



BC EAO EAC Application – Tenas Project

Section 13.0 Management Plans

Chapter 9 Mine Emergency Response Plan

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Tenas Project

Section 13.0 Management Plans Chapter 9 Mine Emergency Response Plan

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ABBREVIATIONS AND ACRONYMS

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
AED	automated external defibrillator
AQMP	Air Quality Management Plan (S13.0-C2)
AP	acid potential
BC	British Columbia
BC MEMPR	British Columbia Ministry of Energy, Mines and Petroleum Resources
BC MECCS	British Columbia Ministry of Environment and Climate Change Strategy
BC MEM	British Columbia Ministry of Energy and Mines
BC MEMLI	British Columbia Ministry of Energy, Mines and Low Carbon Innovation
B/P	blood pressure
C	Chapter
CEMP	Construction Environmental Management Plan (S13.0-C4)
CMSTHP	Chemicals and Materials, Storage, Transfer, and Handling Plan (S13.0-C3)
CNR	Canadian National Railway
Code	Health, Safety and Reclamation Code in British Columbia (British Columbia Ministry of Energy, Mines and Low Carbon Innovation [BC MEMLI 2021])
CO ₂	carbon dioxide
COO	Chief Operating Officer
CPP	Coal Processing Plant
DEF	Diesel Exhaust Fluid
DMP	Discharge Management Plan (S13.0-C5)
EAC	Environmental Assessment Certificate
EAP	employee assistance program
EICS	Emergency Incident Command System
EMBC	Emergency Management British Columbia
EMP	Explosives Management Plan (S13.0-C6)
EMS	Environmental Management System (S13.0-C1)
ERP	Emergency Response Plan
ERT	Emergency Response Team
FMSCP	Fuel Management and Spill Control Plan (S13.0-C7)
Hazmat	hazardous materials management
IV	intravenous
JAIR	Joint Application Information Requirements for <i>Mines Act</i> and <i>Environmental Management Act</i> Permits (British Columbia Ministry of Energy, Mines and Petroleum Resources [BC MEMPR] and British Columbia Ministry of Environment and Climate Change Strategy [BC MECCS] 2019).

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
JRA	Job Risk Assessment
MA/EMA	<i>Mines Act</i> , RSBC 1996, c 293, and <i>Environmental Management Act</i> , SBC 2003, c 53
MCI	Mass/Multiple Casualty Incident
MERP	Mine Emergency Response Plan (S13.0-C9)
MIBC	methyl isobutyl carbinol
MMRD	Mines and Mineral Resources Division
MOC	Management of Change
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheets
MTCP	Minesite Traffic Control Plan (S13.0-C10)
MWMP	Minesite Water Management Plan (S13.0-C11)
N	nitrogen
NP	neutralization potential
NPR	Neutralization Potential Ratio
OFA	Occupational First Aid
OHS	occupational health and safety
OHSC	Occupational Health and Safety Committee
OHSP	Occupational Health and Safety Program (S13.0-C13)
Orica	Orica Canada Incorporated
PAMP	Public Access Management Plan (S13.0-C14)
PEP	Provincial Emergency Program
PPE	personal protective equipment
Project	Tenas Project
PTSD	post-traumatic stress disorder
RDBN	Regional District of Bulkley-Nechako
RCMP	Royal Canadian Mounted Police
RTA	Remote Treatment Area
S	Section
SCBA	self-contained breathing apparatus
SEMP	Socio-economic Management Plan (S13.0-C16)
SEPPSC	Surface Erosion Prevention and Sediment Control Plan (S13.0-C17)
SPP	Standard Practices and Procedures
SRK	SRK Consulting (Canada) Incorporated
TAC	Tenas Access Corridor
TCL	Telkwa Coal Limited

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
TLV	threshold limit value
VC	Valued Component
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization
WMP	Wildlife Management Plan (S13.0-C21)
WMPRE	Waste Management Plan for Refuse and Emissions (S13.0-C20)

UNITS OF MEASURE

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
km	kilometre
L	litre
m	metre

EXECUTIVE SUMMARY

The objective of the Mine Emergency Response Plan (MERP) is to provide safe and healthy working conditions during emergency situations, and to convey that health, safety, and environmental protection are vital elements of the Project, and that this protection is essential to achieving a successful long-term operation.

All emergencies, including fatalities can be made worse if not handled properly. It is herein assumed that anyone discovering a potential emergency knows the immediate steps to be taken and will follow this MERP. The MERP provides guidance about how to assess the scope of an emergency, how to provide initial response, the roles and responsibilities of Minesite personnel, and what to do when the initial attempts to control a situation are not successful.

All TCL employees, as well as visitors and contractors will be trained in this MERP to an appropriate level within the functions of their duties.

Management and implementation of the MERP at the Project is important. Through implementation of the MERP and relevant SPPs, TCL will ensure high standards of safety for the Project's Minesite, its personnel, and the environment.

1. INTRODUCTION

This Mine Emergency Response Plan (MERP) is a component of the **Environmental Management System (Section [S] 13.0-Chapter [C] 1) (EMS)** for Telkwa Coal Limited (TCL)'s Tenas Project (Project) in British Columbia (BC). As such, it is a working document that will be reviewed and updated on a regular basis throughout all phases of the Project.

The MERP provides guidance about how to respond to emergencies in the Project Area, and specifically at the Minesite.

2. PURPOSE AND OBJECTIVES

The objective of the MERP is to provide safe and healthy working conditions, and to understand that health, safety, and environmental protection are vital elements of the Project, and that this protection is essential to achieving a successful long-term operation.

The objectives of this MERP for the Project are to:

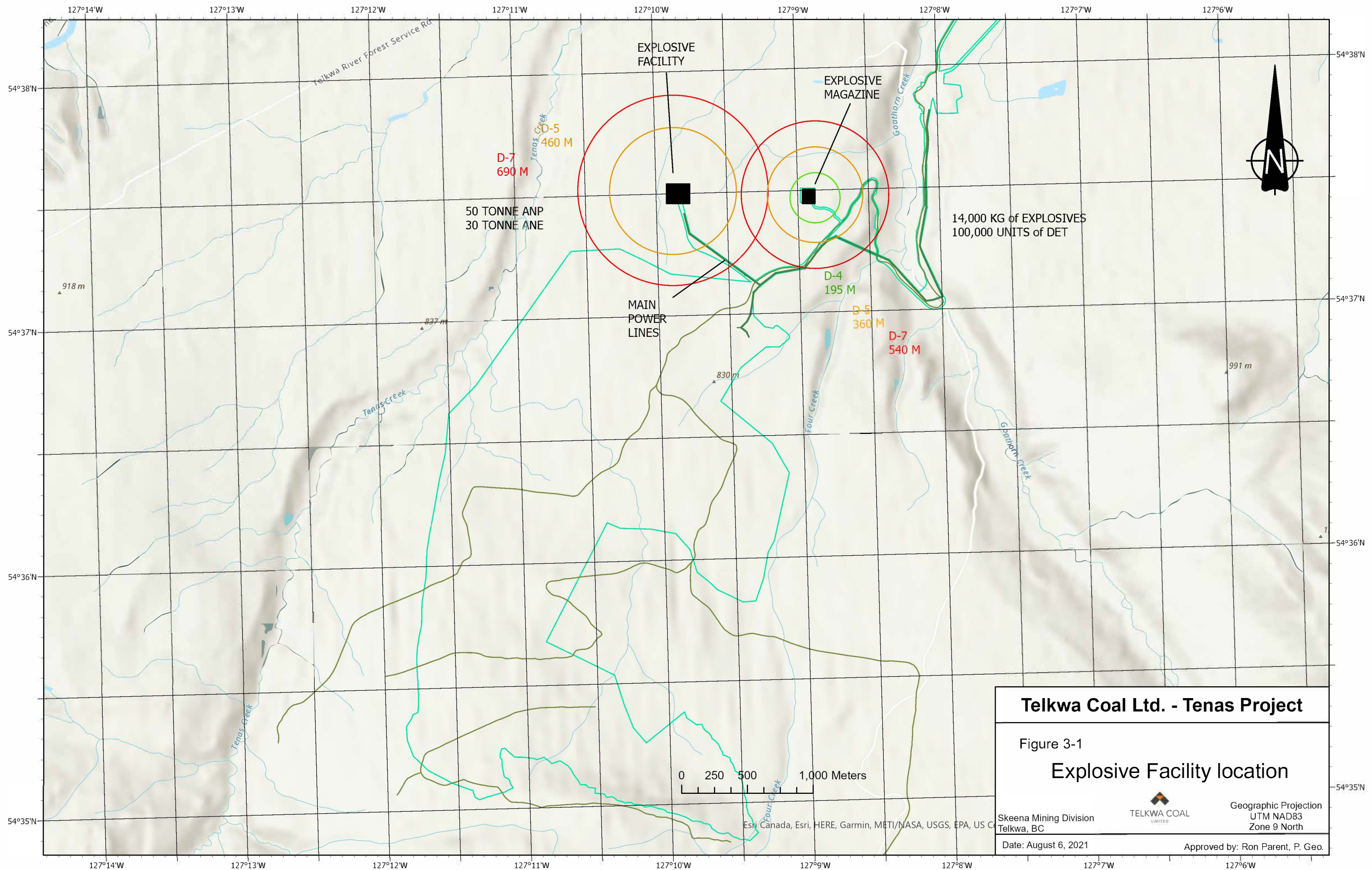
- ▶ provide a pre-determined course of action during a Minesite emergency;
- ▶ provide a listing of the duties and responsibilities of personnel;
- ▶ assist personnel in determining appropriate responses to emergency situations;
- ▶ enable communication, and cooperation between corporate personnel, site personnel, regulatory officials, and others such as Indigenous groups, Ministry of Energy, Mines and Low Carbon Innovation (BC MEMLI) and British Columbia Ministry of Environment and Climate Change Strategy (BC MECCS), Regional District of Bulkley-Nechako (RDBN), and the Village of Telkwa, as required;
- ▶ provide guidelines for ensuring the safety of site personnel, visitors, and community members;
- ▶ minimize losses and injuries during a Minesite emergency;
- ▶ reduce the magnitude and duration of environmental effects;
- ▶ assist response personnel to determine and perform remedial actions quickly;
- ▶ enable timely public reporting of major incidents;
- ▶ reduce recovery time and cost;
- ▶ inspire confidence in response personnel;
- ▶ ensure procedures follow occupational health and safety (OHS) and environmental requirements; and
- ▶ restore operations to normal.

Even a fatality can be made worse if not handled properly. It is herein assumed that anyone discovering a potential emergency knows the immediate steps to be taken and will follow this MERP. The MERP provides guidance about how to assess the scope of an emergency, how to provide initial response, and what to do when the initial attempts to control a situation are not successful.

3. SCOPE AND SCALE

This MERP is defined within the Project Area, and includes all activities, as well as any operation and/or construction activities that are directly associated with the Project and exist outside of the Project Area. This MERP is in effect during all Project phases and ceases to be in force at the final closure of the Project as approved by regulatory authorities.

There is one (1) area within the Project where this MERP is not directly applicable, and that is for a fire within the D-5 distance (460 metres [m]) at the Project's Explosive Facility and the D-5 distance (360 m) at the Explosive Magazine site as shown by **Figure 3-1** below.



A Memorandum of Understanding (MOU) with Orica Canada Incorporated (Orica) will be put in place and signed by both parties after construction is complete for the Explosive Infrastructure. Within the D5 boundary Orica's Emergency Response Plan (ERP) for dealing with fires will take precedent. However, any minor or major emergency within the D5 distances would involve both activation of this MERP document and Orica's ERP, with Orica being in command, and this will likely involve an evacuation of the site and suspension of operations until the minor or major emergency is resolved.

All TCL employees as well as visitors and contractors will be trained in this MERP to an appropriate level within the functions of their duties. Visitors are required to be knowledgeable of the actions that are applicable to their activities while onsite and will be under the direction of a TCL employee who is knowledgeable with this MERP.

TCL is committed to ensuring that the MERP is effective through:

- ▶ providing well-defined corporate expectations regarding safety, health, and the environment;
- ▶ implementing comprehensive hazard prevention and control methods, tracking their effectiveness, and incorporating learning into the MERP;
- ▶ establishing a clear chain of command for safety, health, and environmental activities and incident management, including timely public reporting and training of designated response personnel to execute this MERP and systems of action to an appropriate level;
- ▶ providing the resources needed to respond quickly and efficiently to all emergencies to prevent injury to, or degradation of, the health of individuals and/or the environment;
- ▶ establishment of an Emergency Response Team (ERT) and emergency response facilities, with ongoing resourcing for training, equipment, and maintenance of equipment and facilities;
- ▶ testing of the MERP with the ERT and employees annually, with lessons learned incorporated into this MERP;
- ▶ effective engagement of employees, contractors, and visitors in implementation of the MERP, and encouraging suggestions on improvements to reduce potential hazards and improve work procedures; and
- ▶ reviewing and updating the MERP at least once per year or following an emergency response drill and/or a major Incident such as a fatality, serious medical aid, and/or environmental Incident causing death and/or long-term harm of wildlife, and incorporating any lessons learned into the MERP.

3.1 Policy with Respect to Contractors and Visitors

Every person working at and/or visiting the Project Minesite will receive an induction upon arrival, and as such is apprised of and required to follow the MERP policies and procedures set forth in this MERP and the **Fuel Management and Spill Control Plan (S13.0-C7) (FMSCP)**.

Major contractors that employ more than 15 personnel onsite, such as those for mining and hauling, topsoil salvage, logging, road maintenance, rail, and reclamation are required to have their own health and safety services which need to align with TCL health and safety requirements and meet all regulatory requirements. This is to be verified by TCL management prior to engagement of the contractor. For all contractors that have less than 15 personnel onsite, they will be required to use TCL's health and safety requirements.

Management is committed to ensuring appointment of a MERP Coordinator which will be one of the tasks of the Health, Safety, and Human Resources Superintendent, developing an **Occupational Health and Safety Program (OHSP) (S13.0-C16)** and providing adequate budget and resources to the implementation of a successful MERP, to ensure adequate resources and personnel to minimize the effects of all emergency situations that may occur at the Project.

4. COMPLIANCE OBLIGATIONS

This subsection will summarize the relevant compliance approvals and requirements that the MERP needs to address.

4.1 Regulatory Requirements

TCL is committed to protecting the health and safety of all its workers and the environment, and to adhering to all legislated safety standards. The MERP is required by Part 3.7.1 of the Health, Safety and Reclamation Code for Mines in British Columbia (BC MEMLI 2021) (Code) and is in general accordance with the Mine Emergency Response Plan Guidelines for the Mining Industry (British Columbia Ministry of Energy, Mines and Petroleum Resources [BC MEMPR] 2017).

Several legislative requirements are applicable to the MERP. A short list of these requirements and their major applicable components are provided in **Table 4.1-1** below.

Table 4.1-1: Legislation and Guidelines Relevant to the Mine Emergency Response Plan (MERP)

Legislation, Regulations, and Guidelines	Applicable Information
<i>Canadian Environmental Protection Act</i> , SC 1999 c. 33 Government of Canada [GovCan 1999] (<i>CEPA</i>)	Establishes requirements for pollution prevention, environmental emergency plans and spill reporting
<i>Emergency Program Act</i> , RSBC 1996, c.111 (GovBC 1996a) Emergency Program Management Regulation, BC Reg 477/94 (GovBC 1994)	Identifies the requirements for emergency plans and procedures of the Province and of government corporations
<i>Environmental Management Act</i> , SBC 2003, c. 53 (GovBC 2003) (<i>EMA</i>); Hazardous Waste Regulation, BC Reg. 63/88 (GovBC 1988a); Spill Contingency Planning Regulation, BC Reg. 63/88 (GovBC 1988b); Spill Preparedness, Response and Recovery Regulation, BC Reg 185/2017 (GovBC 2017a)	The <i>EMA</i> sets out requirements for disposal of oil and hazardous materials, spill prevention and reporting, and pollution abatement. Authority for provincial spill cost recovery is additionally provided by the <i>EMA</i> . Regulations may be applied to a reportable hydraulic or chemical spill, any spill in water, industrial accident, or environmental emergency.
Guidelines for Industry Emergency Response Plans (GovBC 2021))	Provides guidance about spill prevention and reporting pursuant to the Hazardous Waste Regulation, BC Reg. 63/88 (GovBC 1988a) and <i>Emergency Program Act</i> , RSBC 1996, c111 (GovBC 1996a)
Health, Safety and Reclamation Code for Mines in British Columbia (British Columbia Ministry of Energy, Mines and Low Carbon Innovation [BC MEMLI] 2021) (Code)	Part 3, 3.7.1 Mine Emergency Response Plan details components and testing requirements
Mine Emergency Response Plan Guidelines for the Mining Industry (British Columbia Ministry of Energy, Mines and Petroleum Resources [BC MEMPR] 2017)	Provides guidance and information on resources for the creation of an emergency response plan for operating mines

Legislation, Regulations, and Guidelines	Applicable Information
<i>Mines Act</i> , RSBC 1996, c 293 Government of British Columbia [GovBC] 1996b)	Regulates mines through the Code and permitting of roads on mineral claims registered to a proponent
Spill Reporting Regulations, BC Reg 187/2017 (GovBC 2017b);	Provides requirements for reporting to Emergency Management British Columbia (EMBC) formerly Provincial Emergency Program (PEP)
<i>Transportation of Dangerous Goods Act</i> , SC 1992, c.34 (GovCan 1999)	Requires any person transporting or importing dangerous goods to prepare an emergency response assistance plan and outline what is to be done if there is an accident transporting the dangerous goods.

Joint Application Information Requirements for *Mines Act* and *Environmental Management Act* Permits (British Columbia Ministry of Energy, Mines and Petroleum Resources [BC MEMPR] and British Columbia Ministry of Environment and Climate Change Strategy [BC MECCS] 2019) (JAIR) provides requirements for obtaining *Mines Act*, RSBC 1996, c 293, and *Environmental Management Act*, SBC 2003, c 53 (MA/EMA) permits, and provides direction on the objectives for a MERP in section 9.12 of the JAIR.

The Code requires mines in British Columbia (BC) to have a MERP that considers all phases of the mine's activity, including exploration, development, construction, operation, and reclamation. It also requires the MERP to be adapted and updated as required as it progresses through each phase. The province has developed a MERP Guidelines document that suggests approaches for preparing, training, and organizing personnel for managing a mine emergency. In accordance with section 10.4.2.1.e of the Code, integrate any tailings storage facility (Tenas Control Pond and management ponds in this Project's case) emergency preparedness and response plan into the MERP. This will be provided in **Appendix 13.9-A Operation, Maintenance and Surveillance Plan for Dams at the Tenas Project** once this is completed.

4.2 Standard Practices and Procedures (SPP)

All TCL Standard Practices and Procedures (SPPs) will conform to the Code. In addition to regulatory requirements, the Project will implement SPPs that meet or exceed the required laws and regulations.

5. RELATIONSHIP TO OTHER MANAGEMENT PLANS

The Project is governed by an **EMS**, an overarching management plan strategy comprising a set of processes and practices which enable TCL to manage its environmental and safety performance in a holistic way, within an integrated framework. While the management plans are part of the **EMS**, the **EMS** is not just a collection of management plans.

In addition to the overall guidance of the **EMS**, this MERP has a relationship with other management plans that also present mitigation measures. Those management plans and their relationship to this MERP are listed in **Table 5-1**.

