instrument of offensive or defensive combat, or anything used or intended to be used for, or capable of producing serious bodily injury or death.

A dangerous weapon may include but is not limited to any of the following: crossbow, bow and arrow, arrows; slingshots; knuckles of lead, brass, or other metal; any dagger, dirk, knife or stiletto over three and one-half inches in blade length; a gravity knife; or any knife with a spring-propelled blade or a blade that can be opened by the push of a button, switch or other mechanical contrivance.

Mine Lease Area: All locations where ODV conducts business, including Camp and other areas for accommodation.

6.6 New and Young Workers

ODV recognizes the importance of training and mentoring new and young workers. All Contractors will have a New and Young Worker Program in place.

Definitions (as per Section 3.22 of the Occupational Health and Safety Regulation)

New worker means any worker who is:

- new to the workplace,
- returning to a workplace where the hazards in that workplace have changed during the worker's absence,
- affected by a change in the hazards of a workplace, or
- relocated to a new workplace if the hazards in that workplace are different from the hazards in the worker's previous workplace.

Young worker means any worker who is under 25 years of age.

The Contractor New and Young Worker Programs will include:

- New and Young workers will don a GREEN hard hat or Green Hand Sticker on their hard hat for their 90-day probationary period to identify them as new.
- ODV and Contractors supervisors and designated mentors will review safe work practices and procedures, ODV policies and will conduct assessments on the new and young workers.
- New and Young worker programs follow WorkSafeBC, testing every 3, 6, and 9 months.

6.6.1 Drugs and Alcohol Policy

Ensuring the health, safety and well-being of our employees, our customers and the public is a major commitment of ODV. ODV recognizes the misuse of alcohol and drugs as a health, safety, and security problem.

This Drug and Alcohol Policy, in addition to setting forth ODV requirements and expectations regarding maintaining a safe work environment, is committed to protecting the health and safety of its employees.

ODV, Contractors and Subcontractors acknowledge the serious consequences of alcohol and drug misuse on health and safety in the workplace. ODV has a zero-tolerance approach to anyone who reports working under the influence of narcotics, intoxicants, or illegal medications or who is found in possession of them onsite. Individuals suspected to be under the influence of alcohol and illegal drugs will be refused site access or removed from the site.

- Possession, consumption or use of alcohol, marijuana, illegal drugs, or a drug that alters your work performance is strictly prohibited on site. Use of a prescription drug or over the counter drug that may alter your work performance is strictly prohibited.
- Workers shall inform their supervisor if they are taking prescribed medication or are taking any over-the-counter medications that may affect their ability to perform their duties safely.
- A contravention of this rule will result in disciplinary action up to and including termination as per the Disciplinary Actions outlined in Section 6.3, without delay.
- No person shall enter, remain, or be knowingly permitted to enter or remain in any mine if, in the opinion of management, his/her ability is so impaired as to endanger his/her health or safety, or that of another person.
- No person shall possess intoxicating liquor, marijuana, or illegal drugs in or about a mine.
- The possession or consumption of alcohol, marijuana, illicit drugs, or the misuse of prescription or “over-the-counter” drugs is strictly prohibited on ODV premises and work sites. The use of illicit drugs, the inappropriate use of alcohol and marijuana, and the misuse of medications and other substances may have serious adverse effects on an employee’s health, safety, and job performance. Misuse of these substances can also negatively impact other employees, customers, or the community.

See Appendix 1, Drug and Alcohol Program

6.7 Fit for Work

It is required that all workers to be “fit for duty.” All workers must be in a proper physical and mental condition to focus and perform their duties safely.

All workers must report to their supervisor any illness or injury that may affect their performance. All supervision must monitor or reassign workers as required.

Contractor’s Fit for Work Policy and Procedure shall be implemented for the Project. This includes include controlling the risks associated with:

- The consumption of alcohol;
- The use of illegal drugs;
- The general level of personal fitness and medical conditions;
- The effect of drugs (prescription, pharmaceutical or illicit);
- Fatigue; and
- Stress.

All Contractors shall be required to ensure their workers are fit and safe for work. Any person who is feeling the effects of ill health should seek medical assistance and refrain from entering the project, from avoiding the spreading of illness and to ensure the fitness of the individual does not impair their ability to carry out their work in a safe manner.

Any discussions of an individual's medical fitness must be in keeping with medical confidentiality, privacy, and legal requirements.

6.8 Fatigue Management

Fatigue is a known hazard in the construction industry that has been found to be a contributing factor to multiple incidents. ODV recognizes this hazard and has the following management plan in place in efforts to mitigate the hazards presented by fatigue:

- Plan project schedules to respect the identified work/rest cycle.
- Provide supervision with the needed support and material to effectively control, implement, and monitor fatigue while at the worksite.
- Lead by example and ensure a healthy work/life balance.
- Review/approve special circumstances where the work/rest cycle must be altered (e.g., prolonged concrete pour).

6.9 Working Alone or In Isolation

To work "alone" means to work in circumstances where assistance is not readily available to the worker in the event of injury, ill health, or emergency.

This applies to workers who are assigned to work alone or in isolation under conditions that present a risk of disabling injury where the worker might not be able to secure assistance due to injury or other misfortune.

Procedures for Working in Isolated Circumstances

Your supervisor in consultation with you and health and safety representatives should:

- Perform a pre-job hazard assessment to determine the risks inherent in the task prior to the worker being assigned to work alone.
- Take measures to eliminate, or if not practicable, mitigate or minimize the risk from the hazards identified.
- Include the JOHSC in the consultation process where practicable.

Steps to eliminate or reduce the risks of working alone:

- Ensure a communication system (radio, phone, in reach, or any other means that provides effective communication in view of the risks involved) is provided to the worker for the duration of the task.
- Ensure regular contact by a designated person (minimum every 2 hours).
- Place limitations on specific activities.
- Provide worker training (for the worker who is working alone and contact person).
- Provide appropriate PPE and provision of emergency supplies.
- Establish safe work procedures for checking on the wellbeing of the worker assigned to work alone. These must include the time interval between checks and procedures to follow in case the worker cannot be contacted, including provisions for emergency rescue.
- Designate a person to establish contact with the worker at predetermined intervals and record the results of that communication.
- Develop time intervals for checking a worker's well-being in consultation with the worker assigned to work alone (higher risk activities require shorter time intervals between checks). Intervals must not be greater than every two hours.
- In addition to checks at regular intervals, a check at the end of the work shift must be done.
- Any worker assigned to work alone, and any person assigned to check on that worker, must be trained in the procedures for checking on the worker, and what to do in the event the worker cannot be contacted.

6.10 Assessment of Project Risks and Opportunities

Health and Safety Risk Register

- The Health and Safety Risk Register is an essential component of health and safety Planning. It catalogues a project's health and safety risks for all self-performed works, identified in accordance with ODV's Health and Safety Risk and Opportunity Assessment Process.

- The Safety Risk Register forms a basis for Job Hazard Analyses related to specific work breakdown structures and/or other Project activities components.
- The Contractors are required to catalogue health and safety hazards and risks for their respective activities and workforces, including pre-existing hazards and hazards created by their Subcontractors. ODV shall review the Contractor's hazard and risk catalogues for alignment with the project's health and safety Register.

List of Significant Health and Safety Risks and Opportunities

- "Critical Activity" has the potential to produce a major loss to people, equipment, process, or the environment.
- In the Health and Safety Risk Register, activities with a primary risk rating greater than or equal to 10 are deemed "critical" (or "significant"). Critical activities are controlled through Safe Work Programs.
- The health and safety Manager ensures that the Contractors receive a copy of the Health and Safety Risk Register.
- The Contractors (and their Subcontractors) are required to consult the Health and Safety Risk Register for applicable health and safety risks and controls and to incorporate into the job hazard analysis process.
- Health and Safety components of completed job hazards assessments are subject to review by the health and safety Manager prior to job commencement.

List of Activities with Critical Tasks

The following Activities with Critical Tasks have been identified for the construction phase of the ODV Project:

- Entering, working in and near Confined Space
- Working underground
- Working at Heights, falls, Falling Objects
- Earthworks: Excavation/trenching: Falls, collapse
- Working with/near Mobile Equipment on site: worker/equipment interactions
- Energy Isolation/Lock Out/Commissioning
- Fire prevention and control
- Erection and use of Scaffolding
- Mobile Cranes, Hoists & Lifting Devices, Critical Lifts
- Erection of Structural Steel/Skeletal Structures

6.11 Objectives and Key Performance Indicators

6.11.1 Health and Safety Objectives

ODV commits to achieving the following health and safety objectives:

Table 6.11-1 Objectives and Key Performance Indicators

Objective	Key Performance Indicator	Target	Completion Date
Demonstrate compliance with applicable health and safety Regulations	Evidence of non-compliance	0% of agency inspections with compliance orders	Ongoing
Demonstrate compliance with Health, Safety and Reclamation Code for Mines in BC	Major non-conformities identified via audits	No major non-conformities	Measured annually
Maintain "better-than-industry group" health and safety performance	Lost Time Injury (LTI) Frequency Severity Rate [SR]	LTI freq < Group LTI freq SR < Group SR	Measured annually

6.11.2 Key Performance Indicators

ODV uses the following indicators to judge the Project's health and safety performance:

Table 6.11-2 Health and Safety Performance

Indicator	Definition
Lost Time Incident Frequency (LTIF) Rate	LTIF Rate = [Total Number of LTIs x 200,000]/[Hours worked]
Total Recordable Injury Frequency (TRIF) Rate	TRIF = [(total number of LTA + MA) x 200,000]/[Hours worked]
Severity Rate (SR)	SR = [Total number of lost workdays]/[Total number of recordable incidents]
Regulatory Compliance (RC) Rate	RC= [Number of agency inspections without compliance order]/[Total number of agency inspections]

6.12 Personal Protective Equipment (PPE)

It is ODV's policy to comply with Sections 1.8.1 to 1.8.7 of the Health Safety and Reclamation Code for Mines in BC. ODV will maintain a policy regarding the use of PPE that is required to be worn while conducting ODV business and/or on mine property. ODV will strictly enforce this policy to provide a safe work environment for all employees, contractors, and visitors to the mine site.

All PPE required for a project must be identified and compiled prior to arrival on the project site. If sufficient PPE is not available, the employee will not undertake work until appropriate PPE has been obtained. The general rules listed (Section 6.1 and 6.2) must always be followed when working at an ODV site. Failure to do so is subject to disciplinary action.

PPE is selected according to the hazards present, and workers should be trained on the proper use, care, and limitations of the equipment.

All PPE must remain in good condition, and defective or missing equipment must be replaced promptly. Always use the equipment in accordance with training and instruction and inspect before use. Refrain from wearing protective equipment outside of the work area where it is required if to do so would constitute a hazard.

No piece of PPE should be modified or changed contrary to its manufacturer's instructions. Whenever PPE is required and used by ODV workers, it must be inspected first and then worn and maintained in a good and sanitary condition. All specialized PPE will be formally inspected and documented prior to use. Any PPE that is of questionable reliability is damaged or in need of service or repair, will be removed from service immediately.

See Appendix 2, Personal Protective Equipment (PPE)

6.13 First Aid

ODV's First Aid policy is to continually maintain such compliance with the Health, Safety and Reclamation Code for Mines in BC, and the Worker's Compensation Board as stated in the Code.

ODV will ensure First Aid Attendants are a minimum age of 18 years and have successfully completed the required level of First Aid Training necessary and hold a certificate that is in good standing.

ODV will provide an effective means for:

- communication between the First Aid Attendant and the workers served, and
- the First Aid Attendant to call for assistance.

ODV will not assign, and the First Aid Attendant must not undertake, employment activities that will interfere with their ability to receive and respond to a request for first aid. ODV management will conduct a review of first aid resources and requirements:

- within 12 months after the previous assessment or review, and
- whenever a significant change affecting the assessment occurs in our operations.

Prior to entering the field, ODV management shall consider job-specific requirements and ensure appropriate resources are available. It ODV's policy to maintain compliance with the Workers Safety – Industrial First Aid activities with the Health, Safety and Reclamation Code for Mines in BC.

See ODV-HS-PL-0001-First Aid Plan (002) on ODV S:/ drive

The main sites identified for First Aid Coverage are outlined in the maps below:



Figure 6.13-1 Wells Office Compound First Aid Location

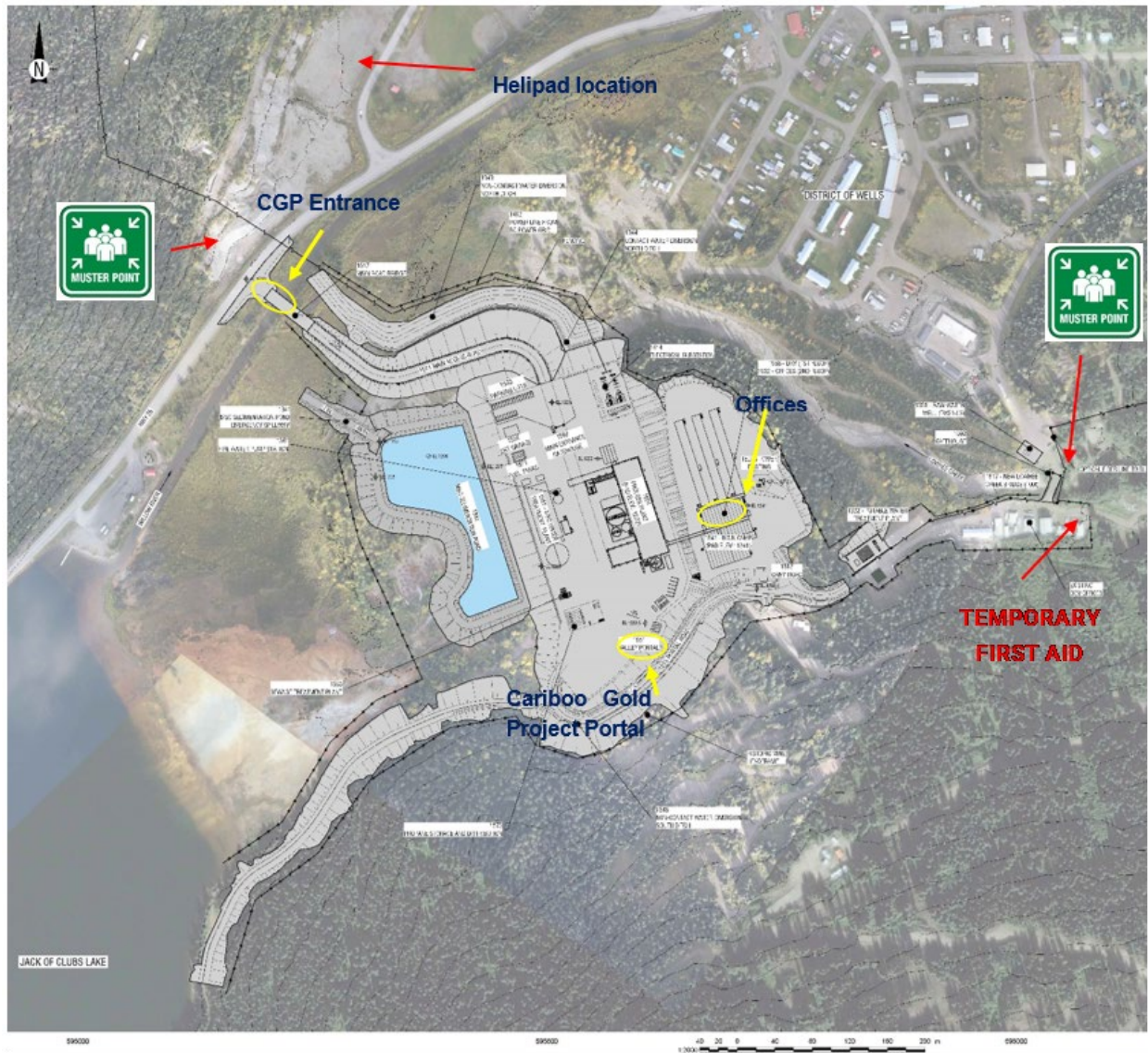


Figure 6.13-2 Cariboo Gold Project Proposed First Aid Locations



Figure 6.13-3 Bonanza Ledge First Aid Locations

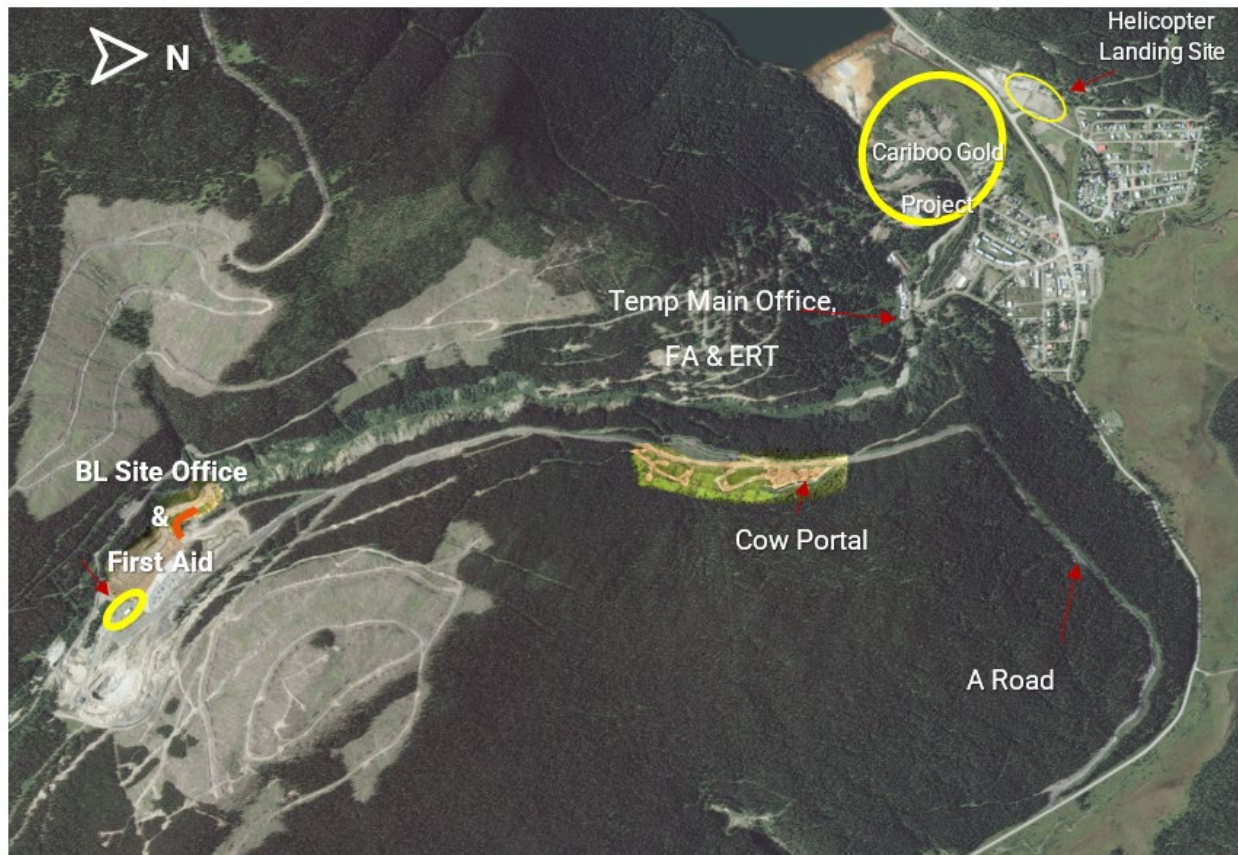


Figure 6.13-4 Cow Portal Mine Site First Aid Locations

This table applies to a workplace that an employer determines under section 3.16 (2)(b) of the Regulation creates a high risk of injury, and that is more than 20 minutes surface travel time away from a hospital.

First aid and required equipment onsite for High Category more than 20 minutes to a hospital. both Wells and QR.

Table 6.13-1 First Aid Requirements

Item	Column 1 Number of Workers per Shift	Column 2 Supplies, Equipment, and Facility	Column 3 Level of First Aid Certificate for Attendant	Column 4 Transportation
1	1	Personal first aid kit		
2	2-5	Level 1 first aid kit	Level 1 certificate	
3	6-10	Level 1 first aid kit ETV equipment	Level 1 certificate with Transportation Endorsement	ETV

Item	Column 1 Number of Workers per Shift	Column 2 Supplies, Equipment, and Facility	Column 3 Level of First Aid Certificate for Attendant	Column 4 Transportation
4	11-30	Level 3 first aid kit Dressing station ETV equipment	Level 3 certificate	ETV
5	31-50	Level 3 first aid kit First aid room ETV equipment	Level 3 certificate	ETV
6	51-200	Level 3 first aid kit First aid room Industrial ambulance equipment	Level 3 certificate	Industrial ambulance
7	201 or more	Level 3 first aid kit First aid room Industrial ambulance equipment	2 attendants, each with Level 3 certificates	Industrial ambulance

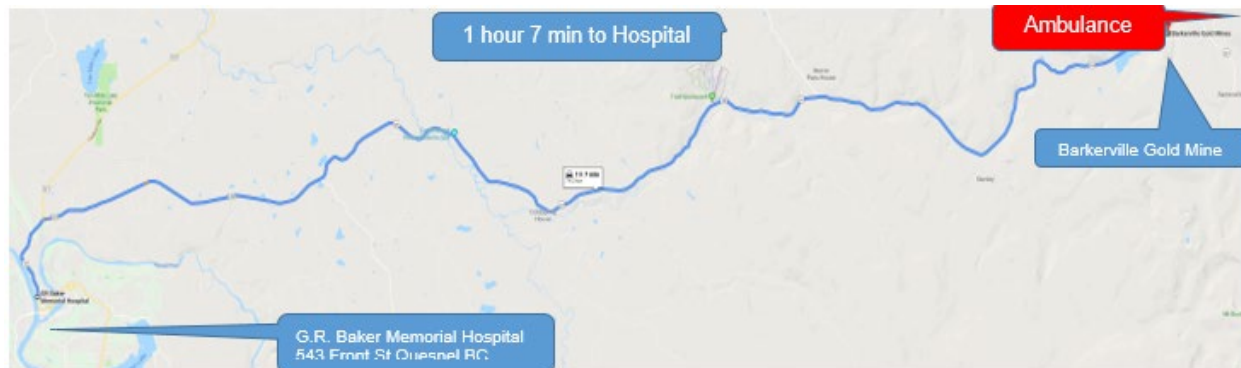


Figure 6.13-5 Site Map showing Route from Barkerville Gold Mine Site to Quesnel Hospital

6.14 Management of Hazardous Products (WHMIS 2015)

It is ODV's policy to ensure that this procedure is compliant with Sections 2.3 and 2.13 of the Health, Safety, and Reclamation Code for Mines in BC acceptable to the Mine Chief Inspector. Canadian law requires that any person exposed to hazardous materials in the workplace must be trained in Workplace Hazardous Materials Information System (WHMIS).

ODV will provide WHMIS training, and the employee is the responsibility to participate, take necessary measures to protect themselves and co-workers, and to identify and control hazardous materials properly. ODV works to ensure that hazardous materials are properly labelled, have SDS, and offer WHMIS training annually.

The WHMIS Requirements, apply to employers and workers in British Columbia with respect to controlled products used, stored, or handled at a workplace. Guidelines G5.3.1 to G5.15, Workplace Hazardous Materials Information System (WHMIS), provide additional clarification.

- ODV requires the Contractors and Subcontractors to protect the workforce from hazardous materials in the workplace. All workers are to be trained on WHMIS 2015.
- It is the responsibility of each Contractor and Subcontractor to:
 - Identify and manage hazardous substances or controlled materials that are required to perform their work functions; and
 - Notify the health and safety Manager (or delegate) PRIOR about any new hazardous material or substance brought on site.
- ODV will only approve the use of any hazardous substance after receiving a copy of the SDS for the substance from the Contractor and Subcontractors. Substances are not to be brought onto the site until ODV approval is received.
- SDS binders from each Contractor must be submitted to ODV for the First aid room.

Each hazardous product must have a label and a data sheet. Labels identify the product's hazards and precautionary measures. Datasheets provide more detailed information. If the product is not classified as a hazardous product, the employer must still provide training, supervision, and safe work procedures.

Employers must ensure that hazardous products used at their workplace are labelled according to WHMIS regulations. There are two main kinds of WHMIS labels - **Supplier Labels** and **Worksite Labels**

Suppliers must affix a label to containers of hazardous products they supply. The label must be present on hazardous products in their original containers and must be presented in English and French. **Supplier Labels** provide key information such as pictograms, hazard statements, signal words, and precautionary statements, as well as identifying product names and suppliers.

If a **supplier label** applied to the hazardous product container becomes illegible or accidentally removed from the container or receives a hazardous product without a supplier label, the employer will affix either a supplier label or a workplace label that meets the requirements of the Hazardous Products Regulations.

Worksite Labels must be affixed. Although there is no specified format for worksite labels, they should provide information regarding:

- Product Identification (brand name, code name or chemical name),
- Information for safe handling of the product, and

- A statement indicating that the SDS is available.

Decanted Products

Employers will ensure that hazardous products in the workplace that are decanted from the supplier container into another container will have a workplace label applied to it.

Safety Data Sheet Location

SDS are electronically stored, and hard copy binders are located onsite, main offices, site offices, first aid room, water treatment plant, shop.

Supplier Safety Data Sheets

Employers are responsible for obtaining from suppliers a SDS for each hazardous product used in their workplace. The employer may also develop a SDS in place of a supplier SDS, provided that the employer SDS contains at least the same content found on the supplier SDS and indicates that a supplier SDS is available.

The SDS will provide useful information such as:

- The product's hazards,
- How to use the product safely,
- What to expect if the recommendations aren't followed,
- How to recognize symptoms of exposure, and
- What to do if emergencies occur.

Employers and Contractors on ODV sites will ensure that SDS for each hazardous product is kept on-site and readily available at the workplace to workers who may be exposed to the hazardous product including the first aid attendants, joint committee or the worker health and safety representative.

Chemical Hazards

The construction environment will likely create numerous chemical hazards, including welding fumes, grinding, cutting, sanding, coating, painting etc. The chemical hazards generated from these activities shall be assessed and reported on for different operating conditions, weather conditions, and base materials to create a representative cross-section of construction activities.

- The Contractor shall assess their worker exposures to controlled products and other potentially harmful substances and agents.
- If quantification of exposure is possible and warranted, only approved methods of measurement will be used. Personal exposures and area measurements will be

determined in consideration of different conditions including weather, the degree of natural ventilation (or enclosure), etc.

See Appendix 3, Workplace Hazardous Material Information System

6.15 Transportation of Dangerous Goods (TDG)

It is ODV's policy to comply with all the various requirements of the transportation of dangerous goods including the Table of Distances in Natural Resources Canada Explosives Branch "*Blasting Explosives and Detonators Storage, Possession, Transportation, Destruction and Sale.*"

Pursuant to the Transportation of Dangerous Goods Act 2.5, regarding Safety Requirements Respecting Transportation of Dangerous Goods:

- a) *a person must not handle or transport dangerous goods unless all applicable prescribed safety requirements are complied with; and,*
- b) *all containers, packaging, road vehicles and rail vehicles comply with the applicable prescribed safety standards and display the applicable prescribed safety marks.*

Those ODV employees working as expeditors, or who will be required to transport materials considered dangerous goods, will undergo certification through an online course.

See Appendix 4 Transportation Dangerous Goods

6.16 Incident Investigation and Reporting

All ODV and Contractor employees must report all incidents, injuries, near misses, equipment, and property damage promptly to ODV Supervisor and Safety dept immediately. Accidents and Incident investigation and reporting is a good safety management practice, ODV obligation and regulatory requirement. The purpose of the incident investigation is to determine the cause of the incident and implement suitable corrective measures so further incidents can be prevented.

This element provides a standardized procedure for the investigation and reporting process. Using a team-based approach, ODV will investigate incidents, accidents and near-miss occurrences and support contractors during their investigations. The immediate supervisor will lead the Incident Investigation with the assistance of the employer, worker representative and/or JOHSC member.

Following an incident, accident, ODV will immediately undertake or require the following:

- A preliminary investigation (Flash Report) within 4 hours of the incident,
- An interim corrective action report (Initial Incident Report) which addresses the findings of the preliminary investigation (Flash Report),

- A full investigation report within 7 days of the incident (unless an extension is granted by the health and safety Manager due to extenuating circumstances) of the incident, that details the full corrective actions addressing the findings of the Incident Analysis, and
- Reports should meet both legislative and corporate reporting requirements and track the tendencies of incidents.

BC Ministry Reportable Incidents

Some incidents are considered “Dangerous Occurrences” and are immediately reportable to the Chief Inspector for the Ministry of Energy, Mines and Low Carbon Innovation.

Dangerous Occurrence sites must be immediately frozen unless the safety of workers or the environment is at risk. Dangerous Occurrences that must be reported to the EMLI Ministry Inspector include the following scenarios:

- Equipment Rollover;
- An accident resulting in loss of life;
- Unexpected ground-fall, on surface or underground, that endangers people, damages equipment, or poses a threat to people or property;
- Cracking or subsidence of a dam or dike, unexpected seepage, loss of adequate freeboard, washout or erosion of a dam or dike;
- Any accident involving a mine hoisting plant;
- The unexpected inrush of water, mud, slurry, or debris;
- A premature or unexpected explosion of explosives, gas, or dust;
- Significant inflow or release of explosive or other dangerous gas;
- Unplanned stoppage of the main underground ventilation system;
- A mining vehicle going out of control;
- An outbreak of fire if it endangers persons or threatens or damages equipment;
- All underground fires;
- Electrical equipment failure or incident that causes or threatens to cause injury to persons or damages equipment or property; and
- Any other unusual incident or unexpected event which had the potential to result in serious injury or damage.

Dangerous Occurrences

Must be reported according to the following schedule provided in Section 1.7.1 of the Health, Safety, and Reclamation Code for Mines in British Columbia, which says that the Mine Manager must inform the Inspector and the JOHSC of a dangerous occurrence within as noted:

- Within 4 hours after a reportable incident, provide a verbal notification to an inspector. Mine Incident Reporting Line 24/7 at the following:
 - Phone: 1-888-348-0299
 - Email: MineIncidents@gov.bc.ca
- Within 16-hours after a reportable incident provide a written notice to an inspector.
- Within 60 days after a reportable incident submit the investigation report.

See Appendix 6, Incident Investigation and Management

6.17 Workplace Inspections

6.17.1 Scope and Purpose of Inspections

The scope of ODV operations includes the administrative site, above-ground mining, underground mining, drilling exploration, and the milling of the mined rock. There are general hazards associated with the overall operation, as well each site has unique hazards.

Furthermore, pursuant to Section 6.4.1 of the Health, Safety, and Reclamation Code for Mines in BC all active workings shall be examined by the certified shift-boss or supervisor with assigned responsibility to ascertain that they are in safe working condition a minimum of once per week and all persons working underground shall have their work areas inspected by a shift-boss or supervisor at least twice per shift.

These inspections will assess:

- the hazards and general working conditions at the project site, and
- the employee's work practices and implementation of safe job procedures.

Employees should be observed and questioned where applicable, to ensure:

- Knowledge of adherence to standard work practices and safe job procedures.
- Proper use of tools and equipment.
- Correct use personal protective and other safety equipment.
- Are adequately trained to perform their work properly.
- Knowledge of the emergency response procedures.

The purpose of conducting Workplace Inspections is to identify compliance and non-compliance issues such as conditions, behaviours and hazards that could lead to accidents. During an inspection, situations or deficiencies that have the potential to cause harm, such as unsafe acts or unsafe conditions, will be identified, prioritized, and corrected in a timely manner.

ODV and contractors will conduct formal and informal inspections that cover the worksite, equipment, vehicles, and PPE. Obligatory formal inspections are documented inspections that will be conducted at a pre-determined frequency. Informal inspections are daily inspections that are conducted prior to all work activities.

The employer is responsible for the overall operation of the program. ODV will direct formal inspections on their job sites and ensure workers are involved in these inspections. Management and Supervisors are responsible for conducting formal and informal inspections, while workers are responsible for participating in these inspections.

ODV believes it is important that the JOHSC plans, conducts, reports, and monitors inspections. Management workers will closely monitor and keep a record of all inspection reports.

Informal inspections attempt to identify and correct problems in the field. Corrective measures may include:

- a toolbox talk with the crew,
- conversation with the individual worker
- stopping the use of equipment, tools, PPE of concern, and
- meeting with senior management.

Inspections are a comprehensive survey of workplaces, workers, processes, equipment, or tools.

Unsafe Acts are defined as the activities in which employees are engaged or involved in an unsafe manner and include unauthorized use or operation of equipment.

Unsafe Condition is defined as an unsatisfactory physical condition that exists at the workplace, especially immediately before an accident, which played a crucial role in triggering the accident.

6.17.2 Roles

Management

- Ensures the inspection process and appropriate actions are being implemented.
- Ensures resources are available to conduct, record and make changes to any unsafe actions or conditions.
- Ensure compliance with regulator and non-regulator worksite inspections.

- Maintains an awareness of the importance of conducting Workplace Inspections, assessing the hazards, and implementing the controls.

Supervisor

- Conducts inspections of their area of responsibility, e.g., where their crews are working.
- If unsafe practices or conditions are identified, ensures prompt corrective action is taken to eliminate the causes.

Employee

- Conducts regular inspections of their area(s) of responsibility to ensure safe work practices are being followed.

6.17.3 Inspection Types

Regular Inspections

Weekly inspection tours will be performed by Foreman or Supervisors of their specific sites of responsibility to inspect project sites where one or more employees are working for an extended duration. A Weekly Inspection Report will be completed following each inspection and provided to the OHSD.

Management, Supervisors, and Employees are all responsible for inspecting worksites, equipment, and tools before putting it to use. For example, Equipment Logbook individual sheets must be completed and handed in daily to ensure proper maintenance schedules.

Informal Inspections

On a daily basis, all employees, supervisors, and managers must conduct ongoing informal inspections of their work environment. Any unsafe act and/or unsafe condition must be reported to the supervisor or person responsible for that area of operation.

In many cases, an employee and supervisor can correct a problem by discussing the act or condition before an incident occurs. There may be situations that require additional corrective action; these must be recorded by the supervisor in the daily log for follow-up.

Formal and Planned Inspections

Planned Inspections are completed on a scheduled basis and documented on the inspection form. The supervisor or designate will set the planned schedule of inspection(s) for his/her respective area depending upon the hazards and possible risks.

ODV requires that the Contractors and Subcontractors carry out their own formal monthly site (area) inspections. Scans of completed inspection records must be provided to the ODV health and safety team when corrective actions are completed.

When conducting a formal inspection:

- Immediately stop any conditions observed that pose an imminent danger.
- Record identified deficiencies and appropriate corrective actions through the inspection form.
- All identified deficiencies must be accompanied by a picture with a description on the inspection form.
- Identified deficiencies shall be corrected within a reasonable time. The effectiveness of completed corrections must be verified by supervision and signed off as completed with a completion date.

Site Inspection

Site Inspections are to be conducted by the supervisor and a worker (or designate) on a weekly basis. Depending on the identified hazards, Site Inspections may need to be performed on a daily basis. This will include surface and underground.

Formal Site Inspections must be documented on the inspection form, which can be found on the company server.

Equipment and Vehicle Inspections

These are to be conducted by the operator at the start of the work shift or prior to operating a piece of equipment. The Operator of the Equipment or Vehicle Inspection shall document the conditions on the appropriate form located on the company server.

Special Inspections

A Special Inspection must be completed in the event of an equipment malfunction or a potentially serious incident or a serious incident. Trades are required to conduct and submit a weekly, daily or monthly formal safety inspection to the responsible company supervisor with hazards and corrective actions identified.

6.17.4 Hazard Control Actions

The Inspection Team will ensure that deficiencies identified during inspections are addressed in a timely manner based on their priority ranking. It is the Supervisor's responsibility to assign hazard control actions to the appropriate workers.

6.17.5 Monitoring and Follow-Up

Managers and Supervisors are accountable to ensure hazard control actions are accomplished by this specific date. Feedback on this action is to be conveyed to the inspection team and the crew. Senior Management will be informed of high priority items and will follow-up on the action plans on a regular basis.

6.17.6 Inspection Review and Communication

Management Review Process

The Manager or designate must monitor the inspection process to ensure inspections are conducted at predetermined intervals and that deficiency is corrected in a timely manner.

All Inspections will be reviewed and evaluated by Senior Management.

Communication

ODV will ensure that Inspection Reports are posted and communicated to the appropriate employees. Following the inspection, all affected workers will be informed of the inspection results at the next toolbox talk or safety meeting.

Frequency of Inspections

Table 6.17-1 Inspection Frequency

Type of Inspection	Purpose	Performed by	Frequency	Documentation
Informal inspections	To keep small health and safety concerns from becoming major	Health and Safety Manager (or Delegates), Managers, Supervisors	Ongoing	No
Formal Workplace health and safety Inspections	To evaluate the overall condition of the site, and compliance with procedures and practices	ODV site safety, supervisors, superintendent, construction manager, project director. JOHSC members inspection.	One (1) inspection per week	Completion of the health and safety Inspection checklists is required. Detailed inspection.
Formal Workplace health and safety Inspections	To evaluate the overall condition of the site and compliance with procedures and practices	Upper management, Safety, and JOHSC member	One (1) per Month	Completion of the health and safety Inspection checklists is required. Detailed inspection.
Pre-Inspections of mobile equipment	To ensure the proper functioning	Driver/ operator	Prior to daily use/at the change of shift	Yes. Equipment-specific pre-checklists
Topic-specific inspections (e.g., PPE)	To evaluate work-/site-specific conditions	Contractors and Subcontractors. Supervisors, health and safety Advisors	Periodically throughout week/shifts	Yes. Specialized checklists, if applicable

6.18 Workplace Monitoring and Medical Surveillance

It is ODV's policy to comply with the various requirements of the Chief Inspector's publication "Workplace Monitoring Procedures Manual." The Workplace Monitoring Program is a cyclical strategy that assesses worker exposures and implements prioritized control measures for worker protection from unacceptable exposures.

The major steps in ODV's Workplace Monitoring Program include:

Defining the Workplace Monitoring Program Objective: Promote a working environment that encourages participation in the Workplace Monitoring Program.

Ensuring the Health, Safety and well-being of our employees, our customers and the public is a major commitment of ODV. We recognize that physical and chemical agents exist in our processes, which can be harmful to exposed workers and that we have a responsibility to ensure that exposure to these agents is monitored and controlled.

The Workplace Monitoring Program results will be used to determine the needs and priority for health hazard controls, build exposure histories and demonstrate regulatory compliance. In order to meet this responsibility, we ask our employees to actively participate in this program for the benefit of all workers.

Basic Characterization: Identify physical and chemical agents in use, their sources and controls, and worker exposure potential.

The *Workplace Monitoring Procedures Manual* (2002) published by the BC Ministry of Energy and Mines describes physical and chemical agents that must be monitored.

Exposure Assessments: Identify groupings of workers having SEG; defining the exposure profile for each group or similarly exposed workers and providing judgements about the acceptability of each exposure profile.

A SEG is defined as a group of workers having the same general exposure profile for an agent because of the similarity and frequency of the task they perform, the similarity of the materials and processes with which they work and the similarity of the way they perform the tasks. The table does not include physical parameters of heat and cold stress, noise, ergonomics, and light. These hazards are assessed on their own merit in their respective Program Section.

Allocation of the SEGs has been conducted using a purely observational approach, as no pre-existing exposure data is available. The first ten columns of Table 9.1 in the Workplace Monitoring Procedures Manual outline the reasoning for SEG formation. As the mine moves into full operation, and more qualitative data becomes available, as well as a collection of quantitative exposure data occurs, SEG exposures will be statistically analyzed and refined. In addition, review

of smaller chemical exposures will be reviewed once common, and higher risk exposures are sufficiently addressed.

The Workplace Monitoring Program has been developed using a compliance-based strategy. A compliance strategy, which is the traditional approach to exposure assessment, is directed at assessing compliance with established regulatory and/or voluntary occupational exposure limits (OELs).

Further Information Gathering: Prioritize exposure monitoring or collection of further information on health effects so that uncertain exposure judgements can be resolved with higher confidence.

Judgements of the SEGs prioritization have been made based on the interpretation of available quantitative and qualitative data using the following criteria.

$\text{SEG Prioritization} = \text{Exposure Rating} \times \text{Health Effect Rating} \times \text{Uncertainty Index}$

As samples are collected, the best applicable statistical assessment tool will be applied to determine exposure profiles, relative to the OEL. All details of findings, assumptions or any professional judgement applied will be reported with the data. *The objective of the analysis is to ensure that less than 5% of the exposures in the SEG exceed the stipulated OEL (with 95% confidence).*

Health Hazard Control: Develop and implement prioritized control strategies for unacceptable exposures and ensure worker exposures are reduced as much as reasonably practicable, and as a minimum standard, at or below the legislated limits. Controls may include modifying or replacing current controls should they fail to achieve the stated goals.

Health hazard control involves the implementation of prioritized control strategies for unacceptable exposures and to ensure worker exposures are reduced as much as reasonably practicable, and as a minimum standard, at or below the legislated limits.

Reassessment: Periodically perform a comprehensive re-evaluation of exposures. Determine whether routine monitoring is required to verify that acceptable exposure remains acceptable.

Given the early stages of this Workplace Monitoring Program, reassessment is recommended a regular basis.

Communications and Documentation: Post sample results inconspicuous areas; review results of sampling with the JOHSC; and review the monitoring program with workers annually and implement changes to improve the program or meet new/changed legislated requirements.

Exposure assessment reports and sampling records are critical elements of the Workplace Monitoring Program. These documents are needed to ensure effective communication of workplace findings and continuity of the industrial hygiene program.

