
# Appendix P.1

**draft Emergency Response Plan**

Appendix G draft Spill Contingency Plan

Completed for the Updated 2021 Beaver Dam Mine EIS


**DRAFT**

# EMERGENCY RESPONSE PLAN
# VERSION 1

**Beaver Dam Mine Project 2021**
**Marinette, Nova Scotia**
**October 2021**

# REVISION HISTORY

| Version | Date | Notes/Revisions |
|---|---|---|
| Version 1 | October 2021 | Submitted with the Beaver Dam Mine Project 2021 Environmental Impact Statement Update application to the Canadian Environmental Assessment Agency and Nova Scotia Environment. The Emergency Response Plan identifies potential environmental, health and safety emergencies that could arise at the Beaver Dam Mine Project. |

# Table of Contents

## List of Tables



## List of Figures

## List of Appendices

# 1 INTRODUCTION

## 1.1 Project Overview

Atlantic Mining NS Inc. (AMNS) is proposing the construction, operation, reclamation (active closure and post-closure monitoring). of an open pit gold mine in Marinette, Nova Scotia (Figure 1). The Beaver Dam Mine Project (the Project) will have an ore production rate of approximately 6,000 tons per day, over a five-year period. Ore from the Project would be crushed and transported approximately 31 km by road to the Moose River (Touquoy) mine for processing. Components of the Project include an open pit, material storage facilities (i.e., waste rock, topsoil and organic materials), mine haul roads, mine infrastructure for crushing, water management, hauling, truck maintenance, administration, and road upgrades.

## 1.2 Purpose

This Emergency Response Plan identifies potential environmental, health and safety emergencies that could arise at the Beaver Dam Mine Project. This Plan establishes the framework for responding to these situations and to all aspects of the operation. All AMNS employees and contractors are required to comply with the requirements of the Emergency Response Plan.

## 1.3 Scope

Emergency events or situations are characterized by immediate threat to life, health, safety, environment, or property. The Emergency Response Plan and its supporting Plans are designed to address these characteristics using the following principles:

- Ensure safety and well-being of personnel, the environment, and property.
- Identify the types of emergencies that may occur and the procedures to respond, intervene, stop, or limit the emergency situation.
- Ensure effective communication between personnel and the Emergency Response Team.
- Ensure that personnel responding to emergencies are properly trained and have adequate resources for the response.

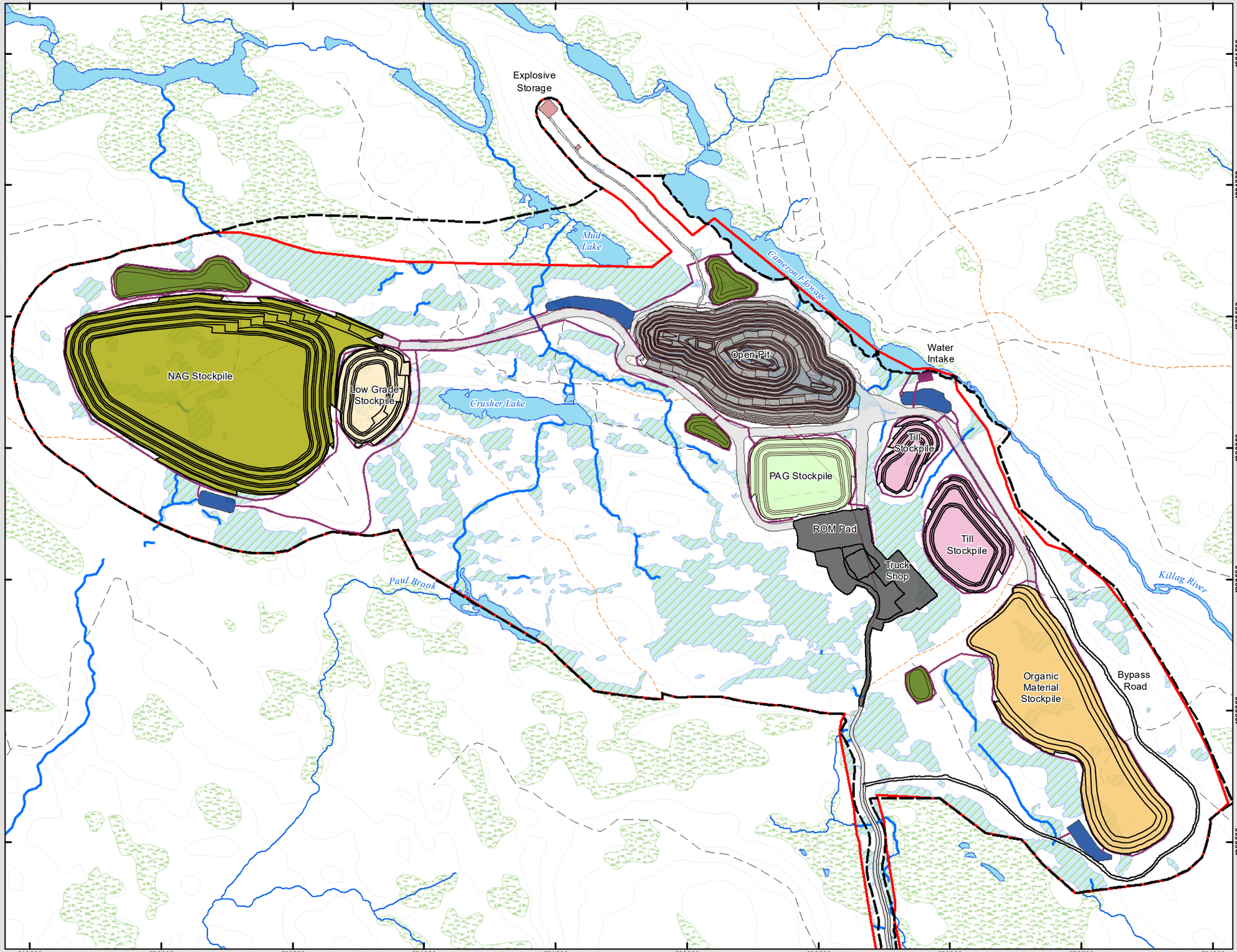
Prepared For:

Atlantic Gold

**FIGURE 1**

# Beaver Dam Mine Site

## General Mine Layout




**Proposed Infrastructure**

- Crusher Pad
- Open Pit
- Low Grade Stockpile
- NAG Stockpile
- PAG Stockpile
- Organic Material Stockpile
- Topsoil Stockpile
- Till Stockpile
- Explosive Storage
- Road
- Settling Pond
- Water Management

- Topo Line - 5m contour
- Local Road
- Dry Weather / Seasonal Road
- Track
- NSTDB Mapped Watercourses outside PA
- Field Delineated Watercourses within PA
- Open Water / Lake
- Field Delineated Wetlands within PA
- NSE Mapped Wetlands outside PA
- Preliminary Property Boundary
- Project Area Boundary


Coordinate System: NAD 1983 CSRS UTM Zone 20N
Projection: Transverse Mercator
Datum: North American 1983 CSRS
Units: Meter

0 125 250 500 m

1:13,500 Scale when printed @ 11" x 17"

Drawn By: LP
Reviewed By: XX

Date: 2021-04-12



McCallum Environmental Ltd.

Document Name: BD_EIS_Fig2.1-X General Mine Arrangement

# 2 DEFINITIONS

.

**Table 2-1: Definitions of terms used in the Emergency Response Plan**

| Term | Definition |
|---|---|
| Civil Aid | Refers to external stakeholders who provide resource support in the form of expertise in response to emergency situations. eg. fire departments, emergency health services, police, etc. |
| Corporate Response Team (CRT) | Senior corporate management group responsible for providing corporate coordination and support during a crisis or emergency. |
| Crisis | A sudden event or set of circumstances that could significantly impact BDM's ability to operate, damage to AMNS' reputation. |
| Crisis Management Plan (CMP) | A plan that defines the roles and responsibilities of the SMRT and CRT in the event of a crisis. |
| Emergency | A serious unplanned event that poses potential harm to health, safety, production, equipment or environment that requires immediate action.<br><br>An "Emergency, Emergency, Emergency" announcement on channel 8 of the 2-way radio system signifies an emergency situation requiring activation of the emergency response team. |
| Emergency Response Coordinator (ERC) | Person responsible for the management of incident activities at the site of the emergency. |
| Emergency Response Plan (ERP) | A course of action developed to mitigate the potential damage of serious sudden or unplanned events that have the potential to endanger health, safety or business continuity. |
| Emergency Response Team (ERT) | A group of employees trained in emergency response and rescue that provide the field response activities to an emergency. |
| Incident Action Plan | An organized course of events that address all phases of incident control including timelines, goals and objectives, and strategy as defined by incident command. This plan is developed in response to a need arising from a specific event or incident. |
| LAE NS OHS Division | Labour and Advanced Education Nova Scotia, OHS Division. Occupational Health and Safety regulatory body. |
| Natural Event | An adverse event resulting from natural process of the earth. eg. hurricanes, floods, etc. |
| NSE | Nova Scotia Environment. Environmental regulatory body. |
| Site Management Response Team (SMRT) | A group consisting of department managers and/or supervisors that provide internal resources (people, equipment, materials) to support the emergency response activities. |
| Unified Command | An authority structure in which the role of incident commander is shared by more than one person each with different accountabilities. The ERC will always play a role in the unified command which may also include department or site leadership. |