Table 5-1: Management Plans with Relationship to the Mine Emergency Response Plan (MERP)

Management Plans	Nature of Relationship
Environmental Management System (S13-C1) (EMS)	All management plans are part of the EMS
Chemicals and Materials, Storage, Transfer, and Handling Plan (S13-C3) (CMSTHP)	Incidents/emergencies
Construction Environmental Management Plan (S13-C4) (CEMP)	Incidents/emergencies
(DMP)	Unplanned discharges
Explosives Management Plan (S13-C6) (EMP)	Fire/spill response
Fuel Management and Spill Control Plan (S13-C7) (FMSCP)	Spill response
Minesite Traffic Control Plan (S13-C10) (MTCP)	Incidents/emergencies
Minesite Water Management Plan (S13-C11) (MWMP)	Incidents/emergencies
Occupational Health and Safety Program (S13-C13) (OHSP)	Incidents/emergencies
Public Access Management Plan (S13-C14) (PAMP)	Incidents/emergencies
Waste Management Plan for Refuse and Emissions (S13-C20) (WMPRE)	Incidents/emergencies
Wildlife Management Plan (S13-C21) (WMP)	Incidents/emergencies involving wildlife

6. DETAILS OF MINE EMERGENCY RESPONSE PLAN (MERP)

By identifying potential emergencies that could affect the Project Minesite, it is possible to anticipate the types of scenarios that may occur during the life of the Project. By identifying potential emergencies, it is easier to prevent them, be prepared for them, and ultimately respond effectively if needed.

6.1 Emergency Identification and Risk Assessment

Every emergency has its own unique characteristics, and challenges to effective response may exist based on its severity, size, location, and personnel involved. However, although unique, most emergencies can be classified into a category based on the type, work area, receiving environment, and/or personnel involved. Emergencies at the Project may have a variety of causes, including environmental and natural forces, an Incident at TCL or nearby workplaces, or by failure of a Project component. Emergencies may result in harm to personnel, damage to the environment, or damage to TCL assets.

6.2 Risk Assessment Methodology

The risk assessment methodology for the MERP follows the same methodology as provided in the **EMS**:

- ▶ Likelihood;
- ▶ Consequence; and
- ▶ Risk Assessment.

Likelihood definitions are summarized by **Figure 6.2-1**. Consequence definitions are summarized by **Figure 6.2-2** while the overall Risk Assessment Rating methodology is summarized by **Figure 6.2-3**. **Table 6.2-1** describes potential emergencies associated with the Project and provides a general assessment of risk.

Likelihood	Almost Certain	The unwanted event has occurred frequently: occurs in order of one or more times per year and is likely to reoccur within one (1) year
	Likely	The unwanted event has occurred infrequently: occurs in order of less than once per year and is likely to reoccur within three (3) years
	May	The unwanted event has happened in the business at some time or could happen within five (5) years
	Unlikely	The unwanted event has happened in the business at some time or could happen within 15 years
	Rare	The unwanted event has never been known to occur in the business or it is highly unlikely that it will occur within 25 years.

Figure 6.2-1: Summary of Likelihood definitions

Consequence Rating	Harm to people	Environmental Impact	Business Interruption/ Material Damage	Legal & Regulatory	Impact on Reputation/Social/ Community	Effects on Environment
Negligible	First aid case/exposure to minor health risk	Minimal environmental harm	No disruption to operation, 5% loss of budgeted operating profit	Low level legal issue	Slight impact – public awareness may exist but no public concern	Biophysical Environment: Resulting adverse effects are barely to not detectable, of very limited extent, and can be reversed in two days or less. Human Environment: Resulting adverse effects are not detectable or are in the normal range of variability in the human environment.
Minor	Medical treatment case/exposure to major health risk	Material environmental harm – incident remediable short term	Brief disruption to operation, 10% loss of budgeted operating profit/listed assets	Minor legal issue, noncompliance and breeches of the law	Limited impact – local public concern	Biophysical Environment: Resulting adverse effects are barely detectable, and can be reversed in one month or less, or are low extent. Human Environment: Resulting adverse effects are detectable but are not likely to be experienced at the community level.
Moderate	Lost time injury/reversible impact on health	Serious environmental harm – incident remediable within LOM	Partial shutdown, 15% loss of budgeted operating profit/listed assets	Serious breach of law/investigation/repo rt to authority prosecution and/or moderate penalty	Considerable impact - regional public concern	Biophysical Environment: Resulting in lethal and/or sub-lethal effects at the individual level indistinguishable from natural variation or resulting adverse effects are detectable and can be reversed in one year or less. Human Environment: Adverse effects would result in demonstrable change and are possible at the community-wide level but remain within historic norms and present no or a minor management challenge.
Major	Single fatality or loss of quality of life/irreversible impact on health	Major environmental harm – incident remediable post LOM	Partial loss of operation, 20% loss of budgeted operating profits/listed assets	Major breech of the law, considerable prosecution and penalties	National impact – national public concern	Biophysical Environment: Resulting in some structural and functional changes at the population level above natural variation, or resulting adverse effects occur regionally and can be reversed in 10 years or less. Human Environment: Adverse effects would result in changes beyond historical norms and present a moderate management challenge.
Severe	Multiple fatalities/impact on health ultimately fatal	Extreme environmental harm – incident irreversible	Substantial or total loss of operation, 25% loss of budgeted operating profit/listed assets	Very considerable penalties and prosecutions. Multiple law suits and jail terms	International impact – International public concern	Biophysical Environment: Resulting in structural and functional changes at the population level to an extent which could potentially result in severe changes at the community and ecosystem levels, or resulting adverse effects occur regionally and will take more than 10 years to reverse. Human Environment: Adverse effects would result in changes beyond historical norms and present a major management challenge. One or more fatalities may occur.

Figure 6.2-2: Summary of Consequence definitions

		Hazard Effect/Consequence				
Likelihood		SEVERE	MAJOR	MODERATE	MINOR	NEGLIGIBLE
	ALMOST CERTAIN	CRITICAL	VERY HIGH	HIGH	MEDIUM	LOW
	LIKELY	VERY HIGH	HIGH	MEDIUM	MEDIUM	LOW
	MAY	HIGH	MEDIUM	MEDIUM	MEDIUM	VERY LOW
	UNLIKELY	MEDIUM	MEDIUM	MEDIUM	LOW	VERY LOW
	RARE	MEDIUM	LOW	LOW	VERY LOW	NEGLIGIBLE

Figure 6.2-3: Summary of Risk Assessment ratings

Table 6.2-1: Description and Risk Assessment for Emergencies that May Occur within the Project Area

Emergencies	Likelihood	Consequence	Risk Assessed	Description
Avalanche	Rare	Moderate	Low	Based on a risk assessment using the Technical Aspects of Snow Avalanche Risk Management – Resources and Guidelines for Avalanche Practitioners in Canada (Canadian Avalanche Association 2016) as per the Code, it is expected that during most years the conditions for sufficient snow level supply on sufficiently steep terrain to form material snow avalanches within the Project's area will not occur and therefore the likelihood had been assessed as Rare with a Moderate consequence rating for an overall risk assessment of Low .
Building and Infrastructure Failure	Rare	Minor	Very Low	TCL will carry out ongoing maintenance and repairs on building infrastructure, as means to reduce potential failures. A building and infrastructure failure is expected to Rare based on events from other mines in BC. A failure will provide adequate notice to personnel and be limited in scope and easily repairable leading to a consequence rating of Minor and an overall risk assessment of Very Low .
Confined Space Incident	Unlikely	Severe	Medium	Personnel are required to be trained in confined space awareness, proper permitting procedures are in place, and confined spaces onsite are marked appropriately. The likelihood of this event occurring is Unlikely , but the consequence would be rated as Severe due to chance of a fatality. This gives an overall risk assessment of Medium .
Disease Outbreak	Rare	Major	Medium	Given the past 30 years and even with recent events of the COVID-19 pandemic, a pandemic event is still a Rare occurrence. The consequence is rated as Major due to the chance of fatalities, so the overall risk is assessed as Medium .
Downed Aircraft	Rare	Moderate	Low	There have been no documented aircraft incidents in the Project Area over the past 20 years, so the likelihood has been rated as Rare for this event. Given the large area of the region and the relatively small size of the Project it is expected that an aircraft crash would have a Moderate effect on the Project leading to an overall risk assessment of Low .
Drought	Rare	Major	Low	The region is not prone to drought conditions based on the historical climate record and climate change is expected to make the region wetter, so a drought likelihood has been rated Rare . If a drought is to occur the event has been rated as Major due to the generation of ARD from the PAG material if the drought is to last over several years. The Project has incorporated a contingency of pumping water from Goathorn Creek at 2.5% of annual flow and this can be increased to 10% if required, without causing significant effects in this creek. So, with this contingency the overall risk has been assessed as Low .
Drowning	Rare	Major	Medium	Given experience at mine sites in BC, drowning events are very rare so this Project has rated this event as Rare . The consequence has been rated as Major

Emergencies	Likelihood	Consequence	Risk Assessed	Description
				due to the chance of a fatality associated with drowning. The risk assessed for this event is Low .
Earthquake	Rare	Moderate	Low	The Project is in a non-active seismic activity region. While there still a potential for seismic events having a Moderate consequence on Project components as they have been designed for the expected earthquake level the likelihood is Rare given an overall risk assessment of Low .
Emergency at Neighbouring Communities	Rare	Moderate	Low	The neighbouring communities have not reported emergencies during the past 10 years so this has been rated as Rare . As the neighbouring communities such as Telkwa are located close enough to the Project to generate consequences to the Project, consequences has been rated as Moderate . The overall risk assessment has been rated as Low .
Emergency at Neighbouring Mine	Rare	Negligible	Negligible	The neighbouring mines have not reported emergencies during the past 10 years so this has been rated as Rare . As the neighbouring mines are located far enough from the Project to not generate any consequence to the Project so it has been rated as Negligible . he overall risk assessment has been rated as Negligible .
Explosions	Unlikely	Severe	Medium	The potential for an uncontrolled explosion only exists during blasting operations, at which time blasting procedures are followed such as implementing controls to mitigate both impacts from blasting and blasting emergencies. The likelihood of this event occurring has been rated as Unlikely . The consequence is rated at a Severe level due to a fatality occurring so overall event has a risk assessed as Medium .
Exposure to Extreme Weather Either Heat, Cold or Wind	Unlikely	Minor	Low	Personnel and equipment onsite have possible exposure to extreme heat and/or cold for this Project however most roles for the Project will be within climate-controlled environments and procedures and clothing will be available for extreme events so the event has been assessed a likelihood of Unlikely and the consequence has been rated as Minor . The overall risk assessed for this event is Medium .
Exposure to hazardous materials	Unlikely	Minor	Low	Personnel will have a possible exposure to hazardous material for this Project so the likelihood has been rated as May . The number of people in these roles will be minimized and appropriate training and PPE will be in place for these workers. The number of hazardous materials for the Project is low and they are well understood, like hydrocarbons. The consequence has been rated as Moderate given that the material onsite while hazardous is not fatal given the materials and quantities being used and exposed to. An overall risk assessment of Low has been assigned to this event.

Emergencies	Likelihood	Consequence	Risk Assessed	Description
Falls	Likely	Minor	Medium	There is a Likely chance of personnel having minor falls onsite due to uneven ground, however injuries are not expected to be major, so the consequence has been rated as Minor . The risk assessment is Medium for this event.
Fire (Electrical or Mechanical or Equipment)	Unlikely	Severe	Medium	Fires identified will be attempted to be extinguished, and if unsuccessful occupants of buildings, machinery, etc. in the vicinity will be evacuated. Given past events at other Projects the likelihood of fire occurring at the Project has been rated as Unlikely with a consequence rating of Severe due to chance of a human fatality and an overall risk assessment of Medium .
Flood	Unlikely	Moderate	Medium	The main potential for any flooding at the Minesite would be during times of unexpected heavy rainfall events and would have a potential effect on the Goathorn Creek Bridge and thus access to the Project. The likelihood for flood in this area is rated as Unlikely based on past events and designing the bridge with additional freeboard to handle a 1 in 200 year flood event but having a Moderate consequence as only the bridge would be impacted, and the environmental effects would not be different from natural events so the overall risk was assessed as Medium .
Wildfire and Related Smoke	Rare	Moderate	Low	The potential of a wildfire occurring in the Project Area given the history of the region the likelihood has been classified as Rare . The consequence of the wildfire has been rated as Moderate due to potential impacts to the Project giving an overall risk assessment of Low .
Geohazards	May	Minor	Medium	Geohazards on a section of the TAC in the vicinity of Goathorn creek valley has a likelihood rating of May due to instability and erosion but the geohazard consequence is considered Minor because of planned mitigations, and that potential environmental effects may be indistinguishable from natural variation giving an overall risk assessment of Medium .
Hydrocarbon and or Non-hydrocarbon Material Leaks	Unlikely	Minor	Low	There are several hydrocarbon lines and systems located throughout the Project site, including diesel, lubricants, diesel exhaust fluid (DEF), and gasoline. Hydrocarbon lines are protected, marked, surveyed, and contained throughout the Minesite. All stored diesel, lubricant, DEF, and gasoline onsite have Emergency Shutdown Devices. Given that these lines will be professionally installed and monitored it is Unlikely a leak will occur and if it does it will be detected quickly thereby having a consequence rating of Minor and an overall risk assessment of Low .
Lightning	Rare	Severe	Medium	The Project is in a region where there is a low likelihood of lightning strikes so the likelihood has been rated as Rare but the consequence of them has been rated as Severe due to the chance of fatalities for an overall risk assessment of Medium .

Emergencies	Likelihood	Consequence	Risk Assessed	Description
Loss of Communications	Rare	Negligible	Negligible	TCL will have professionally installed and maintained radio and phone network by a contractor based in Terrace. Furthermore, cell phones do work at the Minesite and Telkwa does have an office in Telkwa with communications. There will be an emergency satellite phone onsite with independent power. With all these systems in place the likelihood of losing all communications is considered a Rare event. If it does happen, there will be an insignificant effect to the environment as many activities will be modified or curtailed until communications are restored so the consequence has been rated as Negligible . The overall risk assessed for this event is Negligible given the above context.
Loss of Electrical Power	Unlikely	Negligible	Very Low	The Project is connected to the BC Hydro grid power system for the Telkwa area and based on a review of power outages it is considered an Unlikely event. The Project will have back up diesel generator units for critical systems and activities will be modified in the event of power loss. It is expected most power losses will have a very limited time given the history in the region, so the consequence for this event has been rated as Negligible so the overall risk assessment is Very Low for this event.
Loss of Water Supply	Rare	Minor	Very Low	Given water will be supplied by precipitation and storage and that the water balance TCL has completed indicated that this event has a very Rare chance of occurring. TCL has put in a contingency of pumping water from Goathorn Creek if required so the consequence of this even is considered Minor as the site has storage to last without water for an extended period. Therefore, the overall risk assessment of this event has been rated as Very Low .
Management, Control and Sedimentation Pond Embankment Failures	Rare	Severe	Medium	There is a very low risk of a pond embankment failure, see Section 6.8.9 for procedures to handle this emergency. The likelihood of this event has been rated as Rare due to the construction methodology used for these ponds and extensive buttress system being put in place. However, the consequence of this event has been rated as Severe due to possible effects to personnel and the environment so the overall risk assessment for this event is Medium .
Management, Control and Sedimentation Pond Unplanned Discharges	Unlikely	Minor	Very Low	The ponds will all be monitored and controlled via pumping and engineering design so it is unlikely that these structures will have an unplanned discharge and has been rated as Rare . If an unplanned discharge were to occur it will be of a short duration and not expected to have any effect to the environment as the plan is for these structures to discharge every year during the open water season so the consequence has been rated as Major . The overall risk assessment for this event is Low .

Emergencies	Likelihood	Consequence	Risk Assessed	Description
Medical Incident (Serious Injury or Fatality)	May	Major	Medium	Given experience at mine sites in BC, fatalities at mine sites have occurred so this has been given a likelihood rating of May . The consequence is Major due to the death of personnel. The overall risk assessed for this event is Medium .
Misidentification and/or Misplacement of Potentially Acid Generating (PAG) Material	Unlikely	Minor	Very Low	The following Project design measures have been put in place to reduce the likelihood of the above occurrence: ▪ The majority of rock material within the open pit has been designated as PAG material, unless the material is designated non-PAG based on a geochemical assessment using a Neutralization Potential Ratio (NPR) cut-off of 1.2 neutralization potential (NP) to 1 acid potential (AP). Only two (2) rock zones have been identified as non-PAG material, Zones 1 and portions of Zone 4. ▪ Site runoff from mining, including from embankment buttresses that may inadvertently contain PAG material, will be diverted into ponds that are sized and designed appropriately for flood events. Water quality will be monitored at the point of discharge and in the receiving environment. Compliance points downstream at WQS04 on Tenas Creek, WQS03DS on Four Creek and WQS06 on Goathorn Creek will be used to monitor that the Project is meeting the prediction concentrations presented in this assessment. ▪ Non-PAG rock excavated will not be stockpiled but will be placed in final position either in buttress portion of the dam for the management ponds and/or backfilled into the pit, thus limiting the potential for misidentification and misplacement locations to the buttresses (backfill in the pit will be managed as part of standard operating practices). Monitoring and management of waste will be implemented through the ML/ARD Management Plan. Management measures for PAG and non-PAG materials to reduce potential misidentification are: ▪ Blasthole drilling will take additional confirmatory samples to confirm PAG and non-PAG zones prior to excavation; ▪ Excavators will be equipped with high precisions Global Positioning System (GPS) systems, and the PAG and non-PAG zones will be available to the operator based on the geology model and blast hole drilling results. ▪ If a PAG and non-PAG zone occur within the same mining block, a 1 to 2 m unblasted zone will be left in the pattern to provide further visual clues to the operators. ▪ An electronic tracking system will be put in place to track the excavation and placement of all material to confirm where PAG material is placed in the field. ▪ The tracking system will be reviewed daily by the Mine Superintendent, supervisors, and technical services group to identify if any material is placed in the wrong location.