ODV will ensure that all sampling data results are reviewed by a qualified person, as necessary. Discrete sample results in less than the OEL do not ensure safe worker exposures are occurring, given the potential for temporal and process variability. All exposure assessment findings (i.e., the exposure profile and whether it is unacceptable, acceptable, or uncertain) will be documented and retained for the duration of the mine operation.

Moreover, the assessment findings will be communicated in a timely and effective manner to all workers in the SEG and those involved in worker health protection, such as management and labour representatives. Reports will be reviewed in conjunction with the JOHSC on an annual basis.

ODV shall also ensure that an annual review of the Program is conducted to ensure compliance with regulatory changes and that the Program continues to be effective in its implementation. Again, a qualified person should be involved on a regular basis to provide oversight of the Program.

Sampling Procedures included:

- Identification and Assessment of Carbon Monoxide
- Identification and Assessment of Diesel Particulate Matter
- Identification and Assessment of Hydrogen Cyanide
- Identification and Assessment of Airborne Lead Dust
- Identification and Assessment of Surface Lead Dust Contamination
- Identification and Assessment of Respirable Particulate Not Otherwise Classified (PNOC)
- Identification and Assessment of Respirable Crystalline Silica (RCS)
- Identification and Assessment of Sulphur Dioxide
- Identification and Assessment of Welding/Metal Fumes
- Identification and Initial Assessment of Noise Sources
- Health Effects of Cold Stress; Cold Stress Monitoring
- Health Effects of Heat Stress Heat Stroke; Heat Stress Monitoring

See Appendix 13 – Medical Surveillance Program and Appendix 14 – Workplace Monitoring Program

6.19 Ergonomics and Musculoskeletal Disorders

It is ODV's policy to comply with the various requirements of the Health, Safety, and Reclamation Code for Mines in BC regarding Musculoskeletal Disorders (MSDs). A proactive MSD Program is

an important component of ODV's occupational health and safety program. The program requires participation from managers, supervisors, and employees to be successful.

MSDs belong to a group of sprain and strain injuries that can affect muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels, or spinal discs in the body. Whenever a worker's body moves, it puts stress or strain on these structures, and when this strain involves vibration, awkward positioning, forceful movements, or repeated movements, the worker is exposed to a risk of developing an MSD. When aspects of the work or workplace exceed the body's capabilities, the result can be an MSD.

These disorders are sometimes referred to as Whiplash Associated Disorders, Repetitive Strain Injuries, Cumulative Trauma Disorders, or Soft Tissue Injuries. MSDs can be either acute (incident-based) or slow onset (no specific incident).

MSDs occur most often in the hands, wrists, elbows, shoulders, lower limbs and back and in recent years have been recognized as a major source of lost time and poor productivity in many workplaces. To help avoid MSDs, work demands should not exceed the physical capabilities of the worker.

Records documenting the key program elements such as the identification, prevention, and control of employee exposure to ergonomic risk factors will be maintained in accordance with all regulations. These records will ensure prioritized risks are adequately addressed, and all employees are trained in the best practices for minimizing MSD risks – including safe posture and movement habits.

Responsibilities

- ODV's Health and Safety Department is responsible for the program's implementation, management, and recordkeeping requirements.
- ODV Management is responsible for providing necessary resources for and ensuring that activities involving risk factors for MSD are identified, evaluated, and controlled.
- The Mine Manager is responsible for ensuring that site activities are monitored and that MSD risks are identified, evaluated, and controlled.
- The Safety Advisor(s) are responsible for coordinating identification, evaluation, and control activities, as well as for ensuring that the JOHSC receives training in these activities.
- The JOHSC is responsible for ensuring that MSD risks are considered and addressed when conducting worksite safety inspections and pre-job hazard assessments.
- Workers are responsible for participation in training, identification, evaluation, and control activities related to MSD prevention.

- Suppliers and Visitors on the site are responsible for ensuring that they do not undertake any activities involving more than a minor risk of MSD.

See Appendix 7, Musculoskeletal Disorder Prevention Program

6.20 Ergonomics

It is ODV's policy to comply with the various requirements of the Health, Safety, and Reclamation Code for Mines in BC regarding Ergonomics. Occupational ergonomics is the science of fitting workplace conditions and job demands to the capabilities of the working population. The goals range from the basic aim of making work safe through increasing human efficiency to the purpose of creating human well-being. Ergonomics can also be thought of as the science of human comfort.

The goal of the ergonomics program is to reduce the number and severity of musculoskeletal disorders by applying ergonomic principles to create a safe workplace while encouraging safe posture and movement habits. This helps increase safety, productivity, quality, and efficiency while decreasing human and financial costs to workers. Safe use of an ergonomically sound work environment maximizes worker well-being while minimizing the risk of MSD.

ODV has a participatory ergonomics program that emphasizes continuous improvement through a process that is regularly evaluated with the necessary leadership involvement. The elements of the ODV ergonomics program are intended to support a timely reduction in identified ergonomic hazards as well as safe posture and movement habits.

To be credible, leaders need to "walk the talk" on safety. This includes being a safety champion in all that you do. Basic habits like wearing appropriate PPE, using 3-point contact on stairs, and driving to the conditions will reinforce to everyone that you prioritize safety.

Developing a positive culture around movement safety (to prevent MSDs) can only be built on a foundation of trust and mutual respect for safety as the over-riding priority.

All ergonomics documents can be found on the Administration Drive

(S:) → ODV SUPERVISION → Health and Safety → ERGONOMICS → Department Folder (e.g., Core Facilities, QR Mill).

Leadership

ODV is committed to an ergonomics program. Leadership supports the efforts of the Health and Safety Department by pledging financial and leadership support for the reduction of identified ergonomic risk factors.

Worker Participation

Workers will be consulted for input and assistance with identifying ergonomics risk factors, conducting worksite evaluations, developing, and implementing controls, and training.

Worksite Evaluations

Triggers for a worksite evaluation include but would not be limited to

- Worker concerns,
- Identified Risks,
- Change Management,
- Tours, and
- Incident Reviews.

Work-related risk factors to be considered in the evaluation process include, but are not limited to:

- Physical Risk Factors,
- Administrative Risk Factors,
- Environmental Risk Factors and
- Cumulative Risk Factors.

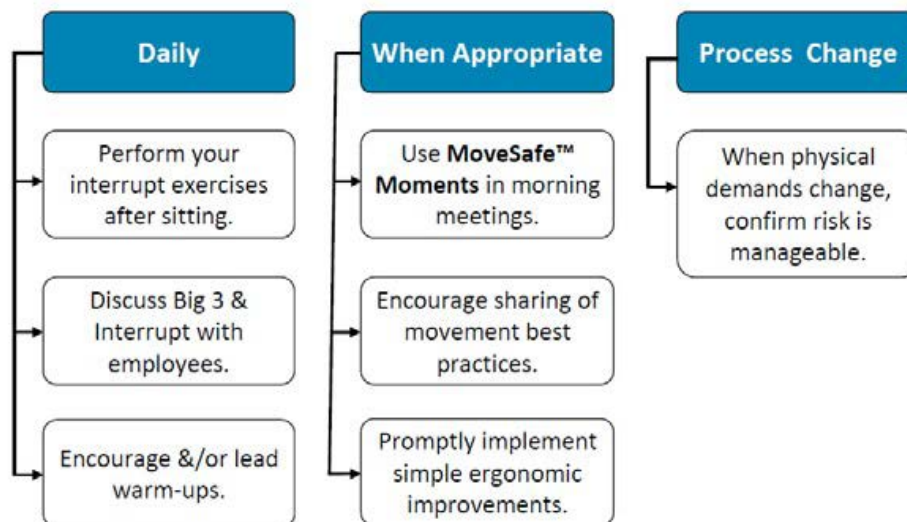


Figure 6.20-1 Interrupt Exercises Schedule

Education and Training

The minimum education and training for all managers, supervisors, and workers will include the following elements:

- Ergonomics Program
- Risks
- Reporting
- Risk Reduction
- Safe Habits

New Equipment and Processes

For any new equipment or tools, the physical demands of the affected employees will be considered. All new processes or process changes will consider the physical demands of the affected employees.

Program Evaluation and Follow-Up

To ensure that issues have been addressed and new problems have not been created, monitoring and evaluation will be conducted on an ongoing basis by the Health and Safety Department.

Roles and Responsibilities

The Health and Safety Department will be responsible for this policy and program. Being responsible for training, risk reduction, reporting concerns, support and accountability, and safe habits.

- Managers and Supervisors
 - Managers and Supervisors are responsible for Training, Risk Reduction, Support & Accountability, and Safe habits.
- Workers
 - Workers are responsible for Safe habits. Training and Reporting.
- Joint Occupational Health & Safety Committee
 - This committee is responsible for Risk Reduction and Support & Accountability.

Annual Program Review

The Health and Safety department will conduct a program review at least annually to assess the progress and success of the program taking into consideration: Training and Education, Risk reduction, Process Accountability and Measuring Success.

See Appendix 8 - Ergonomics Program

6.21 Orientation, Training and Competency

6.21.1 Orientation

ODV Health and Safety Management team will provide a specific site orientation for all workers. As part of the general health and safety onboarding process, all workers (employees, Contractors, Subcontractors, visitors, and suppliers) must complete the ODV mandatory project site orientation before being allowed access to the worksite. Additional orientations may be provided to young workers, if applicable, in accordance with health and safety regulatory requirements. Contractors will also provide their own company-orientation to all workers and all Subcontractors.

As required by legislation, Management shall provide appropriate health and safety training that will give workers the skills and tools to identify and manage the risks associated with their environment. This will ensure workers perform their work safely and enable individuals to communicate any health and safety concerns to Management.

6.21.1.1 New Hire Orientation

It is mandatory that all employees or contractors employed by ODV attend a Safety Orientation prior to commencing work. This applies to a new, transferred or returning employee.

New Hire Orientations may take anywhere from two to eight hours. During this time, the New Hire Orientation Checklist will be used to train employees as per regulations:

General Orientation days and times: Thursdays at 7:30 am (dependant on site emergencies)

Contractor employees who show up without the listed below training ODV will offer the training at no cost and Contractors will not charge ODV for the training.

Contractor employees are expected to arrive with the listed training:

- Wilderness awareness
- Fire Extinguisher
- Mountain Safety/Avalanche Awareness
- WHMIS 2015, and
- Safety Data Sheets (SDS)

6.21.1.2 Contract Visitors

For occasional or short-term visitors, a Visitors Safety Orientation will be established to explain the site, the conditions applicable to entry to the site and the necessary PPE that will be required. These workers can walk the site but cannot perform any physical duties onsite and must be escorted at all times by a site supervisor of that company.

6.21.2 Training

ODV considers it the responsibility of the employer to provide the training for their workers. Accordingly, every Contractor and Subcontractor have an obligation to ensure his or her employees have received the proper health and safety training and ODV enforces that requirement.

The training activities required within ODV are established through regulatory requirements, industry best practices, and safety literature. Some of the training may be delegated to third parties such as associations, private vendors, but for the most part the supervisory level in the organization will lead the training effort and monitor it to ensure it is working well.

- At a minimum, Contractors and Subcontractors are expected to demonstrate to ODV prior to the commencement of any work, including mobilization and site set-up activities, that all company workers are trained and competent. Workers must complete their own company health and safety competency training before commencing any work or critical tasks. In addition, Contractors and Subcontractors must assess the competency of each employee on an ongoing basis.
- Contractors and Subcontractors must maintain a training matrix for all workers, employees. The training matrix must be sent to ODV health and safety Manager when updated (minimum monthly) if required ODV to provide a template.
- The Contractor and Subcontractor must demonstrate that its workers have proper training programs and competent instructors to ensure that their worker's health and safety training remains adequate and current. All training documents (e.g., certificates, trade tickets, competency records, etc.) must be made readily available for self-assessment and for auditing purposes upon request.
- ODV's contractors and Subcontractors must ensure that its workers involved in activities with critical tasks receives appropriate health and safety training.
- ODV requires that health and safety training of workers include knowledge testing, typically through tests of "multiple choice" and "fill in the blank" format.

6.21.2.1 Job Training Contractors

Job training of Contractor and Subcontractor workers is conducted, but is not limited to the following situations:

- With all-new hire employee;
- New and young workers will follow ODV's New and Young Worker program;
- When an employee is assigned new or different work; and
- When an employee is moved to a new site location.

This training will be conducted by the employee's immediate competent Supervisor or delegate and will contain the following items:

- Be under the guidance of the Supervisor until such time the trainer feels the worker is competent;
- Review of safe work practices and procedures that apply to the job;
- Bring all known safety hazards that may affect the employee to his/her attention;
- Provide the employee with all information that is necessary for the employee to do the job safely and correctly;
- The employee may require off site training at an approved training facility;
- The on-going coaching of the employee is a major duty and responsibility of that employee's immediate Supervisor and assigned a mentor; and
- Upon completion of the training, the company shall record the date of completion in a Training/Safety Record System (Matrix) and have all documentation available for auditing.

6.21.2.2 Supervisor Orientation and Training

- Supervisors are required to go through both the New Hire Orientation and EMLI Supervisor training. The Supervisor training covers topics related to the supervisor's task responsibilities, regulations, and legislation, as well as ODV policies and procedures.
- Additionally, supervisors will be trained in workplace inspections, health and safety responsibilities, and investigation and reporting procedures.

6.21.2.3 Job/Task-Specific Training

- ODV will assess qualifications, including certificates and years of experience, to ensure that Job Specific Training is conducted by a competent person or third party.
- The immediate supervisor will determine and arrange Job Specific Training based on a task's complexity and the employee's current task knowledge and experience.

6.21.3 Competency

All workers operating mobile plant and other nominated equipment shall be required to hold an appropriate operating license or a letter of competency by the company supervisor before they shall be permitted to operate any plant or equipment on the project. In addition, all such workers may be individually assessed by a competent person appointed by their employer.

- Where licenses and certificates are not issued for the operation of the particular tool, equipment or plant, standards of competency shall be documented, and assessments shall be conducted by authorized, supervisor, trainers before operation of that plant, equipment shall be permitted on the project.

- Employees, including Contractors and Subcontractors' employees, shall be required to present on request any certificates, licenses, competencies or tickets for any task or activity that requires such formal qualifications.

6.21.4 Accounting for Workers On Site

6.21.4.1 Tag In/Out Board

In accordance with Section 3.2.2 of the Health, Safety and Reclamation Code for Mines in BC, ODV will keep an accurate and effective tally system in place and followed to account for all persons on site. ODV will strictly enforce this.

Upon being hired or contracted by ODV., you will be issued a Personal Tag, which will be used to Tag In on the tagboard to indicate the assigned work location. It is your responsibility to move your personal tag to the new position on the tagboard if you change the work location.

- At the end of your shift, you are to Tag Out to show you are off-site.
- Visitors on site will be provided with a temporary visitor number tag during site orientation.
- Visitors on site will place their tag on the tagboard indicating their location. Visitors are to remain with their chaperones while on-site.
- When the visitor is to leave the site, they must remove their temporary tag from the tagboard and sign-out in the visitor's log.
- No person other than the employee can place, move, or remove their personal tag.
- If an employee, contractor, or visitor fails to Tag In or Out, all attempts to contact said person must be made to ensure safety.
- A Tag Board Removal Form (ODV-HSF-TBR-016) may be filled out for the tag to be removed.
- The offending person MUST review the Tag Board Policy and Procedure (ODV- GEN-TAG-002) prior to commencing work.
- If your tag is left on the board, there is a Tag Removal Policy that involves verifying your absence from the site (a phone call) and getting the Mine Manager's authorization to remove your tag.

6.21.4.2 Failure to Tag Out (worker)

- In the event a worker fails to tag out of the underground, the following steps shall be followed:
- The underground worker's Supervisor (or designate) shall be contacted.
- Every effort will be made to personally contact the worker and have him/her return and remove their tag from the tag inboard.

- If it can be confirmed that the worker is off-site, the Underground Mine Superintendent (or designate) shall remove the worker's tag from the tag inboard.
- No one is allowed to remove or place a person's tag on or off the tagboard.
- No blasting operations shall take place until all persons are accounted for, and their tags are removed from the tag in boards.
- All government mine regulations and company standards must be followed.

6.21.4.3 Workers Entering the Underground

- All persons regularly working underground will be given a name tag, which they will place on the tag-in board before entering the underground and upon returning, place it on the tag-out board.
- It is the responsibility of each individual person to place or remove his/her tag from the tag-in/tag-out board.
- All underground workers are to attend the daily Safety meetings and take note of all blasting notices to ensure they vacate the mine and remove their tag from the tag-in board at the appropriate times.

6.21.5 Security

- The appointed Contractor/Subcontractor should make themselves fully familiar with the site access conditions and security requirements.
- ODV reserves the right, as a condition of employment or as a term in the contract between ODV and a Contractor/Subcontractor, to conduct unannounced searches for the seizure of alcohol, drugs, or drug paraphernalia on ODV premises where there are reasonable and probable grounds to believe that they may be present and there has been a suspected breach of this program.
- Such searches may include searches of individuals and their personal property brought onto the worksite. The employee and Contractor acknowledge that their entry onto ODV premises is deemed consent to a search and seizure at any time while entering on or leaving ODV premises and when carried out pursuant to the program.
- The employee and the Contractor/Subcontractor expressly acknowledge that their right to privacy and to be secure against unreasonable search or seizure is expressly subject to the right of ODV to maintain a safe workplace and to ensure that there are no violations of ODV policies and/or no laws are being violated.
- The appointed Contractor/Subcontractor is to ensure he/she is fully aware of and will comply with all security procedures whilst working on the site.

6.21.6 Working Alone

To be compliant with the Health, Safety and Reclamation Code for Mines in BC 3.2.3 and the BC Workers Compensation Act, Occupational Health and Safety Regulation, Section 4.21 to 4.23, ODV will ensure the safety of all employees and Contractors when required to work alone.

Prior to the commencement of an employee's shift, the employee will report to their direct Supervisor or designate. After they have been appointed their duties by their Supervisor, the employee will proceed to the tagboard and place their tag on the tagboard indicating their assigned work location.

Throughout the shift, the employee's Supervisor or designate will travel to that work location at regular intervals to check on the state of the employee. Durations between visit intervals are not to exceed two hours.

If there is a legitimate reason the Supervisor or designate is unable to physically check on the employee, the Supervisor or designate will communicate directly with the employee by telephone or radio to verify the employee's condition. Durations between contact intervals are not to exceed 2 hours.

If, the employee has not been contacted by their direct Supervisor or designate within the two-hour window, the employee is to immediately make phone or radio contact with their direct Supervisor or designate to inform them of their status. If they are unable to contact their Supervisor or designate, they are to make phone or radio contact with the on-duty First Aid Attendant.

At the end of an employee's shift, the employee will remove their tag from the tagboard and report to their direct Supervisor or designate.

6.21.7 Communication

ODV fosters health and safety communication through:

- Health and safety bulletin boards
- Health and safety alerts and bulletins
- Electronic safety communications
- Meetings with health and safety on the agenda

6.21.7.1 Health and Safety Communication Boards

ODV and Contractors will have designated *Safety Communication Boards* (the Boards) to ensure that information relating to health and safety, is available to all employees and their Subcontractors.

Contractors will monitor and maintain the Boards at:

- Project Work Areas, Lunchroom Trailers
- Other locations, as appropriate.

At a minimum, the following materials are posted on the Boards and maintained as current:

Table 6.21-1 Health and Safety Communication Board Content

Category	Content
Policies and Rules	Health and Safety Policy Statement Workers Report of Injury to WorkSafeBC Safety Rules Progressive Discipline Policy
Incident and Emergency Management	List of First Aid responders Emergency Response Plan Evacuation Plan Map
Joint Occupational Health and Safety Committee	List of JOHSC members Meeting Minutes
Safety Performance	Internal/External inspections reports Incident Notifications
Safety Communication and Awareness	Weekly Safety Meeting minutes health and safety Alerts/Bulletin Notice health and safety awareness posters

At each Board, Contractors must maintain a copy of the Health, Safety and Reclamation Code for Mines in BC for the worker's reference as per the regulations.

6.21.7.2 Health and Safety Alerts and Bulletins

Incident Alerts shall be distributed and published to all workers working on the project, including Contractors and Subcontractors, to share information and key learnings relating to serious incidents or serious potential incidents. Incident Alerts will be in the ODV template.

6.21.7.3 Electronic Safety Communication

The Health and Safety Team or Supervision of Contractors and Subcontractors sends out electronic Incident Notifications to Health and Safety Manager.

- ODV will supply the template.
- Ensure that each notification includes the type of incident, location, dates, times a description, and the immediate actions and corrective actions that were taken.
- Use the Flash incident report form, Sent out to ODV Health and Safety Manager for review.

6.21.8 Meetings

6.21.8.1 Overview

Effective communication and consultation are one of the keystones to enable health and safety compliance and ongoing improvement initiatives on the Project sites. Regular structured meetings will be held to ensure that effective communications occur between management and the Project workforce. Workplace representatives will also actively participate in the preparation of task-level JHAs, inspections and planned task observations.

Table 6.21-2 Safety Meeting Guidelines

Meeting	Safety Content
Kick-off meetings with contractors prior to starting any work deliverables	- Communication Review: Contractor's site safety requirements incl. Hazards, controls, emergency preparedness and response, etc. - Contractor Pre-kickoff meeting checklist will be performed and signed off
Daily Toolbox talks	Daily toolbox talks a safety overview of daily work and hazards.
Weekly Safety meetings with all site contractors	Hosted by each contractor and Subcontractor Safety and supervision; attended by all (documented)
Weekly ODV office safety meetings	- Discussed by the Supervisor and health and safety Manager or delegate. - The purpose of monthly safety meetings is to (1) review and discuss the prior month's health and safety performance (e.g., safety statistics, inspections, incident reports, etc.), and (2) present a relevant health and safety topic. - Monthly safety meetings are a forum for providing feedback on health and safety issues to the health and safety Team and to discuss high-level safety updates to the Project. - The health and safety Team generates and maintains records/minutes of monthly safety meetings.
Monthly JOHSC meetings	Held each month. Refer to Appendix 5

Records/minutes of the aforementioned meetings are managed by the meeting host and are shared with the health and safety Teams.

6.21.8.2 Weekly ODV and Contractor Safety Meeting

ODV and Contractors must conduct weekly formal safety meetings with employees to foster safety awareness. The Contractors and Subcontractors ensure that within 24 hours an electronic scan of completed safety meeting minutes is sent to bgmsafety@osiskodev.com

Safety Meetings are the primary vehicle for communicating ongoing safety awareness and the exchange of safety information. Therefore, all employees, including senior management, will attend and participate in health and safety meetings.

6.21.8.3 Toolbox Talks

ODV requires that Contractors/Subcontractors hold daily Toolbox Meetings prior to work commencing. Each Supervisor will review the activities planned for that day. (e.g., equipment

used etc.) The Toolbox Meeting form will be filled out and kept on-site and scanned and emailed to ODV Safety for audit purposes.

The daily toolbox talks provide timely information on health and safety items that relate to project activities. Prior to starting work each day, toolbox talks will be conducted by supervisors and/or lead hands. Topics for discussion should pertain to health and safety matters only.

It is mandatory for all crew members to attend these meetings. As required by law, each member's name and the meeting minutes must be recorded on the Toolbox Talk form. The minutes must be made available to the workers. Anyone who is unable to attend this meeting must be informed about meeting topics and discussion items. The Toolbox Talk form is located on the company server.

6.21.8.4 Pre-Work Kick Off

After awarding the contract, ODV will hold the kick-off meeting with the following workers:

- Contractor/Subcontractors.
- Health and Safety Manager/Advisor.
- Environmental Manager.
- Quality Manager
- Superintendent, Construction Manager/Coordinator.

The key purpose of the Kick-off Meeting is to:

- Establish that the Contractor fully understands the risks within the work scope and can execute the responsibilities under the OHSMP. If the contractor's understanding and ability to apply Risk Management is lacking, then the ODV should review health and safety pre-qualification to ensure that systems in place to manage risk are suitable and sufficient to meet standards.
- Highlight areas for improvement in the OHSMP and agree on action to address them.
- Ensure the Contractor's workers are aware of the Risk Register and other relevant documents.

7. SAFE WORK PRACTICES

7.1 Spotter Training

Many vehicle/mobile equipment-related incidents on-site occur because of reversing and or maneuvering during low speed, in tight spaces and in congested areas. Identifying when spotters are required is an essential part of your daily hazard assessments when using vehicles and mobile equipment.

- Be on constant alert for people, objects and other equipment that may be near or entering the area.
- STOP IMMEDIATELY if they lose site or eye contact of the spotter/signal person.
- Know and use the standard signals for on-site traffic. Confirm signals with the operator.
- Know driver and operator blind spots.
- Make eye contact with a driver or operator before signalling or changing location.

7.2 Housekeeping

- The Contractor must maintain all work areas in a tidy state and free of debris.
- ODV has the right to instruct the Contractor to cease work until the area has been tidied up and made safe. Neither additional costs nor an extension of time to the Contract is allowed as a result of such a stoppage. Failure to comply will result in site cleaning by another Contractor at the cost of the non-complying Contractor.

7.3 Smoke and Vape Free Environment

Smoking and vaping are prohibited everywhere onsite except in designated areas. Contractors shall clearly mark designated smoking and vaping areas and ensure that their employees observe the smoke and vape-free status of other areas. All designated smoke and vape areas must be pre-approved by ODV.

7.4 Manual Material Lifting

Musculoskeletal Injury is a significant risk for workers doing manual lifting, and if not identified early can lead to a debilitating injury. ODV will provide appropriate equipment transporting for lifting heavy or awkward loads. For all other smaller loads ODV strategy for safe manual lifting focuses on the below recommendation:

- Conduct a Pre-Lift Assessment. Prior to lifting the weight, the size and shape of the load must be assessed. Consider the number of times the load is to be moved and the manner in which it will be moved. Always lift with a team if possible.
- Always stretch prior to engaging in any manual lifting.
- Do not turn or rotate while lifting. If the load is heavy or awkward and there is no equipment available to lift or transport the load, the load must be repackaged and/or split up to allow a safe lift.
- Look up as you lift.
- Employees should know their physical limitations and the approximate weight of materials they are trying to lift.
- Obtain assistance in lifting heavy objects whenever the task may be more than can be safely handled.
- Before any manual lifting is done, the use of power equipment or mechanical lifting devices such as dollies, trucks or similar devices should be considered and employed where practical.
- Bulky loads should be carried in such a way as to permit an unobstructed view ahead.
- Ensure a good firm grip before lifting.
- Lift gradually, slowly, smoothly and without jerking.
- The back should be kept close to vertical or straight and the lifting should be done with the legs.
- Avoid unnecessary bending. Do not place objects on the floor if they must be picked up again later.
- Avoid unnecessary twisting. Turn your feet, not your hips or shoulders. Leave enough room to shift your feet so as not to twist.
- Avoid reaching out. Handle heavy objects close to the body. Avoid a long reach out to pick up an object.
- Do not be tempted at the last moment to swing the load onto the deck or shelf by bending or twisting your back; it could end up being your last heavy load.
- Pipes, conduit, reinforcing rods and other conductive materials should not be carried on the shoulder near exposed live electrical equipment or conductors.
- When two or more persons carry a heavy object that is to be lowered or dropped, there shall be a pre-arranged signal for releasing the load.

- When two or more persons are carrying an object, each employee, if possible, should face the direction in which the object is being carried.
- Keep in good physical shape, get proper exercise, maintain a good diet, and always stretch before starting a shift.

7.5 Working at Heights

- Articles falling from heights can cause serious injuries. Employees working overhead must ensure that materials and tools are properly secured to prevent articles from falling.
- "ANYONE WORKING ABOVE" (or equivalent) signs are to be displayed in the appropriate places.
- Where there is a danger of falling material, the area below is to be fenced and or Red Ribbon off with tagging.
- Material must not be thrown from above but lowered in a safe manner using a securely fixed rope or appropriate waste chutes to lower the material.
- Hazards related to falling objects must be identified during the planning of work activities. A risk assessment completed in order to determine the potential to do harm and to allow development of appropriate control measures.
- Effective risk control measures must be determined, implemented, and monitored in the following order of priority:
 - Preventing an object from falling - for example, by using containment sheeting, toe-boards, lanyards to secure tools and equipment, lift boxes, brick cages, and loads secured to cranes and hoisting equipment;
 - Protecting people from falling objects - for example, exclusion zones, overhead gantries, catch platforms, signs, warning devices and traffic controllers;
 - Personal protective equipment – PPE is the last line of defence and must be worn.

7.6 Safety Harnesses, Lanyards, and Lifelines

- Harnesses are used to provide elevated workers with freedom of movement and protection from falls. These devices are designed to arrest a fall and absorb some of the shock. The harnesses are worn around the body and attached to a lanyard and shock absorber, fall arresting device or rope grab. This system must be connected to a carefully chosen approved engineered anchor point.
- All workers using harnesses, lanyards, and lifelines must have documented training from an approved provider. Trained workers must be certified and deemed competent to perform fall protection.

- Only harnesses in good condition and meet local occupational health and safety legislation will be permitted on ODV Projects.

7.7 Confined Space

It is the policy of ODV to maintain compliance in regard to Confined Space with the Health, Safety and Reclamation Code for Mines in BC section 3.4, and the BC Workers Compensation Act, Occupational Health and Safety Regulation, Part 9.

This policy shall apply to all persons (both ODV and Contractors) in their areas of responsibility as permit issuers, standby persons and workers entering confined spaces and restricted access areas. It shall be referred to and used in conjunction with all applicable site standards relating to any area other than an underground working environment.

As defined by WorkSafeBC, a confined space is:

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.

7.7.1 Confined Space Entry Program

- Only qualified, competent individuals will be selected for confined space entry. Workers must be trained, certified and competent to enter.
- Before workers perform work in a confined space, the employer must prepare and implement a written confined space entry program.
- A Hazard Assessment of the Confined Space, including procedures to eliminate or minimize all hazards, must be conducted prior to entry.
- A permit system will be used for all Confined Space entries.
- Ensure all isolation points are secured, locked, documented, and verified.
- Test the atmosphere inside each confined space using a multi-gas detector that is calibrated and bump tested by qualified individuals.
- Ensure that prior to confined space entry, pre-entry testing and inspection has been conducted by an individual who is trained, qualified and competent to carry out testing and monitoring.
- The Hole Watch will be fully trained and competent in the use of the multi-gas detector including familiarity with the following:

- Each known gas alarm setting (Low level, High-Level alarms);
- Gasses that may be in the confined space and their vapour density;
- The Two and Two Rule and how it pertains to gas testing using the hose attachment. This Rule was established to have simple, clear guidance to determine whether a space is safe. The rule states that it takes 2 minutes of sampling time PLUS 2 seconds for every one foot of tubing. That is, the amount of tubing connected, not the size of the space.
- Have a written Confined Space Rescue plan, with individuals trained in rescue, as well as a Confined Space permit, JHA, and FLHA, and all of which must be signed off by each person entering the confined space and each watch person involved.
- Have a method of summoning the rescue team and ensure all parties involved are aware, on alert and able to respond to an emergency requiring rescue from the Confined Space.
- Ensure that the confined space is ventilated with a minimum of six air exchanges per hour, exhaust fans may also be required.
- Ensure that individuals entering a confined space use and wear all PPE including a full-body harness.
- Ensure that adequate (intrinsically safe) lighting is provided for work activities inside the confined space.
- During activities like welding, effective local exhaust ventilation at the source to the outside atmosphere will be required. Safety Data Sheets must be available in advance of any entry.

7.7.2 Confined Space Hazards

As part of the Risk assessment performed prior to the start of work, the hazards which exist, or have the potential to exist, within the confined space shall be defined and listed. The expected hazards can include:

- Oxygen deficiency, caused by, e.g., fermentation, oxidation, adsorption, or combustion;
- Oxygen enrichment: i.e., introduced by oxy-acetylene torch cutting equipment;
- Toxic gases, accumulation, i.e., Carbon dioxide, Ammonia, Chlorine;
- Biological activity– spores, moulds, and pathogens;
- Solvent vapours;
- Welding fumes;
- Gas formation produced by decomposition/decay, e.g., bacterial action;
- Flammable gases, e.g., methane, (boiler or sewer gas), acetylene (torch cutting);

- Mist, dust, e.g., grain or mill dust;
- Poor ventilation;
- Moving mechanical parts, e.g., agitators, screw augers;
- Electrical shock;
- Entrapment: due to shape or space design, e.g., conical bottom;
- Engulfment caused by the inundation of water, liquids and/or particulate materials, e.g., sand/grains;
- Physical injury from mechanical equipment such as agitators, mixers, etc.
- Severe burns to skin and eyes from acidic or base materials;
- Engulfment from materials or liquids which are in, or which can enter, the confined space;
- Liquids or gasses under pressure; and
- Hot liquids or gasses.

Once a confined space is identified, its atmosphere must be hazard-rated as **HIGH, MODERATE, or LOW**. The atmosphere in a confined space may be hazardous for several reasons. The air may have too little or too much oxygen. The atmosphere may be toxic or explosive. The hazard rating of a confined space must be determined by a qualified person after considering the design, construction, and use of the confined space, the work activities to be performed, and all required engineering controls.

High-hazard atmosphere

- An atmosphere that may expose a worker to the risk of death, injury, or acute illness, or otherwise impair a worker's ability to escape unaided from a confined space if the ventilation system or respirator fails.

Moderate-hazard atmosphere

- An atmosphere that is not clean, respirable air but is not likely to impair a worker's ability to escape unaided from a confined space if the ventilation system or respirator fails.

Low-hazard atmosphere

- An atmosphere that is shown by pre-entry testing or is otherwise known to contain clean, respirable air immediately prior to entry into a confined space, an

7.7.3 Purging

A confined space containing flammable or explosive gas, vapour or dust shall be purged with a non-flammable gas to force the contaminants out of the confined space. Nitrogen or carbon dioxide shall be used for purging. The purging gas shall be added at a point furthest away from

the exhaust point. Purging shall continue until the concentration of flammable gas, vapour or dust in the exhausted air is less than 20% of the lower explosive limit.

Due to the inherent hazards associated with entering confined spaces, proper procedures must be followed at all times. There is a very specific procedure for each confined space entry; you must:

- Be trained;
- Find, read, and understand the particular procedure before the initial entry; and
- Follow all the steps and precautions where required:
 - Identification and entry permit;
 - Lockout and isolation;
 - Verification and testing;
 - Cleaning, venting;
 - Continuous exhaust and or ventilation;
 - Standby person;
 - Rescue;
 - Lifelines, harnesses;
 - PPE; and
 - Coordination of activities.

7.7.4 Explosive or Flammable Atmosphere Procedures

Where the gas or vapour in a confined space is likely to be explosive or flammable, the confined space can be entered only where:

- The space should be purged or ventilated in such a way so that the purging or ventilation of the space does not present a danger of ignition.
- Any potential sources of ignition that can be removed must be removed from the space previous to entry.
- The concentration of the gas or vapour has been tested by a competent person and found not in excess of 20% of the lower explosive limit of the gas or vapour.
- The concentration of the gas or vapour has been recorded in the permanent record.
- The only work performed is that of cleaning or inspecting and such a nature that it does not create any source of ignition.

- Cold work may be performed in a confined space that contains or is likely to contain an explosive or flammable gas or vapour where the concentration does not and is not likely to exceed 10% of the lower explosive limit of the gas or vapour.

7.7.5 Rescue

In the event, an employee inside a confined space is overcome and unable to exit the confined space without assistance, the standby employee shall sound the alarm and don all appropriate PPE specific to the confined space, including self-contained breathing apparatus (SCBA).

No employee shall enter a confined space to attempt a rescue unless:

- The employee is trained and competent in confined space hazards and rescue methods.
- The employee has donned all appropriate PPE.
- Help has arrived at the site, including a person trained in artificial respiration.
- Emergency equipment, including additional SCBA, fire extinguishers, stretchers and first aid shall be brought to the site at the sound of the alarm.
- Anyone working in a confined space will require training. Some confined space entry procedures will require specialized training or knowledge. Your Supervisor will coordinate this. Rescue team members will also receive specialized training; and
- If there are any doubts, consult with your Supervisor before entry.

Know the location of the confined spaces and discuss the proper procedure and requirement for training before conducting a confined space entry.

Always refer to the Site Safety Plan or site-specific Confined Space Safe Work procedures

7.8 Respiratory Protection Equipment

Contractors will have a Respiratory Protection Program to ensure that respirator use by contractor employees and, as applicable, by their Subcontractors to provide effective protection against exposure to airborne contaminants.

7.9 Excavations

It is the policy of ODV to maintain compliance regarding Excavations with the Health, Safety and Reclamation Code for Mines in BC Section 4.17, and the Occupational Health and Safety Regulation 20.78, ODV has established this procedure to protect employees, property, and the environment from the serious incidents that could result from working with trenches and excavations. These written instructions shall be 'signed' and 'certified' by the professional engineer, as per the Code requirements Section 4.17.2.

Before starting any excavation work, all underground utilities will be marked as clearly as possible in order to identify potentially dangerous situations. The supervisor, if designated (by the engineer) or engineer will contact the "call before you dig" number so that the various public utilities will have the opportunity to locate and mark their lines.

- Do not work in trenches and excavations unless authorized.
- Excavations or trenches and the shoring or sloping systems must be inspected before entry, or after any major rainfall or other upset condition.
- Excavation plan must be in place.
- Keep out of trenches and excavations unless authorized and have taken necessary precautions.
- Stay away from earthwork zones with potential for cave-ins.
- Do not work alone when excavating.
- Know where underground utilities are located.
- Safe means of entry and exit must be provided for an excavation a worker enters (ladders/sloped walkways).
- Barricades, flagging, or warning devices must be erected to protect workers and the public from the excavation or trench.
- Employees in an excavation must not work under the suspended bucket of the excavating machine or any load being placed by the machine.
- Excavation work must be in accordance with the written instructions of a Professional Engineer if the excavation is more than 6 m deep.
- Excavated material shall be kept back a minimum distance of 1.5 m from the edge of any trench excavation.

7.9.1 Barriers and Barricading Requirements

Barriers and Barricading will only be erected, altered, maintained, or removed by suitably qualified and authorized workers.

Various signs and barricades are used to warn workers and the public of specific hazards. The most commonly used signs are:

- Danger Tape, Ribbon - Red in colour
- Caution Tape, Ribbon - Yellow in colour
- Safe - Green in colour
- Information- Blue in colour

Workers shall follow barricading procedures and obey all protocols relating to restricted or authorized access signage.

Yellow Caution Tape warns of a hazardous condition or activity. A tag must accompany the barricade ribbon. Only cross yellow ribbon when safe to do so and after reading the tag.

Red Barricade Tape warns of a Dangerous condition or activity. A tag must accompany the barricade ribbon. Individuals not directly involved in the work must contact the person who placed the barricade tag for permission to cross the red barricade tape.

7.10 Scaffolding

- Scaffolds shall only be erected, altered, maintained, or removed by suitably qualified and authorized workers.
- Guardrails and toe boards are to be provided on all outer edges and ends of all scaffolding where a person or an object can fall a distance of 1.2 m or more. Where it is not practical to have handrails, or there is a need to work outside handrails, the use of an approved safety harness, with a lanyard attached to a secure anchorage is required.
- A three-tag scaffolding management system is to be employed by the Contractor to ensure that scaffolding erected on-site complies with the provisions of applicable standards and ODV requirements.
- Contractors' competent appointed scaffold inspectors must carry out inspections of their scaffolding whenever the scaffolding has been modified, damaged, or altered in any manner or form, and otherwise, at least every seven days during the period that the scaffolding is on-site and after inclement weather. Tags must be updated as required, and records of inspections must be kept on file.

7.11 Roofing and Cladding

- The Contractor must provide safe access to roofs.
- The Contractor must provide ladders, scaffolds, or man baskets for this purpose.
- The crew working on the roof is secured with a lanyard to the lifeline via their safety harnesses to allow them freedom of movement for placing the roof materials.
- No work is permitted during rain or when wind speeds exceed 30 kilometre per hour (kph) unless a risk assessment has been conducted and concludes otherwise.
- Bundles of roof sheeting or materials stacked on the roof must conform to the following:
 - Only sufficient bundles to be stacked on the roof to meet immediate needs, other bundles to remain stacked on the ground until required.

- Bundles of sheeting to be secured using 20 mm steel strapping applied with a strapping tool.
- Securely tied to the rafters to prevent sheets being blown from the roof during high winds.
- No material may be stored on the roof over weekends and holiday periods.

7.12 Ladders

- No wooden ladders, (job built) allowed onsite.
- Only purchase engineered ladders from a reputable store.
- Inspect any ladder for defective parts before you climb it.
- For every four feet of working length, the base of the ladder should be one foot out from the top support.
- Straight ladders should extend at least three feet above the top support.
- Always tie off, block, or otherwise secure the ladder at the bottom and top.
- Where practical, wear a full-body harness when working from ladders over 3 m (10 ft) in elevation.
- Use fibreglass ladders, which are not good conductors, for work in proximity to electrical equipment.
- Keep both hands free! Use a three-point climb when climbing a ladder.
- Do not carry tools or materials in your hands when climbing. Use a rope for hoisting or lowering.
- Never skip rungs or steps. Grasping the side rails is the preferred method for climbing a ladder.
- Look to see where you are going to step before you get off the ladder; never jump off.
- Never throw tools to an individual on a ladder nor throw tools to a person while on the ladder.
- Always face the ladder, both when going up and coming down.
- Never try to “jump” a ladder sideways, and do not move a ladder while someone is on it.
- Do not place ladders near doorways, roadways, or equipment access routes, unless the door or access route is made temporarily inoperative, and signs are posted. Do not place materials in proximity to the base or landing of any ladder.
- Always keep a minimum overlap section of 1 m on extension ladders.

- Never stand on or go higher than the second step from the top.
- Do not stand on the top two rungs of any ladder. The cap on a stepladder is not considered a rung.