# 3 ROLES AND RESPONSIBILITIES

The general responsibilities of both internal and external responders during an emergency are outlined in the site ERP and presented in the table below:

.

**Table 3-1: Description of Roles and Responsibilities**

| Role | Responsibilities |
|---|---|
| General Manager | • Ensure appropriate resource availability for ERT and SMRT<br>• Responsible for timely and effective communication of events as per reporting and notification structure<br>• Liaise with regulatory agencies when required |
| Department Manager | • Provide timely and effective communication of ERP to department personnel<br>• Participate in timely and effective communication during an event as per reporting and notification structure and procedures |
| Emergency Response Coordinator (ERC) | • Act as liaison between ERT and H&S Manager<br>• Provide scene control and direction in the event of an emergency<br>• Establish response plans for emergency events<br>• Act as ERT team lead and provide resource support in the form of training, information and guidance for ERT members<br>• Ensure ERT is adequately prepared and trained to respond to emergency events<br>• Establish inspection protocols for ERT controlled supplies and equipment ensuring sufficient supplies are on site in preparedness for a potential emergency event<br>• Provide secondary assistance as medical first responder if necessary<br>• Maintain direct oversight of site ERT programming<br>• Properly don supplementary PPE when working in hazardous areas during an emergency |
| Emergency Response Team (ERT) | • Act as first responders in the event of an emergency<br>• Provide area control in specific emergency circumstances<br>• Work under the direction and oversight of the ERC<br>• Participate in training and emergency response professional development as deemed necessary by the ERC<br>• Respond in a timely manner and as directed to emergency calls while on site<br>• Ensure ERT equipment inspections are completed and documented routinely<br>• Properly don supplementary PPE when working in hazardous areas during an emergency |
| Health and Safety Department | • Act as liaison between ERC and site management; chiefly the site General Manager<br>• Provide situational updates to the SMRT and CRT as necessary and as per notification and reporting procedures<br>• Liaise with external regulators<br>• Provide secondary assistance to ERC in regards to scene control and ERT direction as necessary<br>• Maintain functional oversight of site ERT programming, training and development<br>• Provide resource support to ERC and ERT as requested<br>• Properly don supplementary PPE when working in hazardous areas during an emergency |
| Security Department | • Establish area or boundary control as requested during an emergency event<br>• Communicate with emergency services providers as requested (situationally dependent)<br>• Properly don supplementary PPE when working in hazardous areas during an emergency |
| Environmental Department | • Act as liaison between ERC and site management as required in any type of environmental event<br>• Provide situational updates to the SMRT as necessary and as per notification and reporting procedures related to environmental events<br>• Liaise with external environmental regulators |

| | |
|---|---|
| | • Provide secondary assistance to ERC in regards to scene control and ERT direction as necessary during environmental events<br>• Assist as subject matter experts related to spills and remediation |
| Human Resources Department | • Provide personnel information to emergency services if necessary |
| Superintendent / Supervisor | • Ensure availability of ERT members in the event of an emergency (in a timely manner)<br>• Act as liaison between ERC, H&S Manager and Department Manager if necessary<br>• Provide area subject matter expertise as requested during an emergency event; provide direct support if requested |
| Employees / Business Partners | • Review and acknowledge requirements and procedures outlined in Emergency Response Plan<br>• Actively participate in AGC safety programing to ensure due diligence is practiced in the prevention of emergency events<br>• Properly don supplementary PPE when working in hazardous areas during an emergency<br>• Evacuate as directed in a fast, safe manner and await further instructions including “All Clear” in the event of an emergency |

# 4 REQUIREMENTS

## 4.1 Regulatory Requirements

This Emergency Response Plan has been developed and implemented to ensure that AMNS respects all applicable laws, regulations, and requirements from federal and provincial authorities along with the permits, approvals, and authorizations required for the operations.