Emergencies	Likelihood	Consequence	Risk Assessed	Description
				- Stakes will be placed in the field to identify PAG and non-PAG material boundaries. - Excavators have been selected for primary material loading to allow additional flexibility and selectivity in the mining of PAG material. Sampling of non-PAG material piles will be completed periodically to confirm that PAG material has not been placed in these locations Given the above the likelihood of misplacement occurring is unlikely and if were to occur very little material would be misplaced and could be immediately rehandled into the management ponds giving a consequence of Minor with an overall risk assessment of Low.
Pit Slope or Highwall Failure	May	Moderate	Medium	There is potential for both small and large pit slope or highwall failure. However, ongoing survey monitoring on a periodic basis, should reduce potential for undefined hazards. Given the conservative design for the Project's open pit this event's likelihood has been rated as May given experience at other sites. Given the monitoring and procedures in place and the low height of open pit walls if a failure were to occur it is expected to have only a Moderate consequence to the operation due to the ability to evacuate personnel and equipment and having multiple locations within the open pit to resume the operation. The overall risk of this event is deemed Medium .
Rail Incident	Rare	Severe	Medium	Based on a review of rail incidents at other operating mines and the fact that this Project will only be having one (1) train per week the likelihood of rail incident has been rated as Rare . Even though the incident will likely never happen there is a chance of human injury and fatality if one did occur, so it has a consequence rating of Severe and an overall risk assessment of Medium .
Sabotage, Civil Disorder and Bomb Threats	Rare	Moderate	Low	Given experience at other BC mine sites there is a very Low likelihood of this type of event, so it has been given a rating of Rare . If one were to occur it is likely it would have a limited effect on the Project, so an overall consequence rating of Moderate has been assigned and an overall risk assessment rating of Low has been assigned.
Spills into Water and/or Land of Hydrocarbons or Non-hydrocarbons	Rare	Moderate	Low	There is a Rare likelihood of a spill to occur on the Project given the amount of equipment and fueling and lubricant requirements. However, given procedures and monitoring in place spills are expected to be detected, and contained quickly and therefore a Minor consequence has been assigned. An overall risk assessment of Low has been assigned to this event.
Temporary Closure of Canadian National Railway	Rare	Negligible	Negligible	The CNR line has not been closed for a significant period during the past 15 years, so it has been rated a Rare likelihood. Consequence has been rated Negligible

Emergencies	Likelihood	Consequence	Risk Assessed	Description
(CNR) Line Due to Environmental or Vehicle Incident				given that the Project has sufficient stockpiling capacity to deal with any rail delays, giving an overall risk assessment of Negligible .
Temporary Closure of Highway 16 Due to Environmental or Vehicle Incident	Rare	Negligible	Negligible	Highway 16 has not been closed for a significant period during the past 15 years, so it has been rated a Rare likelihood. Consequence has been rated Negligible given that the Project has an alternate access via Houston and Lawson Road. Thus, the overall risk assessment is rated as Negligible .
Vehicle and/or Equipment Incident	Unlikely	Severe	Medium	There is a Unlikely chance of a vehicle incident to occur for the Project given the number of vehicles and possible interactions. The consequence has been rated as Severe due to the chance of injury to personnel or a fatality. The overall risk was assessed as Medium .
Wildlife Interaction	Likely	Minor	Medium	The Project is an area with documented wildlife use, and it is likely vehicles used at the Project will come into to contact with wildlife so the likelihood was rated as Likely . However, the consequence is rated as Minor as it is likely only equipment damage and harm to one (1) animal would happen which results in an overall risk assessment of Medium .
Wind	Unlikely	Negligible	Very Low	The Project site is not prone to high wind events given a likelihood of Unlikely and even if a high gust were to occur with design mitigations in place the consequence from this event is expected to be Negligible resulting in an overall risk assessment of Very Low .

Notes: BC=British Columbia; Code=Health, Safety and Reclamation Code for British Columbia (British Columbia Ministry of Energy, Mines and Low Carbon Innovation [BC MEMLI] 2021); PPE=personal protective equipment; Project=Tenas Project; TAC=Tenas Access Corridor; TCL=Telkwa Coal Limited

6.2.1 Field Level Risk Assessments

The Health, Safety, and Human Resources Superintendent will engage Supervisors, contractors, and workers to identify hazards and complete field level risk assessments and develop situation specific prevention and protection procedures. Safety meetings will be used to generate interest and discussion.

For the Project, there are two (2) Field Level Risk Assessments that will be used; the Stop, Look, Assess and Manage (SLAM) card; and the Job Risk Assessment (JRA), both of which are described in further detail below.

6.2.2 Stop, Look, Assess and Manage (SLAM)

An example SLAM card is provided by **Figure 6.2-4** below. If a hazard is identified in this process that cannot be managed, a JRA needs to be completed with a Supervisor. A typical **JRA** form is provided in **Appendix 13.9-B**. SLAMs and JRAs are to be kept on file for a minimum of three (3) years.

SLAM Stop, Look, Assess, and Manage				
NAME: POSITION: WORKPLACE:			DATE:	
TICK IF APPLICABLE	CAN I MANAGE THE HAZARD?	YES	NO	
	Can I be caught in, on or between anything?			
	Can I strain or overexert myself?			
	Does anything need to be isolated or tested?			
	Can I come into contact with something that may harm me like heat, gas, fumes, or electricity?			
	Can I damage any equipment?			
	Can I fall more than 2 metres?			
	Can I slip or trip on anything?			
	Do I need additional training qualifications or authorizations to perform this task?			
	Is there a chance I could spill or pollute something?			
	Can something fall on me or strike me?			
	Do I need to communicate to my surrounding workmates the risks associated with this task?			
	Could there be any uncontrolled movements?			
	Am I using any substances that maybe harmful?			
	Am I certain that regulatory and stakeholder approvals are in place for the action about to take place?			
	Is this a change to the approved process, procedure, or design?			
WHERE HAZARDS ARE MANAGED, WRITE THE CONTROLS ON THE BACK. IF YOU TICKED NO TO MANAGING A HAZARD, PLEASE COMPLETE A JRA? DIAGRAM				
NOTES: HOW ARE HAZARDS MANAGED?				

Figure 6.2-4: SLAM card form

6.3 Emergency Prevention

All TCL management, personnel and contractors have a responsibility to work safely so that emergencies are prevented. Adhering to the **OHSP** and all other management plans is the first step in emergency prevention.

During all Project phases, all processes and related work areas will be assessed at designated frequencies for potential risks and hazards, and emergency prevention measures verified. Measures might include safe work procedures, maintenance inspections, and/or training to ensure the safe and proper operation of activities or equipment by personnel and contractors.

6.4 Emergency Protection

A plan for the protection of the worker from the identified hazards from the risk assessment process will be completed and implemented. For example, wearing appropriate personal protective equipment (PPE) will protect workers from some hazards. A response plan to protect workers will be developed for each identified hazard through the risk assessment process in case preventative measures fail. The **Emergency Response Plans** will be maintained and attached when complete as **Appendix 13.9-C** and reviewed as least annually or as conditions change.

6.5 Emergency Preparedness

While not every emergency can be prevented, emergency preparedness can assist with early and effective response should the need arise. By identifying and anticipating possible emergencies, TCL can prepare plans for personnel and resources to be deployed in the event of an emergency.

The purpose of emergency preparedness is to deal with emergencies onsite safely and effectively, without risking human lives and to minimize damage to the environment, equipment, and structures.

Some of the specific emergencies that could potentially happen onsite are discussed in detail in **6.8 Emergency Action Plans**.

6.6 Emergency Response

Despite all efforts to prevent an event, sometimes an event will require action to protect personnel from injury or damage to company property. Effectively assessing the level of emergency, and assigning the appropriate response is important to the successful resolution of the event.

6.6.1 Emergency Level Assessment - Near Misses, Incidents, and Emergencies

Some events, such as Near Misses, and Incidents may occur within the Project Area that are not considered an emergency. It is important to know how to classify and describe an event and communicate whether or not it is an emergency. This enables the proper resources to be deployed to assist in the most appropriate way.

An emergency can be defined as any event that causes or creates the potential for a serious injury, loss of life, significant loss, or damage to property, and/or the environment.

Depending on the situation, the emergency level will be defined as either:

- ▶ Level 1 – Near Miss;
- ▶ Level 2 – Incident;
- ▶ Level 3 – Emergency; or
- ▶ Level 4 – Major Emergency.

Dangerous Occurrences: A component of an Emergency and/or Incident is also a Dangerous Occurrence, which needs to be reported to a Mine Inspector within 4 hours of occurrence verbally via phone (888) 348-0299 and by email to mineincidents@gov.bc.ca, with a follow up written report within seven days.

Dangerous Occurrences are defined in Part 1, clause 1.7.3 of the Code as follows:

- (1) unexpected major groundfall or subsidence, whether on surface or underground, which endangers people or damages equipment or poses a threat to people or property,*
- (2) cracking or subsidence of a dam or impoundment dike, unexpected seepage, or appearance of springs on the outer face of a dam or dike; loss of adequate freeboard, washout or significant erosion of a dam or dike, any of which might adversely affect the integrity of such structures,*
- (3) any incident involving a mine hoisting plant and including sheaves, hoisting rope, shaft conveyance, shaft, shaft timber, or headframe structure,*
- (4) unexpected inrush of water, mud, slurry, or debris,*
- (5) premature or unexpected explosion of explosives, gas, or any dust,*
- (6) significant inflow or release of explosive or other dangerous gas,*
- (7) unplanned stoppage of the main underground ventilation system,*
- (8) a mine vehicle going out of control,*
- (9) outbreak of fire if it endangers persons or threatens or damages equipment and all underground fires,*
- (10) electrical equipment failure or incident that causes or threatens to cause injury to persons or damage to equipment or property, and*
- (11) any other unusual incident or unexpected event which had the potential to result in serious injury.*

Dangerous Occurrences will also be defined and managed as required by the Code, as all Dangerous Occurrences fit under a Level 1, 2, 3, and/or 4 emergency.

In addition to sending a written report to the Inspector within 7 days after a “Dangerous Occurrence” or “Reportable Incident”, the Mine Manager and/or delegate shall send the report to the Occupational Health and Safety Committee (OHSC) Co-Chairs.

The information gathered during monitoring practices will be summarized with information from other management plans into an annual Occupational Health and Safety Summary Report.

TCL will ensure these timelines are complied with and all Dangerous Occurrences will be reported to the Mine Incident Reporting Line as required:

Based on the assessment, resources and personnel will be deployed in a pre-determined response based on the Emergency Action Plans (**6.8**) for the situation.

An Emergency Level Assessment Decision Flow Chart was developed to help personnel make decisions regarding the need for and scope of emergency response as illustrated by **Figure 6.6-1** below.

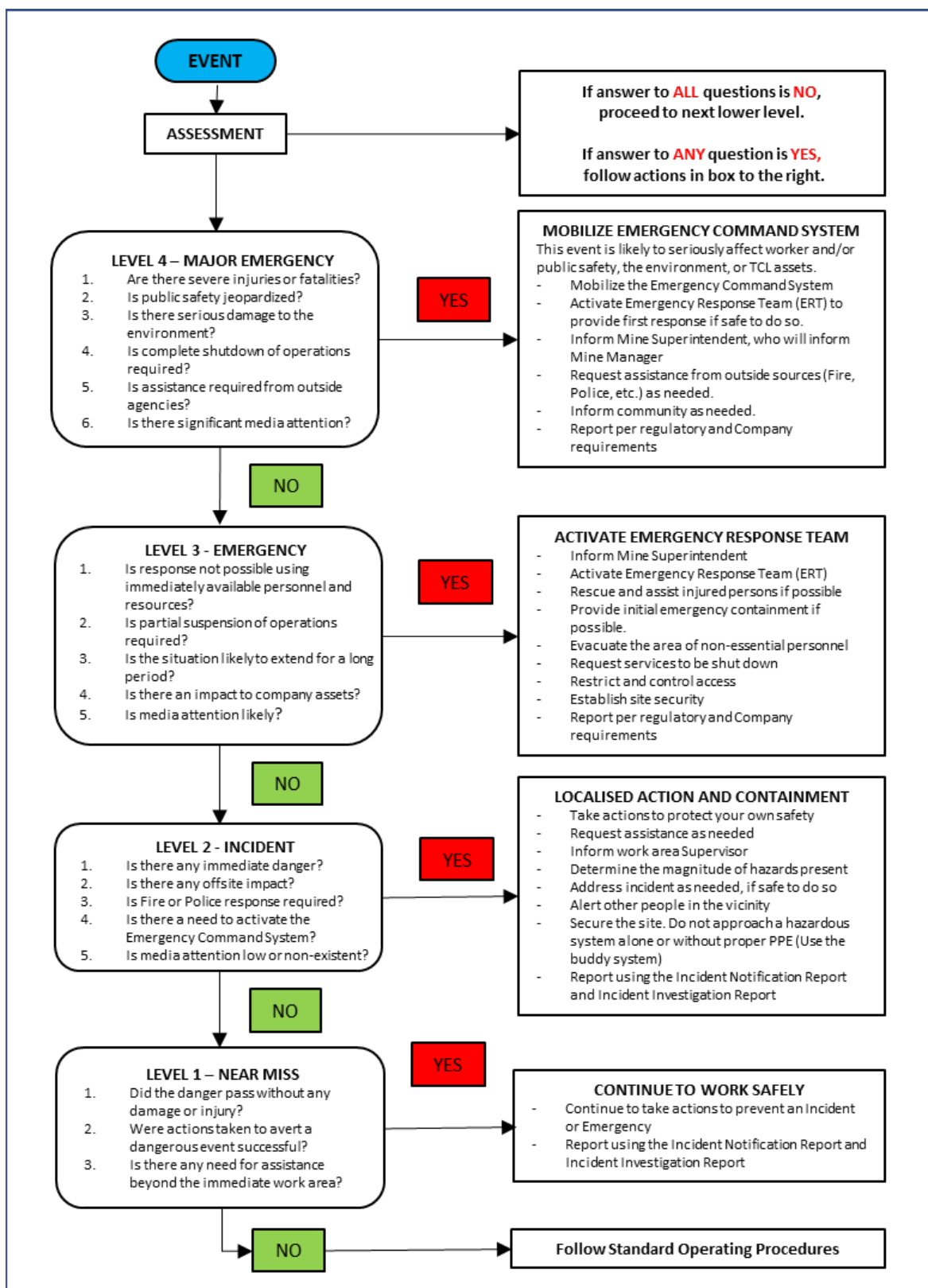


Figure 6.6-1: Emergency level assessment – decision flowchart

6.6.1.1 Level 1 Near Miss

A Level 1 Near Miss is an event that has or had the potential to cause injury or damage but was averted for some reason. For example, if two (2) Minesite vehicles almost collide, that is a Near Miss. These events require little action beyond reporting and investigation by the OHSC to improve safety. A Near Miss:

- ▶ is confined to the work area the event occurred;
- ▶ poses no danger outside of the immediate work area;
- ▶ requires only action to prevent an event from unfolding;
- ▶ is reported using the **Incident Notification Report and Incident Investigation Report Forms (Appendix 13.9-D)**; and
- ▶ is also reported, if required, by the Mine Manager to the Mine Incident (Dangerous Occurrence) Reporting program at mineincidents@gov.bc.ca or by phone at (888) 348-0299.

6.6.1.2 Level 2 Incident

A Level 2 Incident is an event that is manageable by the affected worker or nearby personnel with minimal resources. A Level 2 Incident:

- ▶ can be controlled entirely by the Project's personnel and equipment;
- ▶ is located within the immediate vicinity of the incident site;
- ▶ is confined to the work area the event occurred;
- ▶ presents no danger outside of the Project;
- ▶ can be controlled immediately by work unit personnel and/or First Aid attendant;
- ▶ poses no threat to the public;
- ▶ has minimal environmental impact;
- ▶ generates little or no media interest;
- ▶ is reported using the **Incident Notification Report and Incident Investigation Report Forms (Appendix 13.9-D)**; and
- ▶ is also reported, if required, by the Mine Manager to the Mine Incident (Dangerous Occurrence) Reporting program at mineincidents@gov.bc.ca or by phone at (888) 348-0299.

6.6.1.3 Level 3 Emergency

A Level 3 Emergency is serious event that requires assistance from the ERT, and/or deployment of onsite emergency resources. A Level 3 Emergency:

- ▶ requires a section of the operation to be temporarily shut down;
- ▶ can be controlled by the personnel and equipment that are readily available at the Project Minesite;
- ▶ involves actual or potential severe injuries or fatalities;
- ▶ is likely to be controlled by the resources of the ERT;
- ▶ has potential for the emergency to extend beyond the Project;

- ▶ requires outside agencies (BC MEMLI, Police, Fire Department, etc.) to be alerted and kept informed of the situation;
- ▶ poses some potential threat to the public;
- ▶ may result in moderate environmental impact;
- ▶ generates possible local/regional media interest;
- ▶ is reported immediately by initiating an Emergency Call (6.7.2) to activate Emergency Response (6.7.1); and
- ▶ is further reported using the **Incident Notification Report and Incident Investigation Report Forms (Appendix 13.9-D)**; and
- ▶ is also reported, if required, by the Mine Manager to the Mine Incident (Dangerous Occurrence) Reporting program at mineincidents@gov.bc.ca or by phone at (888) 348-0299.

6.6.1.4 Level 4 Major Emergency

A Level 4 Major Emergency is an event that has escalated due to catastrophic impact to personnel, property, or the environment. The ERT is either unable to control or is overwhelmed by the scale of the response effort. Outside resources are required to assist with containment and/or management of the event to its safe conclusion. A Level 4 Major Emergency:

- ▶ forces the indefinite shut down of operations;
- ▶ requires external emergency support services;
- ▶ means that safe operating control has been lost;
- ▶ involves actual or potential severe injuries or fatalities;
- ▶ potentially jeopardizes public safety;
- ▶ may have significant and ongoing environmental impact;
- ▶ generates significant media interest;
- ▶ requires immediate multi-agency involvement;
- ▶ requires assistance from outside parties.
- ▶ is reported immediately by initiating an Emergency Call (6.7.2) to activate Emergency Response (6.7.1); and
- ▶ is further reported using the **Incident Notification Report and Incident Investigation Report (Appendix 13.9-D)**, and by other TCL and regulatory reporting as required.

6.6.2 Response to Level 1 Near Miss - Continue to Work Safely

A Near Miss means that there is no further hazard, as the potentially dangerous event has been averted or prevented. Personnel reports using TCL procedures and reporting by the Mine Manager and resumes safe work.

6.6.3 Response to Level 2 Incident - Localised Action, Containment, and Rectification

Not every workplace incident is an emergency. At Level 2 Incident, the event is addressed through Localised Action and Containment and work continues as the designated response for a Level 2 Incident.

The work area Supervisor is notified and may assist in or delegate the deployment of immediately available resources if the immediately affected worker has not done so or is unable to do so. Incident response does not involve personnel outside the immediate work area or in the case of a minor First Aid Incident, the Supervisor will have the employee attend the First Aid room for medical attention.

The situation is then monitored by work area personnel to ensure the response has been effective. Reporting is completed using of an **Incident Notification Report and Incident Investigation Report Form** as provided in **Appendix 13.9-D**.

If the Supervisor determines that appropriate response requires additional personnel, resources or services, the Incident is escalated to either a Level 3 Emergency or Level 4 Major Emergency.

6.6.4 Response to Level 3 Emergency - Activate Emergency Response Team (ERT)

Activation of the ERT is the designated response for a Level 3 Emergency.

Major events, such as an explosion or potential fatality, bypass Level 2 Localised Action, Containment, and Rectification, and immediately proceed to Level 3 Emergency - Activate the ERT.

Level 3 involves personnel beyond the immediate work area and may require specialized personnel, supplies or equipment, such as a First Aid Attendant, large spill kits, fire suppression or a single ambulance. A Level 3 Emergency may include the partial suspension of operations or have an impact on company assets such as equipment or structures.

Area Supervisors should notify their area workers of the hazard and, if required, get them to safety. The Supervisor or their designate will request the ERT by initiating the Emergency Response Notification Process (**6.7**) and will inform the Mine Superintendent or Mine Manager if the Mine Superintendent is not available.

6.6.5 Response to Level 4 Major Emergency - Mobilize Emergency Incident Command System (EICS) and Emergency Response Team (ERT)

Activation of the Emergency Incident Command System (EICS) is the designated response for a Level 4 Major Emergency.

Level 4 takes effect when the ERT is unable to handle the scope or magnitude of an event and requires assistance beyond what is available onsite. An emergency of this magnitude involves the use of resources outside the Minesite, such as a local Fire Department or multiple ambulances. Extensive risk of injury or damage is possible or has occurred. A complete shutdown of operations may be required.

At this level, the EICS is activated to further assist, manage, and monitor the situation, while the ERT continues to act as First Responders to the extent it is safe to do so.

At this stage, the media may be involved, and if so, should be managed by designated personnel only.

6.7 Emergency Response Notification Process

6.7.1 Initiation of an Emergency Response

If you are faced with a Level 3 Emergency or Level 4 Major Emergency, you must initiate an emergency call. An emergency may be identified because of a single event, i.e., vehicle incident, unplanned explosion, or through the investigation of an Incident that reveals a potential for immediate escalation.