7.13 Overhead Cranes, Hoist, and Rigging

- All load-hooks shall have a safety device latch to prevent the accidental unfastening of slings. Open hooks shall not be used on any part of any rigging.
- All hooks shall be engineered and certified for use; no hooks shall be used for purposes for which they are not designed.
- Hooks worn more than 10% at a critical section shall be discarded.
- All rigging equipment must be inspected prior to each use. Any chain, wire sling, or fibre sling must have an identification safe working load tag affixed to the rigging equipment. Rigging not having the appropriate tag must not be used.

7.14 Overhead Cranes or Hoists

- Cranes or hoists must not be operated unless the operator is authorized, certified and competent to do so. Operators must test all controls and brakes at the beginning of each shift before starting to use them.
- Hoisting devices must not be loaded beyond the rated limit.
- A defective hook or hoist must not be used. It must be tagged out and reported to the supervisor.
- No one should stand, work, or walk under a suspended load. All workers must obey the person (rigger or signal person) handling the load from the floor.
- When entering a shop or building, workers should look for the crane or hoist and determine its location before crossing the floor.
- Only one competent, trained employee shall be designated to give signals to the crane operator. The operator should, in turn, respond exclusively to that employee, except for the emergency stop signal, which can be given by anyone. Workers in the area of a crane on hoist must know and understand all hoisting signals. A load must not be moved until the operator is directed it is safe to move.
- Workers must not distract the attention of the crane operator while they are operating the crane.
- Suspended loads must not be left unattended.
- A tag line must be used with all lifted loads.
- Workers must never ride a load or hook.

7.15 Steel Erection

- A rescue plan shall be developed prior to beginning steel erection.
- Multi-Piece Lifting is prohibited, structural steel members shall be rigged and placed singularly.
- Proper canvas tool bags with rope handles shall be provided for storing bolts and drift pins. Tool lanyards shall be used on all tools to prevent dropping. Containers shall be secured against dislodgement when used at elevations.
- Ladders, scaffolds, and stairwells shall provide safe access and egress from work areas.
- Material shall be ordered and received to support the installation of permanent floors and stairwells as the erection of structural members' progress.

7.16 Hot Work

- Electric welding cables and gas welding/cutting lines in work areas, walkways and access ways shall be protected against physical damage at all times. Where possible, they shall be routed overhead or under elevated walkways, but in all cases routed in such a manner as to eliminate tripping or other hazards.
- Flashback arrestors shall be fitted on the handpiece and cylinder end of oxy/acetylene hoses.
- Cylinders shall be stored in an upright position in appropriate cages, cradles or trolleys and secured with a non-flammable material (e.g., chain, wire rope) to ensure stability when being transported, stored, or used on site.
- When cylinders are not in use, regulators shall be removed, and bottle caps applied.
- When transported regulators shall be removed, and bottle caps applied.
- Display appropriate signage when transporting or storing compressed or flammable gas.
- Keep electric welding cables and gas welding/cutting apparatus free from grease and oil. Worn or damaged electrical welding cables with exposed wire or bare conductors shall be replaced or discarded immediately.
- Suitable fire-resistant arc flash screens are required when electric arc welding to ensure that adjacent workers or public are not adversely affected.
- Fire extinguishers must be at all work locations where hot work is being undertaken; flammable gases are stored or on vehicles transporting flammable gas.
- Prior to the commencement of hot works, all combustible/flammable material shall be removed or adequately protected.

- Gas cylinders shall not be transported, raised, or lowered to another working-level unless an approved holder or carrier designed for the transport of gas cylinders is used.
- Cylinders shall be kept at a safe distance and shielded from welding or cutting operations and not be exposed to electrical circuits or heat.
- Acetylene and other fuel gases shall not be stored in enclosed spaces, e.g., vans, vessels, or containers.
- Welding or cutting in small non-ventilated areas smoke eaters or ventilation and or exhaust must be used.

7.16.1 Fire Extinguisher Use

- Grab and hold the fire extinguisher with one hand, then use the following steps:
 - **P (Pull):** Grab pin, twist then pull pin out.
 - **A (Aim):** Always aim at the base of the fire using the nozzle provided.
 - **S (Squeeze):** Activate the fire extinguisher by squeezing the handle.
 - **S (Sweep):** Move from side to side in a sweeping motion; make sure flames don't start up again.
- Once the fire is extinguished, or if you are unsuccessful, back away. Never turn your back as the fire may reignite.

7.17 Thunder and Lightning

Lightning can be extremely hazardous to workers and equipment when working outside. Lightning can travel a great distance. Even when the sky looks blue and clear, be cautious. If you hear thunder, take cover. At least 10% of lightning occurs without visible clouds overhead in the sky.

In some areas, lightning may be visible. Team members need to keep an eye on the sky when working outside. Practice the "Flash Bang" measurement of lightning distance. This is the time from seeing the strike to hearing thunder. ODV will help to ensure the safety of our workforce by following the 30/30 rule for lightning.

Flash Bang Measurement: For every count of three seconds (using 1 thousand &, 2 thousand &, 3 thousand &, etc.) from the time of the lightning flash to hearing the thunderclap, the lightning is 1 kilometre (km) away. For example, if you can count to 15, the lightning is 5 km away.

The 30/30 Rule: (30 seconds = 30 minutes) cannot protect against the first lightning strike. When you see lightning, count the time until you hear thunder. If this time is 30 seconds (10 km) or less, go immediately to a safer place. If you can't see the lightning, just hearing thunder means lightning is likely within striking range.

After a storm has moved on or dissipated, wait 30 minutes or more after hearing the last thunder before leaving the secure place.

A large number of casualties occur after the rain dissipates. People, in too much of a hurry to go back to work, ignore the fact that lightning continues to be a threat outside the precipitation areas.

- When the count reaches 30 sec (10 km), supervision will suspend all drilling, equipment, and crane hoisting activities and shut down for 30 minutes.
- When the count reaches 15 sec (5 km) work activities at ground level will be suspended
- Work can commence again after 30 minutes pass without another lightning strike within the 10 km (count of 30) zone.

Table 7.17-1 Flash Bang Criteria

If Thunder is Heard:	The Lightning is:
3 seconds after a flash	1 km away
5 seconds after a flash	1.7 km away
10 seconds after a flash	3.4 km away
15 seconds after a flash	5 km away
20 seconds after a flash	6.8 km away
25 seconds after a flash	8.5 km away
30 seconds after a flash	10.2 km away
35 seconds after a flash	12 km away

Mobile equipment

Shut your Mobile Equipment down if the lightning is within 5 km. Stay in the cab of the machine, close your windows and doors, put your feet flat on the floor, cross your hands on your lap and wait until the storm passes. DO NOT touch anything in the cab, i.e., steering wheel, radio, door.

DO NOT get out of your machine during the storm.

Vehicles

Shut off your vehicle if the lightning is within 5 km. Stay in the cab of the vehicle, close your windows and doors, and put your feet flat on the floor, cross your hands on your lap and wait till the storm passes. DO NOT touch anything in the cab, i.e., steering wheel, radio, door. DO NOT get out of your vehicle during the storm. Maintenance personal stop all work shut off all bottles, turn off all equipment.

Plants

Shut your Plant down if the lightning is within 5 km. Stay in the operator's booth for your plant, close your windows and doors, stand in the middle of the floor with your feet flat on the floor, cross your hands in front of you and wait till the storm passes or till you're given the all-clear.

DO NOT touch anything in your booth. DO NOT get out of your booth during the storm.

- If your booth is constructed of steel, i.e., steel floor, walls, Crusher operator booths exit the booth and seek shelter elsewhere, low ground away from any steel structure.
- Any modular motor control building with a metal floor would not be suitable as a shelter in a lightning storm.

Indoors

- Stand clear of windows, side of the building, doors, electrical panels, electrical outlets & appliances.
- Turn off and unplug appliances, i.e., computers, monitors, air conditioners, tools.
- Avoid contact with water, metal. i.e., pipes, sinks, valves, faucets, wiring.
- Do not use the hardline telephone or cell phone. Use only after the storm has passed or in case of an emergency.

Outdoors

- Seek shelter in a large, fully enclosed, constructed building, warehouse, lunchroom, or shop (see indoor instructions).
- Avoid areas that are higher than the surrounding landscape.
- Avoid standing near tall objects.
- Keep away from metal objects including, fencing, conveyors, structural steel, machinery, and water pipes.
- Immediately get out and away from bodies of water, i.e., thickener, ponds, tanks, spray bars, and water tanks.
- Spread out; don't stand in a crowd of people. Stand at a distance of 4.5 m apart.
- If you feel a tingling sensation or your hair stands on end, lightning may be about to strike! Immediately get into an open area and squat low to the ground, crouch down and cover your ears. Do not lie flat on the ground.

7.18 Spill Response

ODV policies and procedures and manufacturers' operating instructions will be strictly followed by all employees and contractors to prevent accidental spills. Bulk quantities of products will be

stored in the appropriate containment areas to prevent ground contamination and to minimize the impact of storage equipment failure. Place small quantities of products stored in drums and/or plastic containers in the appropriate containment areas to reduce the chance of an accidental spill. Additional preventive/containment measures are listed below:

- Stock adequate spill containment supplies have on-site at all times.
- All vehicles and equipment must stock spill kits.
- Ensure Safety Data Sheets for all controlled products are available on site and are stored in the SDS binder.
- Store products in appropriate compatible containers equipped with lids. Securely fasten the lids to prevent contamination of the product.
- Store and position containers to prevent rainwater contamination.
- Label product containers as directed by WHMIS Regulations.
- Maintain valves and hose joints in good repair.
- Repair leaking valves/hoses immediately.
- Use drip trays under dispensing valves to contain leaks/spills.
- Bulk product delivery workers will keep their equipment under constant observation during the off-loading process to be able to quickly react to equipment failure or malfunction.
- Employees dispensing fuel into equipment will keep the process under constant observation to be able to react quickly to equipment failure or malfunction.

Ensure your own safety by:

- Assessing the situation and determining what the hazards are.
- Eliminating sources of ignition for flammable material spills.
- Maintaining ventilation for volatile material in enclosed areas.
- Avoiding skin contact and contamination of clothing.
- Avoiding stepping in spilled material.
- Wearing appropriate PPE.

The general spill response procedure includes:

- Stop the Flow
- Secure the Area and Prevent Access
- Contain the Spill

7.19 Traffic Control

- Contractors/Subcontractors will have a traffic control plan in place.
- All traffic entering the sites will sign in and receive a site orientation.
- A Flag Person/Controller will be placed at all road intersections (as deemed necessary by Contractors with a Stop/Slow sign to control traffic.
- All haul trucks, passenger vehicles, and excavation equipment are to be operated with headlights on at all times.
- A minimum following distance of three truck lengths is to be maintained between the trucks at all times.
- Always drive at a safe and controlled speed for the road conditions.
- Reduce speed, pull over to the side, and stop if necessary in conditions of extreme dust, fog, or blowing snow.
- Do not park near heavy vehicles or equipment; remain in view of the operator or operator cab.
- Any vehicle or equipment that is broken down must be clearly identified with warning lights or some other effective warning device and must be removed as soon as possible.
- Vehicle back-in rule is in effect on the sites.
- In areas of reduced visibility, reversing equipment shall be guided by a spotter.
- For reversing vehicles, a spotter is required to guide the vehicle.

7.20 Power Lines

Contractors/Subcontractors shall ensure that during the hazard assessments relating to work under or near overhead power lines:

- BC Hydro's Limits of Approach are respected.
- Safe work zones are established and marked, and that controls are in place to eliminate or manage health and safety risks when workers or equipment are working within or in proximity to these zones.

7.21 Operating Mobile Equipment/Vehicles

- No operator/driver is allowed to operate any vehicle/equipment without proof of training, valid driver's license, and letter of competency.
- No passengers are allowed on any mobile equipment unless equipped with an extra seat.
- No person can stand in a bucket while equipment is operating.

- No eating or drinking is allowed while operating equipment.
- Operators/drivers shall not receive or send mobile phone calls or text messages while driving. Phones are allowed in lunchrooms only.
- A pre-use checklist is to be done against an approved checklist; all faulty items are to be attended to immediately.
- Equipment with an implement must have the implement on the ground before leaving the cab. And must be on the ground before anyone approaches the cab.
- Mobile equipment and vehicles must be equipped with:
 - Minimum 10 pound (lb) ABC fire extinguisher;
 - Flashing amber beacon;
 - Back up alarm;
 - Auxiliary steering where required; and
 - Spill Kits.

7.22 Driving Practices

Safe driving practices are essential in reducing the risk of accidents and injuries associated with the operation of vehicles. All employee(s) operating company vehicles or equipment, as well as employees using their personal vehicle for company business, are required to comply with the *Motor Vehicle Act* and regulations. Seat belt must be used at all times. Operators will be responsible for the equipment assigned to him or her. Cell phone use while operating any mobile equipment or vehicle is strictly prohibited at all operations.

7.23 Mobile Equipment

Working around mobile equipment can lead to serious injury if proper precautionary measures are not taken. Some general precautions include:

- Ensure acknowledgement via radio contact or hand wave prior to entering the work area of any mobile equipment. Never enter within the zone two times the length of any equipment without direct acknowledgement from the operator.
- Avoid pinch points (important for articulating equipment and excavators.)
- If you enter the swing zone of an excavator or into a machine blind spot, do not assume the operator can see you. Always approach on the cab side and wait until the operator can see you then approach and tell the operator your intentions.

- If approaching mobile equipment on foot, all implements must be lowered/at rest, and the operator's hands must be free of controls. Wait for acknowledgement from operator before approaching.

Equipment operators are responsible for ensuring that their machine is in good working condition and that they are always in full control of it. Operators are responsible for whatever happens to the machine.

- Do not operate any equipment unless authorized and competent to do so.
- Operate equipment in a manner that does not endanger others.
- Complete a mandatory daily pre-shift pre-trip inspection before using the equipment.
- Fill out and check the equipment daily logbook.
- Defective equipment must not be operated. Park the equipment, tag it out and notify your Supervisor.
- When refueling equipment, the engine must be stopped, and all ignition sources eliminated.
- Do not ride or stand on equipment that is not designed to accommodate a second person. Equipment that can accommodate a passenger must have a seat & seatbelt.
- ODV site speed limits must be followed at all times.
- Ensure you understand and follow manufacturer's instructions for the equipment.
- Seat belts must be used at all times.

7.24 Equipment Certification

- All equipment used on-site shall be in good repair, fit for purpose and have valid certification for the task that it is to be used on. ODV and Contractors shall demonstrate equipment is fit for purpose, and ODV shall carry out inspections and testing prior to working on-site and as deemed necessary to verify fitness for the purpose at ODV's discretion.
- All equipment certifications shall be checked prior to equipment being put into operation. Where necessary, ODV may order an inspection by an inspector/surveyor competent to assess the equipment in question to verify that it meets fitness for purpose requirements and that the certification is correct for that equipment.
- All equipment operators will do a daily pre-trip inspection on all equipment; all equipment will have a logbook that is filled out daily by the operator.
- All equipment with buckets and or attachments used for lifting must be designed for the task and have certification (digging buckets cannot be used for lifting, rigging).

- All equipment will be subject to inspection upon entering the site, paying special attention to hydraulic leaks, hose damage, equipment damage, worn parts, etc.
- All equipment shall clearly display safety signage, including safe working load, and other signage as required by national and local regulations and good international practice.

7.25 Actuated Tools

- Reference ODV Standard AA-H-ST-00018 Power Actuated Tools
- Explosive actuated tools must only be used when prior written permission is granted by ODV prior to use a person must be able to provide sufficient evidence of having successfully completed a training course based on the manufacture requirements and deemed competent by their company.

7.26 Entering Underground

7.26.1 MSA W65 Self Rescuer

ODV self-rescuer of choice is the MSA W65 Self Rescuer. All ODV underground employees will be supplied with the W65's at their workplace unless otherwise specified by regulations. If another self-rescue or respiratory protective equipment is designated or required, the employee will be trained in its use and maintenance before they may proceed underground. Full underground orientation is required with practical hands-on training.

7.26.2 Lighting

- Every person entering an underground mine must have a suitable cap lamp in their close personal possession at all times. The cap lamp must be capable of providing adequate illumination for the duration of the worker's shift.
- If a worker must assess ground conditions underground at a distance greater than the effective range of the cap lamp, auxiliary lighting must be provided for the worker to safely carry out the assessment.
- If operations are being conducted at an open pit mine during darkness, adequate lighting must be provided at every place where vehicles regularly dump material over the edge of an embankment (that is more than 3 m high) and at any other place deemed necessary.
- No open flame shall be used for illumination underground.
- Employees are responsible for ensuring that their PPE is properly maintained, repaired, and replaced as needed.

Table 7.26-1 Underground Risks and Mitigations

Risk	Mitigation/Process
Ventilation	Make sure the fan is on and the vent tubing is inflated before going into any heading.
Stench Gas	Is a warning system that lets all underground employees know that there is some sort of danger. It has a rotten egg smell and is released through our ventilation, and a compressed air system. - Go to refuge station IMMEDIATELY - Follow roll call procedure.
Encountering Fire	- Know, at all times, where the nearest hand-held fire extinguisher is in your area and how to properly use them. - Know escape routes through all areas in the mine. If you don't know, ask a supervisor. - Report all possible signs of a FIRE to your supervisor
Smoke	- If you encounter smoke don your W65 and go to the nearest refuge station and report in & follow the procedure. - If you cannot make it to the refuge station, there are a few things you can do: - Find secure ground, put 5-gallon bucket over your head, and with an air hose (create positive pressure) STAY PUT. Mine Rescue will come to your aid. - Go to fresh air raise and take refuge help will come.
Power Outage	- If the power goes out, shut down the equipment you are operating. - Proceed to the nearest refuge station and report in.
Hat Lamp	Underground hat lamp signals: - A Big Circular Motion = Come to The Light - Turning Side to Side = Stay Away - Up and Down = Retreat or Back UP
Scaling	- Know what a scaling bar is and how to use it. - How to identify loose & know how to scale the loose down.
Lights On Equipment	When underground, if you meet any equipment, go to the closest SAFETY BAY. If you want to walk by a piece of equipment, make sure you make eye & hat lamp signals with the operator, and they give you permission to pass by.
Refuge Station	Keep the doors closed and the air on at all times – this is where the emergency equipment is stored. DO NOT TAMPER WITH IT If caught tamping with any of this safety gear, YOU WILL BE DISMISSED.

7.26.3 Stench Gas Warning

If stench gas is smelled underground, note the time, and stop work immediately and warn the person(s) near you.

- Note the direction of ventilation air currents. Do not shut off any fans or change any doors unless your life is in danger. You may endanger someone else.
- Proceed to the nearest designated refuge station.
- Check with your supervisor for further directions.
- If the supervisor is not present when you return to the refuge station, follow the fire or emergency procedures. (Most mines have the procedures posted in the refuge station for quick reference).

- Persons, on reaching surface, must follow the standard check-out procedure. You must not wander off or leave the property until instructed.
- Persons trained in Mine Rescue work will stand by for orders (this applies to any emergency).
- In cases of an emergency, all vehicles must be parked immediately. The travel way must be kept clear at all times. Do not park vehicles near refuge stations. Emergency vehicles have the right of way.
- All government mine regulations and company standards must be followed.

7.27 Request for Photography

Requestors must understand that ODV and the client's business interests, and protection of people, assets, environment, and reputation is paramount and shall not be compromised by taking any photographs, videos or films or the development, production, and distribution thereof.

- Upon receiving an approved "Request for Photography" form, ODV Safety Team will issue a Camera Pass to the team member. Temporary Camera Passes will be issued to authorize long-term contractors for defined periods. ODV Safety team will retain the approved "Request for Photography" forms for records.
- The Camera Pass will remain valid as long as the team member's current position requires him/her to take photographs.
- If the team member's position changes or he/she is no longer required to take photographs, he/she will notify the ODV Safety team.

APPENDIX 1 DRUG AND ALCOHOL PROGRAM

Ensuring the Health, Safety, and well-being of our employees, our customers and the public is a major commitment of ODV. ODV recognizes the misuse of alcohol and drugs as a health, safety, and security problem. ODV expects and requires that all employees assist in maintaining a work environment that is free from the impairment of alcohol and drugs.

The Drug and Alcohol Program, in addition to setting forth ODV requirements and expectations regarding maintaining a safe work environment, is committed to protecting the health and safety of its employees in accordance with this Policy. These principles outline how ODV will meet this commitment.

The Health, Safety and Reclamation Code for Mines in BC, Part 3 states the following regarding Impaired persons and Drugs and Liquor:

3.1.1 “No person shall enter, remain, or be knowingly permitted to enter or remain in any mine if, in the opinion of management, his/her ability is so impaired as to endanger his/her health or safety, or that of another person.”

3.1.2 “No person shall possess intoxicating liquor or illegal drugs in or about a mine.”

The possession or consumption of alcohol, illicit drugs, or the misuse of prescription or “over-the-counter” drugs is strictly prohibited on ODV premises and work sites. The use of illicit drugs, the inappropriate use of alcohol, marijuana, and the misuse of medications and other substances may have serious adverse effects on an employee’s health, safety, and job performance. Misuse of these substances can also negatively impact other employees, customers, or the community.

All camp/accommodation areas are recognized as ODV/work sites. Each employee has a personal responsibility to themselves, other employees, and ODV, to help eliminate drug and alcohol misuse. Alcohol or drug dependency is a preventable and treatable condition, and early intervention greatly improves the probability of lasting recovery.

ODV will:

- Promote an environment that does not tolerate inappropriate use of alcohol or other drugs.
- Support the rehabilitation and return to work of employees who have had problems with alcohol or drug dependency.
- Conduct comprehensive investigation of work-related incidents including the possibility that the use of alcohol or drugs may have been a contributing factor.
- Undertake alcohol and drug testing in specific circumstances.

- Reserve the right to conduct lawful searches for alcohol, drugs, or drug paraphernalia on company-owned or controlled vehicles and premises.
- Ensure our operations comply with legislation, company policy, and industry standards.
- Prohibit the possession, use, distribution, or sale of illicit drugs, marijuana, and alcoholic beverages on company premises.
- Prohibit being unfit for work because of the misuse of drugs or alcohol.
- Prohibit the intentional misuse of medications on company premises.
- These principles apply to all ODV employees and to others engaged on ODV's behalf. Violations of these principles are grounds for disciplinary action, up to and including termination of employment and contract. All management, supervisors, workers, and contractors allow ODV. to conduct the above testing at any time. By signing the training orientation, all workers agree to abide by this policy.
- Based on reasonable cause, ODV reserves the right to conduct lawful searches for alcohol, drugs, or drug paraphernalia on ODV premises and work sites.
- ODV will not allow a person to work or to remain on ODV premises, or on Mine worksites, if there is reasonable cause to believe that the person has consumed alcohol, marijuana, or illicit drugs, or has used any prescription or "over-the-counter" medication such that the person's ability to perform his or her work functions properly and safely are impaired.
- For this Program, "reasonable grounds" shall mean any observation of impaired motor skill proficiency, impaired judgment or unusual conduct, or any reliable information provided to ODV of consumption of alcohol, illicit drugs either at work or an inappropriately short time prior to reporting for work.
- All employees are expected to perform their duties with the required skill and diligence for that job. Diminishing work performance due to substance abuse will be addressed initially in the same manner as performance decline for any other reason in which disciplinary action may be taken.
- However, the use of alcohol or illicit drugs on ODV worksites, in ODV (whether owned or contracted), or while on ODV business is a violation of this Program and will be cause for disciplinary action, which can include termination.
- Any employee taking a legal drug or medication, whether or not prescribed by a licensed medical practitioner, which the worker knows, or has reason to believe, may affect or impair his or her judgment, coordination, or perception so as to adversely affect his or her ability to perform work in a safe and productive manner, must notify his or her supervisor of the fact he or she is taking a drug and its effect prior to performing any work.

- The employee is not required to inform the supervisor of the specific drug being taken or the condition for which it is being taken.
- The supervisor will determine whether the employee can perform his or her usual work or whether work restrictions or modifications are required, and may, if necessary, in order to make this determination, ask for the employee's authorization to seek further information regarding the drug's effects from his or her physician.

Reporting to Work for an Emergency

- Employees that are contacted to report for work for an emergency or other unscheduled reasons must not accept a work assignment if they have reason to believe their ability to work safely and effectively may be impaired by the consumption of alcohol or illicit drugs or the use of prescription or "over-the-counter" drugs.
- An employee contacted to report in such circumstances must refuse the assignment and advise the person contacting them that their refusal is based on a belief that they may be impaired. Employees refusing a work assignment on this basis will not be subject to discipline for their refusal, though they may, be referred to the Employee Assistance Program.

Employee Responsibilities

It is the responsibility of individuals to ensure their own safety and health at work and to avoid adversely affecting the health and safety of any other person. To fulfill this responsibility, everyone has the following obligations:

- Employees must arrive fit to work and remain fit to work during their shift and be free from the adverse performance effects of drugs and/or alcohol.
- No employee shall report to work, or be at work, with any alcohol level in their blood. Any reading above zero (0) mg per 100 ml will be cause for investigation.
- Employees are expected to cooperate fully during investigations where the suspicion exists or where there is sufficient evidence indicating contravention of this policy.
- As a condition of his or her continued employment, an employee who receives treatment for a substance abuse problem must comply with the terms and conditions of any program established to help the employee.
- Employees are encouraged to seek assistance from ODV before drug or alcohol problems lead to performance issues. If an employee comes forward to seek assistance, ODV will not list the drug problem as part of the employee's workers file; it will not be used as a basis for disciplinary action or used against the employee in disciplinary proceedings.
- An employee has the right to representation from another employee of the organization. The representative may:

- Assist employees with any matter arising under the application of this Program.
- Attend meetings/discussions at the employee's request, providing attendance does not cause undue delay in the time at which the meeting takes place.
- Employees must use prescription and over the counter medications responsibly and be aware of potential side effects. They must notify site medical workers and supervision of any potentially unsafe side effects.
- Failure to comply with this Drug and Alcohol Program will be cause for disciplinary action, which could result in termination of employment.
- All individuals must notify their supervisors of any situation in which this Program may have been breached. This includes:
 - Any situation wherein other persons may appear unfit for work;
 - The unauthorized possession or consumption of drugs on the worksite or during the work period by another individual; and
 - Any other apparent breach of the Program.

Note: All such information will be dealt with in the strictest confidence in accordance with the *Freedom of Information and Protection of Privacy (FOIP) Act*.

Supervisor Responsibilities

Supervisory staff is responsible for the effective implementation of, and adherence to the program on their sites, including the briefing of all employees, the provision of appropriate education and training resources and the review of the Program's application and effectiveness in their areas of responsibility.

Supervisory staff is responsible for ensuring that all individuals in their area of responsibility understand and comply with the requirements of this Program.

Communications of confidential material is on a need-to-know basis only. In general, supervisory staff will only be provided with functional ability information. However, if the supervisory staff is in a position where they have knowledge of or are required to receive sensitive medical or other information of a confidential nature, then they are responsible for establishing appropriate procedures and facilities to ensure that this information is safeguarded as required by this Program.

- Be knowledgeable about ODV, Drug and Alcohol Program and procedures.
- Recognize symptoms of the inappropriate use/abuse of drugs and alcohol.
- Understand ODV's performance management procedures.
- Act on performance deviations.

- Act on reported or suspected drug and/or alcohol use by employees.
- Handle all sensitive information in a confidential manner; and
- Treat all employees with respect and dignity.

Drug and Alcohol Training

Project managers, superintendents and foremen will receive training to ensure that they have:

- An understanding of the purpose of the Drug and Alcohol Program and the requirements established by this Program.
- An understanding of some common drug and alcohol-related terms.
- An awareness of the effects of drug and/or alcohol use on work performance.
- An ability to recognize behaviors that may indicate a drug or alcohol related problem.
- An understanding of denial, enabling, and the importance of avoiding behaviours, which allow problems related to drugs and alcohol, to continue.
- An understanding of their roles and responsibilities in addressing performance problems that may be related to drug and alcohol use; and
- Access to and understanding of the available resources for employees who may have a substance abuse problem.

Employees

Will receive awareness training to ensure they

- Understand and know the purpose of this Drug and Alcohol Program.
- Have awareness of their responsibilities to meet the work standards under the Drug and Alcohol Program, and to ensure safety of themselves, others, and work site.

Referral/Self-Help

Employees are encouraged to seek assistance from ODV before drug problems lead to performance problems. When an employee comes forward to ODV, the employee's decision to seek assistance will not become part of their workers file, will not be used as a basis for disciplinary action, and will not be used against the employee in any disciplinary proceedings.

However, the fact that the employee came forward to ODV for assistance will not be a defence to imposition of disciplinary action where evidence of a violation of this policy is obtained outside of ODV's efforts to assist the employee. Employees participating in a treatment program may be granted leave with a conditional return to work dependent upon such employee's successful completion of an appropriate treatment regime, which is determined by a Substance Abuse Professional.

Possession of Drugs and/or Alcohol

Being in possession of drugs or alcohol while on ODV's site or property is a contravention of the Drug and Alcohol Work Rule. An employee shall not have on his person any amounts of drugs or alcohol while on a ODV work site. If discovered, the drugs or alcohol will be confiscated from the employee by a supervisor.

The supervisor and his/ her superior will make the decision about whether to contact the local authorities. The drugs or alcohol will be photographed and tagged, for evidence to support disciplinary action. If the authorities are not contacted, the evidence is to be disposed of after being photographed and documented, lest a supervisor now is found to be in possession.

Employees who have been found with drugs or alcohol in their possession but were not found in the act of using the drugs, are not to be tested, and their employment is to be terminated. If the employee was found using the drugs or alcohol and has some remaining in their possession, the remaining amounts will be confiscated following the above-mentioned procedure, and the employee will be asked to test, as per the reasonable ground's procedure.

Search Requirements

ODV reserves the right, as a condition of employment or as a term in the contract between ODV and a contractor or Subcontractor, to conduct unannounced searches for the seizure of alcohol, drugs, or drug paraphernalia on ODV premises where there are reasonable and probable grounds to believe that they may be present and there has been a suspected breach of this program.

Such searches may include searches of individuals and their personal property brought onto the work site. The employee and contractor acknowledge that their entry onto ODV premises is deemed consent to a search and seizure at any time while entering on or leaving ODV premises and when carried out pursuant to the program.

The employee and the contractor, or sub-contractor expressly acknowledge that their right to privacy and to be secure against unreasonable search or seizure is expressly subject to the right of ODV to maintain a safe workplace and to ensure that there are no violations of ODV policies and/or no laws are being violated.

Where searches and seizures are conducted with the employee, contractor, or sub-contractor present, the RCMP may be called to assist, and the individual will be informed of the following prior to the search and seizure:

- That a search and possible seizure is being conducted.
- The reason for the search.
- There are reasonable and probable grounds to believe the individual has alcohol, drugs or drug paraphernalia in their possession and is suspected to be in breach of this policy.

- That the individual need not cooperate or provide any statement unless they so choose, but that appropriate law enforcement agencies may be contacted.
- That the search and seizure is a condition of employment or is a term in the contract between ODV and contractor, whichever is applicable, and
- That the individual has the right to retain and instruct counsel without delay.

When searches of employee's personal property occur, without the employee or contractor present, ODV will advise the affected individual as soon as reasonably possible after the search and seizure as to what has occurred.

Any attempt without just cause, by an employee, contractor, or sub-contractor, to impede or prevent a search and seizure of alcohol, drugs, or drug paraphernalia on ODV premises carried out pursuant to this program will be considered a serious breach of this Program and may at ODV sole discretion, result in disciplinary action up to and including termination for cause on the case of an employee, or immediate termination of the contract in the case of the contractor, or sub-contractor.

Any seized items which violate the terms of this Program will be immediately impounded and tagged as to date, names of persons present and general description of the item and then sealed in a container or bag and turned over to the appropriate law enforcement agency where appropriate to do. The seized items will be kept in the exclusive possession of the ODV superintendent or security designated in a locked place unless transferred to the appropriate law enforcement agency. The employee of contractor or Subcontractor will be given a receipt for the seized item.

Conditions for Continued Employment

An employee who has been disciplined for drugs or alcohol, or has voluntarily come forward with an abuse problem, and who has successfully completed rehabilitation, will be required to submit to drug and alcohol testing, prior to returning to work and may be required to submit additional follow-up testing as part of conditions of a continued work plan.

- A Conditions for Continued Employment Form must be completed and signed by the employee then faxed to the Substance Abuse Prevention coordinator at (to be determined) prior to the employee resuming work duties on site.
- The onsite contact person must have written confirmation from the Safety Manager that a treatment program has been successfully completed.
- ODV Safety Coordinator will interface with the superintendent, or designate, to ensure there is work available. If there is no suitable work available, a designated supervisor will contact the employee to inform him of such.

- The employee will be tested following the completion of a treatment program prior to commencing their first shift.
- Failure to comply with the terms outlined in the Conditions for Continued Employment will result in termination of employment.
- The employee may be subject to follow-up testing without prior notification as per the Conditions for Continued Employment.
- Follow-up and post-treatment programs are based on the recommendations of the Substance Abuse Professional.

Definitions for Drug and Alcohol

Alcohol: A beverage alcohol that is designed and manufactured for human consumption.

Drugs: A substance, chemical or agent which the use of, or possession of, is unlawful in Canada or requires a personal prescription from a licensed treating physician, any non-prescription medication lawfully sold in Canada or any drug paraphernalia.

A drug is any substance, including alcohol, illicit drugs, or medications in which the user has the potential to change or adversely affect a person's physiological and/or psychological state. Drugs of concern are those that potentially inhibit a person's ability to perform their job safely and productively.

Specific drugs of concern include but are not limited to alcohol, marijuana, cocaine, opiates, phencyclidine, and amphetamines.

Drug Paraphernalia: Any personal property, which is associated with the use of any drug, substance, chemical, or agent, the possession of which is unlawful in Canada.

Drug or Alcohol Test: A scientifically recognized test, which analyses an individual's urine, breath, or other bodily fluid samples for evidence of drug or alcohol use.

ODV Property and Workplace: All personal property, construction camps facilities, buildings, equipment, containers, vehicles, vessels, boats, and aircraft whether owned, leased or used by ODV and wherever it may be located.

Contractor refers to:

- Any corporation and/or its employees doing business with ODV.
- The individual person doing business with ODV and whose pay is not subject to deductions for income tax, E.I and CPP; or
- Any person who would otherwise be in regular employment with ODV but does not receive ODV benefits.

Employee: Any person on ODV payroll.

Medical Review Officer: The licensed physician who is designated to fill the position of Medical Review Officer under the mandatory guidelines of this Program.

Medication: A substance used for medicinal purposes.

Negative Test Result: A report from the Medical Review Officer that the employee, who provided a specimen for drug and/or alcohol testing, did not have a drug or alcohol concentration level more than cut-off levels.

Owner: The person in legal possession of a workplace.

Positive Test Result: A report from the Medical Review Officer that the employee, who provided a specimen for drug and/or alcohol testing, did have an alcohol or drug concentration level more than the cut-off level.

Reasonable Grounds: Information established by the direct observation of the employee's conduct or other indicators, such as:

- The physical appearance of the employee;
- His/her attendance record;
- Changes in the speech pattern or behaviour of the employee;
- Circumstances surrounding an accident;
- Near miss or potentially dangerous incident;
- Presence of alcohol, drugs or paraphernalia near an employee or work area.

Rehabilitation Program: A program tailored to meet the needs of an individual, which may include education, counselling and residential care offered to assist a person in complying with the drug and alcohol program.

Supervisor: The person who directs the work of others and may, depending on the nature of ODV structure, include the foreman, general foreman, supervisor, and superintendent and team leader.

Work: Training and any other breaks from work while on ODV property or a ODV work site. All such information will be dealt with in the strictest confidence in accordance with Freedom of Information and Protection Act

APPENDIX 2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

It is the policy of ODV to comply with sections 1.8.1 – 1.8.7 of the Health Safety and Reclamation Code for Mines in BC. ODV, will maintain a policy regarding the use of Personal Protective Equipment (PPE) that is required to be worn while conducting ODV business and/or on mine property. ODV will strictly enforce this policy to provide a safe work environment for all employees, contractors, and visitors to the mine site.

All PPE required for a project must be identified and compiled prior to arrival on the project site. If sufficient PPE is not available, the employee will not undertake work until appropriate PPE has been obtained. The general rules listed must always be followed when working at the ODV site. Failure to do so is subject to disciplinary action.

All PPE must remain in good condition, and defective or missing equipment must be replaced promptly. Always use the equipment in accordance with training and instruction, inspect before use, refrain from wearing protective equipment outside of the work area where it is required if to do so would constitute a hazard.

PPE is selected according to the hazards present, and workers should be trained on the proper use, care, and limitations of the equipment.

No piece of PPE should be modified or changed contrary to its manufacturer's instructions. Whenever PPE is required and used by ODV workers, it must be inspected first and then worn and maintained in a good and sanitary condition. All specialized PPE will be formally inspected and documented prior to use. Any PPE that is of questionable reliability is damaged or in need of service or repair, will be removed from service immediately.

Job Hazard Analysis is a technique that focuses on job tasks to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment.

Safe Job Practices can be defined as a set of methods or "Dos and Don'ts" regarding how to use equipment or carry out a specific job.

Safe Work Procedures can be defined as a written set of step-by-step instructions on how to safely complete a specific job.

Fitting, Care and Use of PPE

ODV has written Safe Work Procedures (SWP) or Supplementary Programs for PPE, which outline the proper fitting, care, and use of PPE.

PPE Selection

Personal protective equipment will be selected based on the following information:

- Refer to the appropriate Job Hazard Analysis, Safe Work Procedures, Safe Job Practices, Safety Data Sheets and/or Hazard Assessments;
- For hazardous materials, always check the Safety Data Sheet (SDS) and product labels to determine PPE requirements and
- Ensure PPE meets the required standards and regulations.

Training

All workers who are required to use PPE will be trained. During the New Worker Orientation, Project Orientation and job-specific training, the following information will be covered:

- When the use of PPE is required;
- What specific PPE is required for the job;
- The proper fitting, care and use of PPE as outlined on PPE Safe Work Practices;
- How to inspect PPE;
- The limitations of required PPE; and
- The lifespan and disposal of required PPE.

Following training, ODV workers must demonstrate an understanding of the above training, and all employee training must be documented and maintained.

Roles and Responsibilities

Roles and responsibilities of ODV staff and employees with respect to personal protective equipment are discussed below.

Management

Management's responsibilities include the following:

- Provides resources to ensure PPE is maintained in good condition as required by the Health, Safety and Reclamation Code for Mines in British Columbia.

Supervisor

The Supervisors' responsibilities include the following:

- Establishes requirements for PPE and takes disciplinary action to ensure compliance;
- Consults with workers to evaluate equipment and workplace conditions to determine appropriate PPE;

- Trains the worker in the use, fitting, care, and maintenance of the PPE;
- Maintains training documents and records; and
- Ensures that PPE in questionable condition, damaged or in need of service or repair, is removed from service immediately and guarantees replacement procedures for PPE.

Worker

- Uses required PPE;
- Ensures he/she has been trained and educated on the use, fitting, care, and maintenance of PPE;
- Actively participates in PPE training, inspections, maintenance, and care;
- Notifies his/her supervisor immediately if he/she is unable to access PPE; and
- Basic PPE supplied by ODV.

Note:

- PPE requirements may be modified with the job hazard assessments for specific tasks or locations, such as core handling buildings.
- These requirements may not apply to offices, lunchrooms, vehicle cabs or labs; however, appropriate clothing for the job will be required, which includes appropriate footwear.

Table 2-1 PPE Requirements and Criteria

Types of PPE	Basic/ Specialized	Fitting, Care & Use of PPE	Provided By	
			Worker	Employer
Safety Headgear	Basic	PPE SWP		☒
Safety Footwear	Basic	PPE SWP	☒	
General Purpose Work Gloves	Basic	PPE SWP		☒
(Specialized) Hand Protection	Specialized	PPE SWP		☒
Eye and Face Protection	Basic	PPE SWP		☒
Hearing Protection	Basic	PPE SWP		☒
High-Visibility Safety Apparel	Basic	PPE SWP		☒
Respiratory Protection	Specialized	Supplementary		☒
Fall Protection Equipment	Specialized	Supplementary		☒

SWP: Safe Work Practice

The following PPE must be worn:

- Steel-Toed Boots – Have steel or composite reinforced toes that meet CSA approval guidelines. Be a minimum of 6" high from the tread of the sole to the top of the boot and must be in good condition and laced up to the top.
- Work boots worn on site must conform to CSA Standard "Protective Footwear" Z195-02. Z195-M1984
- Steel-toed Rubber boots CSA- Underground – Rubber boot with metatarsal protection Must be worn underground.
- Eye Protection – CSA Approved - The appropriate protection or combination of protection must be worn for the work being performed. Safety Glasses must be worn at all times when onsite. Ensure your eye protection is properly fitted to your face. Safety glasses must cover your eyes and have side shields. All eye protection must meet CSA Standard Z94.3-M1988 Z94.3- 99 or CSA Z94.3-02.
 - Double-eye protection, face shield and safety glasses must be worn when Grinding, drilling, saw-cutting, jackhammering, pressure washing, sledgehammer and anytime there is a potential of flying debris.
 - Prescription eyewear must meet CSA Standard Z94.3. Wearing of contact lenses is not permitted on ODV's work sites.
- Eye Protection for Welders
 - Welders and their helpers must wear the prescribed approved equipment. Any other workers working in the area should also wear eye protection where there is a chance they could be exposed to an arc flash.
- Face Protection:
 - Metal mesh face shields for radiant heat or hot and humid conditions.
 - Chemical and impact resistant (plastic) face shield.
 - Welders' shields or helmets with specified cover.
 - Filter plates and lens
- Hearing Protection

Any sound over 85 dBA requires hearing protection. Hearing loss can be very gradual and usually happens over a number of years. The most common types of hearing protection are earplugs and earmuffs. Noise monitoring tests must be completed to determine the correct hearing protection.

Employees that are exposed to worksite noise exceeding 82 dBA must have their hearing tested every 12 months.