The guiding principles for the creation of this plan are found within the Underground Mining Regulations of Section 82 of the Nova Scotia Occupational Health and Safety Act Part 4 – Emergency Preparedness and Mine Rescue.

## 4.2 Post Incident Documentation and Incident Reporting

Completion of all associated requirements within the Incident Report Management Program (AGC-PRO-HS 006) must be fulfilled once all activities related to the response of any emergency situation are completed. This requirement must be fulfilled in a timely manner as to maintain the accuracy of all events, witness statements and follow up information.

## 4.3 Training

All personnel shall be informed of their responsibilities as they pertain to the emergency response plan by their supervision during the onboarding process. Department Managers shall inform their employees of their responsibilities when job roles change.

Those personnel required to participate in activities related to the ERP shall undergo specific training related to these requirements.

Every year, employees are required to either commit to (sign off) or complete training on the ERP.

All active members of the Emergency Response Team (ERT) shall be provided with and participate in specialized training to ensure competency in effective response to site wide emergencies.

Training for local civil aid shall be provided on an annual basis by the Beaver Dam Mine Emergency Response Coordinator (ERC) to ensure continued understanding of response requirements, plans and hazards by all civil aid stakeholders.

## 4.4 ERP Posting Locations

The ERP posting locations will be updated during the operational phase of the project. Expected locations are as follows:

- Main Administration Building Health and Safety Office
- Mine Operations Facility Lunchroom
- Truck Shop Safety Board
- First Aid Room

All updates made to the ERP must be communicated to personnel and the most up to date version of the ERP document must be available at the above stated locations.

## 4.5 Warning Systems

The mine facility utilizes the radio communication system as a means of emergency warning. Personnel are to be trained in required responses appropriate for warning systems in their specific work areas.

Warning systems are to be tested as a part of regular preventative maintenance programs at minimum every 6 months. Warning systems are not to be overridden without specific authorization from the ERC and/or H&S Manager

## 4.6 Drills

Each facility will develop an emergency evacuation procedure for specific types of hazard exposures, e.g. Fire, chemical release, etc. to which the area personnel may be exposed. This procedure must be understood by all personnel working in the area and drills for related evacuations will be conducted on an annual basis. All drills must be documented, and a copy is to be retained by the Health & Safety department.

## 4.7 Maps

Line diagrams and maps will be provided in Appendix B indicating the location of the following items:

- Fire Extinguishers
- Fixed Fire Suppression
- Fire Hydrants
- First Aid Stations
- SCBA cashes and self- rescue equipment

## 4.8 Emergency Supplies

Please refer to Appendix C for a listing of all available emergency supplies, quantities and details on use. All supplies maintained and controlled by the ERT are separate to the above mention listing.

## 4.9 Post Emergency Activities

Where required, trauma counselling shall be provided to personnel affected by the emergency to the extent that such counselling is considered to be required. The Employee Assistance Program is also available for staff to utilized following an incident (or at any time during their tenure with AMNS).

Following an emergency, a full investigation shall be carried out as per the AMNS incident reporting management program. At the completion of the investigation, the emergency response plan shall be revised and amended if necessary.

Debriefing will be conducted in both hot wash (immediate after action reporting) and more detailed cold wash (post incident report) format. Hot washes will be conducted with all active incident members immediately post incident while cold wash debriefing will be conducted upon the conclusion of the incident investigation; this will be participated by all ERT and support members whether or not they were active in the event.

# 5 EMERGENCY PREPAREDNESS

Establishing a format for emergency preparedness is critical. Specific emergency response plans are identified in this document.

Site emergencies covered by this plan are:

- Evacuation
- Surface Mine Rescue
- Medical Emergency
- Emergency Transportation
- Fire Fighting
- Vehicle Incident (on site)
- Cyanide Exposure
- Hazardous Chemical Exposure (other than cyanide)
- Entrapment/Confined Space Rescue
- Radiation Exposure
- Explosion
- Pit Wall/Ramp Failure
- Ground Collapse
- Sever Electrical Storm
- Forest Fire
- Natural Event
- Flooding
- Tire Fire
- Hazardous Substance Release
- LPG Release
- External Emergency
- Bomb Threat
- Security Breach
- Power Failure