***ANY PERSON WHO BECOMES AWARE OF AN EMERGENCY
IS RESPONSIBLE FOR INITIATING AN EMERGENCY CALL.***

6.7.2 Emergency Call

Emergency calls are made by either:

- ▶ two (2)-way radio on **Channel 4**;
- ▶ calling **5555** on the Minesite internal phone lines/extensions/direct lines etc.; and/or
- ▶ cellular/mobile phone to the Minesite office at **250-257-0159**;

When the call is answered, the caller must say:

"EMERGENCY, EMERGENCY, EMERGENCY"

Then:

- ▶ Request RADIO SILENCE immediately;
 - ▶ Once an emergency call has been made, Radio Silence will be in force for all normal two-(2)-way transmissions to enable essential emergency communications to proceed without interruption.
- ▶ Wait for response; and
- ▶ If no response, repeat the steps again.

Upon receipt of response, clearly state:

- ▶ your name,
- ▶ location, and
- ▶ type of emergency.

Ask the receiver to repeat the message and clarify if necessary.

- ▶ DO NOT leave the radio until the information has been correctly confirmed back to you; and
- ▶ DO NOT leave the radio until you have been informed that the Mine Superintendent has been notified.

The receiver will then call for RADIO SILENCE and contact the Mine Superintendent if the Mine Superintendent was not the receiver of the call.

The person answering the call is responsible for recording the details of the call and relaying this information to the Mine Superintendent, or if not available, to the most senior personnel present.

***THE MINE SUPERINTENDENT MUST BE IMMEDIATELY
INFORMED OF ALL EMERGENCIES.***

6.7.2.1 Level 4 Major Emergency Notification to Mine Manager

If an event is designated to be a Level 4 Major Emergency, the Mine Superintendent will contact the Mine Manager with a Major Emergency Notification and Request of Assistance. Following approval of the request, the Mine Superintendent will announce over Minesite radio channels:

- ▶ "EMERGENCY ASSEMBLY" 3 times

The Mine Superintendent will then mobilize the EICS and activate the Emergency Siren.

6.7.2.2 Emergency Siren (Coal Processing Plant [CPP]) and Muster Points

The Emergency Siren in the Coal Processing Plant (CPP) will be activated when the emergency cannot be brought under immediate control by the ERT or where additional internal and/or external resources are required onsite to deal with the emergency.

On initiation of the Emergency Siren, all personnel will assemble at their designated Muster Point and await further instructions from their Supervisor.

If the designated Muster Points are not accessible due to unsafe conditions, the relevant Supervisor shall designate an alternate Muster Point.

Figure 6.7-1 below provides a map of Muster Points, which are posted with signs and are located as follows:

- ▶ CPP: Muster Point #1 - southeast corner of CPP;
- ▶ Administration Building: Muster Point #2 - southeast corner of Administration Building;
- ▶ Maintenance Facility: Muster Point #3 - northeast corner of Maintenance Facility;
- ▶ Rail Infrastructure: Muster Point #4 - southeast corner of Rail Infrastructure office;
- ▶ TAC: Muster Point #5 - gravel quarry;
- ▶ TAC: Muster Point #6 - rock quarry;
- ▶ Telkwa Village Office: Muster Point #7 - Unpaved parking lot located along hill;
- ▶ Open Pits:
 - ▶ Muster Point #8 - north topsoil stockpile; and
 - ▶ Muster Point #9 - south topsoil stockpile.

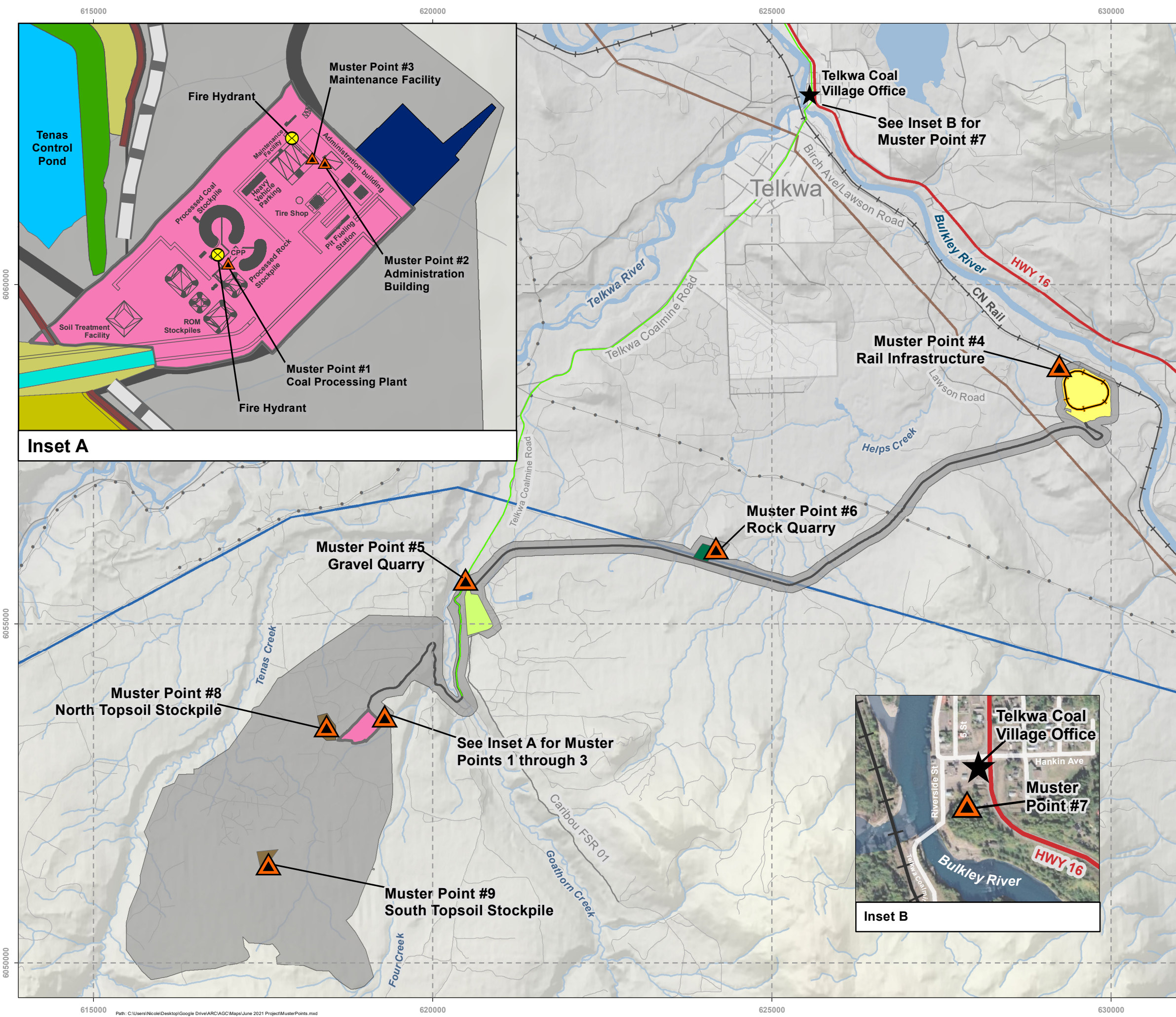
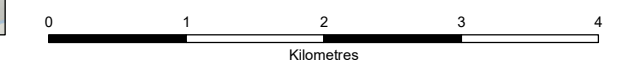


Figure 6.7-1
Tensas Project
Muster points and fire hydrants

- Project Area
- Mine Infrastructure Complex
(Coal Processing Plant, Maintenance Facility, and Pit Fueling Station, Administration and Mine Dry Building, Mine Rescue and Light Vehicle Maintenance Buildings)
- Rock Quarry
- Gravel Quarry
- Topsoil Stockpiles
- Management Pond - Dams
- Management Pond - Buttresses
- Rail Infrastructure
- Rail Loop
- Sedimentation Ponds (CPP)
- Haul Roads
- Tensas Access Corridor
- Channels (Ditches)
- Service Roads
- Fire Hydrant
- Muster Point

- Base Features**
- Rail Line
 - Highway
 - Secondary Roads and Trails
 - Pacific Natural Gas Pipeline
 - 25 kV Powerline
 - 138 kV Transmission Line
 - 500 kV Transmission Line
 - Watercourse
 - Waterbody
 - Telkwa Village Boundary

NAD 83 UTM Zone 9N
Date Created: Jun 14 2021
Last updated: July 08 2021
Version: 7
Created by NB
Base Data: Geogratis, Allegiance Coal 2021



6.8 Emergency Action Plans

The following subsection provides high-level action plans to deal with potential emergency situations at the Project. These plans are for emergencies at a Level 3 and above and will be further expanded on prior to the Project entering the Operation phase.

6.8.1 Medical Emergency

In the event of a medical emergency on the Project Minesite, the following procedures will apply:

- ▶ Initiate Emergency Response by making an Emergency Call (see procedure in **6.7.1**);
- ▶ A radio call will then be sent out to ERT members or, if required, to all emergency trained personnel onsite;
 - ▶ The **ERT** will assemble as quickly as possible at the Emergency Response/Mine Rescue Building and assemble the appropriate supplies.
- ▶ The person reporting the injury will be First Responder and administer First Aid if trained to do so. If other personnel at the work area has more First Aid training, they will take over as First Aid Attendant and administer First Aid;
- ▶ The work area Supervisor will suspend work in affected areas if necessary;
- ▶ The Mine Superintendent or delegate will act as Emergency Commander and ensure that effective deployment of ERT resources, communications, and supplies and services are available as needed;
- ▶ If the situation is assessed as a Level 4 Major Emergency, the Mine Manager onsite will be notified immediately, and the EICS initiated;
- ▶ The Mine Superintendent will arrange transportation to go to the Emergency Response/Mine Rescue Building to pick up medical gear and **ERT** members and take them to the site of the medical emergency;
- ▶ As soon as steps have been implemented to properly attend to the medical emergency, the Emergency Commander will notify the appropriate authorities of the Incident by telephone, as required;
- ▶ A completed **Incident Notification Report** is required to be submitted to the Mine Manager by the Mine Superintendent or delegate no later than 4 hours after the event;
- ▶ An Incident Investigation Report must be submitted to the Mine Manager by the Mine Superintendent or delegate by the end of day; and
- ▶ Unless action is required to remove an immediate hazard, the site of any serious incident will be cordoned off and remain unchanged until clearance is received from the appropriate authorities.

6.8.1.1 To Call for Provincial Road Ambulance

When instructed to call for a Provincial Road Ambulance or if necessary, aid from a medical helicopter, by a First Aid Attendant, a direct Supervisor, Emergency Commander, or ERT member, follow these steps:

- ▶ Dial Emergency Number – **911**.
- ▶ When asked “For what place?” answer “Telkwa, Tenas Minesite”.

- ▶ State: "We have (life-threatening) injuries and request nearest Ambulance assistance." _____
- ▶ There will be several questions to answer including:
 - ▶ What is your exact location? _____
 - ▶ Who is the company contact person or senior official on site? (varies according to Supervisor and shift) and who will meet the ambulance on the road or at the site gate to escort ambulance to the location? _____
 - ▶ What is the site radio frequency? two (2)-way radio: Channel 4, frequency 453.0625
 - ▶ What is your telephone number? 250-257-0159 (general site #) _____
 - ▶ What is the nature of the problem or injuries? _____
 - ▶ What is the number of patients? _____
 - ▶ What is the age of the patient(s)? _____
 - ▶ What is the level of consciousness of the patient(s)? _____
 - ▶ What is the breathing status of the patient(s)? _____
 - ▶ What time will the Provincial Road Ambulance leave for site, and what is anticipated arrival time. _____

If instructed by a First Aid Attendant, tell the dispatcher someone will meet them on the road or at the site gate entrance and will escort the ambulance to the injured person, facilitating access to our radio-road frequency.

6.8.2 Fatality Occurring Onsite

In the event of a fatality occurring on the Project Minesite, the following procedures will apply:

- ▶ The victim of a suspected fatality will not be moved or touched except to determine vital signs or attempt resuscitation;
- ▶ The fatality site must be kept barricaded off, guarded and be undisturbed except for the purpose of preventing injury or relieving suffering, until appropriate personnel (e.g., Royal Canadian Mounted Police (RCMP), Coroner, Mines Inspector) have conducted their investigations and have released the scene;
- ▶ If the fatality involved a chemical, biological, radiological, or nuclear agent, consult with the designated Emergency Commander regarding the agent dispersed, dissemination method, level of PPE required, location, geographic complications (if any), and the number of person(s) involved before taking any action;
- ▶ All communications going out from TCL will be under the Mine Manager (or delegate)'s control, including:
 - ▶ The Coroner shall be notified of a presumed fatality onsite. Only the Coroner is eligible to declare that a person is officially dead;
 - ▶ The BC MEMLI Regional Director and Inspector of Mines for Smithers shall be notified of a fatality onsite and all cooperation should be extended to their representatives to assist them with the required investigation;
 - ▶ The RCMP shall be notified of a fatality onsite and all cooperation should be extended to their representatives to assist them with the required investigation;

- The RCMP is the only communication channel authorized to contact or issue notifications or updates to victim's relatives; and
- ▶ The Regional Director of Mines for Smithers will receive a written notification of a work-related fatality ("reportable incident").

6.8.2.1 Recovery Operation After Fatality

After a fatality, the Mine Manager will wait for authorization by the Coroner and RCMP before initiating any recovery operation by the ERT. Once permitted to do so, the following activities will be undertaken:

- ▶ The ERT will be responsible for removing the victim of the fatality from the area and guarding the body until it is released to the authorities;
- ▶ Depending on the situation, the RCMP may require the victim's personal belongings to be sent to their facilities for analysis;
- ▶ Gather all necessary information and document all findings;
- ▶ According to the situation, the Mine Manager will take all actions to respectfully evacuate the remaining personnel from the fatality area;
- ▶ If suspecting contamination, wear PPE until all bodies(s) are deemed free of contamination; and
- ▶ If contamination is a risk, enlist the help of outside resources to ensure the fatality is removed safely from the site, and that affected personnel are appropriately decontaminated.

6.8.3 Mass/Multiple Casualty Incident (MCI)

A Mass/Multiple Casualty Incident (MCI) is any incident in which Minesite emergency service resources, such as ERT personnel and equipment, are presented by a number and/or severity of casualties that requires outside assistance.

6.8.3.1 Emergency Response Team (ERT) Response to Mass/Multiple Casualty Incident (MCI)

In the event of a MCI on the Project's Minesite, the following procedures will apply:

- ▶ The Mine Manager will initiate the EICS;
- ▶ ERT members will gather at the Emergency Response/Mine Rescue Building, receive instructions, and obtain supplies and PPE as required;
- ▶ The first team to go to the scene will be comprised of the Emergency Commander, ERT Captain, MERP Coordinator, Environmental Coordinator, and ERT member having the greatest experience in First Aid;
- ▶ The Emergency Commander and MERP Coordinator will confirm the Level Assessment and take control of the scene. They will:
 - ▶ ensure the scene is safe before accessing;
 - ▶ assess the event to determine the level of resources required;
 - ▶ communicate with the Logistics Designate to request any additional resources; and
- ▶ The triage will be initiated according to the "Adult Triage" method in listed in **6.8.3.1.1 Triage Protocols**, and as shown by **Figure 6.8-1**.

6.8.3.1.1 Triage Protocols

The universal colours **RED**, **YELLOW**, **GREEN**, and **BLACK** are used to identify triage categories.

1. **RED: Immediate (highest priority)**
 - ▶ Typically, these are patients with airway breathing, perfusion or neurologic problems. Severe burns which compromise the airway also fit in this category.
2. **YELLOW: Delayed (second priority)**
 - ▶ Typically, these are burn patients without airway problems, major or multiple bone or joint injuries, back and spine injuries.
3. **GREEN: Minor (third priority)**
 - ▶ Typically, these are patients with minor painful swollen deformities and minor soft-tissue injuries.
4. **BLACK: Dead/Expected Death (lowest priority)**
 - ▶ Includes non-breathing patients on whom resuscitation would normally be attempted but who are not salvageable given the resources available early in an MCI response.

See **Figure 6.8-1 Adult triage flowchart** below, which further explains the above protocols.

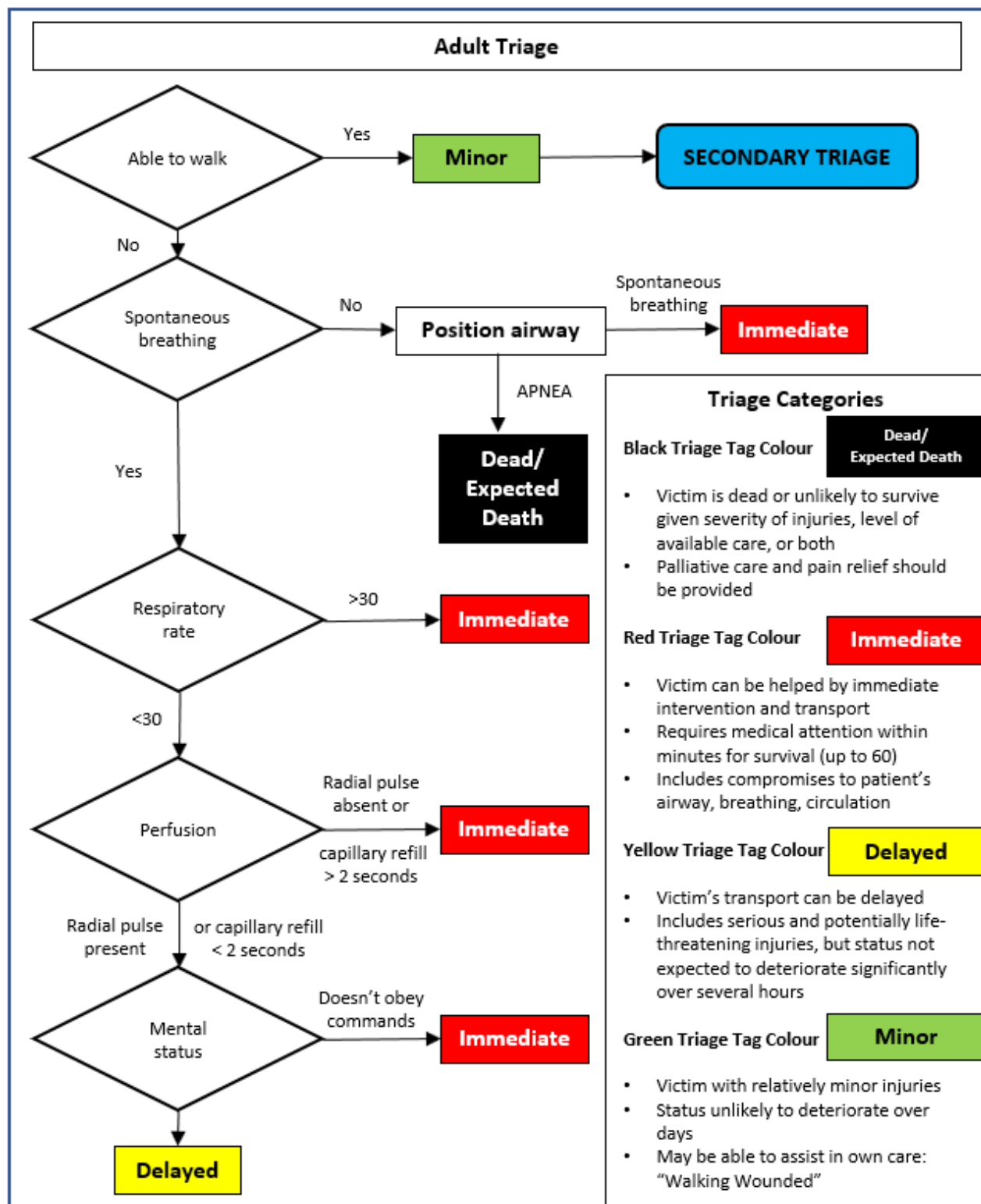


Figure 6.8-1: Adult triage flowchart

6.8.3.1.2 Set-up of the Remote Treatment Area (RTA)

In the event of an MCI the Emergency Commander (either Mine Superintendent or Plant Superintendent depending on the area of the event) will ask the Health, Safety, and Human Resources Superintendent/MERP Coordinator to establish a Remote Treatment Area (RTA). This includes:

- ▶ requesting the Logistics Designate (Maintenance Supervisor) to attend to assist with supplies and set up;
- ▶ assigning the most senior First Aid Attendant onsite (that is not deployed with the ERT) to oversee providing and facilitating medical services to the injured;
- ▶ supervising the conversion of the Lunchroom in the Administration Building into an RTA;
 - ▶ The Lunchroom in the Administration Building is designated as the primary RTA in such events since it offers the space to house multiple casualties during initial treatment. The First Aid Room in the Administration Building is not large enough to handle multiple injuries; and
 - ▶ The Lunchroom is also directly adjacent to the First Aid Room, where supplies are kept. Additional supplies can be brought from the Emergency Response/Mine Rescue Building.