- The company will schedule and pay for this. Contractors will pay for their own employees.
- Hearing protection must be worn when exposed to noise levels over 85 dBs (e.g., shouting instructions at 4').
- It's important that workers wear hearing protection devices when exposed to noise from loud equipment such as power tools, mobile equipment, crushing operations, conveyor systems and processing equipment.

Underground

- Double hearing protection must be worn when underground.

Head Protection

Head Protection – Approved CSA – ODV requires workers to wear approved hard hats when there is a risk of injury to the head of a worker. Hard hats must not be damaged, structurally modified, covered in stickers, subjected to severe impact or have been painted or cleaned with solvents. Both parts of the headwear must be compatible and maintained according to the manufacturer's instructions. If attachments are used with headwear, they must be designed specifically for use with the specific headwear used.

- Hard hats must be worn brim forward unless designed otherwise.
- Hard hats must be worn at all times when onsite or in the field.
- Bump caps are not considered a helmet.
- No metal hard hats will be allowed on Project sites.
- Helmets must be replaced by expiry dates.
- Underground hard hats must be full brim, underground light, and double hearing protection (earmuffs and earplugs).
- Hard hats must be worn when welding, face shields attached to hard hats
- Do Not drill, remove peaks, or alter the shell or suspension in any way.
- Do Not use any liner that contains metal or conductive materials.
- Do Not carry anything in the hard hat while wearing the hard hat.

Safety Vests

All workers must wear High Visibility apparel as per ODV policy anytime while onsite, whenever there is a potential hazard from moving a vehicle and mobile equipment. High Visibility apparel must also be worn in designated areas and as required by the site-specific plan. All High Visibility apparel must comply with the Canadian Safety Association (CSA) standards, MEMLCI, WorkSafeBC and must be in good condition.

- Hi-Visibility apparel must be either Yellow or Orange. Red is acceptable.
- Black or dark blue are not allowed on site.
- Coverall must be orange in colour.

Skin protection

- All employees handling materials or working around materials must wear gloves that will protect against, burn, chemicals, scrapes, abrasions, heat and cold, punctures, cuts, and electrical shocks. PPE for the hands includes mitts, leather gloves, green kings, chemical, Cut Sharpe resistant gloves, and barrier creams, abraded or irritated hands or arms the worker shall wear protective gloves or other personal protective equipment to prevent such injuries.
- Choose hand PPE that will protect against the job hazard. Gloves should fit well and be comfortable.
- When selecting hand PPE, keep the following in mind: look for anything at the job site that may be a hazard to the hands. If gloves are to be used, select the proper type for the job to be done. Inspect and maintain hand PPE regularly. If in doubt about the selection or need for glove or hand PPE, consult your safety supplier's SDS.
- Safety pants or chaps are required where there is a risk of a cut, puncture, irritation, or abrasion to the lower body.
- If handling bodily fluids or performing first aid treatment, use medical Nitril gloves, which are in the first aid kit.
- Where workers are routinely exposed to hazardous substances, ODV will provide them with, and require them to use, protective clothing, gloves, and eyewear or face shields that are adequate to prevent exposure of the worker's skin and mucous membranes to the hazardous substance.

Life Jackets – PFD

For emergency rescue, a life ring complete with a throwing line of adequate length must be available at all bodies of water where drowning could be a risk. All workers who work within 5 ft (1.5 m) of open water or be transported across open water must wear an approved personal flotation device in good condition while performing the work. An exception is granted if the perimeter of their workplace has appropriate standard fencing or guardrails and toe boards to prevent a fall into the water.

- Any person who falls into the water should see the first aid attendant for signs of hypothermia.

Respiratory Protection – Air Purifying Respirators

There are two basic types of APRs:

- Disposable fibre type with or without charcoal or chemical filter “buttons.”
- Reusable rubber/silicon facemask type with disposable or rechargeable cartridges

The choice of equipment depends on your job, the Hazard Assessment, and the SDS for the situation you are working in. Supervisors and workers must review the SDS prior to the selection of respiratory protective equipment.

It is important to remember that APRs are limited to areas where there is enough oxygen to support life. APRs do not supply or make oxygen. The type of APR, the user’s breathing demand, and the concentration of airborne contaminants affect the service life. When an APR is required, consult the SDS and supplier to ensure the correct filters are used.

Facial hair can prevent a seal and good fit of the APR: one to three days’ growth is the worst. Follow the manufacturer’s instructions regarding the masks, filters, cartridges, and other components. Workers who must use respiratory protection should be clean-shaven. An APR is only as good as its seal and its ability to filter out contaminants as it was designed to.

- Ensure that respirators are properly cleaned and disinfected after each shift, according to the manufacturer’s instructions and procedures.
- Dispose of exhausted cartridges and masks in sealed bags or containers.
- Keep new, unused filters separate from old, used filters.
- Monitor APR use; they are useless when hanging around the neck.
- Replace filters when breathing becomes difficult.
- Conduct a seal check before entering the contaminated atmosphere and every time after the seal is broken.

DO NOT:

- Use for protection against materials which are toxic in small amounts.
- Use with materials that are highly irritating to the eyes.
- Use with gases that can’t be detected by odor or throat or nose irritation.
- Use with gases not effectively halted by chemical cartridges regardless of concentration. Read the cartridge label.
- Use respirators or masks if the serviceability is in doubt.
- Use APRs where oxygen content in the air is less than 19.5% or 18 kilopascals (or greater)

Respiratory Protection – Air Supplied Respirators

There are two styles of Air Supplied Breathing Apparatus. All supplied air respiratory protection must maintain positive pressure in the facepiece. This equipment is used in O₂ deficient and hazardous gas locations, during regular and emergency work. A Hazard Assessment must be completed prior to use. Refer to SDS.

1. Self-Contained Breathing Apparatus (SCBA)

SCBA is excellent for rescues and safety watch duties. These units have a limited amount of air supply. The minimum amount of air required in an SCBA is 30 minutes. When SCBAs are required for rescue situations, they must be inspected per shift to ensure that they are functioning properly.

Four main components for an SCBA are:

- Air supply – ensure the cylinder valve is fully opened.
- Regulator assembly – perform a function test to ensure the alarm works.
- Mask assembly – perform a negative pressure test to ensure a proper seal.
- Harness (adjustable) – ensure it fits tightly.

2. Supplied Air Breathing Apparatus systems (SABA)

SABA systems are used when a worker is required to work under air for an extended period. Workers must take breaks regularly, as the air is very dry and clean. SABA gives a continuous air-supply; however, the wearer is limited in mobility due to the airline connection length. Beware of your airline, as it can get tangled or run over. You must exit the same way you're entered.

SABA components are the same as those of the SCBA but have two additional components. These are larger air supply and an escape cylinder. Air to the SABA is supplied from an air trailer or cylinders pigtailed together. The air travels through the regulator to a manifold that permits 1 to 3 workers to work off the same system.

There is no alarm on a SABA. If your air is interrupted, you will be required to turn your escape cylinder on, disconnect the airline from your hip, and exit the area. Ensure your escape cylinder air is full.

Coveralls

Coveralls are required to be worn at all times underground, and whenever the worker is exposed to a large amount of dust, chemical products, oils grease or other materials that can contact the skin or the worker's personal clothing.

Coveralls must only be orange in colour. Must have 4 inches of reflective material. ERT Member will wear Red FR coveralls.

Flame Resistant Clothing

Flame resistant clothing (FRC) will protect against flash fire. Always ensure that the clothing worn beneath the flame-resistant clothing is also flame-resistant or made from natural fibres. Do not wear polyester or other materials that can melt.

- Ensure a proper fit for your coveralls.
- Wear winter coveralls as required for the weather conditions.
- Wash your coveralls as per the manufacturer's specifications.
- Coveralls are supplied and shall be worn in a way that ensures they will perform the functions for which they were designed.

Standards/Hazards

- FRC must fit the worker appropriately to prevent tripping hazards.
- Always wear the FRC with the zippers done up and snaps on wrist clasped together, as burns can occur on skin that is not covered.
- Never tie the arms around your waist. FRC is supposed to be worn as per the manufacturer's specifications.

With all PPE, following the manufacturer's instructions on its use, care, and cleaning is critical and will help you get the full-service life from your specialty PPE.

Clothing - Every employee must wear clothing appropriate for work, long pants and long-sleeve shirts when working outside. Over-the-shoulder shirts 6 inches can be worn when working indoors if the conditions warrant this. Loose apparel must be secured or removed, and long hair (including long beards) must be tied back. Hoodies or jacket hoods cannot be worn under or over a hard hat. No jewelry to be worn on site. You must follow the requirements of the Mine Code and company policy.

- No rings, necklaces, or piercings are permitted to be worn on the mine site, and nothing is to be worn around the neck. Wristwatches must be held on using an elastic band only, no straps.

Welding/cutting - Approved tinted goggles or shields must be worn:

- Using welding or cutting equipment
- Doing work which may expose the employee to extremely bright light.
- Welding helmets must attach to a hard hat.
- Welding equipment must be cleaned regularly

- A Welding screen (arc flash) must be placed in such a manner that welding flashes will not affect adjacent workers. Screens are required for all welding onsite.

Fall Protection

Fall protection is the attempt to eliminate and or minimize injury from hazards that could result from unintentional falls while on the job by:

Employees must use guardrails and/or safety harnesses with fall arresting devices when required to work at an elevation of three (3) meters (10 feet) or more above grade, or when a fall from a lesser elevation involves an unusual risk of injury. Lifelines, anchors, safety nets, control zones, safety monitors and other procedures acceptable to the applicable authority must be used.

- Minimizing the elevation of a worksite through the use of scaffolds, permanent platforms, and mechanical lifts
- Utilizing safety netting to catch falling workers.
- Proper use of personal equipment designed to protect the worker from accidental falls or serious injury should a fall occur.

Analysis of Fall Hazards

Identify hazardous areas. Qualitative assessment of risk must include probability ratings to determine which jobs are the highest risks

Class 1 – no chance for a fall.

Class 2 – occasional chance.

Class 3 – frequent chance to fall.

Severity of risk or fall outcome should be considered.

Rating 1 – marginal.

Rating 2 – critical: may cause death or serious injury.

Rating 3 – catastrophic: almost certain death.

Inspection Requirements

The following markers shall appear on a durable label secured on the full-body harness and shall be written in English and French:

Group A – Fall Arresting.

Group B – Controlled Descent.

Group E – Confined Space Entry and Exit raising and lowering.

Group L – Ladder Climbing.

Group P – Work positioning.

It is important that a harness is inspected prior to use and yearly or more frequently by a trained and competent person. A written record of such inspection and approval for continued use should be retained in company records.

Any unit that has sustained fall arresting service must be removed from service and not be used until it has been inspected by a trained and competent person and approved for reuse. Any full body harness should have its own instruction sheet with diagrams and written instructions.

Manufacturers should provide instructions to recommend cleaning agents and methods of cleaning.

APPENDIX 3 WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM

Sections 5.3 to 5.19 of British Columbia's OHS Regulation, the WHMIS Requirements, apply to employers and workers in British Columbia with respect to controlled products used, stored, or handled at a workplace. Guidelines G5.3.1 to G5.15, Workplace Hazardous Materials Information System (WHMIS), provide additional clarification and are intended to assist in the application and interpretation of the *Workers' Compensation Act* and OHS Regulation.

Hazardous materials may cause serious health problems in workers or fires or explosions in the workplace. WHMIS provides information on hazardous products, as defined, and described in the federal *Hazardous Products Act* and Hazardous Products Regulations, so workers can protect themselves.

Each hazardous product must have a label and a data sheet. Labels identify the product's hazards and precautionary measures. Data sheets provide more detailed information. If the product is not classified as a hazardous product, the employer must still provide training, supervision, and safe work procedures.

Suppliers must:

- Classify hazardous products;
- Prepare and provide labels and SDSs to customers; and
- Provide supplier labels on all containers of hazardous products they sell or produce.

Employers must:

- Ensure that all hazardous products are properly labelled;
- Make SDSs readily available to workers;
- Prepare workplace labels and SDSs as necessary; and
- Provide Managers, Supervisors, and Workers with accredited WHMIS training.

Workers must:

- Participate in WHMIS 2015 training programs;
- Take the 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 Labels provide the essential information that a person needs to handle a particular product safely. SDSs provide basic technical information about a product's physical characteristics and its hazardous properties. The worker education element ensures that workers can apply the information to protect worker health and safety.

Employers must ensure that hazardous products used at their workplace are labelled according to WHMIS regulations. There are two main kinds of WHMIS labels - Supplier labels and Worksite labels.

Suppliers must affix a label to containers of hazardous products they supply. The label must be present on hazardous products in their original containers and must be presented in English and French. Supplier labels provide key information such as pictograms, hazard statements, signal words, and precautionary statements, as well as identifying product names and suppliers.

Worksite labels must be affixed. Although there is no specified format for worksite labels, they should provide information regarding:

Product Identification (brand name, code name or chemical name) Information for safe handling of the product and a statement indicating that the SDS is available.

If a supplier label applied to the hazardous product container becomes illegible or accidentally removed from the container or receives a hazardous product without a supplier label, the employer will affix either a supplier label or a workplace label that meets the requirements of the Hazardous Products Regulations

Decanted Products

Employers will ensure that hazardous products in the workplace that are decanted from the supplier container into another container will have a workplace label applied to it.

Supplier Safety Data Sheets (SDS)

Employers are responsible for obtaining from suppliers an SDS for each hazardous product used in their workplace. The employer may also develop an SDS in place of a supplier SDS, provided that the employer SDS contains at least the same content found on the supplier SDS and indicates that a supplier SDS is available.

The SDS will provide useful information such as

- The product's hazards;
- How to use the product safely;
- What to expect if the recommendations aren't followed;
- How to recognize symptoms of exposure; and
- What to do if emergencies occur.

Employers and Contractors on ODV sites will ensure that SDS for each hazardous product is kept on-site and readily available at the workplace to workers who may be exposed to the hazardous product including the first aid attendants, joint committee or the worker health and safety representative.

Training

If a worker who is required to work with, or may be exposed to a hazardous product in the course of his or her work activities, the employer of that worker will ensure that the worker is trained in the following:

- The content required on a supplier label and workplace label and the purpose and significance of the information contained on those labels.
- The content required on the SDS, and the purpose and significance of the information contained on the SDS.
- Procedures for the safe use, storage, handling, and disposal of the hazardous product.
- Procedures for the safe use, handling and disposal of the hazardous product contained or transferred in a pipe or piping system including valves, a process or reaction vessel, or a tank car or tank truck.
- Procedure to be followed where fugitive emissions are present if workers may be exposed to "A gas, liquid, solid, vapour, fume, mist, fog or dust that escapes from process equipment, emission control equipment or from a product where workers may be readily exposed."
- Safe Work Procedure and emergency response procedure to be used in the workplace.
- A copy of each SDS will be made available to the worker for review; the location of the SDS will be communicated to every worker, and
- For emergency purposes, a copy of each SDS will be provided for the site first aid room.

Chemical Hazards

- The construction environment will likely create numerous chemical hazards, including welding fumes, grinding, cutting, sanding, coating, painting etc. The chemical hazards generated from these activities shall be assessed and reported on for different operating conditions, weather conditions, and base materials to create a representative cross-section of construction activities.
- The contractor shall assess their worker exposures to controlled products and other potentially harmful substances and agents.
- If quantification of exposure is possible and warranted, only approved methods of measurement will be used (Personal exposures and area measurements will be

determined in consideration of different conditions including weather, the degree of natural ventilation (or enclosure), etc.

Material Safety Data Sheet Locations

Material Safety Data Sheets are electronically stored on Administration Drive (S:) → ODV SUPERVISION → Health and Safety → SDS → Site Folder.

APPENDIX 4 TRANSPORTATION DANGEROUS GOODS

Transport Canada, based on risks, develops safety standards and regulations, provides oversight, and gives expert advice (through the Canadian Transport Emergency Centre – CANUTEC) on dangerous goods incidents to promote public safety in the transportation of dangerous goods by all modes of transport in Canada. Pursuant to the Transportation of *Dangerous Goods Act* Section 2.5, regarding Safety Requirements Respecting Transportation of Dangerous Goods:

A person must not handle or transport dangerous goods unless all applicable prescribed safety requirements are complied with; and,

All containers, packaging, road vehicles and rail vehicles comply with the applicable prescribed safety standards and display the applicable prescribed safety marks.

Those ODV employees working as expeditors, or who will be required to transport materials considered dangerous goods, will undergo certification through an online course. Learning objectives include:

- The importance of safety training when handling dangerous goods;
- How to be aware of the dangers when loading, unloading, and transporting dangerous goods;
- TDG regulations, exemptions, and special cases;
- How dangerous goods are classified;
- Emergency response and reporting;
- Required labelling for containers;
- Necessary safety markers when transporting dangerous goods; and
- Documentation when handling dangerous goods.

APPENDIX 5 JOINT OCCUPATIONAL HEALTH AND SAFETY COMMITTEE

A Joint Occupational Health and Safety Committee (JOHSC) shall be established to: (i) raise awareness of health and safety (health and safety) issues across the Cariboo Gold Project, (ii) identify workplace health and safety risks, and (iii) develop recommendations for ODV to address these risks.

This is a joint committee made up of workers and management representatives consulting in a cooperative spirit to identify and resolve health and safety issues in support of a planned occupational health and safety program at ODV. The committee will represent the concerns of all workers in the employ of ODV.

ODV

The employer must ensure that, with respect to each of the employer's joint committees, a written evaluation is conducted annually by:

- The co-chairs of the JOHSC or, with respect to each co-chair, the member, or members of the JOHSC designated by the co-chair, or
- the employer or a person retained by the employer.

Roles and Responsibilities

The Committee Members roles and responsibilities include:

- Demonstrating leadership qualities, confidence and maintains the respect of other members.
- Encouraging and maintaining an unbiased viewpoint.
- Actively listening to all committee members.
- Reviewing the previous minutes and materials for accuracy.
- Actively working together with members on the preparation of the agenda.
- Recording, documenting, and maintaining a file of committee activities.
- Circulating and posting committee minutes for members and the workforce.
- Identifying situations that may be unhealthy or unsafe for workers and advise on effective systems for responding to those situations.

- Considering and promptly dealing with complaints relating to the health and safety (health and safety) of workers.
- Consulting with workers and the ODV management team (Management Team) on pertinent health and safety issues and occupational environment.
- Making Recommendations to the Management Team and the workers health and safety improvements, and the occupational environment of workers.
- Recommending to the Management Team educational programs promoting improved health and safety performance and regulatory compliance, with Part 3 of the Workers Compensation Act and to monitor their effectiveness.
- Advising the Management Team on programs and policies required under regulations for the workplace and to monitor their effectiveness.
- Advising the Management Team on proposed changes to the workplace including significant proposed changes to equipment and machinery, or the work processes that may affect the health or safety of workers.
- Ensuring that accident investigations and regular inspections are carried out as required.
- Where practicable, participating in safety inspections and incident investigations.
- Carry out any other duties and functions prescribed by BC Workers' Compensation Act, Part 3 Division 4 - Joint Committees and Worker Representatives.

Composition of the Committee

- The size of the workforce dictates the type of safety meeting to be conducted. If the ODV workforce (excluding subs) is 20 or less, an informal toolbox meeting will be held. If the total number of ODV workers exceeds 20 then a formal Health and Safety Committee must be created.
- The JOHSC shall be comprised of representatives from the various departments/locations to accurately reflect the work and hazards at that site. The committee must not be comprised of more than 50% management, although more than 50% membership of worker representatives is allowed.
- Meetings will be held monthly. The names and departments of the JOHSC members shall be posted annually at designated locations.

JOSHSC members shall cease to be members if they:

- Resign from the committee.
- Fail to attend 3 consecutive meetings without communicating with the chairpersons.
- Resign from their employment.

- Breach confidentiality

Co-Chairpersons

- The JOSHC shall elect co-chairs from the membership.
- The worker representatives select a co-chair.
- The Management Representative acts as a co-chair.
- The co-chairs shall:
 - Control/facilitate the meetings,
 - Ensure the maintenance of an unbiased viewpoint,
 - Review previous meeting reports and material prior to the meetings,
 - Arrange for the meeting place,
 - Notify members of the meetings,
 - Prepare meeting agendas and minutes, and
 - Prepare recommendation(s) and forward to the Management Team for a response.

Terms of Office

- JOSHC members sit on the committee for the duration of the project.
- If a JOSHC member chosen by the workers is unable to complete the term, the workers shall choose another member.
- If a member of the JOSHC appointed by the Management Team is unable to complete the term of office, the Management Team shall appoint another member.
- All JOSHC members shall arrange to have an alternate member to attend meetings in their place when they are unavailable to attend.

Meetings

- The committee will meet at a predetermined date and time each month.
- Special meetings, if required, will be held at the call of the co-chair.
- A quorum will consist of a majority of members.
- The committee will add procedures they consider necessary for the meetings.

Every meeting will discuss at a minimum the following:

- Review of last minutes.
- Status reports on action items.

- Workplace inspection reports.
- Accident/Injury reports.
- Concerns from JOHSC members.
- New business.

Role of Guests

- Co-chair(s) can invite guests to committee meetings, and
- Guests who attend committee meetings must be there for the purpose of training, providing a presentation and/or for consultation.

Records

The committee keeps accurate records of all matters that come before it. The committee maintains copies of its minutes for a period of at least two years from the date of the Joint Occupational Health and Safety Committee meeting to which they relate.

Assistance in Resolving Disagreements

If the JOHSC is unable to reach an agreement on a workplace health and safety matter, a co-chair of the committee may report this to WorkSafeBC, which may investigate and attempt to resolve the matter.

Agendas and Minutes

- An agenda will be prepared by a co-chair and distributed to members prior to the meetings.
- Items submitted for inclusion on the agenda must be received by the co-chair at least three working days prior to the meeting.
- Minutes will be prepared as soon as possible after the meeting and will be made available to management, JOHSC members and WorkSafeBC.
- The minutes of the three most recent committee meetings will be posted in a conspicuous place in the workplace.
- Copies of WorkSafeBC inspection reports for the proceeding twelve months will be posted in a conspicuous place in the workplace.

Other Considerations

- A member of the JOHSC is entitled to time off from work for the time required to attend meetings of the JOHSC.
- Each member of the JOHSC is entitled to an annual educational leave totalling 8 hours, or a longer period if prescribed by regulation, for the purposes of attending occupational health and safety training courses conducted by or with the approval of WorkSafeBC.

Recommendations to the Employer Must Meet These Guidelines

- Are directly related to health and safety,
- Are reasonably capable of being accomplished, and
- Are complete (employer does not need more information to decide).

Assistance in Resolving Disagreements Within Committee

If the JOHSC is unable to reach an agreement on a matter relating to the health or safety of workers at the workplace, a co-chair of the committee may report this to WorkSafeBC, after which WorkSafeBC may investigate and attempt to resolve the matter.

Evaluation of the Committee Activities

The employer or committee will ensure the JOHSC activities are evaluated annually. The person conducting the evaluation may be the employer or person retained by the employer and/or a committee member(s).

The evaluation of the JOHSC must contain, and relate to, all relevant requirements set forth with regards to the *WSBC Act* and OHS regulations.

Minimum Training Requirements

Each member of the JOHSC receives a total of at least 8 hours of instruction and training as soon as practicable, but no later than 6 months after becoming a member. Each member of the JOHSC is entitled to an annual educational leave totalling 8 hours, three occasion training sessions during the year for mine site-related committees or a longer period if prescribed by regulation and/or code, for the purposes of attending occupational health and safety training courses relevant to the activities of a JOHSC representative.

The training must include the following topics (at least 4 hours):

- Duties and function of the JOHSC,
- Requirements respecting investigation, and
- Requirements respecting inspections and how to make regular inspections.

A member of the JOHSC may designate another member to take all or part of the member's educational leave.

ODV will provide the educational leave without loss of pay or other benefits and will pay for, or reimburse the worker for, the costs of the training course and the reasonable costs of attending the course. The person who receives instruction and training must ensure the employer receives a copy of the record.

Once the person who receives instruction or training ceases to be a member, the training records must be maintained for 2 years by the employer.

ODV will ensure that the following information is posted and maintained in the workplace in high traffic areas:

- The names and work locations of the JOHSC members,
- Minutes of the three most recent JOHSC meetings, and
- JOHSC recommendations and corrective actions and
- Copies of any applicable permits, orders under the Health, Safety and Reclamation Code for Mines in BC, WorkSafeBC Regulations or by a provincial agency for the preceding 12 months, such as copies of regulatory safety inspection reports.

Amendments

These terms of reference may be amended by vote of the committee members.

APPENDIX 6 INCIDENT INVESTIGATION AND MANAGEMENT

Incident investigation and reporting is a good safety management practice and ODV obligation and regulatory requirement. The purpose of the incident investigation is to determine the cause of the incident and implement suitable corrective measures, so further incidents can be prevented.

This element provides a standardized procedure for the investigation and reporting process. Using a team-based approach, ODV will investigate incidents, accidents, and near-miss occurrences. The immediate supervisor will lead the Incident Investigation with the assistance of the employer, worker representative and/or Joint Occupational Health and Safety Committee (JOHSC) member.

Following an incident, ODV will immediately undertake the following:

- A preliminary investigation (Flash Report) within 4 hours of the incident,
- An interim corrective action report (Initial Incident Report) which addresses the findings of the preliminary investigation (Flash Report),
- A full investigation report (Incident Analysis for Incidents with a Risk actual or potential rating of a 1,2 or 3) within 7 days of the incident (unless an extension is granted by the health and safety Manager due to extenuating circumstances) of the incident, that details the full corrective actions addressing the findings of the Incident Analysis, and
- Reports should meet both legislative and corporate reporting requirements and track the tendencies of incidents.

Definitions

- Accident means any event which results in death, injury, illness, environmental, damage or loss.
- Incident is an accident or other occurrences that resulted in, or had the potential to cause, an injury or occupational disease.
- Near Miss is an event or sequence of events that had the potential to cause serious injury, ill-health, or property damage.
- Externally Reportable Accident means any event which resulted in loss, disabling injury, private or public damage, property or environmental impact, operational impact to the project or surrounding community or as prescribed by the WorkSafeBC.

- Internally Reportable Incident means any event which resulted in non-disabling injury, had the potential for loss, private or public damage, property or environmental impact, operational impact to the project or surrounding community as prescribed by ODV, the Client or Owner of the area in which the event occurred.
- Non-occupational disabilities that in those cases of illness, injury, or medical conditions of both a physical and psychological nature not related to work.
- Non-Conformities Incident or accident due to non-fulfillment of a requirement.

Responsibilities

Roles and responsibilities of ODV staff and employees with respect to incident investigation and reporting are discussed below.

Management

Management's responsibilities include the following:

- Provides the necessary resources to implement approved corrective and preventative actions,
- Ensures all workers receive training and education in the reporting of incidents, and
- Ensure regulatory reporting requirements are followed.

Supervisor

The Supervisors responsibilities include the following:

- Investigates all incidents or near misses to determine the underlying causes,
- Ensures that incident investigations are carried out with the participation of employer and work representatives,
- Ensures investigations are reported in detail to the manager, and the required report forms are completed within an acceptable time frame,
- Participate in Full Investigation Reports (Incident Analysis') when required for Incidents with a Risk Actual or Potential rating of 1, 2 or 3.
- Ensures preliminary, interim, and full investigation reports and full corrective action reports are provided to health and safety committee(s) or worker safety representative(s), and
- Reviews accident or incident statistics and reports to identify and implement corrective action(s).

Employee

The Employees responsibilities include the following:

- Reports all incidents to the immediate supervisor,
- Takes steps to prevent further loss, injury or damage resulting from an incident,
- Participates in the investigations of incidents, and
- Is a part of the solution.

Reporting of Incidents, Accidents or Near Misses

All workers employed on site will immediately report any incident, accident or near-miss to:

- The site supervisor or designate,
- The acting first aid attendant or the nearest first aid facility any time an injury occurs.

The site supervisor or designate will:

- Immediately investigate “Incidents that must be Investigated” as stated below,
- Complete a Flash Report Form, Post Incident Checklist, and Initial Incident Report Form.
- Participate in Full Investigation Reports (Incident Analysis’) when required for Incidents with a Risk Actual or Potential rating of 1, 2 or 3.

An injured employee who leaves the worksite without reporting and completing the required documentation will be considered absent from work and:

- Will not receive pay for any missed time,
- May be subject to disciplinary action (Rule Encouragement and Enforcement Procedures), and
- May have a formal objection filed against any claims for compensation benefits.

Injury Reporting and Classification

The following shall be used for the classification of injuries that occur at any of the ODV Project sites:

- Report Only – (Non-Work Related) – Any injury that has occurred during off-work hours.
 - A worker sustains an injury undertaking recreational activities on-site, or any injury sustained during off-work hours.
 - A worker sustains an injury during regular time off but requires following up with the medic when returning to the site.
- Report Only Injury (RO) - A work-related injury that is reported by an individual and receives no treatment of any kind.

- For example, if a mine worker advises his supervisor that his back is sore at the end of this shift and requires no treatment of any kind, this event is recorded as a report only injury.
- Or, if a person visits first aid and receives no treatment by the medic, this would also be a report only injury.
- A ROI still requires an incident report (this is critical for injury management and WCB requirements).
- First Aid Injury (FA) - A work-related injury resulting in the need for treatment to be given onsite by an individual suitably qualified in first aid. Level 3 first aid attendant
 - Clean and apply a bandage to a cut,
 - Re-clean and apply a bandage,
 - Removing foreign bodies from the eyes using irrigation or tweezers,
 - Removing splinters or foreign material from other areas,
 - Using massages, hot or cold therapy,
 - Cleaning, flushing or soaking wounds on the surface of the skin,
 - Using wound coverings such as Band-Aids, bandages, gauze pads, steri-strips etc.
 - Using non-rigid means of support, elastic bandage, non-rigid back belts
- Medical Treatment Injury (MTI) - When an individual sustains a work-related injury that requires treatment from a medical practitioner, i.e., doctor, PA, or of the like.
 - The following are examples of medical treatment injuries include:
 - A physical wound, such as a cut requiring stitches, fracture, amputation etc.
 - Respiratory condition caused by work generated airborne contaminants
 - Poisoning from a substance, chemical or fume
 - Physical effects from the environment, such as frostbite, or heat stroke
 - Effects from radiation, such as welding flash, sunburn
 - Soft tissue injuries prevent an individual from completing a small component of their normal role.
 - Loss of consciousness for example, a mine worker strains his/her shoulder, however, can still return to their normal work in the mine (post-injury) with a restriction on lifting. This is an MTI.
 - The following examples are not medical treatment injuries:
 - Attended the doctor and no other treatment was required.
 - The treatment given can be described as a first-aid treatment or precautionary.

- The doctor determines the injury was not work-related.
- Going to a clinic or seeing a doctor and have eye dye drops put in, to check an eye for an injury or a particle and nothing found is classified as first aid. No treatment.
- An x-ray is classified as non-treatment.

Disabling Injury (DI)- When an individual sustains a work-related injury that prevents the individual from undertaking their normal duties and requiring the provision of some form of alternative duties as prescribed by a medical practitioner.

The employee must still be capable of physically attending work and performing some other type of meaningful duties. For example, if a miner worker sustains a back injury while installing services in the mine and the doctor places a work restriction on the individual requiring him/her to complete office duties on the surface for their following shifts.

Lost Time Injury (LTI) - When an individual sustains a work-related injury that results in that individual not being able to attend their next scheduled shift at work.

This does not include travel time offsite for treatment or assessment. For example, an individual must travel from the operation or site to a major center and return for specialist diagnosis, etc., i.e., an MRI scan. This is not a lost-time injury unless the individual is not physically capable of attending work.

The day of the injury Does Not Count as a Lost Day of Work. A worker may be sent back to camp to rest for the remainder of the shift and returns to work the next day. This Is Not a Lost Day.

If the injured person must wait to be assessed by a medical practitioner over a weekend or because the practitioner is unavailable, these days do not count as lost time day.

Immediate Notice of Certain Accidents

ODV must immediately notify the authority having jurisdiction of the occurrence of any accident that:

- Resulted in serious injury to, or the death of, a worker,
- Rollover of any piece of equipment or vehicle
- Involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation,
- Involved the major release of a hazardous substance,
- Is an incident required by regulation to be reported, or
- Is an incident defined as a dangerous occurrence.

The ODV health and safety Manager must inform a Mines inspector, or WorkSafeBC and the Occupational Health and Safety Committee as soon as practicable, but no later than 4 hours after

an event that results in the loss of life, or no later than 16 hours after an event classified as a dangerous occurrence.

Dangerous occurrences:

Must be reported according to the following schedule provided in Section 1.7.1 of the Health, Safety, and Reclamation Code for Mines in BC which says that the Mine Manager must inform the Inspector and the Joint Occupational Health and Safety Committee of a dangerous occurrence as soon as practicable, but no later than:

- Within 4 hours of the reportable incident, provide verbal notification of the incident.
- Within 16-hours of the reportable incident provide a written notice of the incident.
- Within 60 days of the reportable incident submit a full investigation report.
- Unexpected major ground fall or subsidence, whether on the surface or underground, 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 the 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,
- Any accident involving a mine hoisting plant and including sheaves, hoisting rope, shaft conveyance, shaft, shaft timber or headframe structure,
- 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,
- Unplanned stoppage of the main underground ventilation system,
- A mining vehicle going out of control,
- Outbreak of fire if it endangers persons or threatens or damages equipment and all underground fires,
- 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 has the potential to result in serious injury.

Unless directed by an inspector or officer of the Mines or Board, an inspector, Joint Health and Safety Committee, or in the case of a fatal accident the chief inspector, the Board or a Peace Officer, a person must not disturb the scene of an accident that is reportable, except so far as necessary to (immediately freeze the scene) to:

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

Incidents that Must Be Investigated in Full (Incident Analysis)

ODV must immediately investigate the cause(s) of any accident or other incident that:

- All injuries requiring first aid treatment onsite,
- Serious injury to a worker or a worker's death,
- Injury requiring medical treatment,
- Minor injury, or no injury, but had the potential for causing serious injury,
- Major structural failure or collapse,
- Major release of hazardous substances,
- Diving incident as defined by the OHS regulation,
- Dangerous incident involving explosive materials,
- Blasting incident causing personal injury,
- Resulted in injury to a worker requiring medical treatment, or
- Did not involve injury to a worker, or involved only minor injury not requiring medical treatment, but had the potential for causing serious injury to a worker.

Submitting Investigation Reports to WorkSafeBC

For any incident that involves any type of injury or any incident that happens at the camp, apartment or Hubs must be investigated; the following reports must also be made:

- Submit a preliminary investigation report to WorkSafeBC within 48 hours of the incident,
- Determine interim corrective actions as appropriate and prepare a corrective action report,
- Complete a full investigation and submit a report to WorkSafeBC within 30 days of the incident, and
- Determine final corrective actions as appropriate and prepare a final corrective action report.

Additionally, the Mine Manager must submit a written notification to an inspector within one week of any incident involving loss of life or dangerous occurrence and must submit monthly reports to an inspector, Joint Occupational Health and Safety Committee and the local union or worker representative for an accident involving medical aid.

WorkSafeBC's Prevention Information Line

Phone: 604.276.3100 (Lower Mainland)

Toll-free: 1.888.621.7233 (1.888.621.SAFE) (Canada)

Hours of operation: Monday to Friday, 8:05 a.m. to 4:30 p.m.

Fatalities and serious injuries: Call the numbers above, 24 hours a day, 7 days a week.

Incident Management

All low, medium, and high accident/incident including a near-miss up to a dangerous occurrence, involving ODV, the Contractor, Subcontractor's or any third party's workers, property, must be verbally reported immediately (within 1 hour) to ODV whether injury to workers or damage to property or equipment resulted.

Reporting procedures in place for the contract for:

- Accident/Incident and near-miss investigation,
- Return to Work,
- Reporting covering Accident/injuries (all deaths, first aids, including report, medical treatment, lost time by workers), health incidents, non-occupational, incidents or near misses, including driving to or from work (disease, exposures to hazardous substances)
- Safety equipment failures,
- Loss of capital equipment and material,
- Details of incident investigation and method to determine and correct primary and root causes (are the incident investigation teams led by the relevant supervisors/managers),
- Provide a procedure for follow-up and dissemination of learning points. Use methods for collecting incident statistics,
- Provide a detailed list of modified work programs and methods to ensure compliance with the modified work program,
- An effective follow-up procedure to implement the recommendations of its incident investigations, and where applicable those of the ODV Incident Review Meeting recommendations.
- All low, moderate, and high accidents/incidents will be documented and investigated; the depth of the investigation will be dependent on the ODV Health and Safety Manager.
- All non-occupational will be reported to the ODV Health and Safety Manager.
- All non-compliance issues onsite regarding Safety will be documented and investigated.

- Within 4 hours or sooner a quick incident flash report is to be sent to ODV health and safety Manager.
- Within 24 hours, a written report or Safety Alert stating the known facts and conditions and including a preliminary assessment of the most likely consequent potential of the incident in the circumstances must be submitted to ODV health and safety Manager. This is to be followed up by a full incident report within 72 hours. A serious incident may take longer.
- The Contractor is reminded that this incident reporting system does not exempt the Contractor from providing accident reports required by statutory authorities, in particular, the Contractors' responsibility for reporting accidents in accordance with the legislation requirements. For the purposes of this specification, a Health & Safety incident is taken as an incident involving harm or potential harm to any employees of the Contractor, ODV, the community, Subcontractor, or other entity and/or the work environment, or where the physical wellbeing of a person, the community or the work environment has been placed at risk, e.g., a near miss.
- In the event of an accident/incident on-site in which the Contractor's employee or Subcontractor is involved, the person involved must remain at the scene until the incident is attended by ODV health and safety Manager (or delegate) or the Contractor has received approval from ODV to leave the scene, unless medical attention is required.

Injury Management

- ODV recognizes that implementing early intervention practices for injured workers aides in reducing the impact of an injury on injured workers and their families.
- All contractors and Subcontractors must have a Return to Work modified work program (RTW), including a modified work and/or restricted duties program in place and manage by the contractor(s). ODV health and safety Manager must be informed daily/weekly of the progress.

Internal Reporting

- All workers have a legal responsibility to report unsafe acts, unsafe conditions, and near-miss incidents. Workers who identify an incident or near miss shall take immediate action, where possible and safe to do so, to mitigate the immediate impacts and preserve evidence to support the future investigation, and immediately (without delay) report the incident or near miss verbally to their Supervisor and to ODV health and safety Manager.
- ODV requires that all health and safety accidents, incidents, and near misses be documented internally.
- Documented internal incident reporting is done in two phases:

- Incident quick flash report sent within 2-4 hours via email.
- The Incident First Report submitted within 24 hours via email.
- The Incident final Report submitted within 72 hours via electronic email.
- The health and safety Manager (or delegate):
 - reviews the filed documents for information completeness,
 - ensures that the incident has been assessed, among others, type of health and safety hazards involved and severity of consequence(s), and
 - All incidents will be investigated for corrective actions and root cause.
 - All moderate and high incidents will require a lessons learned.

Non-Conformity Management

Detection

- Non-conformities (NC) may be detected during site inspections, leadership safety observations, construction and installation activities, material delivery, system audits, etc.
- All Project participants are authorized and encouraged to report non-conformities to their supervisors.
- All workers, materials, tools, equipment, work instructions, etc. found or identified as not conforming to the site safety specified requirements or standards must be reported to ODV Supervision. Safety non-conformity must undergo remedial and or corrective measures. Permissions must be obtained and agreed upon by all relevant parties, including the Client, to continue work if necessary.

Reporting

- A Non-conformance Report (NCR) shall be raised for deviations from the applicable specified requirements, standards, and procedures.
- If the nonconformity cannot be immediately resolved, it must be recorded electronically through the Non-Conformity Report (NCR) in accordance with ODV's Non-Conformity and Corrective Action process under the Quality Health & Safety and Environmental Management System.

Investigation

- Under the Quality Health & Safety and Environmental Management System, major non-conformities (NC) are subject to formal and documented investigations as per the table follows:

Safety Incident Investigation (including Lessons Learned)

Under the Health & Safety Management System, major non-conformities (NC) are subject to formal and documented investigations as per the following table:

Table 6-1 Major Investigable Non-Conformities

Major Investigable Non-Conformities		
Quality	Safety	Environment
- The NC causes work stoppage, re-work, or other schedule delays - The NC has a considerable impact on the Project/ Organization budget - The NC has been identified by the agency	- NC is a safety incident that: - Involves more than 1 worker - Requires medical aid - Results in temporary, permanent disability or fatality - Results in the presence of police, firefighters, media on site - Causes considerable property damage - May cause an investigation or legal action against the Project/ Organization	- The NC has a significant impact on the environment (Type 3 incident according to ODV's global incident reporting standard) - The NC may cause a regulatory investigation or legal action against the Project / Organization - The NC adversely impacts the general public or result in a high media profile
The NC has been identified as "major" by the internal/external systems auditor.		

The scope and extent of an investigation of health and safety incidents are dictated by the nature of the incident and determined by the health and safety Manager:

- in consultation with the Manager/supervisor responsible for the area or work with which the incident or near miss is associated, or
- in the case of incidents reported to MEMLCI or WorkSafeBC, as directed by a WorkSafeBC officer.
- The table below illustrates the process of investigating and reporting results. ODV requires that the process be adhered to when investigating applicable health and safety incidents.

Investigation Team

- The investigation team shall be selected by the Contractor and ODV health and safety Manager (or Delegate) and a JOHSC member, with the primary responsibility for the event. The investigation team will vary in size, depending on the severity and complexity of the event.
- A Contractor supervisor representative shall be a member of the investigation team.
- A ODV management representative and ODV health and safety Manager shall be a member of the investigation team for all moderate and High incidents, such as medical emergency and fatal accidents.

- ODV representatives may also attend the investigation of low, minor to serious incidents at their discretion.