## 5.1 Radio Channels

**Table 5-1: Touquoy Mine Radio Channels**

| Radio Channel | Department / Area |
|---|---|
| 1 | Health & Safety |
| 2 | Mine Operations/Pit |
| 3 | TMF Operations |
| 4 | Warehousing |
| 5 | Mill Projects |
| 6 | Mill Operations |
| 7 | Security |
| 8 | EMERGENCY |

**Table 5-2: Proposed Beaver Dam Mine Radio Channels**

| Radio Channel | Department / Area |
|---|---|
| 1 | Health & Safety |
| 2 | Mine Operations/Pit |
| 3 | Environment |
| 4 | Warehousing |
| 5 | Site Services |
| 6 | |
| 7 | Security |
| 8 | EMERGENCY |

## 5.2 Emergency Call-Out

In order to effectively communicate the need for assistance in an emergency the following procedure is to be followed when conducting an emergency call out via radio:

1. Contact Security on Channel 7 first stating EMERGENCY, EMERGENCY, EMERGENCY. Inform them of the type of emergency, location and if ERT is requested.

2. Security will call out the emergency evacuation (if necessary) on the channel specific to the work area, as noted above. They will state EMERGENCY, EMERGENCY, EMERGENCY and give very brief instructions on muster requirements.

3. Security will contact the ERC or delegate via channel 1 to inform of the emergency.

4. ERT members will be contacted by the ERC or delegate on their respective radio channels informing them to muster at the ERT facility for further briefing prior to response.

5. Should the emergency or evacuation require a site wide response; Security will provide the required information via the all-call Emergency channel 8.

# 6 ORGANIZATION

## 6.1 Level of Emergency

In order to effectively manage emergency response, AMNS has adopted a classification system that includes three levels of emergencies. Each level of emergency, based on the significance of the event, requires varying degrees of response, effort and support. The impact on normal business operations will also differ as will the requirements for investigation and reporting. Please refer to the Organization Response Matrix below for further clarification:

**Table 6-1: Organization Response Matrix**

| | Level 1 (Moderate) | Level 2 (Major) | Level 3 (Catastrophic) |
|---|---|---|---|
| Response | Local Site Response (ERT) | ERT & SMRT Response | ERT, SMRT & CRT Response |
| Personal Injury | Injury involving hospitalization | Single fatality or multiple injuries | Multiple fatalities |
| Missing Personnel | One or more people unaccounted for | One or more people confirmed missing | One or more people confirmed missing >24hrs |
| Environmental Event | Incident confirmed contained on site – regulatory notification required | Incident potentially resulting in offsite contamination and requiring regulatory notification | Significant incident – or incident involving mercury or cyanide – with potential implications across the company |
| Community Event | Local issue with no immediate likelihood of sustained media interest (not more than 2 consecutive news cycles) or disruption to operations | Immediate or ongoing issue involving sustained media coverage (more than 2 consecutive news cycles) or adverse impacts to operations | Significant or ongoing issue attracting significant media attention (more than 3 consecutive news cycles) and disruption to operations |
| Technical Incident | Technical failure requiring work to halt in an area | Technical failure requiring significant remediation and evaluation of impact to production | Technical failure impacting production such that it would require revising market guidance |
| Production Loss | Reduction of expected capacity for a period of up to one month | Reduction of expected capacity for more than one month | Total loss of production for more than one month |
| Natural Disaster | Forecast Natural Disaster / threat of significant infectious disease | Natural Disaster impacting site / site affected by significant infectious disease | Natural Disaster / infectious disease affecting multiple sites |
| Terrorism Event | Unconfirmed threat against individuals or structures requiring further investigation | Confirmed threats against individuals or structures requiring intervention | Actual kidnap or extortion demand or actions involving harm and / or significant damage |
| Sabotage | Sabotage < $10,000 damage | Sabotage > $10K-100K damage | Sabotage > $100,000 damage |
| Civil Unrest | Local civil disruption with no imminent threat to site | Local civil disruption with possibility of affecting operations or workforce | Civil unrest or hostile threat with impact on operations and/ or workforce |
| Labour Unrest | Local labour disruption affecting operations / production for short period | Labour disruption for extended period | Long term labour disruption affecting multiple operations |

Note: Categories are to be considered mutually exclusive

## 6.2 Response Plans

The Emergency Response Plan is the overarching document to describe the organization, roles, responsibilities and resources for responding to emergencies at Beaver Dam Mine. However, in some cases specific regulatory requirements require separate emergency response plans; these may include responses found within the Nova Scotia Emergency Measures Act. Appendix F will include AMNS' Propane Response Plan when developed during the operational phase of the project and Appendix G includes AMNS' Spill Contingency Plan.