In turn, the Logistics Designate will:

- ▶ designate Assistants to help with establishing the RTA;
- ▶ ensure the Lunchroom is set up to receive Red and Yellow Triage category patients;
- ▶ ensure the temporary morgue (Black Triage Casualty Area) is ready for use; and
- ▶ coordinate the transfer of the pre-established specific medical material (see list below) from the Emergency Response/Mine Rescue Building and First Aid Room to the RTA once prepared by the First Aid Attendants.

The First Aid Attendants will gather the following material for transfer to the RTA and set it up in the RTA as necessary once it arrives:

- ▶ automated external defibrillator (AED);
- ▶ cardiac monitor;
- ▶ suction unit;
- ▶ multi-patient oxygen kit;
- ▶ intravenous (IV) pumps (x 2);
- ▶ IV warmer;
- ▶ trauma kit;
- ▶ extra blood pressure (B/P) cuffs;
- ▶ stethoscopes;
- ▶ blood glucose monitors (x 3);
- ▶ thermometers (x 2);
- ▶ radio;
- ▶ over the counter drugs such as ibuprofen;

- ▶ narcotics such as morphine;
- ▶ Bair Hugger™ and supplies for monitoring core body temperatures;
- ▶ 10 or less victims; and
 - 20 x cots or mats
 - 20 x fleece blankets
 - 20 x bedsheets
 - 10 x pillows
 - 2 x large garbage bins
 - 2 x tables
 - 2 x electric cord
 - 4 x 18 litre (L) water
 - 2 x oxygen tanks (size K)
 - 1 x cleaning cart
- ▶ more than 10 victims;
 - 80 x cots or mats
 - 80 x fleeces blankets
 - 80 x bedsheets
 - 80 x pillows
 - 4 x large garbage bins
 - 4 x tables
 - 4 x electric cord
 - 8 x 18 L water
 - 4 x oxygen tanks (size K)
 - 3 x cleaning carts

Yellow and Red Triage level patients will be treated by the First Aid Attendant(s) according to their needs and assessed for further medical intervention and evacuation.

Green Triage level individuals will be escorted to:

- ▶ the office area; or
- ▶ another appropriate location to be determined according to the situation.

They may request further assistance if needed, and their need for medical services may be reassessed if appropriate. An assigned First Aid Attendant or Designated Assistant will oversee this area.

6.8.4 Missing Persons

In the event of a missing person on the Project Minesite, the following procedures will apply:

- ▶ As soon as a worker is determined to be missing from their regular work (at beginning of shift or during the day or end of shift) their Supervisor will check with the Health, Safety, and Human Resources Superintendent to check if they have signed-out or have a recent request for leave. If not, the Supervisor will try to contact them via cell phone and/or radio, and then initiate a search of the worker's usual workplaces, and public areas;
- ▶ For staff conducting work in remote areas, the buddy system will be used, and this person should be contacted as well as part of the search. After this primary search, if the worker is still missing, the Mine Superintendent will be advised; and
- ▶ The Mine Superintendent will advise the Mine Manager who will take charge of the search if necessary and follow up with the worker's Supervisor.

6.8.5 Fire Emergency

In the event of a fire on the Project Minesite, the following procedures will apply:

- ▶ If safe to do so and training has been established, a fire extinguisher may be used to try and reduce or eliminate the fire hazard;
 - ▶ Do not jeopardize your own safety;
 - ▶ Ensure there is a backup person to assist in fighting the fire. (Use the buddy system.);
 - ▶ **NEVER LET A FIRE BLOCK YOUR EGRESS;**
- ▶ If not able to put out the fire immediately, evacuate the area;
 - ▶ Shut off all power if safe to do so prior to evacuating the area;
- ▶ Initiate Emergency Response by making an Emergency Call (see procedure in **6.7.2**); and
 - ▶ The ERT will be notified immediately to commence coordination of firefighting activities.

The following subsections provide procedures for dealing with specific types of material fires that might occur at the Project site.

6.8.5.1 Explosives

The following is a general fire response procedure for explosives. Consult the Material Safety Data Sheets (MSDS) to determine whether deviations from the general guidance are required. In accordance with **3. Scope and Scale**, and the Orica MOU, if the fire is in the D5 area around the Explosive Facility or Explosive Magazine, the **Orica ERP** provided in **Appendix 13.9-E** will be used. In any other case, Orica personnel should be called for assistance.

For an explosive substance fire:

1. Isolate and evacuate the area;
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Orica and the Mine/Orica Superintendent who will inform the Mine Manager, as necessary;
 - ▶ The Superintendent will act as Emergency Commander and initiate the EICS and assemble the ERT;
3. Extinguish all sources of ignition in the vicinity. Do not allow vehicles or other sources of ignition in the area;
4. Request assistance on identification of substance from Orica and obtain and read the MSDS for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken;
5. Wear positive pressure self-contained breathing apparatus (SCBA) and full protective clothing;
6. Avoid exposure to smoke, fumes, vapours, dust, or direct contact. The combustion products of some propellant explosives are poisonous;
7. Do not allow personnel to touch or move explosives. Explosives should be moved only under the advice and supervision of trained explosive personnel;
8. Do not fight fire in a cargo or storage area containing explosives. Withdraw from the area and let the fire burn;
9. If a fire is near explosives, efforts should be taken to prevent the fire from reaching the explosives. For fires involving the motor, cabs, or tires of vehicles transporting explosives, flood the area with water;

10. The application of water to burning Class A or B explosives may cause an explosion;
11. Evacuate the area:
 - ▶ Class A Explosives: 1,600 m in all directions;
 - ▶ Class B Explosives: 1,600 m in all directions;
 - ▶ Class C Explosives: 900 m in all directions;
 - ▶ Blasting Agents: 900 m in all directions;
12. Do not overhaul areas where explosives have burned or exploded;
13. Explosives that have been exposed to heat may be very shock sensitive. Keep all personnel away and do not move these containers;
14. Contact BC MEMLI and RCMP. See **Appendix 13.9-F Support Services Contact List**; and
15. When explosives are involved in fire or serious incidents on the roadways, BC's Provincial Emergency providers should be notified as required. See **Appendix 13.9-F Support Services Contact List**.

6.8.5.2 Flammable Compressed Gas

The following is a general fire response procedure for a compressed (inert and flammable) gas leak:

1. **IF SAFE TO DO SO** and if it will stop the gas leak, turn off cylinder valve;
2. If the leak cannot be stopped by closing the cylinder valve and it is an inert atmospheric gas (e.g., nitrogen (N), carbon dioxide (CO₂), etc.), isolate and evacuate the affected area;
3. If the leak is a flammable gas and the leak is outside of a ventilated building enclosure that will contain the gas, immediately activate the fire alarm system, and evacuate the area/building;
4. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
5. Obtain and read the MSDS for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken;
6. Appropriate spill response materials will be gathered outside the spill area;
7. Stay upwind and keep out of low areas;
8. Avoid exposure to gas;
9. Ventilate confined areas before entering;
10. If a tank truck or tank car is involved in fire, isolate 800 m in all directions;
11. Wear positive pressure SCBA and full protective clothing. This is a minimum level of protective clothing and will not provide adequate protection for all incidents. In some cases, chemical protective clothing carried by the ERT will be required for the safe handling of the material;
12. Do not extinguish the fire unless the flow of gas can be stopped. The recommended means of extinguishing is to stop the flow;
13. Since the application of water to pools of liquefied gas will increase the vaporization rate, this is not usually a recommended practice;

14. If a leaking tank is involved in fire, cooling the tank with water may reduce the internal pressure and the rate of leakage. If sufficient water is available, use water spray to cool the tanks and adjacent combustibles affected by the heat of the fire. For massive fires, use remote monitors. If this is not possible, withdraw from the area and let the fire burn;
15. Un-insulated pressure tanks may rupture violently if there is flame impingement on the vapour space at the top of the tank. If it can be done safely, remove all vehicles or containers not already burning;
16. Let tank, car, tank truck or storage tanks burn unless leak can be stopped;
17. Stay away from the ends of the tank exposed to heat or flame impingement;
18. Observe tanks for evidence of bulging or red-hot spots in the metal and listen for a rising sound from venting safety devices. These indicate that the tank may fail; and
19. Determine and implement appropriate decontamination procedures for personnel and equipment.

6.8.5.3 *Flammable Liquids*

The following is a general fire response procedure for flammable liquids, particularly hydrocarbon products. See also the **FMSCP**.

1. Isolate and evacuate the spill area;
2. **IF SAFE TO DO SO**, immediately extinguish any open flames and remove ignition sources (no smoking, flares, sparks in immediate area);
3. **IF SAFE TO DO SO**, stop leak and contain spill (see number 13);
4. **Initiate Emergency Response by making an Emergency Call** (see procedure in 6.7.2);
 - ▶ Contact the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
5. Obtain and read the MSDS for the substance to determine product information, the chemical-specific hazards and to identify any special precautions that must be taken;
6. The appropriate spill response materials will be gathered outside the spill area. Consider the need for additional resources and equipment (berm material, absorbents, foam, overpack, containers, transfer equipment, private cleanup contractors, etc.);
7. Avoid exposure to smoke, fumes, vapours, or direct contact;
8. Ventilate confined areas before entering;
9. Stay upwind and keep out of low areas;
10. Eliminate ignition sources;
11. The vapours of all flammable liquids are heavier than air. Therefore, in addition to eliminating ignition sources in the immediate spill area, the downwind area and adjacent low areas should be checked for sources of ignition and accumulations of flammable vapours;
12. Wear positive pressure SCBA and full protective clothing. This is a minimum level of protective clothing and will not provide adequate protection for all flammable liquid incidents. In some cases, chemical protective clothing carried by the ERT will be required for the safe handling of the incident;
13. For small fires, use dry chemical, carbon dioxide, the appropriate foam, or water spray;

14. For large fires use the appropriate foam or water spray. Water may be ineffective on low flash point flammable liquids;
15. Most flammable liquids float on water. Therefore, the application of water to a spill area may enable the flammable liquid to spread beyond the boundaries of the original incident;
16. Maps should be used to determine the direction of flow and destination (outflow) of the system. Priority should be given to installing a berm or dike on the storm, sewer, or water system ahead of the flow;
17. Dig trenches or build dykes in the path of the burning liquids to confine the fire and protect exposures;
18. It may be appropriate to apply foam not only at the spill site, but also into the storm, sewer, or water system;
19. To lessen the chances of ignition, it may be advisable to apply foam ahead of the flowing spill, either into storm drains or manholes down-flow from the spill or down-flow on the surface of open storm, sewer, or water systems;
20. If a tank truck or tank car is involved in fire, isolate 800 m in all directions;
21. If it can be done safely, remove any vehicles or containers not already burning;
22. If sufficient water is available, use water spray to cool tanks and adjacent combustibles affected by the heat of the fire. For a massive fire, use unmanned monitors. If this is not possible, withdraw from the area and let the fire burn;
23. If vapours are burning at the valves, do not extinguish the fire unless re-ignition can be prevented;
24. Observe tanks for evidence of bulging or red-hot spots in the metal. Listen for pinging sounds or loud noises from the tank that increases in intensity. Withdraw immediately in case of rising sound from venting safety device or discoloration of tank. These indicate that the tank may fail;
25. Do not puncture or rupture the shell of a transport vehicle involved in a fire as this may liberate more flammable liquid and extend the fire;
26. If safety relief valves are obstructed, try to reposition the tank to allow the valves to function properly, but only if this can be done safely;
27. Determine and implement appropriate decontamination procedures for personnel and equipment; and
28. If spilled material has entered the land, sewer, or water bodies, notify the proper regulatory authority and respond as required by the **FMSCP**.

6.8.5.4 Flammable Solids

The following is a general fire response procedure for flammable or combustible solids. Isolate and evacuate the spill area.

1. **IF SAFE TO DO SO**, stop leak and contain spill (see number 8);
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;

3. Obtain and read the MSDS for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken;
4. Appropriate spill response materials will be gathered outside the spill area;
5. Stay upwind and keep out of low areas;
6. Wear positive pressure SCBA and full protective clothing. This is a minimum level of protective clothing and will not provide adequate protection for all incidents. In some cases, chemical protective clothing carried by the ERT will be required for the safe handling of the incident;
7. Avoid exposure to smoke, fumes, vapours, or direct contact. Toxic products may be produced from contact with water, heat, and other substances;
8. Consider the need for additional resources and equipment (berm material, absorbents, foam, over-pack containers, transfer equipment, private cleanup contractors, etc.);
9. If spilled material has entered storm or sewer systems, notify the proper authority. See **Appendix 13.9-F Support Services Contact List**;
10. Determine and implement appropriate decontamination procedures for personnel and equipment;
11. Do not use water or foam on water-reactive materials;
12. If it can be done safely, remove containers from fire area;
13. Chemical reference sources will indicate appropriate extinguishing agents. Agents such as dry chemical, soda ash, lime, or sand may be appropriate for use on water-reactive materials, but they must be moisture-free; and
14. Water may be used to cool containers exposed to fire, but if the water contacts water-reactive materials, the Incident could escalate rapidly.

6.8.5.5 Corrosive Substances

The following is a general fire response procedure for corrosive compounds. Consult the MSDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a corrosive substance fire:

1. Isolate and evacuate the fire area;
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
3. Obtain and read the MSDS for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken;
4. Appropriate spill response materials will be gathered outside the spill area;
5. Put on the appropriate PPE. Wear positive pressure SCBA and chemical protective clothing. This is a minimum level of protective clothing and will not provide adequate protection for corrosive incidents. The chemical protective clothing carried by a Hazmat team may be required for the safe handling of most incidents involving corrosives;
6. Stay upwind and keep out of low areas;

7. Avoid exposure to smoke, fumes, vapours, dusts, or direct contact. Highly toxic fumes are often present;
8. Ventilate confined areas before entering;
9. Consider the need for additional resources and equipment (berm material, absorbents, over pack containers, transfer equipment, private cleanup contractors, etc.);
10. If spilled material has entered storm or sewer systems, notify the proper authority;
11. Determine and implement appropriate decontamination procedures for personnel and equipment;
12. See **Appendix 13.9-F Support Services Contact List**;
13. Many corrosive chemicals react violently with water, liberating heat and toxic gases;
14. If it can be done safely, remove undamaged containers from the fire area;
15. Do not get water inside the container; and
16. Use water to cool containers that are exposed to flame until well after the fire is out. Do not allow water to get inside containers.

6.8.6 Utility Distribution Network (Pipeline) Breakage

A utility distribution network (pipelines) will be used to transport fresh water, grey water, process water, potable water, sanitary water, and wastewater onsite. They will also be used to transport hydrocarbons and methyl isobutyl carbinol (MIBC). These pipelines may be either above ground or underground. Breakages could lead to localised, short-term smothering of vegetation, the release of poor-quality water, and potentially exposure of the Project's personnel to infectious or flammable substances.

In the event of a breakage, the following actions will be taken as required and when it is safe to do so:

1. Shut off the feed to the pipeline if safe to do so;
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
3. The Emergency Commander will ensure the break and spilled material is reported to the proper authorities as required. See **Appendix 13.9-F Support Services Contact List**;
4. Physically contain the spill through the construction of berms, sumps, and collection ditches;
5. Pump collected water to the Tenas Control Pond or Wastewater Storage Pond or one of the management ponds;
6. Collect and remove solids for disposal in the Tenas Control Pond, or offsite disposal at a licensed disposal facility; and
7. Monitor for residual contaminants on land and in surface water if it has discharged to waterbodies.

Note: A general response procedure for the handling of spilled domestic sewage (infectious substances), chemicals (MIBC) or hydrocarbons is provided in the **FMSCP**.

6.8.7 Gas Releases

In the event of a toxic gas release such as carbon monoxide or nitrous oxides, the following actions will be taken:

1. Immediately evacuate the area or building;
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
3. If possible and safety permits, turn off the source of the gas and ventilate the area (i.e., open windows/doors to outdoors);
4. Isolate the area and restrict access to ERT personnel only; and
5. Implement air quality monitoring.

Note: A general response procedure for the release of compressed gases is provided in the **FMSCP**.

6.8.8 Pit Slope or Highwall Failure

In the event of a pit slope or highwall failure, the following actions will be taken:

- ▶ Immediately evacuate the area and pit where failure has or could affect personnel or equipment;
- ▶ Initiate Emergency Response by making an Emergency Call (see procedure in **6.7.2**);
 - ▶ Contact the Mine Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
- ▶ Isolate the area and restrict access to ERT personnel only; and
- ▶ Implement further wall failure monitoring.

TCL will have installed an open pit slope monitoring system, which will record highwall movements on a periodic basis. TCL will have a professional geotechnical engineering consultant available on call, as required to ensure that engineering, monitoring systems, and follow-ups are compliant and safe for personnel and equipment. TCL will monitor pit walls daily, for cracking developing along or near the pit edge, cracking within the pit face, development of overhangs and any noted water flows from the walls.

6.8.9 Management Pond, Tenas Control Pond, and/or Sedimentation Pond Embankment Failure and/or Unplanned Discharge

In the event of an embankment failure and/or unplanned discharge, the following actions will be taken:

1. Immediately evacuate the areas which the failure could affect,
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
3. Isolate the area and restrict access to ERT personnel only; and

4. Use any materials, heavy equipment, and tools to make temporary or permanent repairs, if possible. All work to be conducted under TCL's designated Supervisor.

A detailed Emergency Preparedness Plan (EPP) for the Tenas Control Pond and/or Management Ponds will be developed to address the consequences of failure of any of the dams onsite. This EPP, background information, and potential failure scenarios for the control and management ponds will be provided in **Appendix 13.9-G**.

The EPP was developed by the TCL engineering team, with the assistance of SRK Consulting (Canada) Incorporated (SRK) who was the engineering firm responsible for the design of the dams required for the control, sedimentation, and management ponds.

6.8.10 Explosive Infrastructure Emergency Response Plan (ERP)

An Explosive Infrastructure ERP was prepared by Orica Canada Incorporated (Orica) and addresses Incidents and potential Incidents involving the manufacturing, handling and storage of explosives and related products in Orica magazines, explosive storage facilities, and worksites at the Project site. The Orica ERP for the Explosive Facility and Explosive Magazine is provided in **Appendix 13.9-E** and applies within the D5 circle of the Explosive Facility and the D5 circle of the Explosive Magazine site.