Incident Investigation Reports

All Contractors shall be responsible for reporting, investigating, and implementing remedial actions for incidents involving their workers. ODV shall have active involvement in all incident management processes. The Project shall maintain a register of all incidents. Contractors shall provide copies of all signed off incident reports and investigation documentation for entry into the register for audit and review purposes.

Contractors shall maintain a register of all incidents, accidents, near misses, equipment or property damage, spills.

All incidents shall be reported to the ODV health and safety Manager immediately after the incident occurred and no later than 4 hours after the incident.

All sections of the Incident/Accident form must be filled out.

It is a ODV requirement that all accidents and incidents including Near Misses, be reported, and investigated, e.g.

- Any injury to any person, including first-aid;
- Any illness,
- Any damage to property, tools, or equipment,
- Any loss of containment of hazardous materials,
- Any environmental incident,
- Any non-conformities,
- Any 'Near Miss', that is, an incident with no injury, damage, or loss but which had the potential to cause harm to environment, injury to people, damage, or loss;
- No matter how minor, the employee is to report the incident immediately to the relevant Supervisor. In every case, the Contractors Supervisor is to document the incident and notify the ODV Project Manager and Project health and safety Manager. Verbal notification to the Project Manager and health and safety Manager is to take place immediately after the occurrence.

Secure and document the incident scene

- Once an incident onsite occurs, the scene must be frozen for investigation. Only the ODV Site health and safety Manager or delegate, and if required, EMLI or WorkSafeBC can unfreeze the incident scene.

- After the incident is under control, only members of the accident investigation team should be permitted into the scene.
- This can be done by erecting barriers with warning signs attached, stringing rope or tape with warning signs attached, posting someone in the area to keep people out, locking an access door or a combination of each.
- The purpose of restricting access is to prevent the loss of evidence. Do not remove any material evidence until the investigation is complete and/or have been authorized to do so by the health and safety Manager or police and/or prevailing regulatory agency.
- Use a digital camera to take photographs of the general area and any item that may be involved in the accident. Pictures of the general area will permit a re-examination of conditions and equipment and may reveal new evidence or confirm evidence already collected.

Locate and interview witnesses

- Locate witnesses and or parties involved in the incident, found by asking people in the area if they saw the incident, can provide information about the incident, or can identify someone else who may have been a witness or part of. The supervisor and crew records should also have names of employees stationed in the area at the time of the accident.
- Wherever practicable, at least two investigators should conduct the interview. One investigator should ask the questions, and the others write the answer given.
- Conduct the interview in private if possible. Do not conduct a group discussion. One person's view may cause another to doubt what he/she saw or knew.
- All witnesses and parties involved must fill out a full incident statement form.

At minimum, collect and document the following information from each interviewee:

- Name and contact information;
- Job, years of experience, time on the project;
- Where were you at the time of the accident
- Did you actually see the accident?
- Describe in chronological terms what happened;
- Did you see the [involved person(s)] before the event? Did they seem normal or were they distracted?
- Are you aware of any problems the [involved person(s)] may have had?
- Had you observed any problems with the equipment, materials prior to the event? If yes, do you know whether it was reported and/or fixed?

- Had you observed any problems relating to the operation of the equipment prior to the event? If yes, had you reported your observations to anyone [particularly the supervisor of the equipment] prior to the event?
- Did it appear the proper safety controls were in place?
- Was the JHA filled out and reviewed at the start of the shift;
- Was there any indication that something was not right before the accident?
- Have the involved parties sketch out the Incident if possible;
- If a witness or person involved is unable to write out a witness form their immediate supervisor or safety delegate can write it out for them, and the worker or person involved can read and sign the form.

Determine the root cause and lessons learned

- Firstly, identify Immediate Direct Causes. Immediate causes of incidents are the circumstances that precede the event. They can be determined using one of the five senses (see, hear, smell, feel, or taste). As important as Immediate Causes are in identifying practices or conditions that lead to events that cause loss, they are only symptoms of the true underlying causes of the incident.
- Secondly, identify the Root Causes. Root causes are the real causes behind the Immediate Causes. Root Causes explain why: (1) the substandard acts/practices and conditions occurred, and (2) people perform substandard acts or practices.
- Thirdly, identify Lessons Learned. Lesson Learned is the knowledge or understanding gained from the incident that may be useful to ODV for the objective of improving health and safety performance going forward. When learning from the incident, consider the following:

For each major health and safety non-conformity, The Investigation Team shall document immediate and root causes as well as, if applicable, lessons learned.

Corrective Actions

- The Investigation Team shall develop recommendations for corrective actions to prevent a re-occurrence and to address lessons learned.
- The ODV Safety Manager (or delegate) signs off on the investigation report and recommended corrective actions.
- Sign off on all investigation, incidents, inspection reports:

Incident Classification

All high/Serious incidents Sign-Offs:

- An incident requiring immediate HSRCMBC or WorkSafeBC notification
- A workplace injury requiring medical treatment
- Near Miss with potential to cause serious injury or damage
- An incident with the potential for causing serious injury
- An incident with serious property damage (equipment needs to be re-certified)

Sign offs:

1. ODV General Manager
2. ODV Contractor Manager
3. ODV health and safety Manager
4. Contractor Supervisor
5. Contractor health and safety Advisor

A "serious injury" is any injury that can reasonably be expected at the time of the incident to endanger life or cause permanent injury.

All low to moderate incident Sign-Offs:

- Near misses
- Minor/Moderate property damage with low potential (re-certification not required)
- First aid
- Minor Unsafe Conditions
- Refusal of unsafe work

Sign Offs:

1. ODV health and safety Manager
2. Contractor Project Manager
3. Contractor Construction Manager/supervisor
4. Contractor health and safety Advisor/manager or delegate

- Corrective actions shall be managed and tracked in accordance with the Non-conformity and Corrective Action Management section of the QHS Management System.

Reporting

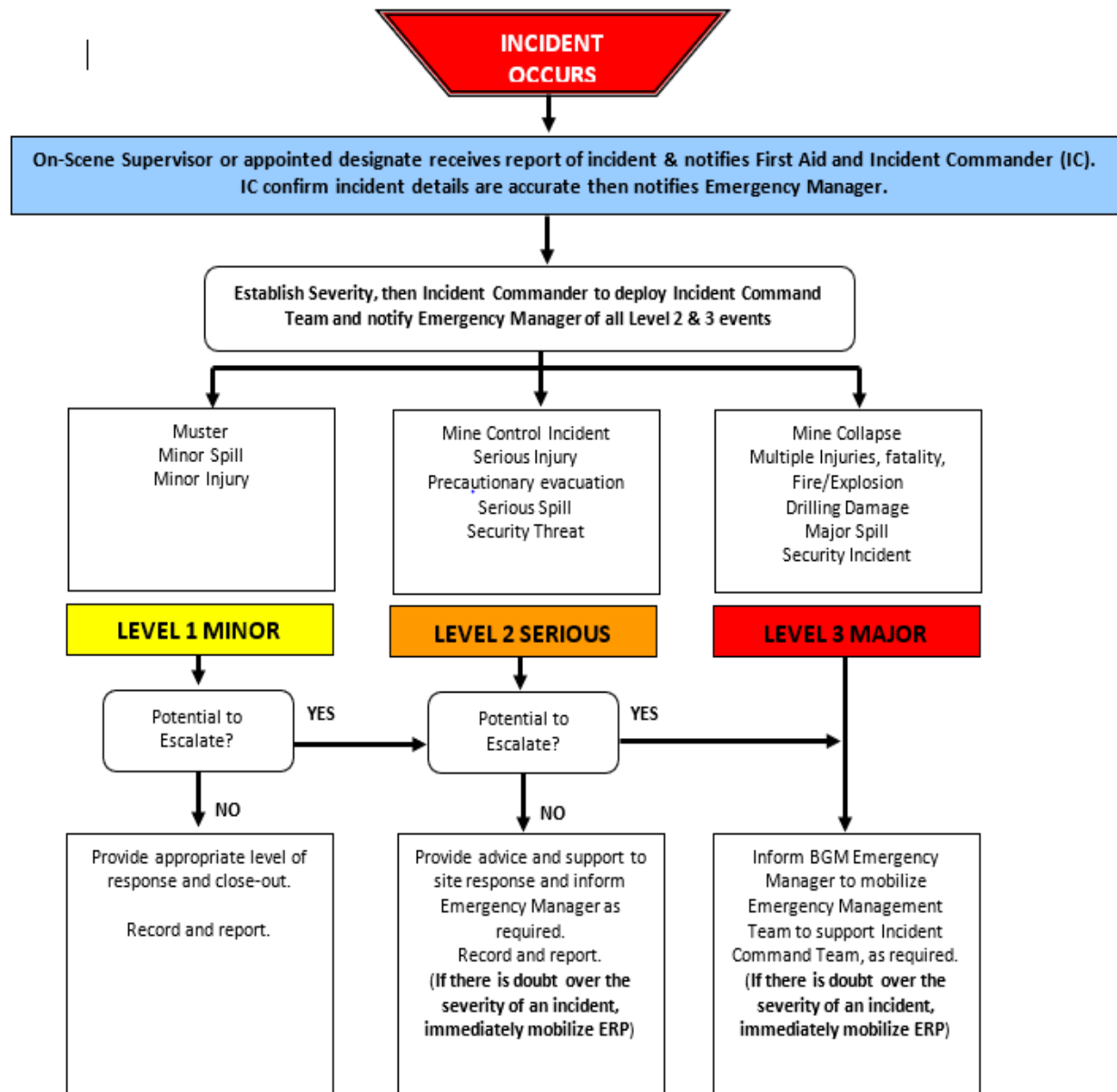
ODV relies on the following health and safety reporting instruments:

- health and safety Statistics (monthly)
- Key Performance Indicators
- Monthly health and safety Dashboards
- Annual external health and safety system and performance audit reports (in accordance with ODV's QHSE Procedure "Internal Audits.")

Return to Work Program

- ODV and contractors must be committed to the pro-active injury management, rehabilitation, and promotion of an early return to work for all injured workers.
- Contractors shall inform the Construction Manager or their nominated representative and the ODV Project health and safety Manager of their nominated person, who shall be responsible for injury management on the project.
- Contractors are required to provide evidence of compliant statutory Workers Compensation Insurance, Injury Management and Rehabilitation to cover their employees prior to mobilization to the project.
- All workers shall be managed in accordance with their relevant companies' Injury Management and Rehabilitation policy and procedures.
- All Contractor Injury Management and Rehabilitation Coordinators shall notify the Project health and safety Manager of all matters relating to personal injury.
- Where an employee's injuries are such that they are capable of performing meaningful and productive work.

Incident Classification



APPENDIX 7 MUSCULOSKELETAL DISORDER PREVENTION PROGRAM

Occupational ergonomics is the science of fitting workplace conditions and job demands to the capabilities of the working population. The goals range from the basic aim of making work safe through increasing human efficiency to the purpose of creating human well-being.

Ergonomics can also be thought of as the science of human comfort. When aspects of the work or workplace exceed the body's capabilities, the result is often a musculoskeletal disorder (MSD). To help avoid MSDs, work demands should not exceed the physical capabilities of the worker.

MSDs belongs to a group of sprain and strain injuries that can affect muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels, or spinal discs in the body. MSDs can be either acute (incident-based) or slow onset (no specific incident).

Background

Musculoskeletal structures include tendons, ligaments, muscles, joints, nerves, blood vessels, and related soft tissues. Whenever a worker's body moves, it puts stress or strain on these structures, and when this strain involves vibration, awkward positioning, forceful movements, or repeated movements, the worker is exposed to a risk of developing a Musculoskeletal Disorder (MSD).

These disorders are sometimes referred to as Whiplash Associated Disorders, Repetitive Strain Injuries, Cumulative Trauma Disorders, or Soft Tissue Injuries. MSD's can be acute, resulting from falls or direct blows, or they can be chronic, resulting from trauma to the affected body part.

MSD's occur most often in the hands, wrists, elbows, shoulders, lower limbs and back and in recent years have been recognized as a major source of lost time and poor productivity in many workplaces.

Policy

It is ODV's policy to provide all workers with a healthy and safe workplace. A proactive ergonomics program is an important component of our company's occupational health and safety program.

Records documenting the key program elements such as the identification, prevention, and control of employee exposure to ergonomic risk factors will be maintained in accordance with all regulations. These records will ensure prioritized risks are adequately addressed, and all employees are trained in the best practices for minimizing MSD risks – including safe posture and movement habits.

This program requires participation from managers, supervisors, and employees to be successful. The Health and Safety Department is responsible for the program's implementation, management, and recordkeeping requirements.

Responsibilities

- ODV Management is responsible for providing necessary resources for and ensuring that activities involving risk factors for MSD are identified, evaluated, and controlled.
- The Mine Manager is responsible for ensuring that site activities are monitored and that MSD risks are identified, evaluated, and controlled.
- The Safety Officer is responsible for coordinating identification, evaluation, and control activities, as well as for ensuring that the OHSC receives training in these activities.
- The JOHSC is responsible for ensuring that MSD risks are considered and addressed when conducting worksite safety inspections and pre-job hazard assessments.
- Workers are responsible for participation in training, identification, evaluation, and control activities related to MSD Prevention.
- Suppliers and Visitors on the site are responsible for ensuring that they do not undertake any activities involving more than a minor risk of MSD.

Definitions

Awkward Posture – Any fixed or constrained body position that overloads muscles, tendons, or joints. Generally, the more a joint deviate from the neutral position the more the posture is considered to be “awkward” and the greater the risk of injury.

Ergonomics – The science of fitting the task to the worker by balancing the job demands with the capabilities of the human. The profession applies theory, principles, data, methods, and analysis to design to optimize human well-being and overall system performance.

Force – Force is generated through muscular effort during (and during attempted) lifting, pushing, pulling, and carrying tasks. Such muscular force allows for controlled movement of the body.

Musculoskeletal – Relating to or denoting the musculature and skeleton together.

Neutral Posture – Postures in which the muscles, tendons, and joints function optimally and require the least amount of effort to maintain are considered neutral.

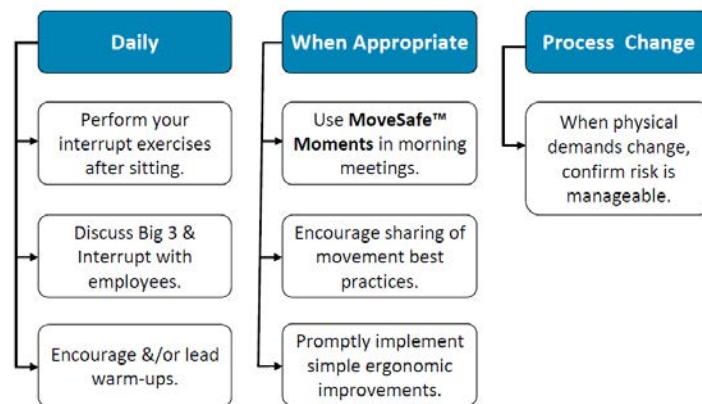
Repetition – Repetition involves the repeated use of the same muscles. Repetition may be measured in terms of minutes, hours, or workday (e.g., 3 per minute, 25 per hour, 30 times per shift). The level of risk depends on the frequency of repetition, time for rest/recovery, speed of motion, postures required, and amount of force required.

Static Posture – A body position that requires sustained physical effort, without joint movement.

APPENDIX 8 ERGONOMICS PROGRAM

The goal of the ergonomics program is to reduce the number and severity of musculoskeletal disorders by applying ergonomic principles to create a safe workplace while encouraging safe posture and movement habits. This helps increase safety, productivity, quality, and efficiency while decreasing human and financial costs to workers. Safe use of an ergonomically sound work environment maximizes worker well-being while minimizing the risk of MSD.

ODV has a participatory ergonomics program that includes the following components that emphasize continuous improvement through a process that is regularly evaluated with the necessary leadership involvement. The elements of the ODV ergonomics program are intended to support a timely reduction in identified ergonomic hazards as well as safe posture and movement habits.



Ergonomics Program

To be credible, leaders need to “walk the talk” on safety. This includes being a safety champion in all that you do. Basic habits like wearing appropriate PPE, using 3-point contact on stairs, and driving to the conditions will reinforce to everyone that you prioritize safety. Developing a positive culture around movement safety (to prevent MSDs) can only be built on a foundation of trust and mutual respect for safety as the over-riding priority.

All ergonomics documents can be found on the Administration Drive (S:) → ODV SUPERVISION → Health and Safety → ERGONOMICS → Department Folder (e.g., Core Facilities, QR Mill).

Leadership

ODV is committed to an ergonomics program. Leadership supports the efforts of the Health and Safety Department by pledging financial and leadership support for the reduction of identified ergonomic risk factors.

Leadership will support an effective MSD reporting system and will respond promptly to reports of MSD. Leadership will communicate regularly with workers about the program. Leadership will also lead by example by practicing safe posture and movement habits and reinforcing these best practices in others.

Worker Participation

Workers will be consulted for input and assistance with identifying ergonomics risk factors, conducting worksite evaluations, developing, and implementing controls, and training. Workers will be expected to implement all safe posture and movement best practice habits as well as task interrupt breaks to optimize their physical capacity.

Worksite Evaluations

Triggers for a worksite evaluation include the following:

- a) Worker Concern – When a worker reports an MSD sign or symptom
- b) Identified Risk – The identification of jobs, processes, or work activities where work-related ergonomics risk factors may cause or aggravate MSDs
- c) Change Management – Any change of jobs, tasks, equipment, tools, processes, scheduling, or work-shift hours such as:
 - The design phase of a new facility or process
 - The purchase of new equipment or tools
 - Scheduling changes (for example, going from a traditional five-day, eight-hour shift to a compressed four-day, ten-hour shift)
- d) Tours – When a safety walk-through or scheduled inspection or survey has uncovered potential MSD risks.
- e) Incident Reviews – When the Safety Department completed a records review - which looks at existing data such as first aid record books, workers' compensation claims, trips to medical facilities, and absentee records.

Work-related risk factors to be considered in the evaluation process include, but are not limited to, the following:

- Physical Risk Factors – These include force, awkward and static postures, static loading and sustained exertion, fatigue, repetition, contact stress, extreme temperatures, and vibration
- Administrative Risk Factors – These include job rotation or enlargement, staffing levels, excessive overtime, numbers of rest breaks, stress from deadlines, amount of training, work pace, and work methods

- Environmental Risk Factors – These include noise, lighting, glare, air quality, temperature, humidity, and personal protective equipment (PPE) and clothing
- Cumulative Risk Factors – A combination of risk factors (such as highly repetitive, forceful work with no job rotation; or precision work in a dimly lit room)

Setting Priorities

The program goal is to create continuous improvement on identified MSD hazards and drive the program from reactive to proactive. The urgency for scheduling worksite evaluations is as follows:

- Any job, process, operation, or workstation that has contributed to a worker's current MSD
- Jobs, processes, operations, or workstations that have historically contributed to MSDs

Specific jobs, processes, operations, or workstations that have the potential to cause MSDs. Priority will be given to those with higher exposure - frequently, duration and employees

- New jobs, processes, operations, or workstations that have the potential to cause MSDs

Worksite Evaluation Methods

Methods used to evaluate problem jobs and processes will include the following:

- Walk-throughs and observations, which may include photos and videos
- Worker interviews
- Surveys and questionnaires
- Checklists
- Detailed worksite evaluations and assessments

Risk Reduction

In consultation with our JOHSC and affected workers, ODV will take steps to identify and assess ergonomics risk factors, and reduce these risk factors using risk control methods:

Engineering Controls – These are the most preferable and reliable means of reducing workplace exposure to risk factors. Engineering controls focus on the physical modification of jobs, workstations, tools, equipment, or work processes.

Administrative Controls – To control or prevent workplace exposure to risk factors by implementing administrative changes such as job rotation, job enlargement, rest breaks, adjustment of pace, redesign of methods, or worker education and training.

Personal Protective Equipment – PPE is considered a last resort. PPE will be used (a) when engineering or administrative controls are not practicable, (b) as an interim measure until long-term solutions are implemented or (c) when other controls cannot adequately control the risks.

Acceptable forms of PPE include knee pads and various types of gloves, such as anti-vibration gloves.

Safe Posture and Movement Best Practices – The previous 3 control measures must be complemented by safe work practices. All employees should be using safe postures and movements throughout their workday to reinforce proper movement habits and reduce the risk of discomfort, pain, or injury. In addition to general safe posture and movement guidelines, specific tasks may also have best practice guidelines for positioning and movement to mitigate identified MSD risks.

Education and Training

Education and training are meant to help managers, supervisors, and workers (a) recognize work-related ergonomics risk factors, (b) understand and apply appropriate control strategies as well as (c) use safe posture and movement habits.

Training will be provided:

- To all workers,
- To all new workers during orientation,
- To all workers assuming a new job assignment,
- New jobs, tasks, tools, equipment, machinery, workstations, or processes are introduced, and
- When high exposure levels to ergonomics risk factors have been identified.

The minimum education and training for all managers, supervisors, and workers will include the following elements:

Ergonomics Program – An account of the ODV ergonomics program and their role in the program.

Risks – A list of the exposures that have been associated with MSDs as well as a description of early MSD signs and symptoms.

Reporting – An emphasis on the importance of early reporting of MSD signs and symptoms and injuries to management as well as the method and means of reporting MSDs.

Risk Reduction – The methods used by ODV to minimize risk factors related to work as well as those not related to work.

Safe Habits – Simple safe posture and movement best practice habits to maintain physical capacity and optimize ergonomic risk controls. The importance of our posture and movement habits is integral to the safety of everyone in matching the required physical demands of the work.

All training sessions will be documented – all workers will be required to sign a training roster.

New Equipment and Processes

Purchasing New Equipment – Any new equipment or tools will consider the physical demands on the affected employees.

New Process – All new processes or process changes will consider the physical demands on the affected employees.

Program Evaluation and Follow-Up

In order to ensure that issues have been addressed and new problems have not been created, monitoring and evaluation will be conducted on an ongoing basis by the Health and Safety Department. The methods will include the use of individual interviews and checklists to re-evaluate jobs or tasks, to ensure that risks have been reduced, minimized, or eliminated.

Roles and Responsibilities

Health and Safety Department

The Health and Safety Department will be responsible for this policy and program. All evaluations, controls, and training will be coordinated under the direction of the Health and Safety department in collaboration with management. The Health and Safety department will monitor the results of the program to determine additional areas of focus, as needed.

The Health and Safety department is responsible for the following:

- Training – Ensure that workers performing worksite evaluations and training are properly trained.
- Risk Reduction – Ensure that control measures are implemented in a timely manner.
- Reporting Concerns – Ensure that a system is in place for workers to report MSD signs or symptoms and suspected work-related risk factors to managers and supervisors.
- Support and Accountability
 - Ensure that accurate risk identification, evaluation and control records are maintained.
 - Schedule training and maintain training records.
 - Monitor the program on at least an annual basis. Provide an annual written review for the joint health and safety committee.
- Safe Habits – Use safe posture and movement best practices. Actively encourage all employees to use a safe posture and movement best practices.

Managers

Managers are responsible for the following:

- Training – Attend ergonomics training to familiarize themselves with the elements of the program.
- Risk Reduction
 - Ensure that ergonomics practices and principles are considered when conducting worksite evaluations.
 - Ensure that recommended control measures are implemented and used appropriately.
- Support and Accountability
 - Maintain accountability for the health and safety of all workers within their departments by actively supporting the ergonomics program.
 - Ensure that supervisors and workers have received the appropriate training.
 - Allocate human and financial resources.
- Safe Habits. Use a safe posture and movement best practices. Actively encourage all employees to use a safe posture and movement best practices.

Supervisors

Supervisors are responsible for the following:

- Training – Attend ergonomics training to familiarize themselves with the elements of the program.
- Risk Reduction
 - Ensure that workers understand MSD signs and symptoms, and the early reporting system.
 - Respond promptly to worker reports.
 - Ensure that workers are provided with and use the appropriate tools, equipment, parts, and materials in accordance with ergonomics requirements.
- Support and Accountability
 - Ensure that workers have received the appropriate training.
 - Maintain clear communication with managers and workers.
- Safe Habits. Use a safe posture and movement best practices. Actively encourage all employees to use a safe posture and movement best practices.

Workers

Workers of ODV are responsible for conducting themselves in accordance with this policy and program. Workers are responsible for the following:

- Safe Habits
 - Take responsibility for their personal health and safety.
 - Use a safe posture and movement best practices.
 - When provided, use the appropriate tools, equipment, parts, materials, and safe work procedures as directed by managers and supervisors.
 - Ensure that equipment is properly maintained in good condition and, when not, report it immediately.
- Training – Attend ergonomics training as required, and apply the knowledge and skills acquired to actual jobs, tasks, processes, and work activities.
- Reporting – Report MSD signs or symptoms and work-related MSD risk factors to the supervisor as early as possible to facilitate medical treatment and proactive interventions.

Joint Health and Safety Committee

In addition to individual member roles as indicated above, the JOHSC is responsible for the following:

- Risk Reduction
 - Drive risk reduction efforts through the committee agenda.
 - Assist in prioritizing identified risks and developing practical solutions, including communication with the affected employees.
- Support and Accountability
 - Include MSD hazard identification and movement safety habit observations in safety tours and conversations with workers.
 - Champion the use of safe posture and movement best practices. Actively encourage all employees to use a safe posture and movement best practices.

Annual Program Review

The Health and Safety department will conduct a program review at least annually to assess the progress and success of the program. The review will consider the following:

- Training and Education
 - Evaluation of all training programs and records
 - The need for retraining of managers, supervisors, and workers
- Risk Reduction – The jobs, processes, or operations that have produced a high incidence rate of work-related MSDs.

- Process Accountability
 - The length of time between a request for an ergonomics evaluation and the actual evaluation.
 - The length of time between the point at which the results of the evaluation are known and the beginning of the implementation of controls.
 - The length of time between the beginning and completion of the implementation of controls.
- Measuring Success, the program's success will be based on the historical comparison, using the following criteria:
 - Number and type of lost workdays
 - Cost of workers' compensation cases
 - Worker feedback through direct interviews, walk-through observations, written surveys and questionnaires, and re-evaluations

APPENDIX 9 RISK ASSESSMENT AND COMMUNICATION

ODV requires that health and safety risks be identified, assessed, communicated, and controlled at applicable levels and work breakdown structure deliverables/stages of the Project.

Under ODV's Health and Safety Management System, the following health and safety risk assessment is to be practiced:

Table 9-1 Risk Assessment Levels

Risk Assessment Levels	Purpose	Responsible	Intended Audience
Health and Safety Risk Register	Catalogue Project activities with health and safety hazards Assess each activity for primary and residual risks Identify key applicable regulatory requirements Catalogue safety controls and mitigation measures Identify Activities with Critical Tasks	[ODV's health and safety Manager (or Delegate)	Management Team and health and safety Manager
Job Hazard Analysis (JHA)	Detail job-and task-specific health and safety hazards of the work ahead, and (ii) identify corresponding hazard controls. Reference SDS for products that is hazardous to the environment or to the workers. Accepted by ODV prior	Contractor's Supervisor	Workers who report to the Supervisor
Toolbox Meetings	To review the JHA document prepared in advance of the job and (i) either conclude that identified tasks, hazards and controls remain current, or (ii) revise the JHS as required. Mine code segments.	Supervisor or Foreman	Workers, contractors who report to the Supervisor
Weekly Safety Meeting	To discuss site safety issues, incidents, accidents, review JHA's document prepared in advance, safety briefs, mine code segments, stats	Supervisor or Foreman	Workers, contractors who report to the Supervisor
Field Level Hazard Assessments	Building off the Toolbox meeting completed prior to commencing the job, (i) detail task-/site-level safety hazards of the work ahead, and (ii) identify corresponding hazard controls.	Each Worker	All workers, contractors onsite

Weekly, the Contractors and Subcontractors will provide Health and Safety with the scans of completed and signed off Field Level Hazard Assessments (FLHA).

Hazard Assessment & Control

The goal of the ODV Workplace Hazard Assessment and Control Process is to reduce the incidences of injuries, property and environmental damage through hazard identification, risk assessment and corrective action. Hazards may exist in many forms; they can be visible or hidden, a condition or an action.

The Hazard Assessment Tools provide a process that facilitates the identification, assessment, monitoring, and control of hazards. ODV will utilize the Hazard Assessment Tools described in this manual to ensure hazards are identified and assessed for every worksite and every job, especially critical jobs.

The hazard identification, assessment and control processes are an ongoing component of the health and safety management system. New or updated Hazard Assessments will be completed as the work evolves. This includes, but is not limited to, new equipment, special projects, job design changes, machine upgrades, significant staff changes, etc.

Definitions

Hazard is a condition and/or practice with the potential to cause loss. OHSAS 18001 defines a hazard as a source, situation, or act with the potential to harm in terms of human injury or ill health or a combination of these.

Risk is the combination of the likelihood and consequence of a specified event occurring due to a hazardous condition.

Critical Task is a task that has the potential to produce major loss to people, equipment, process, or the environment.

Responsibilities

Management

- Takes immediate remedial action when a worker or supervisor reports a potentially hazardous situation.

Supervisor

- Utilizes the proper Hazard Assessment Tool to conduct the hazard identification, assessments, and control process,
- Conducts the hazard identification, assessments, and control process with workers prior to the start of work,
- Ensures hazard identification and hazard assessments are conducted properly; controls are then implemented and evaluated for effectiveness,

- Ensures only authorized, adequately trained workers operate tools, equipment and/or use hazardous chemicals, and
- Ensures equipment and materials are properly handled, stored, and maintained.

Worker

- Must participate in hazard identification, assessments, and control process,
- Must implement and follow the hazard identification and assessment process, and
- Applies the control measures identified; if they are not adequate, workers have a legal responsibility to notify the supervisor immediately.

Hazard Identification, Assessment and Control Process

To ensure all hazards are assessed, ODV utilizes four Hazard Assessment steps:

1. Identifying the Hazards
2. Analyzing the Degree of Risk
3. Prioritizing the Hazards
4. Controlling the Hazards

Step 1: Identifying the Hazards

Hazard Identification is a process that identifies conditions that may be unsafe or unhealthy to the well-being of people or cause a loss for ODV. Proper hazard identification can help to effectively reduce the risk of loss to people, property, and the environment through elimination.

It is the Supervisor's responsibility to lead and involve affected workers in the adequate identification of the risk for the health and safety of ODV workers. Hazard identification should be completed by a team of qualified workers. This team should consist of a qualified worksite supervisor and at least one employee who is involved in the function being assessed. If further expertise is required, an expert can be brought in, depending on the worksite or job being evaluated.

Step 2: Analyzing the Degree of Risk

Supervisors are responsible for analyzing the degree of risk, but it is most beneficial to include the workforce. This approach should include knowledgeable workers and/or a specialist because the concept of risk is somewhat subjective and can be difficult to identify. Past experiences, upbringing and actual or supposed knowledge cause each person to attach a different significance (if any) to a given risk.

When assessing a hazard for possible risks, you must have an idea of the accepted norms in order to evaluate the situation. The following list contains laws, standards, guidelines, and codes used to compare hazardous conditions:

- *Occupational Health and Safety Act*
- Occupational Health and Safety Regulation
- Fire and Building Codes
- Ministry of Labour Standards and Guidelines
- CSA Standards
- Workplace Policies and Procedures
- Manufacturers' and Suppliers' Instructions

Step 3: Prioritizing the Hazards

Supervisors conducting the hazard assessment process will assess and prioritize risks based on the severity, the probability, and the frequency of the risk. The system below will appear, and be used, on each Hazard Assessment Tool.

The National Safety Council System of hazard classification uses both a degree of risk (severity) and the probability of the hazard resulting in a loss.

The severity can be:

1. Imminent Danger (e.g., causing death, widespread occupational illness, loss of facilities)
2. Serious (e.g., severe injury, serious illness, property, and equipment damage)
3. Minor (e.g., non-serious injury, illness, or damage)
4. Insignificant (e.g., a minor injury requiring first aid or less)

The probability can be:

- A. Extremely remote – unlikely to occur
- B. Remote – could occur at some point
- C. Reasonably probable – likely to occur eventually
- D. Probable – likely to occur immediately or soon

Each hazard is assigned both rankings (severity and probability). This determines clear priorities in terms of hazard control. A hazard ranked 1-D is a higher priority of correction than a hazard ranked.

Step 4: Controlling the Hazards

Following the identification and assessment of hazards, ODV will develop and implement appropriate controls in a timely manner. Five general approaches to minimize and control hazards on the worksite include:

(i) Elimination

Sometimes a hazard can be eliminated by taking a different approach to performing a job or by changing the design of the operation. Although this may sound unrealistic, sometimes clients are responsive to change, particularly when you save them time, money or improve public perception.

(ii) Substitution

Particularly with hazardous materials, it may be possible to use a product which is less hazardous than the one originally specified. A different procedure or piece of equipment may increase the safety margin within specific jobs.

(iii) Engineering Controls

These methods are built into the design of a plant, equipment, ventilation system or process. This built-in protection pays for itself and should be used when continual human involvement is required. It may be possible to increase the safety of the operation by using mechanical and design controls.

(iv) Administrative Controls

Administrative controls change the way work is done and include the timing of work, policies, work rules, and work practices and procedures such as workers scheduling, training, housekeeping, and equipment maintenance.

(v) Personal Protective Equipment (PPE)

PPE must be worn by workers. This includes hard hats, gloves, respirators, gas monitors, eye and face protectors, boots, safety harnesses and lanyards, etc.

**Note: Although it is often a necessary part of the job, the use of PPE is a "last" line of defence.*

Hazard Assessment Tools

ODV has developed five Hazard Assessment Tools for the identification, assessment, and control of hazards. There are different types of Hazard Assessment Tools that can be used depending on ODV activities, worksite, or project. Risk or hazard assessments are mandatory, as stated in ODV policy and provincial legislation.

1. Company Hazard Assessment

ODV Hazard Assessment contains an inventory of main work jobs conducted by workers on a regular basis. These jobs show the potential hazard, along with a risk rating. Any jobs with a risk rating of “A” are considered to be critical jobs and must have a SWP created.

2. Department/Shop/Facility Hazard Assessment

A manager or designate must complete a Department/Shop/Facility Hazard Assessment on an annual basis. This assessment will identify any critical jobs and allow time to develop and implement relevant SWPs or Safe Job Procedures to control any risks of an incident.

3. Field Level Risk Assessments

FLHA – A critical thinking process used by individual workers to identify hazards and risks in the workplace.

ODV requires that all workers complete a daily Field Level Hazard Assessment card:

- At the beginning of a new job or new shift, before starting the work, and done in the field.
- When new workers come on-site,
- When the work changes (plans are modified, substitute equipment is provided, etc.),
- Whenever worksite conditions change (weather, availability of tools, people or trades, materials, equipment),
- Whenever a change in another person’s activity on the worksite could pose a risk to you,
- After stop times or breaks (revisit the hazards)

4. Field Level Hazard Assessment (FLHA)

- Each worker completes their FLHA for their unique task/role and fills out a separate FLHA Form. If workers share the task, it is sufficient that the workers complete and sign on the same FLHA form;
- Anyone entering into a worker work area must sign and date-stamp their FLHA card;
- Upon completion of the FLHA Card, Supervision will review the FLHA out in the field and identified controls with employees performing the work. The employees performing the work will sign the FLHA to verify understanding, agreeing to job requirements, and implementing hazard controls;
- Completed FLHA forms remain on site with the worker until the end of the shift;
- Contractor supervision will sign off (Time Stamp) on all worker FLHA cards once in each shift, and this is done daily and in the field;
- Supervisor reviews completed FLHA forms for (i) completeness and (ii) any issues that warrant to be reviewed with the workers as subsequent toolbox meetings;

- The supervisor ensures that complete FLHA forms from prior days are scanned weekly and conveyed to ODV Document control;
- The contractor reviews submitted FLHA forms daily for issues of concern;
- FLHA is subject to internal inspections by the ODV health and safety Team.

5. Job Hazard Analysis

After identifying uncontrolled hazards, the next process involves taking steps to eliminate or reduce hazards to an acceptable level of risk. A JHA is a technique used to analyze a specific job. This technique breaks jobs down into separate steps. The hazards and appropriate controls are then identified for each step, and a predetermined standard is developed. A JHA is to be completed and documented on the JHA form.

This process also provides a job inventory list of all jobs that workers are required to perform. To keep this list current, you must perform a JHA on all new jobs introduced into the workplace. It is important that this process does not stop; it must be ongoing. This information is important for developing SWPs, and training programs.

Furthermore, the JHA also has a risk priority based on severity, probability, and frequency evaluation. All jobs, including all critical jobs, are provided with a priority rating of A, B, C, etc. Specifically, critical jobs are provided with an “A” priority rating. This information is valuable for developing an accurate Critical Job List.

Hazard Assessment Review and Communication

Management Review Process

All Hazard Assessments will be reviewed and evaluated by Senior Management. This process will be documented and will be signed by Senior Management.

Communication

Prior to starting work, the results of the Hazard Assessment will be reviewed and signed off by all affected employees. During the review, the hazards identified, and the controls developed and implemented will be discussed.

All completed Hazard Assessment forms will remain in effect for the duration of the work activities and will be:

- Posted where practicable in the area where the work is being performed, or made readily available to all affected workers, and
- Upon completion of the work activities, all related forms will be kept on the company server.

Change Management

- All temporary and permanent changes to organization, workers, systems, procedures, equipment, products, materials, or substances will be evaluated and managed to ensure that any associated health and safety risks are eliminated or controlled to an acceptable level.
- Changes in legal and regulatory requirements, technical codes, and knowledge of health and safety consequences/effects shall be monitored.
- Information on changes to the project schedule, construction methods and the construction workforce shall be obtained from The Project Director and/or the Construction Manager to develop and/or adjust safe work plans and other controls.
- The health and safety implications of temporary and permanent changes will be formally assessed, approved, and managed.
- Assessments shall consider whether permits, permit modifications, or regulatory approval or notification are required.
- All management of change actions will be coordinated and integrated with current operating procedures, and operating workers will be made aware of any changes in procedures before the change is made.
- When a work activity or process is shut down to make a change, the operating procedures must be updated before re-starting the process or work activity.
- Training shall be conducted as necessary to ensure that the revised procedures are fully understood and can be implemented safely.
- Where warranted, pre-and post-start-up reviews will be carried out for all newly installed or modified equipment to confirm that construction is in accordance with design, required verification testing is complete and acceptable, and that all approved recommendations/deviations have been completed.
- A Change Management shall be recorded as part of the overall tracking system. Revisions to documents shall be managed according to project document control procedures.

APPENDIX 10 CONTRACTOR/SUBCONTRACTOR

As the prime contractor, ODV always places the highest importance on safety during the execution and performance of all work activities at the site. The Contractors and Subcontractors are responsible for the Health & Safety performance of their own workforce and staff and shall perform the services in strict compliance with the ODV Health and Safety Program, WorkSafeBC act and regulations, CSA Standards, and local regulation applicable to each scope of work. Failure to comply strictly with its obligations under this article shall constitute a default.

Each Contractor and Subcontractor shall:

- Develop their Safety Management Plan for the Project and submit it to Health & Safety team (if set up) or the health and safety Manager for review of conformance with this OHSMMP and approval prior to starting the Project.
- Understand the Project's critical tasks.
- For critical tasks, develop and maintain safe work practices (SWPs) and JHA. Each SWP is subject to review and acceptance by ODV prior to use.
- Ensure that their workforce has been oriented and possesses appropriate training, certification, and competencies to complete the work in a safe, technically correct, and environmentally sound fashion.
- Understand the key commitments, rights, and responsibilities documented in the Project's health and safety Policy.
- Provide management and worker representatives for the Project's Joint Occupational Health & Safety Committee (JOHSC).
- Observe the site Safety Rules and disciplinary actions for violations of the Safety Rules
- Carry out JHAs and submit the documentation to ODV Supervision or to the Health and Safety Manager for approval prior to embarking on specific jobs.
- Carry out daily Field Level Hazard Assessment cards (FLRA) and submit weekly scans of completed FLHA to ODV Supervision or to the Health and Safety Manager.
- Inspect work of their workforce, independently from inspections and observations carried out by ODV, and within 24 hours submit scans of completed inspection reports to ODV Supervision or to the Health and Safety Manager.
- Report incidents and near misses upon their occurrence.
- Designate and maintain their own qualified First Aid providers as per WorkSafeBC.

- Provide ODV with monthly Health and Safety statistics for self and each of its Subcontractors as per the template provided by ODV. Health and Safety statistics are due no later than fourth (4th) day of the next month. Completed STATS form emailed to the health and safety Team bgmsafety@osiskodev.com.
- Provide Safety Data Sheets/ Material Safety Data Sheets for all WHMIS controlled materials that will be on-site are provided to the ODV Safety team prior to storage or use of the materials on site.
- Appoint a qualified and experienced person(s) to provide such first aid service as may be required given the nature of the job site and government regulations. The person(s) appointed to this position shall possess an appropriate Occupational First Aid Level 3 Certificate in First Aid in compliance with accordance with the BC Workers Compensation Act Part 3, Sections 3.14-3.21 (*Occupational First Aid*), and must be available at all times to administer first aid. First aid responsibilities include:
 - Administer first aid as required,
 - Maintains a first aid log, keeping the records confidential,
 - Coordinate the transportation of injured employees to a physician's office or hospital,
 - Assist Site Safety team, when necessary,
 - Attend and participate in regular daily "toolbox" safety meetings to ensure unsafe working conditions and practices are adequately addressed,
 - Instruct their workers in ODV Health and Safety Program requirements and applicable sections of the OHS Regulation and secure compliance from them, and
 - Provides health education materials or instruction to all on-site employees as required,
- Demonstrate support for the health and safety program by showing an exemplary attitude toward the health and safety of workers and the protection of the environment, and
- Assume responsibility for the coordination of their Subcontractors compliance with the requirements of this program and the OHS Regulation.