In an event of an emergency within the designated D4 area of Orica infrastructure onsite, the following actions will be taken:

1. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Contact the Mine Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
2. Evacuate the area to a safe distance; and
3. The Mine Superintendent who will notify Site Supervisor for Orica. If one is not present the Mine Manager will be notified.

6.8.11 Vehicle Incident

The following procedures will be followed if a vehicle Incident occurs on the Project:

1. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Notify the Mine Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
2. Immediately shut down road access except for emergency vehicles;
3. Mobilize site-based ambulance if required;
4. Call 911 – Ambulance if required (see **6.8.1.1 Call for Provincial Road Ambulance**);
5. Remove all possible ignition sources;
6. Initiate vehicle stabilization, patient rescue and recovery (will be developed);
7. Initiate the **FMSCP** for spills if needed;

8. Inform appropriate personnel and agencies offsite. See **Appendix 13.9-F Support Services Contact List**; and
9. Relocate additional equipment and resources to vicinity of vehicle incident.

6.8.12 Spills Onsite

The following activities will be followed if a spill occurs on the Project:

1. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Notify the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
2. Isolate spill location;
3. Conduct Roll Call;
4. Immediately confirm substance and volume; if over reporting requirements (e.g., diesel or hydraulic oil at 100 L or more) or any volume spilled near a waterbody, contact Emergency Management British Columbia (EMBC), formerly the Provincial Emergency Program (PEP), and follow-up with written response;
5. Initiate the FMSCP for containment, control, cleanup and reporting;
6. Additional equipment and resources relocated to vicinity of spill location; and
7. Inform appropriate personnel and agencies offsite:
 - ▶ Reporting appropriate spills to the EMBC at 1-800-663-3456.

Note: Consult the **FMSCP** and the **Chemicals and Materials Storage, Transfer, and Handling Plan (S13.0-C3) (CMSTHP)** for further information on spills.

6.8.13 Bomb Threat/Civil Disobedience

The likelihood of a bomb threat or civil disobedience onsite is very remote based on the active community interactions to date. However, in the unlikely event of a bomb threat or civil disobedience, the following actions are to be followed:

1. Evaluate the area to a safe distance;
2. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Notify the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
3. The Superintendent will notify BC MEMPR and the RCMP;
4. If the ERT is requested to respond to a bomb threat involving hazardous materials, under no circumstances will the ERT attend the scene;
5. ERT will stage in a safe area, but not less than 61 m from the incident scene;
6. Isolate area of bomb threat or civil disobedience, if possible;
7. Conduct Role Call;

8. Movement of all non-essential personnel to a safe location;
9. The ERT will act as a technical resource for the bomb unit;
 - ▶ This may involve the loaning of chemical protective clothing to bomb unit personnel, assistance in dressing, researching chemical data, etc.; and
10. Inform appropriate personnel and agencies offsite:

6.8.14 Infectious Diseases

The potential of having infectious diseases onsite was previously considered a low risk given the past 20 years of mining activities in BC. However, given recent events with the COVID-19 pandemic, TCL has included a section for dealing with infectious diseases at the Project Minesite, assuming that disease is at least moderately communicable between personnel.

The following categories of infectious diseases have been developed which are:

- ▶ airborne and bodily fluid borne, and
- ▶ waterborne.

6.8.14.1 Airborne and Bodily Fluid-borne Infectious Diseases

Airborne infectious diseases (like measles and COVID-19) have the highest risk due to their ease of transport within a population by close contact droplets. TCL will rely solely on provincial health authorities for what actions to take when confronting an airborne infectious disease.

However, in preparation the following actions will be taken during normal operations:

- ▶ Review of dealing with infectious diseases will be a recurring safety meeting topic;
- ▶ Literature for review for dealing with airborne infectious diseases from the World Health Organization (WHO), Health Canada and the BC Health Authority will be available for review;
- ▶ Personnel onsite will have training in infectious disease control;
- ▶ A stockpile of PPE equipment suitable for dealing with airborne infectious diseases will be kept onsite, and will include:
 - ▶ respirators capable of dealing with airborne infectious diseases;
 - ▶ face shields;
 - ▶ masks (I95);
 - ▶ goggles;
 - ▶ gloves;
 - ▶ hand sanitizer and cleaning stations;
- ▶ Workplace hours will be modified to reduce personnel interaction. This will involve:
 - ▶ increasing shift schedule from 1 week to 3 weeks;
 - ▶ reduction in shift length from 12 hours to 10 hours;
 - ▶ staggered shift start schedules;
 - ▶ requirement that employees drive personal vehicles to site;
 - ▶ closing shower and locker facilities onsite;
 - ▶ provide room for 2 m socially distant safety or tailgate meetings;

- ▶ stagger lunch times for TCL staff in break rooms, and
- ▶ suspending crew line-up meetings.

6.8.14.2 *Waterborne Infectious Diseases*

The second category of infectious diseases is waterborne, like E. coli. This category has the second highest risk due to the ease by which it is passed between members of a population. TCL will rely solely on provincial health authorities for what actions to take when confronting a waterborne infectious disease.

However, in preparation the following actions will be taken during normal operations:

- ▶ Review of dealing with infectious diseases will be a recurring safety meeting topic;
- ▶ Literature for review for dealing with airborne infectious diseases from the WHO, Health Canada and the BC Health Authority will be available for review;
- ▶ Personnel onsite will have training in infectious disease control;
- ▶ A stockpile of bottled water for onsite drinking use and contracts with water providers will be kept;
- ▶ Required personnel onsite are only to use potable water produced onsite or bottled water;
- ▶ Bacteriological testing of water supplies onsite will be conducted as per the BC Drinking Water Protection Regulation, BC Reg 200/2003 and results posted; and
- ▶ Suspension of onsite shower use will be done.

6.8.15 *Avalanche*

The likelihood of an avalanche onsite is very remote based on the topography of the site. However, in the unlikely event of an avalanche the following actions are to be followed:

- 1. Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Notify the Mine/Plant Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
- 2. Isolate avalanche site;**
- 3. Conduct Role Call;**
- 4. Initiate plan for rescue of buried survivors and/or recovery (to be developed);**
- 5. Inform appropriate personnel and agencies offsite, including BC MEMPR, RCMP and Search and Rescue. See **Appendix 13.9-F Support Services Contact List**;**
- 6. Move all non-essential personnel to a safe location;**
- 7. Assess site terrain for secondary avalanche release; and**
- 8. Relocate additional digging equipment and resources to close vicinity of rescue efforts.**

The Snow Avalanche Assessment, as required by section 3.3.6 of the Code, is found in **Appendix 13.9-H Telkwa Coal Snow Avalanche Assessment**. The assessment concluded that the snow supply, terrain, and vegetation cover analyses indicate that snow avalanches can form within localized sections of the study area, with a maximum magnitude of Size 1 (relatively harmless to people) and frequency of approximately once per 10 to 30 years. The expected snow avalanches are of smaller magnitude than the guidelines

provided in Canadian Avalanche Association (Canadian Avalanche Association 2016), indicating that an avalanche safety program is not required for the study area, given the current terrain and vegetation cover.

6.8.16 Geohazards

The potential for a geohazard to affect the Project has not been identified for the Minesite and most of the TAC. However, there is the potential that geohazards related to instability and erosion may affect a section of the TAC in the Goathorn Creek Valley. Design mitigation measures presented in **S4.0-C2 Terrain and Soil Valued Component (VC)** for effects to terrain stability are applicable to managing the environmental effects and are anticipated to reduce the risks to the Project. Project design measures include:

- ▶ construction design specifications (e.g., abutments, water management systems, erosion, and sediment controls) to eliminate and/or minimize further direct and indirect effects;
- ▶ project design and sequencing that emphasizes progressive reclamation (if/where possible) during the Operation Phase;
- ▶ locating the TAC in areas of little geotechnical risk; except for the Goathorn Creek Valley section the road has little to no geotechnical risk;
- ▶ installation of slope measuring devices on the Goathorn Creek section of the TAC to record slope movements and feed into a trigger response plan;
- ▶ locating equipment onsite and offsite to assist with removal of any landslide materials on the TAC;
- ▶ planned new access by West Fraser into the Project Area within the next five (5) to 10 years which will allow for an emergency secondary access route, and
- ▶ project design for road crossings at bridges and culverts considered an assessment of creek bank stability and debris flow potential.

The following actions will be followed if there is instability and erosion affecting a section of the TAC in the Goathorn Creek valley vicinity:

1. **Initiate Emergency Response by making an Emergency Call** (see procedure in 6.7.2);
 - ▶ Notify the Mine Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
2. Isolate the TAC area near Goathorn Creek and ensure road closure;
3. Move all non-essential personnel to a safe location;
4. Conduct Role Call;
5. In the event of missing persons and/or vehicle, initiate plan for recovery;
6. Assess site terrain for secondary material release;
7. Relocate additional digging equipment and resources to close vicinity of rescue efforts;
8. Initiate plan for water monitoring, if safe to do so, containment, control, diversion, road repair, and cleanup; and
9. Inform appropriate personnel and agencies offsite per regulatory requirements

6.8.17 Wildfire – Offsite

To deal with the risk of wildfires from offsite sources during the fire season, all reportable wildfires within a 300-kilometres (km) radius of the Project site will be closely monitored, and daily reports will be provided during safety meetings as informed by the Northwest Fire Centre in Smithers. The Environmental Coordinator is responsible to monitor fire conditions in the Project Area, and evacuation orders are given by the Mine Manager or delegate.

The following actions will be followed if a wildfire is closer than 300 km from the Minesite or TAC.

1. Initiate Emergency Response by making an Emergency Call (see procedure in **6.7.2**);

- ▶ Notify the Mine/Plant Superintendent who will inform the Mine Manager if necessary; and
- ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary.

For the purposes of this MERP, wildfires are classified based on their distance from the Minesite. GREEN, YELLOW, ORANGE, and RED are used to define the evacuation status for the site, and what actions are to be taken at each stage. Evacuation levels are shown by **Figure 6.8-2**.

- ▶ GREEN: Wildfire within 200 km;
 - ▶ all personnel onsite placed on Alert status;
- ▶ YELLOW: Wildfire within 100 km;
 - ▶ contractors placed on Standby for evacuation;
 - ▶ non-essential personnel placed on Standby for evacuation;
 - ▶ essential personnel placed on Alert;
- ▶ ORANGE: Wildfire within 50 km;
 - ▶ contractors evacuated offsite;
 - ▶ non-essential personnel evacuated offsite;
 - ▶ essential personnel placed on Standby for evacuation;
 - ▶ construction of 250 m emergency fire breaks in direction of the approaching fire that maybe outside of disturbance zone;
 - ▶ set up equipment for firefighting of a wildfire; and
 - ▶ evacuation of non-essential equipment offsite.
- ▶ RED: Wildfire within 5 km of Project's Minesite or TAC;
 - ▶ All personnel will be evacuated offsite except for volunteers from ERT and others to form a firefighting team; and
 - ▶ ERT will conduct final sweep of Project's Minesite and use roster controls to ensure all employees, visitors, and contractors are evacuated.

PERSONNEL	GREEN	YELLOW	ORANGE	RED
Contractors	On Alert	Standby for Evacuation	Evacuation	Evacuation
Non-essential Personnel	On Alert	Standby for Evacuation	Evacuation	Evacuation
Essential Personnel	On Alert	On Alert	Standby for Evacuation	Evacuation

Figure 6.8-2: Wildfire evacuation levels

6.8.18 Floods

Incidents involving flooding at the Project site may result in:

- ▶ loss of life or injury;
- ▶ major actual or perceived environmental impact; and
- ▶ significant disruption to operations.

The Environmental Coordinator will monitor weather forecast and conditions and provide a risk assessment of severe rain events in the coming seven (7) days.

The following procedures will be followed if a high-risk flood is indicated from the Environment Coordinator:

1. Severe rain event is less than seven (7) days away and rated as High Risk:
 - ▶ Monitor weather;
 - ▶ Survey all culverts and spillways to ensure in good working order and not blocked;
 - ▶ Ensure debris protection is in place;
 - ▶ Ensure all ditches are in good shape; and
 - ▶ Ensure pumping systems in pit are all in working order and ensure backup pumping systems are in place and ready.
2. Severe rain event is 48 hours away from occurring onsite and still rated as High Risk:
 - ▶ Continue to monitor weather;
 - ▶ Communicate at all safety meetings of upcoming event;
 - ▶ Place backhoe at Goathorn Creek Bridge to assist with debris flow;
 - ▶ Do not allow visitors to attend site;
 - ▶ Non-essential personnel evacuated offsite; and
 - ▶ Draw down sedimentation, management, and control ponds by 1 to 2 m to allow for surge protection and have pumps in place to direct water to other ponds if one becomes overwhelmed.
3. Severe rain event is less than 12 hours away and event is still rated as High Risk:
 - ▶ Ensure crews have personnel dedicated to pumping;
 - ▶ Move mining equipment out of flood-prone mining locations;

- ▶ Draw down sedimentation and control ponds by a further metre to deal with surge; and
- ▶ Have the ERT and equipment ready to deal with any flood conditions.

The following actions should be followed in an event of flood:

1. **Initiate Emergency Response by making an Emergency Call** (see procedure in **6.7.2**);
 - ▶ Notify the Mine Superintendent who will inform the Mine Manager if necessary;
 - ▶ The Superintendent will act as the Emergency Commander, assemble the ERT, and initiate the EICS if necessary;
2. Isolate flooding location;
3. Conduct Role Call;
4. Initiate plan for containment, control, diversion, and cleanup; and
5. Inform appropriate personnel and agencies offsite per regulatory requirements:

6.9 Alternate Evacuation Routes

In the case of the TAC becoming blocked in the portion between the Goathorn Creek Bridge and the Project's Minesite an alternate emergency access route via an existing Forest Service Road (FSR) and the alternate Hunter Basin Access to Staging Area 1. This route will also be used for evacuation from the Project if a fire occurs at the Explosive Facility and/or Explosive Magazine. If the TAC becomes blocked on the east side of the creek, the Project can be evacuated via an existing forestry service road to Tenas Creek and then by foot to Staging Area 2 which is accessible by vehicles from the Telkwa Coal Village Office. This location will require personnel to be dropped off at the designated location and walk the remainder of the way to Staging Area 2 as shown by **Figure 6.9-1** below.

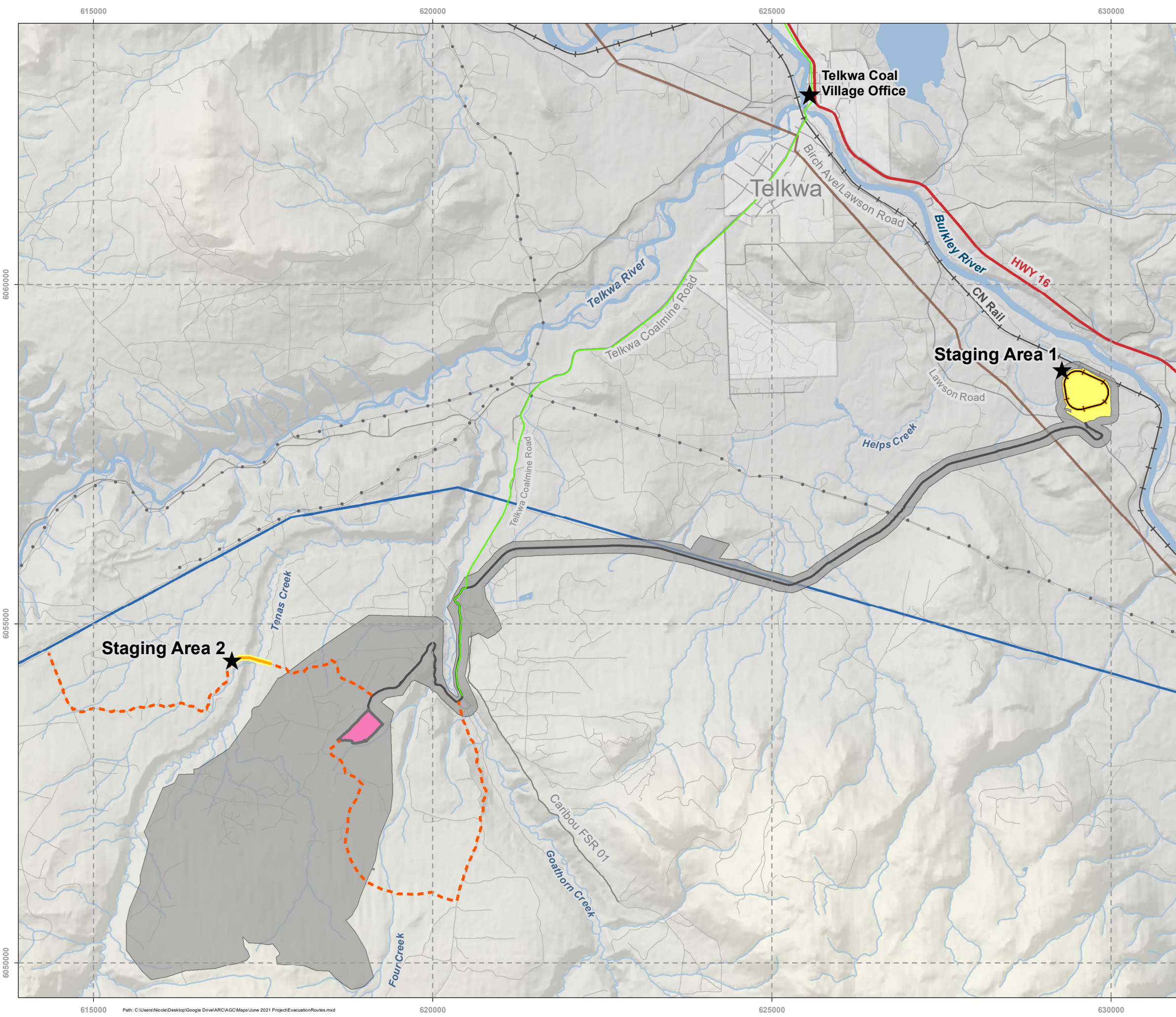


Figure 6.9-1
Tenas Project
Evacuation routes

Tenas Access Corridor Features

- Project Area
- Mine Infrastructure Complex
(Coal Processing Plant, Maintenance Facility, and Pit Fueling Station, Administration and Mine Dry Building, Mine Rescue and Light Vehicle Maintenance Buildings)
- Rail Infrastructure
- Rail Loop
- Tenas Access Corridor
- Evacuation Routes
- Section of Evacuation Route that is on foot
(From Trail to Staging Area)

Base Features

- Rail Line
- Highway
- Secondary Roads and Trails
- Pacific Natural Gas Pipeline
- 25 kV Powerline
- 138 kV Transmission Line
- 500 kV Transmission Line
- Watercourse
- Waterbody
- Telkwa Village Boundary

NAD 83 UTM Zone 9N
Date Created: Jun 14 2021
Last updated: July 08 2021
Version: 2
Created by NB
Base Data: Geogatis, Allegiance Coal 2021



6.10 Mine Plan and Operation Maps

The production schedule is in **Appendix 13.9-I Current TCL Mine Plan for Life-of-Mine Plan** while **Appendix 13.9-J** provides maps of the Project site.

6.11 Evacuation and Escape Routes

6.11.1 Overview of Evacuation Procedures

The draft evacuation procedures below were developed for the Administration Building, CPP, and Maintenance Facilities. Upon the sounding of the Emergency Siren, fire alarm, hearing "**Emergency Assembly**" three (3) times over the radio, and/or initiation of an evacuation order, these procedures will be followed immediately:

- ▶ Evacuate all personnel from the facilities or area of work to designated Muster Site;
- ▶ All personnel will assemble in the designated areas and will remain there until ordered to move by the Supervisor or the emergency services;
- ▶ A Role Call will be conducted:
 - ▶ If you did not evacuate to the designated area immediately you could be classified as missing, therefore immediately report to the Supervisor in charge to get checked off the Roll Call list;
- ▶ Some personnel may elect to use emergency equipment to control and/or extinguish flames, spills, etc. but at no time is any worker to remain in the facilities if further exposure will increase the risk of hazard to the worker;
- ▶ No worker shall re-enter the workplace and/or return into buildings after an evacuation until authorized by the Mine Manager and the emergency services; and
- ▶ The Supervisor will appoint a person to direct emergency vehicle(s) or personnel to the emergency site.

In the event of an emergency, response will be directed by the Mine Superintendent, who is the Emergency Commander. The Emergency Commander will assemble the ERT (if necessary), and the ERT Captain will then direct rescue and firefighting operations.

The ERT will assess any report of missing personnel and/or details concerning the emergency. The ERT will then locate and rescue anyone not accounted for, and handle emergency response.

When located/rescued, individuals will be assessed for medical needs by the Triage Officer (ERT Captain until relieved by First Aid Attendant with more training) and treated onsite if necessary, or if safe to do so, evacuated to the designated First Aid Area where a First Aid Attendant will treat them and/or assess them for possible removal to a hospital.

During an evacuation, the First Aid Room and Lunchroom may not be available for use as a treatment area. In such a case, the MERP Coordinator will instruct the Logistics Designate to set up an alternate RTA.

Fire drills and evacuation drills will be conducted periodically by management, and all persons shall cooperate during these drills.

6.11.2 Escape Routes

All escape routes within buildings will be mapped and posted in conspicuous locations, with escape exit signals as required by legislation.

6.12 Check-in/Check-out Procedures for Emergency Operations

Personnel are required to check-in with their Supervisor prior to the start of their shift, at which time notification of the assigned work will be given. Upon check-out, personnel are to provide their Supervisor with a timesheet and/or production sheet.

In the event of an emergency, a systematic check of all persons (Roll Call) on the property at the time of the emergency must be done and all personnel accounted for. To achieve this, the following procedures would be followed:

- ▶ Once an emergency has been established, the Supervisor or designate will begin a Roll Call of all employees on shift;
- ▶ Should anyone be unaccounted for, the Supervisor or designate would then determine their job description and location at the Project where last working; and
- ▶ If authorized by the Mine Superintendent/Emergency Commander, a search and rescue plan would be initiated and executed by the ERT.

6.13 Emergency Response Team (ERT)

The following subsection provides a high-level summary of the ERT, also known as the Mine Rescue Team under the Code.

6.13.1 Selection of Candidates

Personnel wanting to become part of TCL's ERT may do so by filling out the application form and submitting it to the Health, Safety, and Human Resources Superintendent. Personnel with previous experience in emergency response, mine rescue, firefighting, ambulance, First Aid, etc. are encouraged to apply.

6.13.2 Medical Evaluation

Personnel wanting to be an active member of the ERT must undergo and pass a medical evaluation. This medical is conducted by third-party health care providers and results are sent to the Mine Superintendent who will review and advise accordingly.

6.13.3 Basic Emergency Response Training

All personnel who have completed and passed their medical evaluation will receive Basic Emergency Response Training. Training is of 40-hour duration and involves:

- ▶ Introduction: principles, requirements, and certification;
- ▶ Emergency Response Operations: emotional stress, personal safety and PPE, team procedures;
- ▶ Mine Gases: recognition, effects and treatment, threshold limit value (TLV), hazards, gases, and charts;

- ▶ Gas Detection and Equipment: introduction, gas detection pumps and tubes, electronic devices;
- ▶ Oxygen Therapy: when, the oxygen unit, safe practices, storage, and handling;
- ▶ Electrical Safety: basic facts and hazards, potential injuries, safe approach and Lock Out/Tag Out;
- ▶ Rescue Rigging: introduction, webbing and rope, equipment, knots;
- ▶ Fire: safety, ignition temperatures, combustion, fire phases, ventilation, fire habits, fire extinguisher, firefighting and PPE;
- ▶ Respiratory Protective Equipment: introduction, hazards, SCBA, donning, doffing;
- ▶ Rescue Rigging: harnesses, lowering, anchoring, packaging systems and shallow, slope rescue;
- ▶ Special Hazards of Winter Conditions: driving, walking, hypothermia;
- ▶ Rescue Operations: tools, airbags, winching, vehicles, buildings, and cave ins;
- ▶ Scene Assessment and Emergency Incident Command: EICS, activation, ERT, classifications, scene/hazard assessment/zones;
- ▶ Team Practical Training: fire drill exercise, equipment donning, searching; rescue rigging, repelling; and
- ▶ Final Evaluation and Written Exam.

If the individual does not have first aid certificates and experience to be a member of TCL's ERT, TCL will provide training for members to obtain the following:

- ▶ Occupational First Aid with Transportation Endorsement and/or Saint John's Standard First Aid with Transportation Endorsement; and
- ▶ Transport of Dangerous Goods.

Upon successful completion of the Emergency Response course, the individual will receive a Certificate from TCL, and will then need to pass the BC Mine Rescue Exam to be allowed to be a designated member of TCL's ERT.

All TCL ERT members will be eligible for additional compensation if they fulfill the following requirements:

- ▶ Attend 90% of scheduled practices and training sessions;
- ▶ Keep up required qualifications; and
- ▶ Abide by the TCL ERT code of conduct.

TCL will encourage members of the ERT to add to their ability to respond to emergencies by obtaining higher levels of first aid qualifications such as OFA2, OFA3, paramedic, and nursing designations.

At the present time, TCL uses third-party qualified Mine Rescue/Emergency Response Instructors for training with the goal of having two (2) qualified Instructors as part of the TCL ERT team in the future.

6.13.4 ERT Member Requirements

TCL will aim to exceed the minimum requirements specified in the Code below:

Open Pit

- 3.7.5 *The manager of an open pit mine employing more than 25 persons per shift shall ensure that*
- (1) *there is one fully trained and equipped mine rescue team, and*
 - (2) *on every shift where more than 10 persons are working, there are four persons trained in mine rescue procedures.*

Team Complement

- 3.7.6 *The normal compliment of a mine rescue team shall be 6 qualified members, one of whom shall be the team captain, one the vice-captain, and one the coordinator who shall remain at the fresh air base at all times.*

Mine Rescue Teams

- 3.7.7 *A person shall not be considered as a qualified member of a mine rescue team unless*
- (1) *the person possesses a valid mine rescue certificate and a valid St. John standard first aid certificate and transportation endorsement or an equivalent standard acceptable to the chief inspector, free from a beard, moustache, or sideburns that could interfere with the facepiece seal of any breathing apparatus,*
 - (2) *considered competent to act as a mine rescue team member by the person appointed as a trainer under section 3.7.9, and*
 - (3) *medically fit for the nature of the work required.*

Through the provision of paid time off and additional compensation, TCL will encourage members of both the ERT and general workforce to become members of other organizations such as:

- ▶ Volunteer Fire Department,
- ▶ Search and Rescue, and
- ▶ First Responder Groups.

6.14 Mine Rescue Equipment Inventory

The list below will be updated annually and provided to the Mines and Mineral Resources Division (MMRD) Emergency Preparedness Committee in Victoria, via the Regional Health and Safety Inspector.

Table 6.14-1: Mine Rescue Equipment Inventory

Facility	Location	Supplies
Emergency Incident Command Center (EICS)	Administration Building Lunchroom or Boardroom in the Telkwa Coal Limited (TCL) Village Office	▪ satellite phone; ▪ land line; and ▪ two (2) - way radio communications.
First Aid Room	Administration Building	See Appendix 13.9-J for full list.
Site Ambulance	Parked adjacent to Emergency Response/Mine Rescue Building	Level 3 kit plus accessories

Facility	Location	Supplies
Emergency Response/Mine Rescue Building	Adjacent to Administration Building	▪ Drager BG4 self-contained breathing apparatus (SCBA) and dryer; ▪ hazardous material suits; ▪ medical masks such as I95; ▪ portable ventilation system; ▪ Test-it 6100; and ▪ medical supplies, automated external defibrillator (AED), and oxygen.
Rescue Response Vehicle	Parked adjacent to Emergency Response/Mine Rescue Building	▪ foam suppression system; ▪ step blocks for stabilization of vehicle Incidents and rollovers; ▪ set of Jaws of Life; ▪ lifting bags; ▪ rescue tripod, SKED stretcher & Wrap-Evac harness; and ▪ rope, harnesses, and rigging.
Fire Extinguishers	In all buildings at various locations, and in all vehicles, mobile equipment and at fueling stations, with extras in warehouse.	▪ Fire extinguishers
Fire Hydrants	Northwest corner of the Maintenance Facility, and off the southeast corner of the Coal Processing Plant (CPP) inside designated insulated sea containers. See previous Figure 6.6-2 .	▪ one fire hydrant at each location ▪ additional firefighting equipment.
Wildfire and Site Fire Supplies	Sea containers located beside Emergency Response/Mine Rescue Building	▪ Chainsaws, chainsaw pants, shovels, picks, safety gear, fire extinguishers, fire hoses, fittings, clamps, tools, water jugs, and food rations.
Spill Kits	Coal Processing Plant (CPP), Process Reagent Storage Site, Pit Fueling Station, Rail Infrastructure Fueling Station, Maintenance Facility, and environmental spill response trailers, all TCL heavy vehicles and selected light vehicles	▪ Each kit will contain a drip pan, absorbent pads, and absorbent materials.

6.15 Emergency Mutual Aid Agreements

Where possible, TCL will support emergency response efforts initiated by local government to manage the effects of environmental events in the Project Area and vicinity. For example, the Protective Services Department of the RDBN is responsible for facilitating the RDBN's Emergency Management Program, 911 Service, Rural Fire Protection, and Emergency Response. During an emergency, the RDBN activates its Emergency Operations Centre (EOC) to support residents. Additional information on local and regional emergency services is provided in **S6.0-C3 Infrastructure and Services VC**.

Wildfires are regionally managed by the Northwest Fire Center in Smithers.

Emergency **Mutual Assistance Agreements** will be provided in **Appendix 13.9-L** of this document once they are obtained from other mines, organizations, and municipalities. A template has been provided in **Appendix 13.9-L** which will be added to in accordance with the BC guidelines for mutual aid agreements which is also provided in **Appendix 13.9-L**.

6.16 Post-emergency Procedures

Following an emergency, the site shall be secured until the scene can be investigated by the appropriate authorities and all evidence collected. This will assist the Health, Safety, and Human Resources Superintendent and their team to complete their investigation of the Incident.

6.16.1 Emergency Level “Stand Down”

To the discretion of the Mine Manager, the emergency will be reduced to “Stand Down” upon completion of emergency response operations. Affected personnel will be requested to participate in a Post-emergency Debriefing.

6.16.2 Post-emergency Debriefing

The Health, Safety, and Human Resources Superintendent will convene a Post-emergency Debriefing session, after any emergency or emergency exercise. The debriefing shall occur as soon as practicable after the emergency has ended.

The entire ERT as well as other personnel or managers, as necessary, are required to participate in the debriefing. The debriefing may follow any format that allows for open communication, identification of cause, resolution of issues, exploration of improvement methods and prevention strategies.

The Health, Safety, and Human Resources Superintendent will collect the information, and shall ensure a debrief report is distributed to all senior management, the ERT, and all others as necessary within 7 days of the emergency. The report shall include positive as well as any negative findings about the event, for use as a learning tool for future events. If regulatory reporting is required, this will be done in collaboration with the Environmental Coordinator.

6.16.3 Injury Treatment and/or Surviving Family Follow-up

Following any Incident where an injury has been sustained it is necessary for the immediate Supervisor to monitor the progress and condition of that person and to liaise with the Health, Safety, and Human Resources Department to ensure that any WorkSafeBC matters or other insurable issues are attended to.

In addition, there may be return to work and modified duties program matters that require monitoring and managing.

In the event of a fatality or serious disabling injury, the matter is to be handled by the Health, Safety, and Human Resources Superintendent with the support of the Supervisor of the impacted personnel. The sensitivity of these matters may require additional medical, psychological, financial, and union and employee assistance program (EAP) assistance for recovery and prevention.

6.16.4 Treatment for Post-traumatic Stress Disorder

The debriefing will allow participants to discuss any experience of post-traumatic stress. Victims, coworkers, emergency personnel, and others involved in an emergency, either as a victim, responder or observer may suffer from post-traumatic stress disorder (PTSD) following an event.

Individuals may have a variety of reactions to the event and therefore a customized approach may be required to promote recovery. Further treatment or coping therapies may be required for some individuals on an individual or group basis. The EAP, as well as other resources such as Victims Services through the local Health Region, EMBC, RCMP or other agencies may also be of assistance with recovery from an event. The Health, Safety, and Human Resources Superintendent will be consulted on this matter.

6.16.5 Investigations

All Incidents and emergencies are to be investigated using the current TCL practices. These investigations allow the identification of repeat Incidents and the improvement of conditions that may have led or contributed to an emergency. Most investigations start with the receipt of an **Incident Notification Report and Incident Investigation Report**. See **Appendix 13.9-D**.

6.16.6 Corrective Action Initiatives

Methods currently in place are to be used for preventative or corrective actions. Additional consultation of the ERT as well as the OHSC may be utilized for assistance.

7. MONITORING

The following provides some of the monitoring activities related to the MERP and will be updated as required. The following is an initial list of monitoring objectives:

- ▶ conducted during emergencies to document potential or actual damage to personnel, the environment, or company assets and to facilitate reporting;
- ▶ implement practice emergency response scenarios annually;
- ▶ inventory and management of First Aid and ERT supplies;
- ▶ verify all emergency response and First Aid personnel have up-to-date training;
- ▶ ensure the MERP is used to address onsite events;
- ▶ assess and report Post-emergency Debrief results;
- ▶ ensure the MERP is updated per ongoing lessons learned; and
- ▶ provide metrics on performance objectives for the ongoing improvement of the MERP.

7.1 Performance Objectives

Table 7.1-1 below highlights the performance objectives and targets required to ensure the proper implementation of this MERP:

Table 7.1-1: Performance Objectives

Objectives	Target
Review and updates of Mine Emergency Response Plan (MERP) are completed	At least once per year or after any major incident such as a fatality, serious medical aid, and/or environmental incident causing death of wildlife and/or long-term harm
Unplanned emergency response incidents are tracked	Zero incidents
Occupational First Aid 3 (OFA3) personnel are on staff	A minimum of two (2) qualified personnel onsite, 24 hours a day
Mine Rescue certification is held by personnel and is current	A minimum six (6) qualified personnel onsite, 24 hours a day
Emergency Response Mock Drills and Testing is held regularly	At least once per year or after any major Incident such as a fatality
Fatalities are prevented	Zero fatalities
Mass casualties are prevented	Zero mass casualties
Non-compliant equipment audits are conducted	Zero non-compliant equipment audits
Timing to publicly report on emergency response is timely and compliant	48 hours or less for required reportable incidents

8. REPORTING

8.1 General Reporting

Reporting completed by TCL will confirm consistent implementation of the MERP. Summary reports of evaluation activities and results will be compiled and reviewed annually.

8.2 Compliance Reporting

Compliance reporting will be subject to the Environmental Assessment Certificate (EAC), and *MA/EMA* permit conditions. The information gathered during monitoring practices will be summarized with information from other management plans into an Annual Environmental Management Summary Report and upon permitting completion, the Annual Environmental Reports as required by *MA/EMA* permits. Community engagement activities will be an aspect of the **Socio-economic Management Plan (S13.0-C16) (SEMP)**. The SEMP will have requirements related to reporting on community engagement programs.

Furthermore, events requiring emergency response have other regulatory reporting responsibilities and they will be fulfilled as required.

8.3 Dangerous Occurrence, Incident, and Emergency Reporting

All Dangerous Occurrences, Incidents, or other Emergency will be reported to the BC Mine Incident Reporting Line as required:

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

8.4 Internal Reporting

Details of all Dangerous Occurrences, Incidents or Emergency will be reported internally on an annual basis according to the adaptive management framework of the **EMS**. Specifically, the **Incident Notification Report and the Incident Investigation Report (Appendix 13.9-D)** will be used to gather information for reporting. The **EMS** annual report will provide results of monitoring, assessment of performance objectives where applicable, and any other pertinent information.

TCL staff or contractors will be strongly encouraged to report any inefficiencies to management for evaluation consideration.

9. ROLES AND RESPONSIBILITIES

Primary responsibilities have been assigned to the following roles or groups:

9.1 Mine Manager

The Mine Manager bears overall responsibility for all phases of the Project, and responsibility for onsite environmental monitoring and compliance relating to Construction, Operation, Decommissioning and Reclamation, and Post-Closure phase activities. The Mine Manager reports to the executive steering committee for TCL and will coordinate with this group to ensure that Project objectives are being met.

Specifically, the Mine Manager will:

- ▶ support the implementation of the MERP by ensuring adequate personnel and resources are available onsite;
- ▶ act as Emergency Commander if the Mine Superintendent is not available;
- ▶ act as Senior Management liaison in the event of an emergency;
- ▶ be the sole point of contact for media, police, or public inquiries during an emergency;
- ▶ facilitate the annual review of the MERP;
- ▶ TCL management shall also empower the OHSC, as required in section 1.6.1 of the Code wherein the manager will establish and maintain a joint management-worker OHSC to operate as a planning group that will work with the MERP Coordinator to divide the workload of organizing and implementing the MERP; and
- ▶ establish an ERT and emergency response facilities, with ongoing resourcing for training, equipment, and maintenance of equipment and facilities.

9.2 Mine Superintendent

The Mine Superintendent bears the primary responsibility for executing emergency response as described in this MERP. During an emergency, the Mine Superintendent:

- ▶ receives and follows up on Emergency Calls;
- ▶ classifies the event as Level 1, 2, 3, or 4;
- ▶ acts as the Emergency Commander;
- ▶ deploys the ERT;
- ▶ attend as needed in emergency response drills with all teams onsite as well as with all managers;
- ▶ initiates the EICS if needed;
- ▶ coordinates the response to Level 3 and 4 emergencies with assistance of MERP Coordinator;
- ▶ provides direction and information about affected work areas to the MERP Coordinator and ERT; and
- ▶ provide updates to the Mine Manager or requests the Communications delegate to do so.

In addition, the Mine Superintendent will participate in the OHSC.

9.3 Plant Superintendent

In the event an emergency occurs in/near the CPP, areas related to it, or other areas under the authority of the Plant Superintendent, the Plant Superintendent shall fulfill all roles normally associated with the Mine Superintendent in this MERP. Furthermore, they will provide direction and information about affected work areas to the MERP Coordinator and ERT.

The Plant Superintendent will be assisted by the Mine Superintendent as needed.

9.4 Health, Safety, and Human Resources Superintendent and the Occupational Health and Safety Committee (OHSC)

The Health, Safety, and Human Resources Superintendent will be MERP Coordinator and will be fully supported by TCL management. Responsibilities of the MERP Coordinator shall include (but are not necessarily limited to) the following:

- ▶ Establish and lead the OHSC in the implementation of the MERP;
- ▶ testing of the MERP with the ERT and employees annually, with lessons learned incorporated into this MERP;
- ▶ Coordinate the recruitment and training of ERT members;
- ▶ Coordinate with the ERT to inventory, organize and maintain equipment;
- ▶ Ensure the availability of MSDS information to responders as needed;
- ▶ Ensure that the **Support Services Contact List** in **Appendix 13.9-F** is updated as necessary;
- ▶ effective engagement of employees, contractors, and visitors in implementation of the MERP, and encouraging suggestions on improvements to reduce potential hazards and improve work procedures;
- ▶ reviewing and updating the MERP at least once per year or following a Minesite emergency response drill and/or a major incident such as a fatality, serious medical aid, and/or environmental Incident causing death of wildlife and/or long-term harm, and incorporating any lessons learned into the MERP;
- ▶ during an emergency:
 - ▶ act as MERP Coordinator;
 - ▶ liaise with various parts of emergency operations to ensure situation status is communicated;
 - ▶ coordinate the establishment of an RTA as needed;
 - ▶ manage any security issues that may arise;
 - ▶ conduct Post-emergency Debriefing;
 - ▶ review the effectiveness of the ERT and the EICS; and
 - ▶ provide post-emergency reports to management or regulators as needed, with the assistance of the Environmental Coordinator.