Contractors and Subcontractors that engage in unsafe work practices will be notified in writing that they are/were in breach of ODV Health and Safety Program requirements and/or the OHS Regulation. Receipt of such notification will require a written response specifying what actions have or will be taken to rectify the situation.

The Contractors are required to provide suitably qualified Health and Safety Coordinator for the purpose of ensuring the coordination of health and safety activities for the location to provide up to date information, to guide, support and oversee the Contractor's health and safety performance. Where the Contractor/Subcontractor has more than 20 workers, they shall provide

at least one suitably qualified Health and Safety Advisor and be able to cover rotational roster requirements. The Project Construction Manager, in consultation with the health and safety Manager, approves all Contractor supervision.

Site health and safety Coordinator: Minimum requirements:

- Minimum of four years of experience in the industry
- Current safety designation (e.g., CRSP/CSO/NCSO)
- Occupational First Aid Level 3 Certificate, current, in good standings
- Good knowledge of construction techniques
- High standard of written and spoken communication skills with the ability to explain and enforce Health and Safety elements
- Good Knowledge of the Health, Safety and Reclamation Code for Mines in BC and Occupational Health and Safety Regulations
- Sound knowledge of hazard identification and risk management processes
- Sound knowledge of incident investigation procedures, reporting, and training

ODV Construction and health and safety Manager reserves the right to approve Contractor and Subcontractor health and safety Coordinator(s)

Interactions with Regulators

ODV welcomes inspections, site visits, and business meetings with regulatory agencies overseeing ODV Sites. Officers representing regulatory agencies have the mandate and authority to conduct unannounced inspections of the Project's worksite, equipment, and vehicles.

The following outlines' ODV's interface with agency officers on site:

- During all interactions with regulators, ODV and contractor employees shall be courteous, respectful, professional, cooperative, responsive and demonstrate a commitment to regulatory compliance.
- Upon an Officer's communication of intent to perform an inspection, the employee with whom the Officer made contact shall provide all reasonable means to facilitate the inspection immediately and shall notify their superior.
- The Health and Safety Manager (or delegate) shall accompany officers performing an inspection. In the event of an emergency situation or any other urgent reason that prevents this, Officers have the authority to proceed without direct ODV accompaniment.
- The Health and Safety Manager (or delegate) must communicate all hazards that could pose a risk to the Officer and provide all reasonable means to facilitate the inspection.

Officers/inspectors performing a site inspection or consultation leaves a report of their activities on-site, or provide a verbal summary, with a report sent subsequently by email, fax or email to the Health and Safety Manager, who should:

- Immediately respond to and correct any identified non-compliance if practicable to do so.
- Immediately post the inspection report locally and forward it and any other related documentation to line management and the Health and Safety Manager.
- Submit a Notice of Compliance when requested by the Officer and forward a copy to General Manager and the Health and Safety Manager.

ODV provides copies of inspection reports and Notice of Compliance to the Client upon request.

ODV ensures that if they, or any Contractor or Subcontractor, receives an order issued by a regulatory agency, as soon as practicable, and within 24 hours of receiving the order, will notify all parties involved, in writing, of the order.

Prime Contractor

To be compliant with the Health, Safety and Reclamation Code for Mines in British Columbia, Contractors, Mines Act 25 (1) (2)

ODV is the Prime Contractor as defined by Section 118, *"Coordination at multiple-employer workplaces,"* of Part 3 Division 3 of the BC Workers Compensation Act.

As the Prime Contractor, ODV will work cooperatively with the Contractors and Subcontractors to maintain a safe and healthy workplace for all on-site workers, visitors, and suppliers at all times.

The Contractors and Subcontractor must give ODV the name and phone number of the person (s) whom they have designated to supervise their workers involved in the Project.

ODV installs and maintains consistent signage that clearly identifies ODV as Prime Contractor and contact information for key safety resources at main gate entrances/exits from the Project site and at other locations, as appropriate.

The Prime Contractor Signage includes:

- The name of Prime Contractor: ODV
- Phone number and email of site Community Contact
- Construction Manager Phone number is available 24 hours a day.
- PPE Requirements

Contractor/Subcontractor Controls

As part of the ODV policy, all direct hire and Contractor/Subcontractor employees are entitled to work in a safe environment. To achieve this, every reasonable effort shall be made to eliminate/reduce hazards and prevent incidents that cause injury to workers, environmental damage, and property damage. This effort shall include controls applied both before awarding a subcontract and during the execution of the work.

ODV believes that incidents are preventable. It is the duty of every Contractor/Subcontractor, in the performance of their subcontract, to cooperate with ODV and comply fully with ODV Health, Safety Program and Provincial Health, Safety and Regulations.

Pre-construction Controls

Before Contractors/Subcontractors are permitted to mobilize on-site and begin work, the following steps must be taken:

- The Manager/Superintendent will hold a “pre-job kick-off” meeting before the start of the company's scope of work to discuss safety expectations. Minutes are to be taken using ODV standard Pre-mobilization kick-off meeting checklist and copied to ODV Supervision and the appropriate health and safety Manager.
- Contractors/Subcontractors must submit a site health and safety plan, risk assessment, safe work procedures, job hazard analysis, to ODV health and safety Manager for their scope of work prior to mobilization for acceptance by health and safety Manager or delegate.
- Contractors/Subcontractors will receive a copy of the following ODV documents by formal transmittal:
 - Emergency Response & Preparedness Plan
 - Occupational Health & Safety Management Plan
 - Health and Safety Risk Register
 - HS Pre-Job Mobilization checklist
 - Summary of Submittals
- WHMIS Safety Data Sheets are to be submitted to ODV via bgmsafety@osiskodev.com. A Contractor/Subcontractor must submit to ODV hard copies of all Safety Data Sheets in a binder (for first aid room)
- Contractor/Subcontractors are to ensure that they have an adequate number of employees trained in BC First Aid by a licensed FA training provider. Contractors must meet the requirements of WorkSafeBC Occupational Health and Safety First Aid Assessment.

Contractor document requirements

The prime contractor of a multiple-employer workplace must

(a) Ensure that the activities of employers, workers and other persons at the workplace relating to occupational health and safety are coordinated, and

Accordingly, ODV requires all Contractors and Subcontractors to participate in our Health and Safety Management Program either by (i) following their own health and safety procedures provided they have been pre-approved by ODV (ii) follow ODV Health and Safety program.

ODV stratified Contractors and Subcontractors into the following three categories:

Contractor A	Involved in activities with moderate-high and critical tasks (as per our health and safety Risk Register); crews on the ground
Contractor B	Not involved in activities of high or with critical tasks.); crews on the ground
Contractor C	Transient workers, e.g., short-term maintenance, deliveries, truckers etc.
Contractor D	Suppliers only
Contractor A - Crane work - Rigging - Excavation - Form Work - Rebar work - Tank installation - Equipment Fabrication - Engineering companies performing work onsite - Confined Space work - Fall Protection work - Building construction - Excavations - Underground work - Concrete pumping/pouring - Concrete form and falsework - Dewatering/pumps - Pipe fitting and other work - Energizing equipment - Floor layering - Masonry	Full Package - WorkSafeBC Clearance Letter - Health and Safety Management Plan - First Aid and site Response and contacts - Pre-Job kick Off Meeting Checklist with applicable items initialized. - Equipment certification and pre trips, as applicable - Inventory and certificates of applicable equipment and tools - Equipment inventory & evidence of equipment maintenance - Safe work practices/ safe job procedures - Job Hazard Analysis (JHA) - Training certificates, a record of competencies, training matrix - Drivers and operators' driver's license - Insurance for mobile vehicles - Field Level Hazard Assessment (FLRA) - New/Young Worker Program - Return to work program - Drug and alcohol policy - Material list. Safety Data Sheets of hazardous materials brought to the site.

• Millwright work • Painting/varnishing • Equipment installation • Carpentry • Scaffolding / Ladder • Civil work • Equipment work • Equipment installation • Steel erecting/ironworker • Welding/cutting • Plumbing • Electrical • Drywall/plasterer • Insulating • Ventilation/Sheet metal • Roofing • Paving/asphalt • Glazers • Sandblasting • Other, as decided by ODV	
Contractor B • Surveyors • Testers • Delivery vehicles with crane (truck-mounted) • Traffic control • Landscaper • Concrete truck delivery • Elevator mechanic • Working Supervisor from Manufacturer (installation) • Office Repairs Major work • Consultants setting up large equipment for monitoring • Other, as decided by ODV • Engineering Consultant working onsite	Partial Package • WorkSafeBC Clearance Letter • health and safety Mgmt Plan (or a declaration that they will adapt ODV's) • Job Hazard Analysis (JHA) • Field Level Hazard Assessment (FLHA) filled out daily • Inventory and certifications of applicable equipment and tools • Drivers and operators' driver's license • Insurance for mobile vehicles/equipment (cranes) • SWPs • Training Certificates, a record of competencies, training matrix • Material list. Safety Data Sheets of hazardous materials brought to the site.

Contractor C (short term work) • Independent minor Maintenance • Suppliers with deliveries (driver (s) don't exit vehicle) • Security • Dump trucks • Delivery truck (no crane) (no lifting device) • Office electrical • Fencer • Office Repairs minor work • Janitors • Nonworking Supervisor from Manufacturer (installation) • (no physical work performed 1 or 2 days onsite only) • Consultants: setting up small electronic equipment • Other, as decided by ODV	Minimal Package • WorkSafeBC Clearance Letter • Job Hazard Analysis (JHA) • Equipment/vehicle certificates • Drivers License/vehicle Insurance (large delivery trucks) • Sign onto ODV FLHA Card
Contractor D Supply only • Suppliers No Delivery • Couriers • Photocopy machine Repair • Other, as decided by ODV	No documents required. • Supply deliveries will follow Contractor C

Construction Controls

Contractors/Subcontractors in the process of performing work under the control of ODV must meet the following requirements:

- All work will be performed in accordance with the Contractor/Subcontractor's safety manual. If the standards set out in the Subcontractor's manual are exceeded by ODV's OHSMP and/or the BC Occupational Health and Safety Regulation - the higher standard must be adhered to. Subcontractors without a Health and Safety manual shall follow ODV's OHSMP
- Workers arriving on the worksite must receive a full ODV Site Orientation. Contractor/Subcontractor employees must arrive onsite with all the required training, certifications. ODV will not be responsible for paying contractors time and money for essential onsite training.

- Subcontractors will be responsible for monitoring the health and safety performance of their employees and Subcontractors and taking corrective action when necessary.
- All Contractors/Subcontractor employees will participate in a morning pre-task Toolbox Meeting. ODV and its Contractors/Subcontractors will hold a joint meeting whenever practical.
- All Contractor/Subcontractor employees will participate in a daily (pre-shift) pre-task Field Level Hazard Assessment (FLHA) that is equivalent to or better than the system used by ODV.
- All Contractor/Subcontractor employees will participate in a weekly safety meeting.
- All Contractor/Subcontractors will perform a monthly safety inspection and submit it to ODV Health and Safety Team and ODV Supervision process.
- All Contractors, Subcontractors, and suppliers shall be responsible for providing Personal protective equipment (PPE) to their employees, visitors and for assuring its use by the following requirements:
 - All Contractors, Subcontractors, and suppliers shall wear the mandatory PPE required on any ODV project. At a minimum, all individuals shall wear:
 - Basic clothing including full-legged pants, and shirts with a 6 inch over the shoulder sleeve.
 - CSA/ANSI approved work safety boots (6 inches) as applicable (laced up boots only, no pull on or zippered boots) (safety shoes are not acceptable).
 - CSA/ANSI approved work safety rubber boots are acceptable
 - CSA/ANSI approved safety eye protection. (prescription glasses must be CSA approved) Must be worn 100% time.
 - CSA/ANSI approved high visible vests (as per WorkSafeBC). (Orange or Yellow) (No black or dark blue high vis vest or high vis coveralls allowed onsite) Must be worn 100% time.
 - CSA/ANSI approved head protection. (brim forward unless designed to be worn backwards) Must be worn 100% time.
 - CSA/ANSI approved head protection. Full brim for underground
 - Hearing protection must be worn when required. Double hearing protection must be worn at all times underground
 - Approved gloves according to the specialty tasks.
 - Gloves must be carried and readily available. Gloves will be worn when working with hands.
 - Double-eye protection must be worn (face shield and safety glasses) when there is a potential for flying debris from tools.

- Any other PPE as deemed necessary by ODV based on job hazard analysis and SDS requirements: e.g., grinding- face shield, safety glasses, hearing protection and hard hat required.
- Contractors/Subcontractors are required to report all incidents and near misses to ODV health and safety Manager or delegate immediately, within minutes of the occurrence.
- Contractors/Subcontractors shall investigate as a minimum:
 - Near misses
 - Site Accident/Incidents
 - First Aid Incidents regardless of how minor
 - An incident on the way to work
 - Lost Time Incidents
 - Medical Aid Incidents
 - Property, Equipment, vehicle Damage Incidents
 - Public complaints
- Contractors/Subcontractors are to ensure their employees are familiar with site emergency procedures. (Emergency Response Plan) A manpower roster shall be created each day for evacuation headcount purposes. Subcontractors are to account for their own workers in an emergency and report their headcount to ODV.
- Contractors/Subcontractors shall actively participate and manage WorkSafeBC Return to work program claims and will always offer Modified Work to employees. This includes sedentary office duties.
- Contractors/Subcontractors shall maintain and use all their tools and equipment as per manufacturers' specifications. All tools and equipment must be pre-inspected prior to use and do a documented inspection in a manner that meets or exceeds the ODV program, Health, Safety and Reclamation Code for Mines in BC, WorkSafeBC, CSA Standards.
- The Contractor/Subcontractor must provide ODV with a preventive maintenance schedule for all on-site equipment. The contractor will be audited against all work performed.
- All equipment must have logbooks, operator's manuals, and pre-use inspection records on each machine and must be available for auditing.
- A site pre-equipment inspection will be performed by the ODV maintenance dept prior to work onsite. Deficiencies may reject the equipment from working on the site. Please arrange this with GM maintenance dept

- The Contractor shall provide ODV with monthly Health and Safety statistics for self and each of its Subcontractors as per the template provided by ODV. Health and Safety statistics are due no later than fourth (4th) day of the next month. Completed statistics forms should be emailed to the Health and Safety Team at bgmsafety@oskiskodev.com.
- Contractors/Subcontractors are to provide or develop any necessary, safe work practices and procedures. The practices and procedures must be applicable to the project.

APPENDIX 11 PREVENTATIVE MAINTENANCE

The purpose of Preventative Maintenance is to ensure that all tools, equipment, and vehicles are maintained in a condition that will not damage the environment or compromise the health and safety of workers, visitors or Subcontractors.

Regulatory bodies and equipment manufacturers have specifications for the maintenance, and this information is incorporated into the maintenance of equipment. Supervision shall ensure that qualified workers, according to the manufacturer's warranty, carry out all preventative maintenance frequently or by the established schedules.

Each vehicle, tool or piece of equipment will be inspected daily prior to use. Vehicles and equipment will be fitted with a trip logbook as necessary. Any defective tools, vehicles or equipment that pose a hazard shall be removed from service until repaired by a qualified person or replaced. Through regular inspections, all workers and supervisors are responsible for identifying and removing defective equipment from service.

Responsibilities

Manager

- Ensures all company tools, equipment and vehicles are appropriately cared for and maintained. Ensures that all policies and Preventative Maintenance programs comply with local and national regulatory bodies.

Supervisor

- Ensures all preventative maintenance is carried out by qualified workers,
- Ensures maintenance is carried out according to established schedules that meet regulatory and/or manufacturers' standards,
- Ensures all equipment that requires ongoing maintenance is identified, logged, or documented,
- Ensures that workers are trained in how to remove defective equipment or tools from service, and
- Ensures all preventative maintenance records are maintained on the company server.

Worker

- Regularly checks and/or inspects all tools, vehicles, and equipment prior to use,
- Ensures any tools, vehicles or equipment that pose a hazard are tagged as "out of service,"

- Uses “out of service” tags; notifies supervisor and provides a complete description of the problem, and
- Exercises the right to refuse to work with unsafe equipment, when necessary.

Maintenance

Inventory of Items

ODV has documented a list of items in the Equipment Inventory section of the company server. This list includes all Company tools, equipment, and vehicles to be maintained. ODV will create and/or upload Maintenance Schedules for each item in the Equipment section of the company server.

Servicing Equipment and Company Vehicles

ODV has Maintenance Schedules that meet regulatory and manufacturers’ standards for all items that need to be maintained. The manager, the supervisor, will supply the vehicle to the shop for inspection at the allotted scheduled time. In service, hours are checked daily for every piece of equipment on-site, and it is the duty of the operator to ensure that the daily logs are filled out for the piece of equipment.

Daily Informal Tool Inspections

All employees must inspect their tools prior to use. If any defect is found, contact your supervisor.

Daily Vehicle and Equipment Inspections

All equipment and vehicle operators are required to fill out a daily inspection sheet before use and before the shift begins. All vehicles and equipment shall be inspected utilizing the inspection checklist located in the Equipment Inspections section of the company server.

If any defects are found during the inspection, workers will follow the correct tag out/lockout procedures and then record the deficiency. This individual will take corrective actions to fix the deficiency. The corrective action taken will be described in the Inspection document under maintenance with the Complete date. Note: Any defects should be dealt with immediately or as soon as reasonably achievable.

Logbook

Each piece of equipment must carry a logbook (duplicate copy), which must be filled in by the operator driver or operator prior to use. A list of items must be checked off. Any deficiencies must be recorded and reported immediately to Maintenance for repair. The original copy must be dropped off at the maintenance drop outside of the kitchen.

Defective Tool Repair Steps:

1. Bring defective tool(s) to your supervisor.

2. Tag tool with a company tag explaining what's wrong with it. Note: If any tool is not tagged, it will not be sent out.

Defective Equipment Repair Steps:

1. If a piece of equipment is defective, notify your supervisor immediately.
2. Shut down equipment and isolate the energy source (if trained to do so) using the manufacturer's instructions.
3. Remove all stored potential energy and confirm zero energy flow state.
4. Tag equipment to explain what's wrong, and ensure each worker locks out equipment (Lock Out Tag Out Training Required).

Qualifications

All individuals who perform maintenance, inspections or operate tools, equipment and vehicles should have the appropriate skills, accreditation, and certification. This certification applies to both company workers and contracted maintenance services.

Qualifications should include:

- Vehicle operators must possess a valid driver's license,
- Electrician certification if working with electrical/power tools,
- Appropriate certification if working with hydraulic, compressed air or other stored energy tools or equipment, and
- Any other certification required under the province of British Columbia or required under Canadian law.

Workers are trained and experienced in the following areas:

- Familiarity and comprehension of the safety requirements for the equipment that they intend to repair or operate,
- Use of manufacturers' operating and maintenance manuals,
- Ability to communicate to maintenance workers when there is a problem with a specific piece of equipment, and
- Knowledge of hand signals and/or other requirements as set by ODV, owner/client and local laws.

Training

Prior to starting work, supervisors, workers, and maintenance workers will be trained in the following:

- The policy and how it is applicable to the maintenance of the equipment and the worker,
- Defective tool management,
- How to identify defective components,
- Repair and maintenance schedules of equipment,
- Lock Out Tag Out Trained, and
- Daily inspection of equipment and vehicles.

APPENDIX 12 SAFE WORK PRACTICES

ODV is committed to preventing the accidental loss of all resources. In order to minimize the chance of injury and/or incident while improving efficiency and productivity, SWPs are to be accurately developed, reviewed, and implemented.

SWPs can be defined as a written step-by-step set of instructions on how to safely complete a specific job. This procedure should clearly identify hazards the worker could be exposed to, steps required to complete jobs and control measures to be implemented.

ODV involves supervisors, workers and specialists in the development and review of SWPs. The development team creates practical procedures, which enable workers to complete their jobs at hand efficiently, effectively and, most importantly, safely.

SWPs are the basis for workers' education, which is expected to help demonstrate how to perform their jobs safely. ODV expects and encourages all workers to adhere to these principles.

Definitions

Job Hazard Analysis is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment.

Safe Work Practice can be defined as a written step-by-step set of instructions on how to safely complete a specific job that involves a higher risk to people, equipment, materials, environment, and processes.

Responsibilities

Management

- Instills the importance of developing SWPs and ensuring the appropriate workers are trained in how to perform all jobs safely.

Supervisor

- Ensures Safe Work Procedures are written for high risk and repetitive work to be performed and that they are readily available to workers,
- Involves the workers in the development and/or review of SWPs,
- Reviews and edits SWPs to make sure they are easily understood,
- Ensures all workers working within areas covered by specific SWPs, have been trained and have signed off on the respective SWP.

- Conducts regular inspections of their area of responsibility to ensure SWPs are being followed, and
- Enforces the use of established Safe Work SWPs.

Worker

- Works within the requirements of ODV's Safe Work SWPs and regulatory requirements,
- Knows how to access the Safe Work SWPs,
- Follows the SWPs as required,
- If requested, participates in the development and/or review of SWPs in a positive manner, and
- Understands SWPs or asks the supervisor for clarification.

Developing Safe Work Procedures

SWPs must be developed for all high risk or repetitive work performed by ODV employees. At times, Practices may be related to a whole range of work activities rather than a specific job. It is important to make sure that SWPs are written to fit the scope of work and to use a language that is easily understood by your workforce.

ODV must assess all jobs the company performs to develop SWPs that accurately reflect ODV's activities. Once the assessment is completed and all company jobs have been listed, select a job, and conduct a collaborative Job Hazard Analysis.

Selecting a Team

Involving a number of individuals increases the likelihood of accurately identifying job steps, potential hazards, and appropriate measures for eliminating or controlling hazards.

An effective team includes:

- The supervisor,
- Employee/s who is familiar and experienced with the job,
- Other workers who perform the job regularly, and
- Experts or specialists when necessary—maintenance workers, safety advisors, engineers and as many knowledgeable and experienced workers as possible.

Job Hazard Analysis

Once the team and job have been selected, perform a Job Hazard Analysis using the Job Hazard Analysis form. Ensure all fields are completed.

When the Job Hazard Analysis is completed, determine whether the analysis fulfills the definition outlined in SWPs. If so, make sure to select SWPs as the category in the Job Hazard Analysis Tool.

Risk Priority Rating of Safe Work Procedures

During the Job Hazard Analysis, the user will be required to select a risk priority based on severity and probability for the job. Therefore, all SWPs will include a Risk Priority Rating.

Location of Safe Work Procedures

ODV will ensure that all employees have access to SWPs by making them readily available at all workplace locations. There will be a copy of SWPs available for employees' review, located in the Main Office, Shop, Bonanza Ledge and on each worksite location.

The SWPs must be printed off if required and available at the workstation or office.

Reviewing Safe Work Procedures

All SWPs must be reviewed by Management, Supervisors, and workers prior to the implementation of each SWPs. This review by Management and Supervisors will occur on an as-needed basis and prior to works being undertaken, and or after extended lengths of time between the use of the SWPs for specific tasks, while the review with the employees will occur during the next toolbox talk. Following implementation, SWPs will continue to be reviewed on an annual basis at the site coordination meetings, Safety Meeting and by the Joint Occupational Health and Safety Committee (JOHSC) or as required.

Training

Prior to performing the job, all supervisors, JOHSC members and workers who use and/or conduct the annual review of the SWPs, will receive training.

During the New Worker Orientation, orientation and job-specific training, the following information will be covered:

- How to develop SWPs,
- When to use SWPs,
- How to use and follow SWPs,
- Who is responsible for ensuring the procedures are followed, and
- How and when to review SWPs.

APPENDIX 13 MEDICAL SURVEILLANCE PROGRAM

ODV has established a Medical Surveillance Program to protect employees and all other persons from undue risks to their health and safety arising out of or in connection with activities at mines. A medical surveillance program is required in accordance with section 2.12 of the Health, Safety and Reclamation Code for Mines in BC.

ODV has selected the Quesnel Medical Clinic to perform the tests; however, an employee participating in the medical surveillance program may attend the doctor of his/her choice to undergo any examinations and tests required by Code section 2.12.1(2) and have the results sent to the ODV Health and Safety Department.

The ODV Medical Surveillance Program includes the following:

- Pre-assignment, mid-assignment, and post-assignment (exit) medical assessments periodic medical examinations;
- Clinical tests;
- Health education; and
- Record-keeping.

The program is designed to detect occupational illnesses and diseases in their early treatable stages. Medical assessments or examinations are offered pre-assignment, mid-assignment, and post-assignment. Employees benefit from early detection and appropriate early intervention. Patterns and trends can also be identified among groups of workers who share common occupational exposures and risks. Health protection and exposure prevention strategies can be modified to improve workplace safety conditions.

Occupational Illnesses can be caused by three types of agents:

- Chemical Agents – dust, vapours/gases, fumes - solvents, metals, poisons, acids, bases, etc.
- Biological Agents – infectious bacteria, viruses, parasites, and mould; parts/products of animals, plants, or microorganisms.
- Physical Agents – noise, heat, cold, vibration, radiation, high or low air pressures.

These agents can cause three types of reactions in the body:

- Acute reactions – e.g., shortness of breath, headache, and nausea from one-time exposure, e.g., chemical spill – Usually not permanent.
- Gradual reactions – e.g., asthma or dermatitis after exposure over days, weeks, or months – Can get worse or persist.
- Delayed reactions – e.g., hearing loss, cancer, lung fibrosis after long-term exposure – May develop after exposure or job is finished.

There are three kinds of prevention strategies:

- Primary prevention – preventing the development of disease/illness by taking measures to avoid/control exposures;
- Secondary prevention- early detection, intervention, and treatment of an existing disease to prevent permanent impairment or reverse disease process (e.g., medical surveillance); and
- Tertiary prevention – involves medical management of established disease to minimize impairment by restoring function and reducing disease-related complications.

Prevention elements include:

- Hazard Recognition
- Hazard Controls
- Education

Audiometric Testing

ODV has hired **Connect Hearing**. They are a WorkSafeBC approved mobile industrial audiometric business out of Vernon, BC.

Testing includes:

- **History:** Any pre-existing medical conditions such as diabetes, heart disease, heart attack, high blood pressure and stroke; smoking; previous un-protected exposures to noise etc.
- **Clinical Test:** The frequency of audiometric tests is set at 1-year intervals.
- **Health Education:** Noise control; exposure limits; inform affected employees and/or students of the results of noise exposure measurement and the significance of the measurement to the risk of hearing loss; the categorization of the hearing test; the necessity, use, maintenance, and replacement of hearing protection.
- **Results/Records:** All hearing test results are stored at WorkSafeBC. Results are also maintained in your Workers File with the company.

Lead Testing

ODV is working with the Quesnel Medical Clinic and G. R. Baker Memorial Hospital in Quesnel for its Lead Testing Program. Testing includes:

- **History:** Previous exposure to Lead; personal habits (smoking)
- **Work-Site Tests:** Weekly site swab tests will be performed after the end of shift.
- **Clinical Tests:** the tests done include blood lead concentration (inorganic lead) and urine lead concentration (organic lead). The frequency of periodic blood and urine tests is set at three-month intervals.
- **Results / Records:** All test results are stored at the medical clinic in which the tests are performed. Results are also maintained in your Workers File with the company.
- **Health Education:** Personal cleanliness, worksite cleanliness; the danger of eating, drinking, and smoking in lead-exposed areas, hazards from lead, discussion of examination results, need to notify the employer and examining physician as soon as possible in the case of pregnancy.

Respiratory Testing

ODV is working with the Quesnel Medical Clinic and G. R. Baker Memorial Hospital in Quesnel for its Pulmonary Testing and Chest X-ray Program. Testing includes:

- **History:** Previous exposure to isocyanates (occupational and non-occupational); allergies, asthma; past or present breathing or skin disorders; previous exposure to silica; personal habits (smoking); previous exposure to silica; frequency and duration of exposure to silica since the previous examination; signs and symptoms of breathing disorders (shortness of breath, cough, sputum, wheezing, chest pain, etc.)
- **Physical Examination:** Emphasis on the respiratory system. The frequency of periodic examination is set to be annually; however, it may be requested to be more frequent by the examining physician.
- **Clinical Tests:**
 - Pulmonary function tests will be done annually
 - Chest x-rays will be done annually (lateral view only if required by the examining physician)
 - When exposure to silica is discontinued the examining physician will determine the duration and frequency of follow-up which will be based on the intensity and duration of exposure and findings in previous x-rays
- **Results/Records:** All test results are stored at the medical clinic in which the tests are performed. Results are also maintained in your Workers File with the company.

- **Health Education:** Personal cleanliness, eating, drinking, and smoking should be prohibited in isocyanate-exposed areas, hazards of isocyanates, discussion of examination results.

Maintenance of Records

Specific test results and other personal medical information generated by these exams will be kept confidential between the employee and the physician. The physician will determine the scope of the exam, then inform the supervisor of their recommendations based on the exam results.

The supervisor will discuss these recommendations, if any, with the employee. The employee can contact the physician who performs the exam with any questions regarding the test results.

According to the law, employees have the right to request copies of their medical or exposure records at any time by contacting their supervisor or Human Resources.

Definitions

Medical Surveillance: the identification of employees exhibiting signs or symptoms of occupational illnesses or diseases.

Occupational Health: health care addressing the recognition, evaluation, and control of biological, chemical, and physical workplace stressors that cause adverse health effects to workers.

Occupational Hygiene: efforts to control exposures to biological, chemical, and physical causes of occupational diseases.

Occupational Illness: a condition that results from exposure in a workplace to a physical, chemical, or biological agent to the extent that the normal physiological mechanisms are affected, and the health of the worker is impaired.

APPENDIX 14 WORKPLACE MONITORING PROGRAM

It ODV's policy to comply with the various requirements of the Chief Inspector's publication, *Workplace Monitoring Procedures Manual*. The Workplace Monitoring Program is a cyclical strategy that assesses worker exposures and implements prioritized control measures for worker protection from unacceptable exposures. The major steps in the strategy for ODV include:

- Defining the Workplace Monitoring Program Objective: Promote a working environment that encourages participation in the Workplace Monitoring Program.
- Basic Characterization: Identify physical and chemical agents in use, their sources and controls, and worker exposure potential.
- Exposure Assessments: Identify groupings of workers having Similar Exposure Groups (SEG), defining the exposure profile for each group or similarly exposed workers, and providing judgements about the acceptability of each exposure profile.
- Further Information Gathering: Prioritize exposure monitoring or collection of further information on health effects so that uncertain exposure judgements can be resolved with higher confidence.
- Health Hazard Control: Develop and implement prioritized control strategies for unacceptable exposures and ensure worker exposures are reduced as much as reasonably practicable, and as a minimum standard, at or below the legislated limits. Controls may include modifying or replacing current controls should they fail to achieve the stated goals.
- Reassessment: Periodically perform a comprehensive re-evaluation of exposures. Determine whether routine monitoring is required to verify that acceptable exposure remains acceptable.
- Communications & Documentation: Post sample results inconspicuous areas; review results of sampling with the Joint Occupational Health and Safety Committee (JOHSC); and review the monitoring program with workers annually and implement changes to improve the program or meet new / changed legislated requirements.

Objective

Ensuring the health, safety and well-being of our employees, our customers and the public is a major commitment of ODV operations. We recognize that physical and chemical agents exist in our processes, which can be harmful to exposed workers and that we have a responsibility to

ensure that exposure to these agents is monitored and controlled. The Workplace Monitoring Program results will be used to determine the needs and priority for health hazard controls, build exposure histories and demonstrate regulatory compliance. To meet this responsibility, we ask our employees to actively participate in this program for the benefit of all workers.

Basic Characterization

The Chief Inspector's *Workplace Monitoring Procedures Manual* describes physical and chemical agents that must be monitored. Physical agents common to most industrial workplaces include:

- Respirable Dust
- Crystalline Silica
- Welding Fume
- Asbestos
- Noise
- Light*
- Heat and Cold Stress
- Ergonomics

*There are no unusual lighting features at ODV sites, and until required by circumstances, the light will not be monitored.

Chemical agents tend to be more site-specific than physical agents and for ODV sites additional large-scale chemical exposures include, but may not be limited to:

- Diesel Exhaust
- Hydrogen Cyanide Gas
- Sulphur Dioxide Gas
- Litharge (PbO)

Basic characterization of exposures was undertaken by conducting a preliminary walk around survey of the ODV operations (prior to operation), interviews with managers and workers, reviewing process flow diagrams and engineer reports, and conducting a literature review.

Exposure Assessments

From this basic characterization of exposure agents, Table 14-1 presented below outlines further refinement of potential exposures and associated SEG.

A SEG is defined as a group of workers having the same general exposure profile for an agent because of the similarity and frequency of the task they perform, the similarity of the materials

and processes with which they work and the similarity of the way they perform the tasks. The table does not include physical parameters of heat and cold stress, noise, ergonomics, and light. These hazards are assessed on their own merit in their respective Program Section.

Allocation of the SEGs has been conducted using a purely observational approach, as no pre-existing exposure data is available. The first ten columns of the table outline the reasoning for SEG formation. As the mine moves into full operation, and more qualitative data becomes available, as well as a collection of quantitative exposure data occurs, SEG exposures will be statistically analyzed and refined. In addition, a review of smaller chemical exposures will be reviewed once common, and higher risk exposures are sufficiently addressed.

Table 14-1 Potential Exposures and Associated SEG

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
A	Wells Exploration - Core Cutting Facility 3 Stations 1, 2, 3	Cutting cores using a wet saw in booths, based on markings of geologists. Also, perform wash-downs of the booth on a regular basis to prevent cross-contamination of cores.		~10 hr. shift	1/saw	Localized exhaust ventilation (recirculating), use of wet cutting saws, half-face respirators/PAPRs also available; presently use P100 and combination cartridges (AG cartridge for sulfides nuisance level), NBR and nitrile gloves, hearing protection, aprons, and rubber boots.	Respirable Crystalline Silica (RCS), trace sulfides	None	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1	NIOSH 7500	2	Controls observed	3	Carcinogen	2	12
B	Wells Exploration - Core Cutting Facility 4 Station Stations 1,2,3,4	Cutting cores using a wet saw in booths, based on markings of geologists. Also, perform wash-downs of the booth on a regular basis to prevent cross-contamination of cores.		~10 hr. shift	1/saw	Localized exhaust ventilation (not recirculating), use of wet cutting saws, and half-face respirators/PAPRs also available; presently, use P100 and combination cartridges. NBR and nitrile gloves, hearing protection, aprons, and rubber boots.	RCS, trace sulfides	None	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1	NIOSH 7500	1	Controls observed	3	Carcinogen	1	3
C	Wells - Underground Mine Site	Operation of Sandvik MH620 to dig and extract ore (Drilling)	No image available	10-12 hours/day	2	Operator cab provided with triple stage filtration; ejector sprays water on tungsten carbide drills; diesel motor only used for equipment movements while electric is for ejector and drills. Ventilation in mine to MEM standards	RCS, diesel particulate matter, NO2, CO, PNOC	None	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1 / NO2 = 1ppm / CO =25 ppm (8hr); R / PNOC = 3 mg/m³ (8hr)	NIOSH 7500, NIOSH 5040, real-time detection for CO, NO2	3 (all)	Controls observed	3	Carcinogen;	2	18
D	Wells - Underground Mine Site	Blasting	No image available	1-2 times/day	2	Workers are restricted from blast are until dust has settled. Ventilation in mine to MEM standards	RCS, CO, PNOC	None	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1 / CO =25 ppm (8hr); R / PNOC = 3 mg/m³ (8hr)	NIOSH 7500, real-time detection for CO, NIOSH 0600	4 (all)		4	Carcinogen	1	16

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
E	Wells- Underground Mine Site	Diesel haul truck operation to transport extracted ore	No image available	~10 hours	1	Filtration of vehicle cab (type unknown). No other.	RCS, diesel particulate matter, NO2, CO, PNOC	None	RCS (cristobalite & quartz) = 0.05 mg/m ³ (8hr); A2, 1 / NO2 = 1ppm / CO =25 ppm (8hr); R / PNOC = 3 mg/m ³ (8hr)	NIOSH 5040, NIOSH 7500, NIOSH 0600, real-time detection for CO, NO2	3 (all)	Not in operation	4	Carcinogen	2	24
F	Wells- Underground Mine Site (not in operation)	Scoop (front-end loader) operator to assist loading of dump truck for transport of materials to mine processing site	No image available	~10 hours	N/Ap	TBD once in operation	RCS, diesel particulate matter, NO2, CO, PNOC	None	RCS (cristobalite & quartz) = 0.05 mg/m ³ (8hr); A2, 1 / NO2 = 1ppm / CO =25 ppm (8hr); R / PNOC = 3 mg/m ³ (8hr)	NIOSH 7500, NIOSH 5040, NIOSH 0600	N/Ap	Not in operation		Carcinogen		n/a
G	QR- Crushing Operation	Crushing station operation monitoring (enclosed office) and troubleshooting line production (outside area)		Continuous	Operator (1)	Active exhaust ventilation system and wetting on line operation as created into slurry	RCS, PNOC	None	RCS (cristobalite & quartz) = 0.05 mg/m ³ (8hr); A2, 1 / PNOC = 3 mg/m ³ (8hr)	NIOSH 7500, NIOSH 0600	2 (all)	Controls observed	3	Carcinogen, respiratory	2	12
H	QR- Crushing Operation	Crushing station operation monitoring (enclosed office) and troubleshooting line production (outside area)		Continuous	Potential for all mill occupants	Active exhaust ventilation system and wetting on line operation as created into slurry	RCS, PNOC	None	RCS (cristobalite & quartz) = 0.05 mg/m ³ (8hr); A2, 1 / PNOC = 3 mg/m ³ (8hr)	NIOSH 7500, NIOSH 0600	1 (PNOC)	Controls observed	3	Carcinogen, respiratory	1	3
I	QR- Assay Lab	Sample Prep- pulverize, crushing of core samples		~12 hours	3	Pulverize canopy hood (P-1, 4000 FPM), pulverize enveloping sample hood (H-1- 125 FPM), riffle splitting enveloping hood (H-2, 125 FPM) & jaw crusher hood (H-3, 125 FPM) exhaust ventilation	RCS	March 2017 engineering report indicates dust exhaust is not filtered, with ineffective dispersion occurring and potential	RCS (cristobalite & quartz) = 0.05 mg/m ³ (8hr); A2, 1	NIOSH 7500; D-lead Test Kits (swab); EPA 6010c R3 m biological monitoring	4	Controls observed	3	Carcinogen, respiratory	2	24

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
						assessment and upgrades implemented. Airflow readings to be documented monthly. Workers to conduct work under local exhaust ventilation; daily HEPA vac/cleaning of surfaces; safety glasses; lab coats; safety boots; 1/2 face respiratory protection with OV/HEPA required for cleaning at the end of the day.		reintroduction occurring through supply air. Dust collector has been recommended, as well as curtains on canopy hood for pulveriser.								
J	QR- Assay Lab	Fire Assay Room - mixing the flux (litharge- lead oxide) into ore sample		~12 hours	3	Flux hood (H-4, 125 FPM) exhaust ventilation assessment and upgrades implemented. Airflow readings to be documented monthly. Workers to conduct work under local exhaust ventilation; daily HEPA vac/cleaning of surfaces; 1/2 face OV/P100 for assay work and cleaning; safety glasses; lab coats; safety boots and latex gloves.	Inorganic lead, potassium nitrate (niter), calcium fluoride	March 2017 BBA Engineering report indicates insufficient LEV and reduction of face opening by 30% still required.	Lead inorganic - 0.05 mg/.3; 2A, R / CaF2 = 2.5 mg/m³ (8hr-ACGIH) / Potassium Nitrate = 10 mg/m³ (8hr-ACGIH)	NIOSH 7303 (air); EPA 6010c R3 m; biological monitoring	4 (lead)	Controls observed	2	Lead poisoning	2	16
K	QR- Assay Lab	Fire Assay Room- operation of cupellation furnaces, pour into slag molds and sample cooling, de-slagging lead buttons		~12 hours	3	Furnace Heat Exhaust (H-5, N/A); Furnace Door (H-6, 125 FPM); Furnace Work Table (H-7, 125 FPM) exhaust ventilation assessment and upgrades implemented. Airflow readings to be documented monthly. Workers to conduct work under local exhaust ventilation; daily HEPA vac/cleaning of surfaces; ½ face OV/P100 for assay work and cleaning; safety glasses (masks for deslagging); lab coats; safety boots and latex gloves.	Inorganic lead	March 2017 BBA Engineering report indicates an extension of canopy hood over oven required to remove furnace heat (H-5). Furnace work table (H-7) airflow is below recommended values but capture efficiency was considered adequate.	Lead inorganic 0.05 mg/.3; 2A, R	NIOSH 7303 (air); EPA 6010c R3 m; biological monitoring	4	Controls observed	2	Lead poisoning	2	16