9.5 Environmental Coordinator

The Environmental Coordinator has a unique role during an emergency. In an emergency, while reporting to the Mine Superintendent, the Environmental Coordinator operates independently with a mandate to:

- ▶ monitor and record the scene and surrounding areas, and collect information related to potential or actual damage to the environment, personnel, equipment, or structures;
- ▶ act as Reporting Coordinator, by preparing for review all regulatory and other reporting related to the emergency, including internal and regulatory reports;
- ▶ distribution and interpretation of MSDS to support the ERT; and
- ▶ participate in the Post-emergency Debriefing.

9.6 Emergency Response Team (ERT)

The ERT is comprised of Minesite personnel who are trained in emergency response, First Aid, firefighting, and/or hazardous materials management. A member of the ERT is called a Responder. Under the Code, the ERT is known as a Mine Rescue Team, and for the MERP, and all management plans, the ERT fulfills all roles designated to the Mine Rescue Team by the Code. They are required to:

- ▶ assemble and provide emergency response when requested to do so;
- ▶ participate in the Post-emergency Debriefing; and
- ▶ ensure their training is updated regularly and provide related documentation to the Health, Safety, and Human Resources Superintendent.

9.6.1 Emergency Response Team (ERT) Captain

The ERT Captain is the individual who has the most emergency response training on each shift and is also willing to be the leader of this important TCL team. Each shift has a designated ERT Captain. The ERT Captain:

- ▶ leads the ERT in addressing Level 3 Emergencies onsite;
- ▶ directs the deployment of ERT personnel and resources;
- ▶ directs First Aid Attendants as needed;
- ▶ is responsible for Triage decisions until relieved by a First Aid Attendant with more training;
- ▶ liaises with the MERP Coordinator to obtain logistical support and communicate status during an emergency event;
- ▶ participates in the Post-emergency Debriefing; and
- ▶ works with the Health, Safety, and Human Resources Superintendent to maintain an inventory of safety supplies and equipment.

9.6.2 First Responder(s)

The First Responder(s) is usually the first individual(s) on scene and is likely a member of the workgroup where the event takes place. The actions of a First Responder can be the difference between a Near Miss or Incident, and the escalation of an event to an Emergency or Major Emergency. The First Responder:

- ▶ may act upon the event if safe to do so, for example, deploying a spill kit or providing First Aid;
- ▶ is responsible to notify the area Supervisor and communicate the status of the event;
- ▶ will request assistance as needed after responding to an event onsite;

- ▶ holds the authority of treatment until an equal or higher-level First Aid Attendant takes over; and
- ▶ participates in the Post-emergency Debriefing.

9.6.3 First Aid Attendant(s)

First Aid Attendants are personnel with First Aid training. Many First Aid Attendants will have Occupational First Aid (OFA) 3 or other related emergency designations. The OFA 3 and Emergency Response/Mine Rescue Roster and Contacts will be provided in **Appendix 13.9-M** as personnel are hired.

First Aid Attendants:

- ▶ provide First Aid when called upon to do so;
- ▶ report to the ERT Captain or delegate during an emergency response;
- ▶ help the Logistics Designate to set up the RTA as needed,
- ▶ assist with inventory and management of First Aid supplies and equipment;
- ▶ participate in the Post-emergency Debriefing; and
- ▶ ensure their training is updated regularly and provide related documentation to the Health, Safety, and Human Resources Superintendent.

9.7 Emergency Incident Command System (EICS)

The EICS is only mobilized for a Level 4 Major Emergency and involved various personnel and reporting relationships as illustrated by **Figure 9.7-1** below.

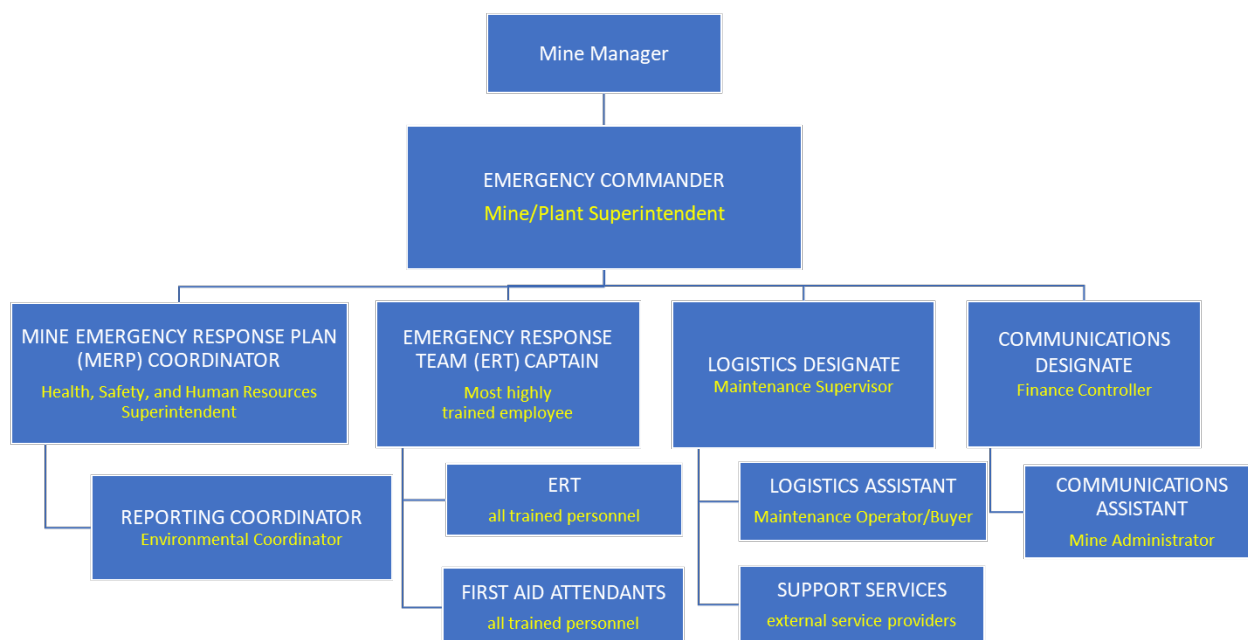


Figure 9.7-1: Emergency Incident Command System (EICS) structure

At its core are the positions cited and described in 7.1 to 7.6, and briefly listed below:

- ▶ Emergency Commander = Mine/Plant Superintendent;
- ▶ MERP Coordinator = Health, Safety and Human Resources Superintendent;
- ▶ ERT Team = appropriately trained personnel; and
- ▶ Reporting Coordinator = Environmental Coordinator.

During a Level 4 Major Emergency, additional personnel are needed to facilitate the effective management and resolution of the event. See subsections below.

9.7.1 Logistics Designate (Maintenance Supervisor)

The successful resolution of an emergency depends on the reliable and timely provision of appropriate resources. The Logistics Designate is the Maintenance Supervisor, and will:

- ▶ organize and provide support for any equipment, supplies, additional resources, or resource agency required for emergency response;
- ▶ set up the RTA with the assistance of the First Aid Attendants under the direction of the Health, Safety, and Human Resources Superintendent;
- ▶ supervise a Logistic Assistant as needed, and
- ▶ ensure the function of the Emergency Communications equipment as part of their regular work function as well as during an emergency.

9.7.2 Communications Designate (Finance Controller)

Effective communication during an emergency is critical to the successful outcome of an emergency response. Furthermore, accurate monitoring and logging of emergency calls and responses, as well as the progress of activities, is an important part of appropriate response and Post-emergency Debriefing.

Depending on the type of emergency, the Mine Superintendent may control communications, however, during a Level 4 Major Emergency, it may be necessary to delegate this important role. In this case, the Finance Controller is the assigned Communications Designate.

The Communications Designate will:

- ▶ gather information pertaining to the event and give it to the Environmental Coordinator, MERP Coordinator, and/or the Chief Operating Officer (COO) if requested to do so;
- ▶ monitor and log communications by radio and/or phone in support of the emergency response;
- ▶ supervise a Communications Assistant as needed for scribing, communications logging and/or other clerical duties;
- ▶ initiate or delegate making calls to personnel by radio and/or phone and to contact those on the **Support Services Contact List** in **Appendix 13.9-F**;
- ▶ act as the liaison between the management team, emergency and/or government/law enforcement agencies, work force and media under the direction of the Emergency Commander; and
- ▶ not make statements to the media unless authorized to do so by the Mine Manager or COO.

9.7.3 Designated Assistant(s)

During a Level 4 Major Emergency, each designate will require assistance from personnel that are trained to assist during an emergency. This is likely personnel that they already supervise. Known designated assistants include:

- ▶ Logistics Assistant is a Maintenance Operator/Buyer; and
- ▶ Communications Assistant is a Mine Administrator.

Other Assistants, when needed and called upon will be personnel with existing training in logistics, safety, First Aid, communications, equipment operation, Minesite traffic control, etc. Personnel will only be assigned tasks that are within their scope of training and skills. All employees are requested to assist to the best of their abilities during an emergency response.

9.7.4 Support Services

These are individuals or organizations that are identified in **Appendix 13.9-F Support Services Contact List**, for example, Fire or Ambulance. Support services will be initiated by the Health, Safety, and Human Resources Superintendent, or Logistics Designate as needed to fulfill the identified needs of the response effort.

Once communication is made and the service requested, the service provider will report directly to the MERP Coordinator upon arrival onsite.

9.7.5 Duty Cards

A Duty Card system will be implemented. The Duty Cards detail activities that will be undertaken by TCL personnel in the event of an emergency. The cards are designed to facilitate an organized and coordinated response to an emergency by helping to guide individuals through their specific activities and responsibilities. **Emergency Incident Command Duty Cards** are detailed in **Appendix 13.9-M**.

9.7.6 Emergency Incident Command Centre

The Emergency Incident Command Centre will be in the boardroom of the Telkwa Town Office located in the Village of Telkwa during the Construction Phase. It will be relocated to the Lunchroom of the TCL Administration Building once it is constructed for the Operation Phase and will revert to the Telkwa Town Office if this building is removed during the Decommissioning and Reclamation Phase. Contingency locations may be established during an incident due to a site evacuation or other reason, with the primary contingency being the boardroom of the TCL's Town Office. This will be determined by the Emergency Commander at the time it is required.

Supplies at the Emergency Incident Command Centre shall include:

- ▶ phone line, cell phone booster, satellite phone, two (2)-way radio base station;
- ▶ copy of MERP;
- ▶ Project contact lists;
- ▶ notebooks, camera, flashlights, water, and food (as needed for personnel, victims, responders during the Incident);
- ▶ current Mine Plan;

- ▶ site infrastructure plan (each Department Manager to keep a copy and have it handy); and
- ▶ office supplies (kept in Administrative Assistant's office).

The above supplies are required if the event type or duration dictates that they are needed.

9.8 Training Plan

An understanding of the MERP is required of all employees and contractors onsite. Selected employees onsite will need a high degree of understanding and training to carry out the MERP for this Project. These individuals will be part of the ERT. See the **OHSP** for additional information about training related to ERT.

9.8.1 Employee and Contractor Training

The environmental awareness and training of all personnel involved in Construction, Operation, and Decommissioning and Reclamation activities on the Project is a critical factor in achieving the objectives outlined in this MERP. All those responsible for the management, implementation, and operation of any aspect of this MERP will be competent for their role. Prior to the commencement of work onsite, all employees and contractors, including those responsible for moving equipment to site, will:

- ▶ attend an induction session that will provide a brief overview of the types of hazardous materials and dangerous goods used and stored on the Project, the hazards associated with the materials, and the use and maintenance of protective equipment and gear;
- ▶ receive Workplace Hazardous Materials Information System (WHMIS) training; and
- ▶ review and understand the requirements of this MERP, including the need to report any health, safety, or environmental Incidents to the TCL manager.

In addition, workers will receive additional training in chemicals and materials storage and handling appropriate for the work they are undertaking.

9.8.2 Emergency Incident Command Training

All personnel that are in the EICS are required to participate in annual instructional sessions specifically for the Project and its related activities.

9.8.3 Visitor Training

Visitors are required to be knowledgeable of the health and safety requirements of TCL including the basics of the MERP as provided in the visitor induction, which are applicable to their activities while onsite and whom will be under the direction of a TCL employee who is knowledgeable with this plan. Therefore, they will not be required to be directly knowledgeable with the whole MERP.

10. COMMUNICATION

Communication of the MERP at TCL will be based on internal requirements and will primarily take place through this MERP and relevant SPPs. Any significant change to the MERP will be communicated to the Project's employees and contractors through a site-wide email, announcements over all radio channels by Minesite supervision and bulletins posted around the Project's Minesite. When effective to do so, maps will be marked with changes.

10.1 Consultation with Other Potentially Impacted Parties

TCL will undertake consultation with potentially impacted parties (local Indigenous groups, the public, local municipalities, and regional districts, media, and other groups) as it relates to hazards which are associated with an emergency at the Project Minesite that could pose a threat to surrounding communities. The consultation process will include discussions around potential Incidents such as fires, explosions, management pond failures, Tenas Control Pond failures, storage pile or stockpile failures, and spills affecting waterways, etc. As part of the consultation, the plan developed will address the appropriate notification processes for such incidents.

TCL will ensure that its management plans have annual evaluations and feedback from potentially impacted parties. Any proposed changes will be sent out for review to the impacted parties before being finalised and implemented into a revised MERP.

10.2 Emergency Communication Services

TCL will have a dedicated emergency communication system that will be developed and maintained by the Project's Maintenance Department.

The Emergency Communication Services will have the following:

- ▶ defined preventive maintenance program that will ensure the system has capacity for handling calls during an emergency;
- ▶ up-to-date technical and logistical component parts for the system;
- ▶ a back-up and alternative means of communication if system goes down;
- ▶ standardized system for recording calls, messages, and information; and
- ▶ policies, procedures, manning list, and budget to ensure enhanced operations during a defined emergency.

10.3 Emergency Communication Details

The following **Figure 8.3-1** is a sample Emergency Communication Form that may be used at the Project.

Date:	Day Shift: ☐	Night Shift: ☐	Time of Call:	a.m./p.m.
Name of Caller:				
Nature of Emergency:				
Location of Emergency:				
Assistance Required:				

Figure 10.3-1: Emergency Communication Form

10.4 Public and Media Relations

In the event of a serious or fatal incident, TCL will ensure that only accurate and consistent information is released to workers, relatives of workers and the media.

All releases to media and/or communications will be done in consultation with TCL's COO, and the Mine Manager or their delegate (Finance Controller) must get approval from the COO before any media communications are sent offsite whether verbal and/or written and/or social media; however, time is of the essence in a crisis.

Protocols to be followed in communicating to the public about incidents include:

- ▶ Families must be informed as early as possible and prior to any media releases;
- ▶ When people are trapped or missing, it is necessary to establish and maintain regular contact to update families on the progress of rescue and/or recovery efforts;
- ▶ The names of the people affected shall not be released publicly until they have been rescued or recovered, and authorization from their families has been received;
- ▶ All outside calls shall be directed through the person designated as responsible for public and media relations;
- ▶ As the emergency becomes of interest to the media, it may be desirable to establish formal information sessions. These should be pre-scheduled on a regular basis for the duration of the crisis, and news releases should be issued as major new developments occur; and
- ▶ Media conferences shall be attended by knowledgeable representatives or persons involved in the rescue, which may include management, union representatives, etc. Whenever practicable, these conferences will be conducted in the Village of Telkwa, rather than on the Project Minesite property.

10.5 Training and Awareness

All employees and contractors will have training and awareness of the Project responsibilities to meet the objectives of the MERP for all Project phases. Training will include an overview of the MERP objectives, mitigation measures, monitoring, and reporting requirements to meet MERP targets.

10.6 Employee Training

All employees and contractors will receive training on the MERP during a general-site safety orientation. MERP training will occur before individuals begin work on the Project and for new personnel arriving on the Project.

Employees are required to review all relevant management plans and/or SPP and their associated training modules at the start of employment and on annual basis. Employee training is tracked by the Health, Safety, and Human Resources Department using an industry standard software application.

10.7 Contractor and Visitor Training

Additional training will be provided to employees and contractors delegated to specific work tasks (emergency response) and will occur through site-specific orientation and/or in-person communication with the Environmental Coordinator.

Contractors will review the relevant management plans and/or SPP at the start of their contract and on an annual basis if contracts are longer than 13 months in duration to ensure their compliance with these requirements. Visitors will receive an overview of the relevant SPPs during their visitor induction session prior to accessing the Minesite or from their Contract Manager. Visitors are generally restricted to being under the direction of TCL employees and are unlikely to need to be familiar with the details of the MERP.

11. EVALUATION AND ADAPTIVE MANAGEMENT

11.1 Evaluation

A review of the MERP will be completed by the Health, Safety, and Human Resources Department on an annual basis to compare data, trends, and implementation of the MERP objectives. This process will include a review of the management plan deliverables and input received from Indigenous groups and other stakeholders. Performance objectives and other metrics will be used to assess and evaluate the MERP.

11.2 Adaptive Management

A philosophy of adaptive management will be adopted to make sure that management plans and mitigation measures are consistently meeting or exceeding performance targets. This will be achieved through periodic reviews of the MERP and the results of monitoring programs.

TCL will work towards continual improvement at the Project. The Mine Manager or their delegate will investigate improvements in any trend and assess whether the practices responsible for the improvements can be applied to other areas of the Project. Deteriorating trends will be studied to determine the root cause. When the cause is identified, the Mine Manager or their delegate will implement a suitable corrective action. Examples of corrective actions could include:

- ▶ additional training of employees and contractors on procedures;
- ▶ enhancement of maintenance or monitoring measures; and/or
- ▶ additional supervisory oversight.

TCL will amend the MERP as required based on the annual evaluations and feedback from stakeholders and Indigenous Groups.

11.3 Emergency Response Exercises

The MERP Coordinator will coordinate a program of Emergency Response Exercises (mock Incidents/Emergency drills) to test the emergency response capabilities of the Project's personnel and the effectiveness of the MERP. The exercise shall include an environmental emergency as part of the drill.

These exercises shall be conducted during shift and will cover all crews to ensure their effectiveness.

A major exercise shall be conducted annually which will include external resources to test the effectiveness of the MERP beyond the Project Minesite. If an actual emergency occurs where external resources are used, then this may also be used as a test.

The execution of a mock incident allows periodic evaluation of the MERP by affected parties, which leads to continual improvement.

12. CHANGE MANAGEMENT

Changing any part of the MERP requires the use of a formalized process. If significant changes are being planned to objectives, management plan structure, operational milestones, communication and/or information management, it is required that the Management of Change (MOC) procedure in the **EMS** be followed. Minor edits and/or updates to this MERP will be controlled through version control and content approval functions.

13. CONCLUSION

Management and implementation of the MERP at the Project is important. Through implementation of the MERP and relevant SPPs, TCL will ensure high standards of safety and emergency response for the Project's Minesite, its personnel, and the environment.

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