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
L	QR- Assay Lab	Wet Lab Assay- acid digestion on hot plates, analytical assessment of cores		~12 hours	3	Fume hood operation (FH-1, FH-2, and 125 FPM) and additional canopies installed over AA spectra and ELTRA analyzer. Airflow readings to be documented monthly. Workers to conduct work under local exhaust ventilation; daily HEPA vac/cleaning of surfaces; safety glasses; lab coats; safety boots and latex gloves; 1/2 face respiratory protection with OVA/HEPA required for cleaning at the end of the day.	Nitric acid, hydrochloric acid, RCS, PNOC, lead, picric acid	March 2017 BBA Engineering report indicates insufficient capture efficiency on fume hoods, with recommended reduction of face opening by 30% and follow fume hood design recommendations.	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1 / PNOC = 3 mg/m³ (8hr) / Lead inorganic - 0.05 mg/m³ (8 hr.); 2A, R / Picric Acid = 0.1 mg/m³ (8-hr ACGIH) / Nitric acid = 2 ppm (8hr), 4 ppm (STEL)	NIOSH 7303 (air); EPA 6010c R3 m; biological monitoring	3 (lead)	Controls observed	3	Lead poisoning	2	18
M	QR- Mill Operation/ Processing	Sodium cyanide addition to slurry mixes		Continuous	High risk for solution operators at storage tanks and CIP (2)	Cyanide tank exhaust system present and verified working properly March 2017; 3 HCN monitoring sensors present in Mill. Safe work procedures for application of sodium cyanide and entry into storage tanks outlining PPE and real-time monitoring	Hydrogen cyanide	Make: Armstrong Monitoring Corporation Model: 3x AMC – 299BA0 HCN L1 alarm 3.3 ppm, L2 alarm 6.7 ppm; calibrated every 6 months.	HCN = C10ppm, Skin	Personal-real-time Drager Xam-5000 5 gas with HCN L1 3.3 ppm L2 6.7; Real-Time fixed detection systems at cyanide berm area; between the regeneration kiln and pregnant tank and over CIP tank number 2. OSHA 1015.	2	Controls observed	4	IDLH, toxicity	2	16
N	QR- Mill Operation/ Processing	Mill operation with HCN in CIPs and slurry tanks (utilities, maintenance, supervisors, contractors, etc.).		Continuous	Moderate risk for all mill occupants	Localized exhaust and sensor positioning (3) next to sources and on high-risk activity sensors of the plant.	Hydrogen cyanide	Make: Armstrong Monitoring Corporation Model: 3x AMC – 299BA0 HCN L1 alarm 3.3 ppm, L2 alarm 6.7 ppm; calibrated every 6 months.	HCN = C10ppm, Skin	Personal-real-time Drager Xam-5000 5 gas with HCN L1 3.3 ppm L2 6.7; Real-Time fixed detection	2	Controls observed	4	IDLH, toxicity	2	16

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
										systems at cyanide berm area; between the regeneration kiln and pregnant tank and over CIP tank number 2. OSHA 1015.						
O	QR- Mill Operation/ Processing	Removing gold from electro-winning tables (electricity is used to attract residual gold held in solution to a negative cathode).		Daily	1	Local exhaust ventilation on extraction tables, process enclosed during operation.	Hydrogen cyanide in solution (trace); hydrogen, oxygen	Make: Armstrong Monitoring Corporation Model: 3x AMC – 299BA0 HCN L1 alarm 3.3 ppm, L2 alarm 6.7 ppm; calibrated every 6 months.	HCN = C10ppm, Skin	Personal real-time Drager Xam-5000 5 gas with HCN L1 3.3 ppm L2 6.7; Real-time fixed detection systems at cyanide berm area; between the regeneration kiln and pregnant tank and over CIP tank number 2. OSHA 1015.	2 (HCN)	Controls observed	2	IDLH, toxicity	1	4
P	QR- Mill Operation/ Processing	Introduction of powder sodium metabisulphite to process water in the cyanide destruction circuit-occurrence at mixing tank; work in vicinity of tank.		Daily	Operator (high)	Sodium metabisulphite tank exhaust system present and verified March 2017 as working properly; one H2S monitoring sensor present next to the tank in the Mill; emergency exhaust fan present at floor in spillage containment	Sulphur dioxide	Make: Armstrong Monitoring Corporation Model: 3x AMC – 299BA0 SO2 L1 alarm 1.33 ppm, L2 alarm 3.63 ppm; calibrated every 6 months.	SO2 = 2ppm (8hr) & 5 ppm (STEL)	Real-time fixed detector (at berm of tank); Drager PAC 7000 H2S – SO2 personal monitors L1 1.33 ppm L2 3.63 ppm; and NIOSH 6400	3	Controls observed	4	Pulmonary edema	2	24

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
Q	QR- Mill Operation/ Processing	Work in vicinity of sodium bisulphite tanks		Daily	Potential for all mill occupants (moderate)	Sodium metabisulphite tank exhaust system present and verified March 2017 as working properly; one SO2 monitoring sensor present next to the tank in the Mill; emergency exhaust fan present at floor in spillage containment	Sulphur dioxide	Make: Armstrong Monitoring Corporation Model: 3x AMC – 299BA0 SO2 L1 alarm 1.33 ppm, L2 alarm 3.63 ppm; calibrated every 6 months	SO2 = 2ppm (8hr) & 5 ppm (STEL)	Real-time fixed detector (at berm of tank); Drager PAC 7000 H2S – SO2 personal monitors L1 1.33 ppm L2 3.63 ppm.	3	Controls observed	4	Pulmonary edema	2	24
R	QR- Mill Operation/ Processing	Furnace operation to smelt gold; adding fluxing agent and monitoring process		1/month, 24 hours	3	Dust collection system (Pulseflo- Joy) dedicated to the canopy hood of the gold room furnace.	Metal fume exposures	March 2017 engineering report recommending application of new non- flammable curtain on sides of canopy recommended by engineer report. No air monitoring available as not yet put into operation.	Dependent on metal	NIOSH 7303	3	Controls observed	2	Metals toxicity	2	12
S	QR- Mill Operation/ Processing	Refractory ceramic fiber on smelting furnace-replacement during filter maintenance		1 every five years	3	No work procedures generated. Activity not scheduled to occur. To be developed when required.	RCS	None	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1	NIOSH 7500	N/Av	Procedures required	3	Carcinogen		N/A
T	QR- Mill Operation/ Processing	Review shaker tables sediment for large gold ore extraction		~12 hours	2	No local extraction; materials are wet.	RCS	None	RCS (cristobalite & quartz) = 0.05 mg/m³ (8hr); A2, 1	NIOSH 7500	2	Controls observed	3	Carcinogen	2	12
U	Potential Throughout-asbestos in building construction/process equipment- no	General maintenance	No image available	?	Within vicinity of work	None observed	Asbestos fibers	None	Asbestos = Amosite 0.5 f/cc; chrysotile	NIOSH 7400 or NIOSH 7402 (air);	N/A			Carcinogen		N/A

SEG	Exposure Locations	Tasks	Operation Photo	Duration	Workers Impacted	Current Controls	Exposure Parameters	Existing Site Data for Exposures & Controls	Exposure Limits	Reference Sampling Procedures	Estimated Exposure Rating	Basis for ER	Health Effect Rating	Basis for HER	Uncertainty Rating	SEG Prioritization
	surveys available and not identified on-site at present.								& other forms 1 f/cc; crocidolite and other types not identified 0.2 f/cc	NIOSH 9002 (bulk) and/or EPA600/R-93/116 (bulk)						
V	Potential throughout- lead in building paints, metals- no surveys available	General maintenance	No image available	?	Within vicinity of work	None observed	Lead (dust or fume dependent on task)	None	Lead and inorganic compound- 0.05 mg/m ³ ; 2B, 2A, R	NIOSH 7303	Task Dependent			Lead poisoning		N/A
W	Welding - not observed in process	Welders/Millwright/Mechanics	No image available	?	Within vicinity of work; welder (2)	None observed	Metal fume exposures (zinc, iron, aluminum, manganese, ozone, carbon monoxide, etc.)	None	Dependent on metal, substrates, welding process	NIOSH 7303	N/A					N/A
X	Water Treatment Plant	Water Treatment Plant Operator, monitoring the plant, setting up chemical totes and barrels	No image available	~12 hours	1 Worker	Building ventilation Follow the SDS for all PPE. safety glasses (full face respirators for preparing & installing chemicals); impervious apron; full coveralls; impervious safety boots and impervious gloves.	H2S, SO2, NO2	Constant Monitoring Make: unknown	H2S 10 ppm, SO2	Drager PAC 7000 H2S – SO2 personal monitors L1 1.33 ppm L2 3.63 ppm.	Task dependant	Controls Observed & Procedures Followed	3	Carcinogen /toxicity / IDLH /Pulmonary edema	1	2

The Workplace Monitoring Program has been developed using a compliance-based strategy. A compliance strategy, which is the traditional approach to exposure assessment, is directed at assessing compliance with established regulatory and/or voluntary occupational exposure limits (OELs).

Based on the chemical agents identified, the following reference values, presented in the following table, will be used to determine SEG acceptable exposures. Diesel particulate matter has been included in the following table; however, it is still a proposed exposure limit.

Table 14-2 Reference Values – SEG Acceptable Exposures

Chemical Parameter	TWA (8-Hour)	STEL or C	Additional Notes	Reference Agency
Asbestos (if encountered)	Amosite- 0.5 f/cc Chrysotile- 1 f/cc Crocidolite- 0.2 f/cc Other forms 1 f/cc	-	A1, 1	HSRC
Carbon Monoxide [630-08-0]	25 ppm	-	R	HSRC
Hydrogen cyanide [74-90-8]	3.3 ppm	10 ppm C	Skin	HSRC
Hydrogen sulphide [778306-4]	10 ppm	-	-	HSRC
Lead [7439-92-1]	0.05 mg/m ³		Elemental 2B, R; other, inorganic 2A, R	HSRC
Lead [7439-92-1] and inorganic compound as Pb - Surface Contamination			Floors/Surfaces 200 µg/ft.2 Eating Areas 40 µg/ft.2	WorkSafeBC OHSR
Nitric Acid [7697-37-2]	2 ppm	4 ppm (STEL)	-	ACGIH
Nitrogen dioxide [10102-44-0]	1ppm	-	-	HSRC
Respirable Particles Not Other Classified- PNOC (Insoluble)	3 mg/m ³	-	-	ACGIH
Picric Acid [88-89-1]	0.1 mg/m ³	-	Skin	ACGIH
Potassium Nitrate	10 mg/m ³	-	-	ACGIH
RCS Cristobalite [14464-46-1] Quartz [14808-60-7; 1317-95-9]	0.05 mg/m ³	-	A2, 1	HSRC
Sulphur dioxide [7446- 09-5]	1.33 ppm	3.63 ppm	-	HSRC

Chemical Parameter	TWA (8-Hour)	STEL or C	Additional Notes	Reference Agency
Diesel Particulate Matter	20 µg/m ³ as elemental carbon	-	-	ACGIH (proposed)

Table Notes:

ppm = parts of vapour/gas per million parts of contaminated air volume at 25°C mg/m³ = milligrams of substance per cubic meter of air
f/cc = fibres per cubic centimetre

TWA = time-weight average

STEL= short-term exposure limit value means the time-weighted average (TWA) concentration of a substance in air which may not be exceeded over any 15-minute period, limited to no more than 4

Such periods in an 8-hour work shift with at least one hour between any two successive 15-minute excursion periods

C= ceiling limit value, the concentration of material in the air which may not be exceeded during the work period

HRSC= Health, Safety and Reclamation Code for Mines in British Columbia, 2017.

ACGIH= American Conference of Governmental Industrial Hygienist Inc.

IARC = International Agency for Research on Cancer

A1 = ACGIH carcinogen designation indicating a confirmed human carcinogen

A2= ACGIH carcinogen designation indicating a suspected human carcinogen

1= IARC carcinogen to humans

Skin = ACGIH identified the potential for significant impact to overall exposure by the skin, including mucous membranes and the eyes.

R= ACGIH identified reproductive toxin

**= ACGIH Biological Exposure Index for Lead is 30 µg/100 ml

For OELs displayed in the above table, when applied to work shifts greater than eight hours, the time-weighted average concentration of airborne contaminations will be amended to the “concentration equivalent” (Ceq) derived using the following formula:

$$Ceq = [(8\text{-hour OEL}) \times 8] / \text{shift length in hours}$$

Given predominantly 12-hour shifts within the industry, review of sample data with corrections for exposure duration will be clearly identified.

The table also makes reference to the American Conference of Governmental Industrial Hygienists Biological Exposure Index for lead exposure. Exposures within the assay lab have a significant additional exposure risk from dermal and ingestion routes. Further details are available in the pertinent section of this Program, as well as the QR Lab Assay: Lead Exposure Control Plan and associated Standard Operating Procedure.

Further Information and Gathering

Judgements of the SEGs prioritization have been made based on the interpretation of available quantitative and qualitative data using the following criteria.

$\text{SEG Prioritization} = \text{Exposure Rating} \times \text{Health Effect Rating} \times \text{Uncertainty Index}$

The following table defines the criteria for estimated exposure rating categories in relation to referenced OELs for the chemical agents of interest.

Table 14-3 Estimated Exposure Rating Categories

Category	Arithmetic Mean of the Exposure Profile
4	>Long-term average-OEL
3	50% -100% of LTA-OEL
2	10-50% of LTA-OEL
1	<10% of LTA-OEL

As incorporated into the table, exposure ratings were based on the chemical agent with the most significant potential for exposure and health effect, as well as controls observed in place. Where multiple chemicals are cited in the SEG exposure parameters, the chemical agent used to create the exposure profile is listed in brackets beside the allocated exposure rating category.

As the Workplace Monitoring Program evolves, SEGs will be further segregated to address smaller, lower risk chemical exposures. It should be noted, that in the absence of full operations, and available screening data or quantitative data, all exposures have been approached as uncertain until the Workplace Monitoring Program sampling is fully implemented.

The next table outlines the health effects rating scheme allocated for the respective SEGs. Once again, health effects ratings were allocated based on the most significant exposure parameter referenced in the exposure rating category.

Table 14-4 Health Effects Rating Scheme

Category	Health Effect
4	A life-threatening or disabling injury or illness
3	Irreversible health effects of concern
2	Severe, reversible health effects of concern
1	Reversible health effects of concern
0	Mutable health effects of little concern, no known/suspended adverse health effects

To prioritize the sampling schedule and further information gathering, an uncertainty index was applied. The uncertainty criteria are defined in the following table.

Table 14-5 Uncertainty Index Criteria

Category	Reason
2	Highly uncertain- judgement was made in the absence of significant information and/or health effects
1	Uncertain- enough information to make a judgement, but further information is necessary to verify
0	Certain- Agent's exposure profile and health effects are well-understood

The final column in this table outlines SEG prioritization for further information and sampling priorities to verify the protection of worker health in relation to OELs. The SEG prioritization should not be viewed as a reflection of relative risk.

Assessment of Additional Information

As quantitative data is collected, in accordance with the outlined sampling plan, the technician will be sure to record all pertinent sampling data on the Monitoring Data Sheet. Results and sample logs should be forwarded to a qualified person for review and assessment. Random sampling must be undertaken within practical constraints.

Discrete samples over the OEL will result in an immediate verification of potential health hazard controls to ensure worker protection. Any changes to health hazard controls will need to be recorded with respect to future SEG exposures and profiling.

As samples are collected, the best applicable statistical assessment tool will be applied to determine exposure profiles, relative to the OEL.

Options include:

- EN689-1996 (revised 2017) for rule-based assessment. This method is fairly robust methods with small data sets.
- Bayesian statistics (using IHData Analyst)
- Parametric statistics (using IHStat)

The data will be analyzed according to the following steps for acceptability when sufficient data is available for Bayesian or parametric statistics:

1. Plot the data in a time series as a subjective test for population stability.
2. Calculate simple descriptive statistics and define dealing with non-detectable data.
3. Check the lognormal distribution of data.

4. Calculate the mean estimate of the exposure profile and its confidence interval.
5. Estimate the 95th percentile and the upper confidence interval for the percentile.
6. Review the available data, information, and statistical results for the SEG and assess whether ANOVA is required for the misclassification of SEG workers.
7. Judge exposure to be acceptable or unacceptable in view of exposure assessment objectives. All details of findings, assumptions or any professional judgement applied will be reported with the data. *The objective of the analysis is to ensure that less than 5% of the exposures in the SEG exceed the stipulated OEL (with 95% confidence).*

Health Hazard Control

Health hazard control involves the implementation of prioritized control strategies for unacceptable exposures and to ensure worker exposures are reduced as much as reasonably practicable, and as a minimum standard, at or below the legislated limits.

Determination about the requirement for refinement or installation of health hazard controls will be determined by reviewing the statistical assessment of measured exposures. For SEGs associated with unacceptable exposures, the following hierarchy will be applied when implementing permanent exposure control strategies:

1. Elimination of the process, equipment or materials giving rise to the exposure;
2. Substitution with the less hazardous process, equipment, or material;
3. Engineering controls (e.g., process modification, enclosure, exhaust ventilation, shielding, damping);
4. Work practice controls and employee training;
5. Administrative controls; and
6. Proper selection, fitting, and use of personal protective equipment.

The following factors will be considered when assessing feasibility and selection of the most effective health hazard control strategy:

- Magnitude of health risk;
- Technical feasibility;
- Economic feasibility;
- Reliability of the control method;
- Worker acceptance;

- Consequences of worker control failure;
- Maintenance requirements;
- Associated safety hazards; and
- Associated environmental hazards.

Re-Assessment

Given the early stages of this Workplace Monitoring Program, reassessment is recommended on a regular basis. The recommended frequency for reassessment should be executed, as outlined:

- Daily review of real-time monitoring data by safety workers with all exceedances reported immediately to supervisors/management.
- Review of discrete collected air monitoring data as it becomes available based on the sample plan.
- Review of process/task and SEGs forthwith the worker complaints of chemical agent potential exposures or evidence of occupational illness/disease.
- Review of process/task and SEG forthwith for new exposures or significant changes in chemical agent use, workplace controls, or workforce changes (i.e., longer shifts).

Based on this criterion, recommendations and adjustments will continuously be made to ensure worker protection.

Once ascertained that SEGs profiles could be consistently categorized as acceptable or unacceptable, with quantitative data and/or similarly acceptable methods (i.e., modelling), a periodic monitoring strategy may be considered for implementation. Random sampling is advised to minimize biased data, as collecting samples at the same time each year may result in distorted data. Monitoring of known and characterized exposures, that are not likely to exceed the OEL could be monitored:

- Semi-annually for exposures 50-100% of the OEL
- Annual basis if 25-50% of the OEL
- Bi-annually if less than 25% of the OEL

Communication and Documentation

Exposure assessment reports and sampling records are critical elements of the Workplace Monitoring Program. These documents are needed to ensure effective communication of workplace findings and continuity of the industrial hygiene program. ODV will ensure that all sampling data results are reviewed by a qualified person, as necessary. Discrete sample results in less than the OEL do not ensure safe worker exposures are occurring, given the potential for temporal and process variability.

All exposure assessment findings (i.e., the exposure profile and whether it is unacceptable, acceptable, or uncertain) will be documented and retained for the duration of the mine operation.

Moreover, the assessment findings will be communicated in a timely and effective manner to all workers in the SEG and those involved in worker health protection, such as management and labour representatives. Reports will be reviewed in conjunction with the OHSC on an annual basis.

ODV shall also ensure that an annual review of the Program is conducted to ensure compliance with regulatory changes and that the Program continues to be effective in its implementation. Again, a qualified person should be involved on a regular basis to provide oversight of the Program.

Chemical Exposure Sampling Plan

The following table is a schedule of monitoring activities for the SEGs identified and chemical agents considered. The number in brackets is the number of workers from the SEG to be randomly sampled.

Table 14-6 Sampling Plan – Underground

Underground				
Month	Respirable Crystalline Silica	Diesel Particulate Matter	PNOC (Respirable)	O ₂ , NO ₂ , CO, LEL(CH ₄)
January	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / Day
February	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
March	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
April	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
May	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
June	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
July	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
August	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
September	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
October	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
November	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day
December	E(2); F(2);	E(1); F(1)	E(1); F(1)	D(1) Testing Min 2x / day

Table 14-7 Sampling Plan – Exploration

Exploration					
Month	Respirable Crystalline Silica				
January	A(4); B(4);				
February	A(4); B(4);				
March	A(4); B(4);				
April	A(4); B(4);				
May	A(4); B(4);				
June	A(4); B(4);				
July	A(4); B(4);				
August	A(4); B(4);				
September	A(4); B(4);				
October	A(4); B(4);				
November	A(4); B(4);				
December	A(4); B(4);				

Table 14-8 Sampling Plan – Water Treatment Plant

Water Treatment Plant			
Month	Hydrogen Sulphide daily	Sulphur Dioxide daily	O2, NO2, CO, LEL(CH4)
January	X(1)	X(1)	X(1) Testing Min 2x / day
February	X(1)	X(1)	X(1) Testing Min 2x / day
March	X(1)	X(1)	X(1) Testing Min 2x / day
April	X(1)	X(1)	X(1) Testing Min 2x / day
May	X(1)	X(1)	X(1) Testing Min 2x / day
June	X(1)	X(1)	X(1) Testing Min 2x / day
July	X(1)	X(1)	X(1) Testing Min 2x / day
August	X(1)	X(1)	X(1) Testing Min 2x / day
September	X(1)	X(1)	X(1) Testing Min 2x / day
October	X(1)	X(1)	X(1) Testing Min 2x / day
November	X(1)	X(1)	X(1) Testing Min 2x / day
December	A(4); B(4);		

Table 14-9 Sampling Plan - QR Mill

Month	Respirable Crystalline Silica	HCN(^)	SO2(^)	PNOC	Lead in Air	Lead in Blood	Lead Swabs	Welding Fumes (Metals)
January	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)			I, K, L (17 surfaces 4 times)	
February	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)	J(2)		I, K, L (17 surfaces 4 times)	
March	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)	L(1)		I, K, L (17 surfaces 4 times)	W(1)
April	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)	K(2)		I, K, L (17 surfaces 4 times)	
May	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)		I, K, L All	I, K, L (17 surfaces 4 times)	
June	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)			I, K, L (17 surfaces 4 times)	
July	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)			I, K, L (17 surfaces 4 times)	
August	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)			I, K, L (17 surfaces 4 times)	
September	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)	I(1)		I, K, L (17 surfaces 4 times)	W(1)
October	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)	K(2); J(2)		I, K, L (17 surfaces 4 times)	

Month	Respirable Crystalline Silica	HCN(^)	SO2(^)	PNOC	Lead in Air	Lead in Blood	Lead Swabs	Welding Fumes (Metals)
November	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)			I, K, L (17 surfaces 4 times)	
December	G(2); H(2); I(1); T(1)	M(1); N(1) daily	P(1); Q(1) daily	G(1); H(1)	L(1)	I, K, L All	I, K, L (17 surfaces 4 times)	W(1)

Notes for the Table:

- *Metals in the air –R (1)– in equipment in operation; anticipated to be sporadic in nature.
- RCS- S(1) – When relining of smelting furnace occurs
- (^) – Continuous real-time detectors used year-round; carbon monoxide and nitrogen dioxide also monitored with continue real-time instrumentation in SEGs C, D, E & F

The plan should be reviewed on an annual basis, as revisions will be required based on exposure findings. The following page is the sample monitoring log to be completed for each sample collected. Photographs of the site conditions should be taken and logged as well.

Table 14-10 Monitoring Data Sheet (Air Sampling)

Data Collected:	
Collected By:	
Signature:	
Position:	
Date Collected:	
Ambient Conditions:	
Temperature:	
Weather Conditions:	
Plant Site / Location of Work:	
SEG Identifier:	
Description of Process / Job / Task / Chemical:	

Target Chemical Parameter:			
Workplace Conditions at Measurement:	Typical ☐	Upset ☐	
Explanation:			
Engineering Equipment in Use and Functional?	Yes ☐	No ☐	
Personal Protective Equipment?	☐ Hearing Protection ☐ Hand Protection ☐ Eye/Face Protection ☐ Respirator ☐ Protective Clothing ☐ Foot Protection		
Worker Name:			
Work Schedule:	Shift Length:		
Sample Type:	Personal ☐	Area Specific ☐	
Reason to Monitor:	☐ Baseline ☐ Compliance ☐ Complaint		
Define Worst Case Scenario:			
Analytical Method:	☐ NIOSH ## _____ ☐ Other: _____		
Sample Media:	☐ Filter ☐ Cyclone Type: _____		
Pump No. _____	Calibration of Instrument Date: _____		
Flow Rate (lpm)	Pre-Calibration: _____ lpm	Post-Calibration: _____ lpm	
Sample Duration	Start Time: _____	End Time: _____	
Additional Notes Regarding Sample:			
OEL Avg. Time (Ceiling, STEL, 8, 10, 12-hr.)			
Photos Taken:	Yes ☐	No ☐	
Date of Lab Analysis:			
Attach All Original Lab Documentation:			

Sampling Procedures

Carbon Monoxide (CO)

Carbon monoxide is mainly encountered as a product of incomplete combustion of almost any carbonaceous material, especially as created by the exhaust of internal combustion engines. Operations of these engines in an enclosed area without adequate ventilation is an important source of occupational exposures.

The primary toxic action of carbon monoxide is the inhibition of cell oxidation following inhalation exposure. Breathing carbon monoxide causes headaches, dizziness, vomiting and nausea. If levels are high enough, unconsciousness and death may result. Exposure to moderate and high levels of carbon monoxide has also been linked with increase in heart disease.

Table 14-11 Identification and Assessment of Carbon Monoxide

Areas of Concern (Where and Who)	Reference Table 9.1 - SEGs C, D, E, F
When to Sample	Reference Table 9.6: Chemical Exposure Sampling Plan
Exposure Limits	25 ppm (TWA-8 hr.) HSRC
Sampling Procedure	Drager Xam-5000 5 gas with CO sensor L1 25 ppm, L2 35 ppm for real-time exposures
Sampling Equipment Required	See sampling procedure
Duration	Continuous
Calibration Equipment	For real-time detection: Drager specified calibration gas applied monthly.
QA/QC	Daily bump of instrumentation, monthly calibration and download data frequently.
Analyses Procedure	Electrochemical sensor technology
Additional note	Maintain equipment in accordance with manufacturer's specifications

Diesel Particulate Matter

Diesel exhaust is a compound of a variable composition containing thousands of chemicals, many of which have proven to be carcinogenic or mutagenic in nature. Dieselized engines, particularly in underground mines, can deteriorate environmental conditions such that levels of exhaust gases and diesel particulates can become excessively high. When broken down, diesel exhaust is a mixture of particulates and gases and is primarily comprised of carbon dioxide (CO₂), carbon monoxide (CO), nitrous oxide (NO), nitrogen dioxide (NO₂), Sulphur dioxide (SO₂), hydrocarbons and carbonaceous particles. Although many of the gases in the mixture cause adverse health effects, the respirable particulate mass poses the greatest threat to worker health.

Airborne particulates that result from the combustion of diesel fuel are extremely small in size and are composed primarily of organic materials and elemental carbon. Many gases, including hydrocarbons and sulphates, tend to adsorb to the surface of the carbon particulates, resulting in small agglomerations. As a result of the adsorption of hydrocarbons onto the solid carbon spheres, the toxic effects of worker exposure dramatically increase.

Polynuclear aromatic hydrocarbons (PAH's), in particular benzo(a)pyrene, readily adsorb to carbonaceous particulates and are known gaseous carcinogens produced from the incomplete combustion of diesel fuel. Workers can potentially inhale these particulate masses, allowing for deposition of the carcinogenic substances deep within the lungs. Prolonged exposure to such carcinogenic particulates can potentially lead to chronic lung diseases or cancer. It has been classified as a probable human carcinogen.

Table 14-12 Identification and Assessment of Diesel Particulate Matter

Areas of Concern (Where and Who)	Reference Table 9.1 - SEGs C, E, F
When to Sample	Reference Table 9.6: Chemical Exposure Sampling Plan, with random selection of various shifts
Exposure Limits	20 µg/m ³ as elemental carbon (TWA-8hr) proposed ACGIH
Sampling Procedure	NIOSH 5040
Sampling Equipment Required	Sampling Pumps: Battery-powered GilAir5 or equivalent Filter media: Pre weight Quartz-fibre, 37-mm No cyclone recommended at this time.
Duration	60 min-10 hours @ 2.0 lpm (no cyclone); aim for 8 hours
Calibration Equipment	TSI Model 4046, 4146 (Primary Calibrator)
QA/QC	Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Thermal, optical analysis; flame-ionization detector (FID)
Sample Handling & Storage	Stable- ship within 7 days. If anticipated to be exposed to high temperatures, refrigerate shipment.

Diesel Particulate Matter Sampling Methodology

The following methodology is based on the National Institute for Occupational Safety and Health (NIOSH) 5040.

1. Ensure that the sampling pump has been charged before use.
2. Attach filter media in accordance with the manufacturer's instructions.

3. Ensure that the primary calibrator is at the end of the sampling train.
4. Set airflow to 1.7 l/min. Flows may vary between 2-4 l/min, with volumes between 142 and 960L.
5. Set up field blank in the general area of the worker.
6. Attach the pump to workers belt and clip filter assembly as close to the workers breathing zone as possible without restricting the ability to move freely.
7. Sample for a minimum of 4 hours at the specified set flowrate; aim for 6 hours.
8. Collect samples, verify calibration, remove the filter from assembly and place caps and plugs onto cassettes.
9. Record all pertinent information on the attached log sheet.
10. Label and submit samples to an accredited lab for NIOSH 5040 analysis.



37 mm Glass Fiber Cassette



Cassette in Holder Assembly (no cyclone)



Primary Calibrator



Gil Air 5 Sampling Pump



Pump, Cassette, and Primary Calibrator



Cassette Assembly on Worker

Hydrogen Cyanide

Hydrogen Cyanide (HCN) gas arises in the workplace as a result of the introduction of a Cyanide salt, such as Sodium Cyanide (NaCN), to a solution with a pH of less than 10.0 or when the pH of a solution containing Cyanide ions drops to below 10.0.

Hydrogen Cyanide is a colourless gas with an odour similar to that of burnt almonds (*Note that some people are genetically unable to smell this gas*) and is slightly lighter than air, so it tends to rise slowly and drift on air currents.

Potential health effects from exposure to levels of Hydrogen Cyanide in excess of accepted Threshold Limit Values (TLVs) include rapid respiration and pulse, unconsciousness, convulsions, cessation of breathing, irregular heartbeat, fluid in lungs and death depending on inhaled concentration and length of exposure.

Table 14-13 Identification and Assessment of Hydrogen Cyanide

Areas of Concern (Where & Who)	SEGs M, N, O
When to Sample	Chemical Exposure Sampling Plan, with a random selection of various shifts
Exposure Limits	10 ppm (Ceiling) HSRC
Sampling Procedure	Drager Xam-5000 5 gas with HCN sensor L1 1.89 ppm, L2 3.79ppm for real-time for ceiling exposures and OSHA 1015 for shift passive dosimetry to verify fixed and personal monitors
Sampling Equipment Required	For real-time detection: Drager Xam-5000 with calibrated HCN Sensor For passive filter media: SKC Passive Samplers, Soda Lime (Cat. No. 590-400)
Duration	For real-time detection: Continuous For passive dosimetry: 15 mins-4 hours Record temperature & atmospheric pressure
Calibration Equipment	For real-time detection: Drager specified calibration gas applied monthly. For passive dosimetry: None
QA/QC	For real-time detection: Daily bump of instrumentation, monthly calibration and download data frequently. For passive dosimetry: Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Ion chromatography using an electrochemical detector
Sample Handling & Storage	Submit samplers as soon as possible. If unavoidable, store sampled in a refrigerator
Additional note	Sulphides may cause positive interference

Hydrogen Cyanide Sampling Methodology

The following methodology is based on OSHA 1015 using SKC soda-lime passive sampler (Cat. No. 590-400).

1. Use a thermometer and barometer to measure the sampling site air temperature and atmospheric pressure—Record on the log sheet.
2. Remove the sampler from its re-sealable plastic package.
3. Remove the white plastic plug from the back of the sampler.
4. Remove the cap from the sorbent vial and carefully screw the sorbent vial onto the sampler vial adaptor without spilling any soda lime.
5. Invert the sampler and vial assembly and gently tap the sampler until all the soda lime has been transferred into the sampler.
6. Unscrew the sorbent vial and reinsert the white plastic plug onto the back of the sampler.
7. Place the cap and sorbent vial into the re-sealable plastic package for storage.
8. Do not throw away the cap and sorbent vial.
9. It is recommended that the sampler be loaded immediately before use. If this is not possible, then load the sampler on the day of use.
10. Record the start time on the log sheet.
11. Remove the cover when ready to begin sampling. CAUTION - The sampler immediately begins to sample when the cover is removed.
12. Attach the sampler to the worker near his/her breathing zone with the perforations in the sampler facing forward.
13. Assure that the area directly in front of the sampler is unobstructed throughout the sampling period.
14. Sample for up to 240 min to collect TWA (long-term) samples. Sample for 15 min when using to collect short-term samples.
15. At the end of the sampling period, immediately detach the sampler from the worker and attach the cover.
16. Record the stop time on the sampler label and also on the sample log.

17. Hold the sampler with the plastic plug facing upwards and remove the plug. Screw the sorbent vial onto the sampler vial adaptor and invert the sampler and vial assembly.
18. Gently tap or shake the sampler until all soda lime has shifted back to the sorbent vial.
19. Detach the sorbent vial from the sampler and attach the vial cap. Place the vial and sampler in its re-sealable plastic package, close the package, and seal it.
20. Prepare a blank in a low background area by loading and then unloading a sampler as described above. Return the vial to its re-sealable plastic package, close and seal the package.
21. Verify the sampling times are properly recorded for each sample & identify blank samples.
22. List any compounds that could be considered potential interferences, especially hydrogen sulphide. Submit samples to the laboratory for analysis as soon as possible if a delay is certain, store samples in a refrigerator as a precaution. Ship sample(s) separate from air samples.
23. Do not reuse the sampler.



SKC Passive Sampler for HCN

Lead (Fire Assay Lab)

Lead oxide (litharge) is commonly used in fire assay labs as part of the flux mix. The greatest risk of exposure occurs from the release of airborne particulates while mixing flux and firing couples. Fine particulates stick to skin, hair, clothing, and laboratory surfaces and are easily transferred from one area to another.

This Section of the Workplace Monitoring Program addresses the lead in air and surface contamination. Procedures for biological exposure monitoring are under the Lead Exposure Control Plan Standard Operating Procedures, and interpretation of results is left to the discretion of an occupational physician.

Table 14-14 Identification and Assessment of Airborne Lead Dust

Areas of Concern (Where & Who)	Reference Table 9.1 - SEGs J,K,L
When to Sample	Reference Table 9.6: Chemical Exposure Sampling Plan, with a random selection of various shifts
Exposure Limits	0.05 mg/m ³ HSRC
Sampling Procedure	NIOSH 7301
Sampling Equipment Required	Sampling Pumps: Battery-powered GilAir5 or equivalent Filter media: (Pre-weighed) 5.0 µm polyvinyl chloride
Duration	3 hours @ 1.7 lpm general rule (align flows with Table 1 of NIOSH 7301 for a particular metal of concern)
Calibration Equipment	TSI Model 4046, 4146 (Primary Calibrator)
QA/QC	Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Inductively Coupled Argon Plasma Spectrometer
Sample Handling & Storage	Stable- ship within 7 days

Airborne Lead Dust Sampling Methodology

The following methodology is based on NIOSH 7301.

1. Ensure that the sampling pump has been charged before use.
2. Attach filter media to holder assembly in accordance with manufacturer's instructions.
3. Attach the assembly to pump.
4. Attach the assembly to the primary calibrator.
5. Ensure that the primary calibrator is at the end of the sampling train.
6. Set airflow to 2.0 l/min. Flows may vary between 1-4 l/min, with volumes between 50L to 2000L.
7. Prevent sampling assembly from becoming inverted to avoid having material fall into the cassette.
8. Set up field blank in the general area of the worker.
9. Attach the pump to workers belt and clip assembly as close to the workers breathing zone as possible without restricting the worker's ability to move freely.

10. Sample for 3 hours at the specified flowrate. If flowrate is modified, adjust sampling time accordingly.
11. Collect samples, verify calibration, remove from assembly and place caps and plugs onto cassettes.
12. Record all pertinent information on the attached log sheet.
13. Label and submit samples to an accredited lab for NIOSH 7301 analysis.
14. Clean the pump according to the manufacturer prior to next use.



37 mm 5um PVC Cassette

Reference Diesel Particulate Matter photos for assembly, sampling train calibration, and placement

Table 14-15 Identification and Assessment of Surface Lead Dust Contamination

Areas of Concern (Where & Who)	Reference Table 9.1 - SEGs J,K,L
When to Sample	Reference Table 9.6: Chemical Exposure Sampling Plan, with random selection of various shifts to verify routine cleaning practices
Exposure Limits	Floor/Surfaces – 200 µg/ft.2 ; Eating Areas - 40 µg/ft.2 (WorkSafeBC)
Sampling Procedure	NIOSH 9100
Sampling Equipment Required	Lead sampling wipes (Ghost Wipes or equivalent) 10 cm 10 cm or 30 cm X 30 cm disposable cardboard templates Disposable gloves Sample containers (50 ml hard-sided centrifuge tubes with caps)
QA/QC	Wipe blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Atomic Absorption Spectrophotometry
Sample Handling & Storage	Stable- ship within 7 days

Surface Lead Dust Sampling Methodology

Workers in the Assay Lab will clean surfaces daily with HEPA vacuums and wet rags. Verification of cleaning on surfaces is conducted weekly with D-lead wipes, capable of measuring as little as 20 µg. It is a qualitative method of assessment. This sampling method is meant to ensure surfaces are maintained below-regulated limits that can be quantified.

The following methodology is based on NIOSH 9100:

1. Wear a clean pair of gloves.
2. Place the template over the area to be sampled and secure the outside edges with masking tape. If the area to be sampled is in a confined area and a template cannot be used, measure the sampling area with the tape measure, and delineate the area to be sampled with masking tape.
3. Remove a wipe from its package and unfold it.
4. Re-fold the wipe into fourths and wipe the surface to be sampled with firm pressure. Use an overlapping “S” pattern to cover the entire surface area with horizontal strokes.
5. Fold exposed side of the wipe in and wipe the same area using vertical “S”-strokes.
6. Fold the wipe once more to reveal an unexposed surface and wipe the surface a third time, as described in step 4.
7. Fold the wipe, exposed side in, and place it into a clean hard-walled sample container. Seal securely and clearly label the sample container. NOTE: Compositing of wipe samples is not recommended, because they cause sample preparation and analytical difficulties, and site-specific analytical information is lost.
8. Remove the template and discard it.
9. Discard gloves.
10. Field blanks: 5% of samples, at least two per sample set. Remove unexposed wipes from their packaging and place them into sample containers.



Disposable Cardboard Templates



Lead Wipe



Sample Container

Particulates Not Otherwise Classified

Particulates Not Otherwise Classified (PNOC) are inert nuisance dusts, whether mineral or organics, without regulated limits. To be considered a PNOC, the particles must be insoluble or poorly soluble in water and have low toxicity.

The American Conference of Governmental Industrial Hygienists believes that even biologically inert, insoluble, or poorly soluble particles may have adverse health effects and recommends that airborne concentrations be kept below 3mg/m³ for respirable particulates. Respirable PNOC is defined as those with a size of less than 10 microns.

Respirable particulates can get deep into the lungs and cause a broad range of health effects, in particular respiratory and cardiovascular illness—including irritation of the airways, coughing, difficulty breathing, decreasing lung function, aggravation of asthma, development of chronic bronchitis, and premature death in people with heart or lung disease.

Table 14-16 Identification and Assessment of Particulates Not Otherwise Classified

Areas of Concern (Where & Who)	Reference Table 9.1 - SEGs A, B, C, D, G, H, I
When to Sample	Reference Table 9.6: Chemical Exposure Sampling Plan, with random selection of various shifts
Exposure Limits	3 mg/m ³ (TWA-8hr) ACGIH
Sampling Procedure	NIOSH 0600
Sampling Equipment Required	Sampling Pumps: Battery-powered GilAir5 or equivalent Cyclone: 10mm nylon cyclone and related tubing Filter media: Pre-weighed 5-µm PVC membrane filters in 37mm cassette
Duration	10 min-4 hours @ 1.7 lpm; aim for 8 hours
Calibration Equipment	TSI Model 4046, 4146 (Primary Calibrator)
QA/QC	Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Gravimetric
Sample Handling & Storage	Samples collected using this method are stable but should be sent for analysis within 7 days of collection.

Identification and Assessment of Respirable PNOC

Sampling Methodology

The following methodology is based on NIOSH 0600.

1. Ensure that the sampling pump has been charged before use.
2. Attach filter media to cyclone assembly in accordance with manufacturer's instructions.
3. Attach cyclone assembly to pump.
4. Attach cyclone assembly to calibration jar and attach it to the primary calibrator.
5. Ensure that the primary calibrator is at the end of the sampling train.
6. Set airflow to 1.7 l/min for the nylon cyclone. If an alternate cyclone is used, flow values will need to be adjusted according to NIOSH 7500.
7. Never allow sampling train to become inverted (both while calibrating and during sampling).
8. Set up field blank in the general area of the worker.
9. Attach the pump to workers belt and clip cyclone assembly as close to the workers breathing zone as possible without restricting the worker's ability to move freely.
10. Sample for a minimum of 4 hours at the set flowrate.
11. Collect samples, verify calibration, remove from cyclone assembly and place caps and plugs onto cassettes.
12. Record all pertinent information on the attached log sheet.
13. Label and submit samples to an accredited lab for NIOSH 0600 analysis.
14. Clean pump according to manufacturer prior to next use and empty cyclone grit pot.



Cyclone Assembly



Higgins-Dewell Cyclone



Cassette and Cyclone Assembly on Worker

Respirable Crystalline Silica

Silica or silicon dioxide (SiO_2) is the second most common mineral on earth. It consists of silicon and oxygen atoms which makes up nearly all of what we call “sand” and “rock.” Quartz is the most common form of crystalline silica and is varying in varying amounts in almost all rocks, sands, clays, shales, and gravel. Cristobalite and tridymite are found in volcanic rocks.

CAREX Canada estimates that approximately 48,000 workers in BC are occupationally exposed to respirable crystalline silica each year. More workers in BC workplaces are exposed to RCS dust than to asbestos or lead.

Occupational exposures to RCS dust are associated with the development of silicosis, lung cancer, and pulmonary tuberculosis and airway disease. NIOSH has classified silicosis based on the timeline of development: chronic, accelerated, or acute. Chronic silicosis is the most common form and tends to develop after 10 or more years of exposure to crystalline silica at low levels.

Symptoms can range from very mild to disabling or even fatal. These exposures may also be related to the development of autoimmune disorders, chronic renal disease, and other adverse health effects.

Table 14-17 Identification and Assessment of RCS

Areas of Concern (Where & Who)	SEGs A, B, C, D, E, G, I, T
When to Sample	Chemical Exposure Sampling Plan, with a random selection of various shifts
Exposure Limits	0.05 mg/m ³ (TWA-8hr) HSRC
Sampling Procedure	NIOSH 7500
Sampling Equipment Required	Sampling Pumps: Battery-powered GilAir5 or equivalent Cyclone: 10mm nylon cyclone and related tubing Filter media: 5µm PVC membrane filters in 37mm case
Duration	4-10 hours @ 1.7 lpm; aim for minimum 8 hours

Calibration Equipment	TSI Model 4046, 4146 (Primary Calibrator)
QA/QC	Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	X-ray Powder Diffraction
Sample Handling & Storage	Samples collected using this method are stable but should be sent for analysis within 7 days of collection.

Respirable Crystalline Sampling Methodology

The following methodology is based on NIOSH 7500.

1. Ensure that the sampling pump has been charged before use.
2. Attach filter media to cyclone assembly in accordance with manufacturer's instructions.
3. Attach cyclone assembly to pump.
4. Attach cyclone assembly to calibration jar and attach it to the primary calibrator.
5. Ensure that the primary calibrator is at the end of the sampling train.
6. Set airflow to 1.7 l/min for the nylon cyclone. If an alternate cyclone is used, flow values will need to be adjusted according to NIOSH 7500.
7. Never allow sampling train to become inverted (both while calibrating and during sampling).
8. Set up field blank in the general area of the worker.
9. Attach the pump to workers belt and clip cyclone assembly as close to the workers breathing zone as possible without restricting the worker's ability to move freely.
10. Sample for a minimum of 4 hours at the set flowrate.
11. Collect samples, verify calibration, remove from cyclone assembly and place caps and plugs onto cassettes.
12. Record all pertinent information on the attached log sheet.
13. Label and submit samples to an accredited lab for NIOSH 7500 analysis.
14. Clean pump according to manufacturer prior to next use and empty cyclone grit pot.

See reference photos under Particulates Not Otherwise Classified (PNOC) Respirable

Sulphur Dioxide (SO₂)

Sulphur Dioxide (SO₂) gas arises in the workplace as a result of the introduction of Sodium Metabisulphite (Na₂S₂O₅) to process water for use in the Cyanide destruction circuit. Sulphur Dioxide is a colourless gas with a highly irritating pungent odour, and it is almost 2.5 times as heavy as air, which means that it tends to settle in low lying areas.

Potential health effects from exposure to levels of SO₂ in excess of accepted TLVs include irritation to any living tissue, acid-like burns, corrosion of the teeth (with prolonged low-level exposure), and irritation of the respiratory tract that can lead to chemical pneumonitis and pulmonary edema and death.

Table 14-18 Identification and Assessment of Sulphur Dioxide

Areas of Concern (Where & Who)	SEGs P (operator), Q (general mill)
When to Sample	Chemical Exposure Sampling Plan, with random selection of various shifts
Exposure Limits	2 ppm (TWA-8hr); 5 ppm (STEL) - HSRC
Sampling Procedure	For continuous real-time: Drager PAC 7000 H ₂ S – SO ₂ personal monitors L 1.5ppm L2 1 ppm For 15-minute exposures or greater for SEG P, NIOSH 6004
Sampling Equipment Required	For real-time detection: Drager PAC 7000 with calibrated SO ₂ Sampling Pumps: Battery-powered GilAir5 or equivalent Filter media: cellulose + Na ₂ CO ₃ preceded by 0.8 µm cellulose ester membrane
Duration	For real-time detection: Continuous For filters: Minimum 15 minutes, up to 2 hours with the highest flow. Flow may be adjusted between 0.5-1.5L/min with volume min 4L to max 200L
Calibration Equipment	For real-time detection: Drager specified calibration gas applied monthly. For sample pump: TSI Model 4046, 4146 (Primary Calibrator)
QA/QC	For real-time detection: Daily bump of instrumentation, monthly calibration and download data frequently. For active sampling: Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Ion chromatography
Sample Handling & Storage	Same stability not determined- send to laboratory immediately.

Sulphur Dioxide (SO₂) Sampling Methodology

The following methodology is based on NIOSH 6400.

1. Ensure that the sampling pump has been charged before use.
2. Attach filter media to the assembly in accordance with the manufacturer's instructions.
3. Ensure that the primary calibrator is at the end of the sampling train.
4. Set airflow from 0.5 to 1.5 l/min, dependent on task duration assessing. For fifteen minutes STEV evaluation set flow at 1.5 l/min.
5. Set up field blank in the general area of the worker.
6. Attach the pump to workers belt and clip assembly as close to the workers breathing zone as possible without restricting the worker's ability to move freely.
7. Sample no less than 4 L volume or 200 L maximum of air.
8. Collect samples, verify calibration, remove the filter from assembly and place caps and plugs onto cassettes.
9. Record all pertinent information on the attached log sheet.
10. Label and submit samples to an accredited lab for NIOSH 6400 analysis.
11. Real-time data collected from the Drager instrumentation should be downloaded for the same time interval for later reference.

Welding/Metals in Air

Welding fumes are composed of a variety of chemical contaminants and vary in toxicity depending on the welding process and the alloy being welded. Fumes are not gases, but tiny particulates formed by the evaporation of solid or liquid materials. Generally, fume particle size is very small, usually 1µm or smaller, but these particles tend to agglomerate together, forming larger particulates.

A number of occupational hazards are directly associated with exposure to the welding process, including radiation exposure and toxic fume inhalation. Since welders are generally protected from UV radiation with protective clothing and equipment, welding fumes tend to pose the greatest occupational health risk to workers.

Potential health effects from exposure to levels of welding fume in excess of accepted TLVs include short term effects such as metal fume fever, nausea, headaches, vomiting and eye and

throat irritation in addition to long term effects on the respiratory, cardiovascular, and central nervous systems.

Table 14-19 Identification and Assessment of Welding/Metal Fumes

Areas of Concern (Where & Who)	SEGs R, W
When to Sample	Chemical Exposure Sampling Plan, with a random selection of various shifts
Exposure Limits	Various Metals in Air, excluding beryllium, as outlined by WorkSafeBC OHSR
Sampling Procedure	NIOSH 7301
Sampling Equipment Required	Sampling Pumps: Battery-powered GilAir5 or equivalent Filter media: 0.8 µm cellulose ester membrane or 5.0 µm polyvinyl chloride
Duration	3 hours @ 2.0 lpm general rule (align flows with Table 1 of NIOSH 7301 for particular metal of concern)
Calibration Equipment	TSI Model 4046, 4146 (Primary Calibrator)
QA/QC	Cartridge blanks will be sent with all samples consisting of 1 blank per 10 samples or portion thereof. Wherever possible, replicate samples will also be taken to verify the precision of the sampling technique.
Analyses Procedure	Inductively Coupled Argon Plasma Spectrometer
Sample Handling & Storage	Stable- ship within 7 days

Welding Fume Sampling Methodology

The following methodology is based on NIOSH 7301.

1. Ensure that the sampling pump has been charged before use.
2. Attach filter media to holder assembly in accordance with manufacturer's instructions.
3. Attach the assembly to pump.
4. Attach the assembly to the primary calibrator.
5. Ensure that the primary calibrator is at the end of the sampling train.
6. Set airflow to 2.0 l/min.
7. Prevent sampling assembly from becoming inverted to avoid having material fall into the cassette.
8. Set up field blank in the general area of the worker.

9. Attach the pump to workers belt and clip assembly as close to the workers breathing zone under the welding helmet.
10. Sample for 3 hours at the set flowrate.
11. Collect samples, verify calibration, remove from assembly and place caps and plugs onto cassettes.
12. Record all pertinent information on the attached log sheet.
13. Label and submit samples to an accredited lab for NIOSH 7301 analysis.
14. Clean pump according to manufacturer prior to next use.

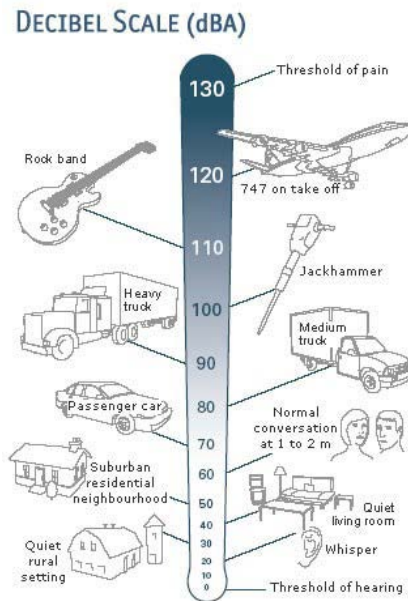
****Reference photos under Lead, with exception to the placement of cassette for sampling during welding****



Drawing of Welding Shield
with Sampling Device Installed

Worker Exposure - Noise

Worker exposure to physical agents needs to be addressed in the same manner as worker exposure to chemical contaminants. Noise is a physical agent within the workplace that has the potential to affect worker health and safety if not properly monitored and controlled.



The illustration above depicts the intensity of some commonly heard sounds to provide a frame of reference for assessing sound measurements taken in the workplace.

When monitoring noise exposures with sound level meters, readings are usually frequency weighted and time-weighted. Frequency weightings are readings based on how the ear hears sound and time weightings are averaging sound over a given period of time. The most commonly used frequency weighting is the A-weighted response, which also measures the sound intensity in dBA. This particular response simulates the sensitivity of a normally functioning ear and is a good indicator of potentially harmful sound levels. The time weighting allows for the measurement of the average exposure of the frequency weighting.

Identification and Initial Assessment of Noise Sources

The human ear is an invaluable tool when performing an initial sound survey to identify sources of potentially harmful noise; however, the ear cannot quantify sound and express it as a numeric value. A sound level meter capable of A-weighted response measurement and preferably peak measurements must be used to determine the level of risk associated with sources of noise. Noise is generated by almost all work activities throughout the sites.

Refer to the table below for an observation level assessment of exposures.

Table 14-20 Observation Level – Assessment of Exposures

Location	Primary Workers Exposed	Initial Sound Level Test Results	Control Measures in Place	Monitoring Criteria
Crusher Area	Crusher Operators Crusher Helpers	Up to 91dBA	Workers must utilize hearing protection equipment	Workers in the crusher area have significant exposure and monitoring must be done
Mill	Supervisors, Electricians Mill Operators	No areas where workers are exposed to more than 85dBA	Workers are instructed to utilize hearing protection equipment when performing unusually noisy operations	Monitoring is done in order to identify trends of increased noise exposure, so preventative measures can be taken
Assay Lab	Assayers Buckers	Occasional peaks of up to 90 dBA (during rock crushing)	Workers are instructed to utilize hearing protection when crushing rock	Monitoring is done for workers in the Assay Lab due to periodic exposure to high noise levels
Mechanic Shop	Welders, Millwrights, Mechanics	Occasional peaks of up to 90dBA (during welding, grinding, and use of air tools)	Workers are instructed to utilize hearing protection during welding, grinding, and when using air tools	Monitoring for workers in the Mechanic Shop includes work that they undertake in other areas
Underground	Underground Miners Equip. Operators	Not yet measured	Underground workers who work near equipment are required to wear hearing protection	Monitoring for workers underground due to high noise levels generated by underground equipment and because the noise is contained in a small space
Water Treatment Plant	Supervisors, Electricians Plant Operators	Not yet measured	Workers are instructed to utilize hearing protection equipment when performing unusually noisy operations	Monitoring is done in order to identify trends of increased noise exposure, so preventative measures can be taken

Noise Sampling Methodology

1. Where should samples be collected? – Samples should be taken in most areas of the mine and mill complex because measured noise levels in many areas approach or exceed the TLV for noise exposure with no protection.
2. When should sampling take place? – Sampling should be done in all seasons and considerations, such as which shift to sample should be addressed at random.
3. Over what length of time samples should be collected? – Sampling can be done over entire shift lengths, which can include shifts from 8 to 12 hours per day.

4. Who to sample? – SEG groups include Crusher, Mill, Mechanic Shop, Assay Lab, and Underground workers and determination of which workers are to be sampled is determined by their participation in the program and random selection for shift and individual.
5. How many samples should be collected? – Based on the number of workers normally employed in each of the SEG's, personal sampling regimens have been determined as follows:
 - Crusher – 2 samples every Month
 - Mill – 2 samples every Month
 - Assay Lab – 1 sample every Month
 - Mechanic Shop – 2 samples every Month
 - Underground – 4 samples every Month
6. How are samples obtained? – Samples are obtained in accordance with guidelines published in Occupational Noise Surveys (WorkSafeBC April 2007).
7. What quality assurance measures should be taken? – Calibration of sound level meters and noise dosimeters must be performed immediately before performing the sampling. Results of sampling must be reviewed, and uncharacteristic data eliminated in accordance with the WorkSafeBC guidelines for Occupational Noise Surveys.
 - Equipment and Materials Required
 - Svantek SV 973 Sound Level Meter Kit (with SV 34B calibration unit)
 - Svantek 104 Data-logging Noise Dosimeter Kit (with SV 34B calibration unit)

Sound Level Survey Procedure

1. Using an integrating sound level meter set to monitor the A-Weighted range of sound, measure sound levels near identified sources of noise (e.g., motors, compressors)
2. Move progressively farther from the sources with ideal measurement locations at 1m intervals (this data can even be used to map sound levels similar to a contour line map)
3. Record and review all data gathered to identify locations or processes where noise levels are at or near exposure limits Using the identified locations or processes as a guide, SEG's can be identified so that individual noise dosimetry can be conducted in accordance with legislated requirements.

Noise Dosimetry Procedure

1. Charge and calibrate the noise dosimeter according to manufacturer's instructions and the Occupational Noise Survey guide.
2. Explain sampling procedure and reasons for sampling to the worker to be sampled and instruct them to carry out their duties in as normal a fashion as possible in order to obtain accurate results.
3. Affix noise dosimeter to the worker (usually on the collar close to the ear).
4. Switch on the noise dosimeter.
5. Check on the worker and the dosimeter occasionally during the sampling period to ensure good function of the dosimeter.
6. At the end of the sampling period, turn off the dosimeter.
7. Record the elapsed time of the sampling.
8. Upon review of results, compare calculated exposure levels with applicable standards and report results to management and the JOHSC.
9. If exposure levels are in compliance, assess control measures annually to ensure that all reasonably practicable measures have been taken.
10. If exposure levels are out of compliance, immediately assess control measures and implement further control measures to meet applicable standards.
11. How are samples obtained? – Samples are obtained in accordance with guidelines published in Measuring Occupational Noise¹.
12. What quality assurance measures should be taken? – Calibration of sound level meters and noise dosimeters must be performed immediately before performing the sampling. Results of sampling must be reviewed, and uncharacteristic data eliminated in accordance with the WorkSafeBC guidelines for Occupational Noise Surveys.
 - Equipment and Materials Required
 - Svantek SV 973 Sound Level Meter Kit (with SV 34B calibration unit)
 - Svantek 104 Data-logging Noise Dosimeter Kit (with SV 34B calibration unit)

¹ WorkSafeBC. 2020. Measuring Occupational Noise. Available at: <https://www.worksafebc.com/resources/health-safety/books-guides/measuring-occupational-noise?lang=en&direct>

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9. If exposure levels are in compliance, assess control measures annually to ensure that all reasonably practicable measures have been taken.
10. If exposure levels are out of compliance, immediately assess control measures and implement further control measures to meet applicable standards.

Noise Exposure Code Requirements

The maximum permissible daily noise exposure for unprotected ears is represented by a Lex of 85 dBA, including peak impulse noise except:

- No exposure to steady-state noise of 109 dBA or over
- No exposure to peak impulse noise of 140 dBA or over

Examples of shift exposures that are equivalent to 85 dBA over an 8-hour shift:

Table 14-21 Shift Exposures

Length of Exposure	Average Noise Level
16 hours	82 dBA
12 hours	83 dBA
10 hours	84 dBA
8 hours	85 dBA
4 hours	88 dBA
2 hours	91 dBA
1 hour	94 dBA
½ hour	97 dBA
¼ hour	100 dBA

Noise Sampling Schedule

Table 14-22 Noise Sampling Schedule

Month	Assay	Mechanic Shop	Crusher	Mill	Underground	Water Treatment Plant
January	N (1)	N (1)	N (1)	N (2)	N (2)	N (1)
February	N (1)		N (1)	N (2)	N (2)	N (1)
March	N (1)	N (1)	N (1)	N (2)	N (2)	N (1)
April	N (1)		N (1)	N (2)	N (2)	N (1)
May	N (1)	N (1)	N (1)	N (2)	N (2)	N (1)
June	N (1)		N (1)	N (2)	N (2)	N (1)
July	N (1)	N (1)	N (1)	N (2)	N (2)	N (1)
August	N (1)		N (1)	N (2)	N (2)	N (1)
September	N (1)	N (1)	N (1)	N (2)	N (2)	N (1)
October	N (1)		N (1)	N (2)	N (2)	N (1)
November	N (1)	N (1)	N (1)	N (2)	N (2)	N (1)
December	N (1)		N (1)	N (2)	N (2)	N (1)

Audiometric Exams for All Workers July and October each year

Number in brackets indicates the number of samples to be collected each month. Note, for Water Treatment Plant, 1 sample per month is indicated but 2 samples may be required.

Crusher noise sampling to be performed when the crusher is running.

Mill noise sampling to be performed when Mill is running.

Water Treatment Plant sampling to be performed when plant is running.

Table Legend: N=Noise

Cold Stress

Cold stress occurs when the core body temperature drops excessively low. Cold stress cannot only cause conditions such as frostbite and hypothermia but can reduce productivity in workers even under moderate conditions.

Hypothermia occurs when the body can no longer produce more heat than it is losing. Wind, wet and cold are the key factors that lead to hypothermia. The single most important aspect of life-threatening hypothermia is the fall in the deep core body temperature below 36°C. Fatal hypothermia among workers has almost always resulted from accidents involving failure to escape from low environmental air temperatures or immersion in low-temperature water. However, hypothermia can happen at less than 10°C and remains a threat even in above-average winter temperatures.

Health Effects of Cold Stress

Hypothermia

When exposed to cold temperatures, the body begins to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up the body's stored energy. The result is hypothermia or abnormally low body temperature. Low body temperature affects the brain, making the victim unable to think clearly or move in a coordinated way. This makes hypothermia particularly dangerous because a person may not be aware of his or her condition or may not be able to do anything about it.

Hypothermia is most likely to occur at very cold temperatures however because water can extract heat from the body more than ten times faster than air, it can occur even at cool temperatures (above 4°C) if a person becomes chilled from rain, sweat, or submersion in cold water.

Frostbite

Frostbite is an injury to the body caused by freezing. Frostbite causes a loss of feeling and colour in affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can permanently damage the body, and severe cases can lead to amputation.

The risk of frostbite is increased in people with reduced blood circulation and among people who are not dressed properly for extremely cold temperatures. Because the frozen tissue is numb, victims are often unaware of frostbite until someone else points it out.

Identification and Initial Assessment of Cold Stress Risk

Cold stress is a risk anywhere on a mine site, but the risk is pronounced for those workers who work primarily outdoors, and the following table can be used as a guideline for how to manage work/rest schedules for times of extreme cold weather, which has been adapted from the American Conference of Governmental Industrial Hygienists.

Table 14-23 Identification and Initial Assessment of Cold Stress Risk

THRESHOLD LIMIT VALUES WORK/WARM-UP SCHEDULE FOR FOUR HOUR SHIFT*											
Air Temperature Sunny Sky		No Noticeable Wind		5 mph (8 kmph) Wind		10 mph (16 kmph) Wind		15 mph (24 kmph) Wind		20 mph (32 kmph) Wind	
°C (approx)	°F (approx)	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks
-26° to -28°	-15° to -19°	Normal Breaks		Normal Breaks		75 min	2	55 min	3	40 min	4
-29° to -31°	-20° to -24°	Normal Breaks		75 min	2	55 min	3	40 min	4	30 min	5
-32° to -34°	-25° to -29°	75 min	2	55 min	3	40 min	4	30 min	5	Non-Emergency Work Should Cease	
-35° to -37°	-30° to -34°	55 min	3	40 min	4	30 min	5				
-38° to -39°	-35° to -39°	40 min	4	30 min	5						
-40° to -42°	-40° to -44°	30 min	5								
-43° & below	-45° & below										

* Notes for above table:

Schedule applied to any 4-hour work period with moderate to heavy work activity, with warm-up periods of ten (10) minutes in a warm location and with an extended break (e.g., lunch) at the end of the 4-hour work period in a warm location. For Light-to- Moderate Work (limited physical movement): apply the schedule one step lower. For example, at -35°C with no noticeable wind (Step 4), a worker at a job with little physical movement should have a maximum work period of 40 min with 4 breaks in a 4-hour period (Step 5).

The following is suggested as a guide for estimating wind velocity if accurate information is not available: 5 mph: light flag moves; 10 mph: light flag fully extended; 15 mph: raises newspaper sheet; 20 mph: blowing/drifting snow.

If only the wind chill cooling rate is available, a rough rule of thumb for applying it rather than the temperature and "Wind velocity factors are given above would be: 1) special warm-up breaks should be initiated at a wind chill cooling rate of about 1750 W/m²; 2) all non-emergency work should have ceased at or before wind chill of 2250 W/m². In general, the warm-up schedule provided above slightly under-compensated for the wind at the. Warmer temperature, assuming acclimatization and clothing appropriate for winter work.

TLVs apply only for workers in dry clothing.

Cold Stress Monitoring Methodology

- If local weather data from a weather station is available – Temperature and wind speed data will be monitored daily to ensure that the warm-up schedule is used appropriately.
- If local weather data from a weather station is unavailable – Temperature and wind speed predictions for Likely, BC and Wells, BC will be obtained and posted daily from the weather network website at www.theweathernetwork.com. The peak values in these predictions will be utilized to ensure that the warm-up schedule is used appropriately.

Equipment and Materials Required

- Weather Monitoring Station
- Computer with an internet connection

Heat Stress

Heat stress occurs when excessive temperatures and conditions cause the body's cooling system to fail so that the core body temperature rises to extreme levels. Heatstroke is the most serious effect of heat stress and can be fatal.

Susceptibility levels to excessive heat will vary from worker to worker and therefore, it is difficult to predict when the onset of heat stress will occur. Factors that make a worker more likely to develop heatstroke or other heat stress disorders include age, weight, physical fitness, degree of acclimatization, metabolism, decreased fluid intake, exertion, consumption of alcohol and drugs before or during work and various medical conditions, including high blood pressure.

Health Effects of Heat Stress

Heat Stroke

Heatstroke develops when workers are exposed to temperatures higher than the acclimatization capabilities of their bodies. Generally, heatstroke can be characterized by pale blue or mottled skin and high internal body temperatures. As a result of increased body temperature, a worker may experience mental confusion or, in extreme cases, unconsciousness. If not immediately attended to, heatstroke can become a life-threatening condition.

Heat Rash

Heat rash is most prevalent under warm, moist conditions. Basically, a heat rash is the result of an inflammation of the sweat glands and a swelling of the skin. The skin develops a rash that has the potential to greatly reduce a worker's ability to cope with the heat in the work environment.

Heat Exhaustion and Cramps

Heat exhaustion and cramps again, result from working under adverse conditions. Heat exhaustion is not life-threatening but should be taken as a warning sign in preventing heatstroke.

Identification and Initial Assessment of Heat Stress Risk

Heat stress can be a risk anywhere on a mine site, but the risk is pronounced for those workers who primarily work outdoors, and the following table can be used as a guideline for how to manage work/rest schedules for work locations and activities involving the potential for heat stress, which has been adapted from the American Conference of Governmental Industrial Hygienists.

Table 14-24 Permissible Heat Exposure Threshold Limit Values

Permissible Heat Exposure Threshold Limit Values			
Work/Rest Regimen	Work Load*		
	Light	Moderate	Heavy
Continuous Work	30.0°C (86°F)	26.7°C (80°F)	25.0°C (77°F)
75% Work - 25% Rest	30.6°C (87°F)	28.0°C (82°F)	25.9°C (78°F)
50% Work - 50% Rest	31.4°C (89°F)	29.4°C (85°F)	27.9°C (82°F)
25% Work - 75% Rest	32.2°C (90°F)	31.1°C (88°F)	30.0°C (86°F)

* Values are expressed in °C and (°F), WBGT

(ACGIH).

*Notes for above table:

These TLV's are based on the assumption that nearly all acclimatized, fully clothed workers with adequate water and salt intake should be able to function effectively under the given working conditions without exceeding a deep body temperature of 38°C (100.4°F). They are also based on the assumption that the WBGT of the resting place is the same or very close to that of the workplace. Where the WBGT of the resting area is different from that of the rest area, a TWA should be used.

These TLV's apply to physically fit and acclimatized individuals wearing light summer clothing. If heavier clothing that impedes sweat or has a higher insulation value is required, the permissible heat exposure TLV's must be reduced using the following table.

Table 14-25 WBGT Correction Factors in °C

WBGT Correction Factors in °C		
Clothing Type	Clo* Value	WBGT Correction
Summer lightweight working clothing	0.6	0
Cotton coveralls	1	-2
Winter work clothing	1.4	-4
Water barrier, permeable	1.2	-6
Fully encapsulating suit, gloves, boots and hood	1.2	-10

* Clo is the insulation value of clothing as considered by the ACGIH

Heat Stress Monitoring Methodology

1. Where should measurements be performed? – Measurements should be performed in outdoor areas of the mine and mill complex where worker exposure to heat is high, which would include the mill yard, the crusher area, and the ore deck.
2. When should measurements be performed? – Measurements should be performed during the daylight hours in the summertime, whenever ambient temperatures approach 25-30°C.
3. Over what length of time measurements should be performed? – Measurements are almost instantaneous and may need to be performed several times per day on particularly hot days.

4. Who to sample? – Measurements are based on locations and conditions as there is no acceptable means of performing individual dose measurements.
5. How many samples should be collected? – It may be necessary to perform measurements several times per day on particularly hot days.
6. How are samples obtained? – Measurements are performed using a Wet Bulb Globe Temperature (WBGT) Heat Stress Monitor.
 - o Equipment and Materials Required
 - o WBGT Heat Stress Monitor
 - o WBGT Heat Stress Monitoring Procedure
 - o Charge and prepare the WBGT Monitor according to manufacturer's recommendations
 - o Proceed to the location to be measured
 - o Use the WBGT Monitor and record results
 - o In the event that the WBGT is between 25.0°C and 32.2°C, immediately initiate a work-rest regimen according to tables above to reduce worker heat exposure

APPENDIX 15 EMERGENCY PREPAREDNESS

This element applies to all workers, site visitors and subcontractors who may be present during an emergency. Regardless of how careful we may be, there is always a risk of injury or incident that requires emergency preparedness. The purpose of Emergency Preparedness is to develop and implement Emergency Response Plans (ERP) that coordinate actions to reduce losses and exposure to people, property, and the environment, during and after an emergency occurs.

To prepare for emergencies, ODV has developed formal Emergency Preparedness plans and will train all employees in emergency procedures and their roles and responsibilities. These training requirements will be documented on the Emergency Preparedness plans. All employees who may be present during an emergency will be required to be familiar with the appropriate course of action to take in situations requiring care, emergency evacuation or rescue.

Emergency Preparedness plans will be tested for deficiencies on an annual basis using mock drills. The deficiencies, along with the corrective actions taken, will be documented on a Mock Drill form. A reminder will be sent out with quarterly updates and commitments achieved.

Responsibilities

Management

- Provides adequate first aid facilities, equipment, and services,
- Ensures Emergency Response Procedures are developed, appropriate to each site, and updated when operations change,
- Records and files all completed records for future reference during inspections and audits, and.
- Initiates specific emergency procedures for their worksite(s) and will incorporate any client stipulations and requirements.

Supervisor

- Ensures all workers are trained in Emergency Response Procedures for foreseeable emergencies,
- Ensures that the employees understand the Emergency Response Procedures specific to their position and current conditions,
- Ensures that all workers understand who the first aid attendant is and how to reach him/her,
- Annually executes and documents Emergency Response mock drills, and

- Communicates the results of the mock drill, such as corrective actions, to workers at the next safety meeting.
- Employee
- Knows the content and location of Emergency Response Plans,
- Follows Emergency Response Plans during all emergencies, and
- Knows his/her First Aid Attendants and how to contact them.

Developing Emergency Response Plans

To successfully reduce the loss of people and property, Emergency Response Plans must be developed, implemented, and practised.

An emergency preparedness risk assessment will be completed for each worksite or operational situation in order to develop appropriate Emergency Response Plans for the work being done. Depending on the site location and nature of the work, other Emergency Response Plans may be developed for earthquakes, floods, tornadoes, etc. All company locations will develop and post appropriate Emergency Response Plans, including a Fire Response Plan.

As required, ODV will create and document detailed Emergency Response Plans in the JHA.

An integral part of our emergency planning is to ensure that all workers and outside agencies are aware of the risk of an emergency that requires evacuation and the emergency response we have established in the workplace.

Coordinating Responses to Emergencies

ODV has identified the positions and operational groups that are likely to be the recipients of emergency information and reports. In the event of an emergency, Supervisors and Subcontractors will communicate with outside agencies and first aid workers, as required.

General Emergency Requirements

Primary and secondary emergency stations for gathering workers must be designated and identified so workers know where to gather after an evacuation.

Emergency lighting will be installed in areas where risk assessments have shown that a lack of lighting would prove hazardous in the event of an evacuation.

All fuel and power shut-offs and emergency exits will be clearly marked and kept free of obstructions at all times.

All emergency contact numbers will be kept up-to-date and made available to all workers during regularly scheduled work hours.

Appropriate emergency communication devices such as phones, horns or two-way radios will be kept readily available at each operational worksite as a means of:

- Alerting site workers, and
- Contacting outside assistance.

The Site Supervisor or designate will know of the number of employees on-site at all times and will be able to provide an accurate headcount in the event of an emergency. Logistics will provide a daily update camp loading of all employees.

ODV will ensure that appropriate transportation is available to transport an injured worker to a medical treatment facility. Under no circumstance will an injured worker transport himself/herself to medical aid from the worksite, even for minor injuries.

Regular Worksites

A Regular Worksite is any worksite that is active for one or more weeks.

The site supervisor or designate will ensure a detailed Emergency Response Plan, specific to the needs of each regular worksite in operation, is created and posted in accordance with the established procedure.

Plans will include but are not limited to:

- Site information,
- Emergency contact information (including directions to the nearest clinic or hospital),
- Key locations (first aid equipment and room, emergency workers meeting point and muster stations),
- Instructions on how to call for first aid, and
- Fire response and evacuation information.

The Site Supervisor or designate will ensure

- Directions to the nearest hospital or medical clinic are posted on the Safety Board, and
- Annual drills are held to ensure awareness and effectiveness of the Emergency Response Plan.
- Each department will require to develop an annual drill schedule and provide documentation of the completed drills.

ODV will ensure a written Fire Response Plan is posted in an accessible location. It will include, but is not limited to, the following information:

- Types and locations of fire extinguishers

- Diagram of the location
- Escape routes and muster stations
- Communication devices

Temporary Worksites

A Temporary Worksite is any worksite that is active for less than one week.

Employees working outside regular worksite locations will be provided with a handout that contains contact information for the following:

- Emergency services,
- Head office,
- Major hospitals, and
- The local Occupational Health and Safety (OHS) Regulatory Authority

Fire Prevention

The Site Supervisor or designate will ensure that appropriate fire extinguishers are installed at key locations on all worksites. For regular worksites, these locations will be marked with a sign that contains written text or a picture.

In addition to this, fire extinguishers will be kept in all company mobile equipment, trucks, and vehicles.

All fire extinguishers will be:

- Class ABC,
- Kept in good working condition,
- Readily available/accessible,
- Stored in a compliant position and location,
- Tagged to indicate a monthly inspection by a qualified person or agency, and
- Stamped to indicate a five-year certification by a qualified person or agency.

Fire Extinguisher Inspection

ODV will ensure fire extinguishers are inspected on an annual and monthly basis. An annual inspection will be conducted by a qualified person or agency, while the site supervisor or designate will ensure that company-owned fire extinguishers are inspected monthly. The monthly inspection will be documented in the Inspection form. These guidelines are to be followed for the monthly fire extinguisher inspection:

- Know where all the portable fire extinguishers are located and document any that are missing so they may be replaced.
- When approaching a fire extinguisher, check that it is easy to see and not blocked by equipment or other objects that could interfere with access in an emergency.
- Check that the operating instructions on the nameplate are facing outward and are legible.
- Make sure that the pin and safety seal or tamper indicator is intact and not broken.
- Ensure that pressure is at the recommended level. On extinguishers equipped with a gauge, the needle should be in the green zone.
- Examine the extinguisher for obvious physical damage, corrosion, leakage or a clogged nozzle.
- While you are examining the extinguisher, feel the weight. Does the unit feel full?
- Is the Workplace Hazardous Materials Identification System label in place?
- Ensure that the extinguisher is placed and stored as per fire code.
- Look at the maintenance tag attached to the extinguisher and verify that the last maintenance date was not more than 12 months ago.
- If all of the above conditions are met, initial and date the back of the tag.

When an inspection of a fire extinguisher reveals a deficiency in any of the conditions listed above, take corrective action immediately.

Table 15-1 **ODV Notification List**

Name	Title	ICS Position	Location	Manual
Wells Site				
Javad Azanchi	General Manager	Incident Commander	Wells/QR	ICT-01
Peter Prochotsky	General Manager, Mine Development	Incident Commander (Back up)	Wells/QR	ICT-02
Lynette Candy	Community Relations	Scribe	Wells	ICT-03
Hayley Archer	Sustainable Development Project Coordinator	Scribe	Wells	ICT-04
Steven Lalonde	Health & Safety Advisor	H & S Advisor	Wells/QR	ICT-05
Emily Bailey	Health & Safety Superintendent	H & S Advisor	Wells/QR	ICT-06
John Aitken	Surface Ops Superintendent	On-Scene Supervisor	Bonanza Ledge	ICT-07
Cindy Petrin	Buyer	Logistics Chief	Wells	ICT-08
Kayly Phipps	Environmental Superintendent	Environmental Officer	Wells/QR	ICT-09

Ryan Boudens	Environmental Coordinator	Environmental Officer	Wells/QR	ICT-10
Luc Richard	Maintenance Superintendent	Maintenance coordinator	Wells/QR	ICT-11
Sustainability Manager (Vacant)	Environment and Sustainability	Information & Media Officer / Gov't Liaison Officer/Environmental	Wells/QR	ICT-12
	Superintendent – Closure Planning and Reclamation	Environment Officer	Wells/QR	ICT-13
Matt Carter	GIS/Data Manager	IT Officer	Wells/Vancouver	ICT-14
Eryn Doyle	Exploration Manager	On-Scene Supervisor	Wells	ICT-15
	Exploration Manager	On-Scene Supervisor	Wells	ICT-16
	VP Exploration	Incident Commander	Wells / Vancouver	ICT-17
Jorleen Russell	HR	Human Resources Officer	Wells	ICT-18
QR Mill Site				
Javad Azanchi	Mill Manager	Incident Commander	QR Mill	ICT-19
Sophie Li	Assay lab Supervisor	Scribe / First Aid	QR Mill	ICT-20
Shea Kadar	Mill Supervisor	On-Scene Supervisor/First Aid	QR Mill	ICT-21

EMERGENCY CONTACTS

Osisko Development - Cariboo Gold Project
Last update: November 27, 2024



EMERGENCY RADIO	Channel 1, MEDIC RP (RX 165.69 TX 170.67)		
FIRST AID TRAILER	236-713-2014	Line not monitored – use MEDIC RP in emergency	
MAIN OFFICE	3700 Ski Hill Road, Wells, BC V0K 2R0		
BALLARAT CAMP	4050 Bowron Lake Road, Wells, BC V0K 2R0		
SITE COORDINATES	BONANZA LEDGE	53.0738, -121.5511	
	MOSQUITO CREEK	53.1072, -121.6009	
	AIRPORT BY BALLARAT	53.088056, -121.515277	

WELLS SITE-WIDE PROTOCOL: IN-CASE OF EMERGENCY

SPEAK CLEARLY AND CALMLY INTO THE RADIO MICROPHONE

“CODE 1, CODE 1, CODE 1”

state your emergency

WHEN CODE 1 IS CALLED, SUPERVISORS SWITCH TO CREW CHANNEL AND ALERT WORKERS CODE 1 HAS BEEN CALLED AND TO STAND DOWN.

WELLS OPERATIONS

General Manager	Javad Azanchi	Office: 236-713-2030 (801)	Mobile: 778-951-9153
Manager of Mine Development	Peter Prochotsky	Office: 250-470-8718	Mobile: 778-594-6637
Mine Manager Designate(s)	John Aitken	Office: 778-414-8489 (704)	Mobile: 778-258-0347
	Luc Richard	Office: 236-713-2066 (816)	Mobile: 438-401-8354
Consulting Engineer(s)	Guillaume Breton-Vincent	Office:	Mobile: 514-503-1654
	Guillaume Debellefeuille	Office:	Mobile: 450 807-2280
Surface Ops Superintendent	John Aitken	Office: 778-414-8489 (704)	Mobile: 778-258-0347
Human Resources	Jorleen Russell	Office: 778-414-8499 (102)	Mobile: 250-255-8855
Command Centre - Wells	ERP Command Centre Satellite Phone #2	Office: 236-713-2070 (610) 01-188-163-164-8765	Radio: MEDIC RP

HEALTH & SAFETY

Health & Safety Superintendent	Emily Bailey (OFA 3)	Office: 236-713-2061 (600)	Mobile: 250-699-1183
ON-SITE OFA 3 ATTENDANT(S)	Steven Lalonde (OFA 3)	Office:	Evening: 250-365-6772/MEDIC RP
	Anthony Flegg (OFA 3)	Office:	Evening: 306-250-2718/MEDIC RP
	Adam Saxler (OFA 3)	Office: 236-713-2025 (813)	Evening: 250-316-0667/MEDIC RP

ENVIRONMENT

Environmental Superintendent	Kayly Phipps (OFA 3)	Office: 778-414-8488	Mobile: 250-488-7768
Environmental Coordinator(s)	Mathieu Perrault	Office: 778-414-8485 (403)	Mobile: 250-641-1135
	Ryan Boudens (OFA 3)	Office:	Mobile:

QR MILL SITE

Mill Supervisor	Shea Kadar (OFA 3)	Office: 236-713-2032 (802)	Mobile: 250-255-3978

EXPLORATION

Exploration Manager	Eryn Doyle	Office: 778-414-8496 (503)	Mobile: 604-328-0558

COMMUNITY RELATIONS OFFICE

Community Relations	Hayley Archer	Office: 778-414-8484 (205)	Mobile: 778-414-8484
	Lynnette Candy	Office: 778-414-8497 (200)	Mobile:
Community Feedback Line (voicemail box)		Office: 778-414-8493 (202)	

EXTERNAL EMERGENCY SERVICES

Service	Emergency Number	Non-Emergency Number
BC Ambulance	9 1 1	
Air Ambulance (Helicopter)	9 1 1	
Yellowhead Helicopters (McBride, BC)	250-963-9884	250-963-9884
RCMP	9 1 1	250-994-3314
Wells Volunteer Fire Brigade	9 1 1	250-944-3363
BC Wildfire Reporting	1-800-663-5555 OR *5555 (on Cell Phone)	
Poison Control	9 1 1	1-800-567-8911
HOSPITAL G.R. Baker (Quesnel, BC)	250-985-5600	250-985-5600
Provincial Emergency	1-800-663-3456	

ON-SITE RADIO FREQUENCIES

Site Channel	Name	Frequency	Description / Use
1	MEDIC RP	RX 165.69 TX 170.67	First Aid primary channel for Day Shift/Night Shift & Emergency Response.
3	EXPL RP	RX 162.36 TX 167.34	Exploration Dept. primary channel - core compound and Geologist activity.
5	STD Drilling	RX 166.11	Drill Access Roads (KM calling for F Rd, B Rd, C Rd, & Hard Scrabble Rd).
	RR31	RX 151.52	For A Road to BL (KM calling for A Rd. from 0 KM to 4.5 KM stop sign).
6	MOP RP	RX 162.355 TX 168.375	Bonanza Ledge – change to 6 MOP RP (channel 6) at A Rd. 4.5 km stop sign; this channel for any operations chatter on BL (past 4.5 km on A Rd.).
9	RR1/500 FSR	RX 150.08	For 500 Road to QR (KM calling for 500 Rd. from 0 KMs to QR gate).
10	QR Site	RX 173.955	QR Site main channel (change to this at QR gate).
11	QR Mill	RX 171.345	QR Mill radio channel.
12	QR Medic RP	RX 165.18 TX 170.16	First Aid primary channel for Day Shift/Night Shift & Emergency Response.

APPENDIX 16 SAFETY DATA SHEET

Reference hard copy Safety Data Sheets (SDS) binders are located at:

- Main Office
- First Aid Room
- Engineering Office
- Water Treatment Plant
- Warehouse
- UG Surface Shop
- Under Ground Office Surface Building
- Maintenance office

SDS MASTER BINDER – TABLE OF CONTENTS

1. Assay Chemicals
2. Compressed Bottles
3. Cleaners, Solvents and Paints
4. Explosives
5. Fuels and Fuel Additives
6. Janitorial and First Aid Supplies
7. Mill Chemicals
8. Oils – Lubricants – Glycol
9. Other Process and Chemicals
10. Resins and Polymers/Concrete
11. Water Treatment Plant

APPENDIX B COMMUNICABLE DISEASE POLICY AND PROCEDURE

APPENDIX C EXPOSURE CONTROL PLAN— BLOOD BORN PATHOGENS

APPENDIX D SITE SPECIFIC EMERGENCY RESPONSE PLANS

APPENDIX E OCCUPATIONAL HEALTH AND SAFETY PLAN