## 6.3 Notification and Communication

### 6.3.1 Emergency Event Notification

Please refer to Appendix A for emergency event notification tree and related stakeholder contact information.

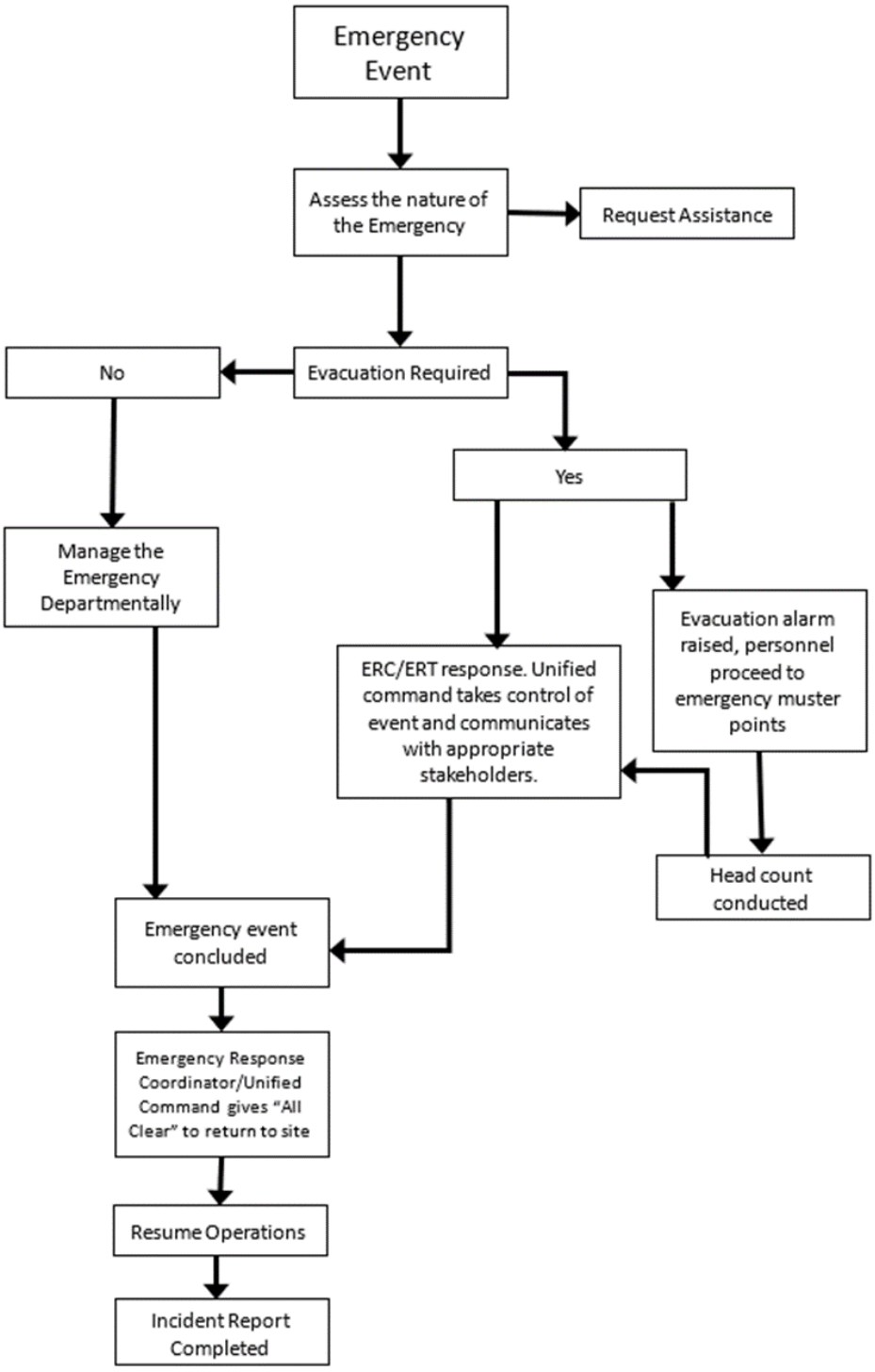
### 6.3.2 Emergency Communication

Please refer to Appendix A-1 for emergency communication plan relating to emergency contact and call out on site.

### 6.3.3 Emergency Command Structure

Please refer to Appendix A-2 for emergency command structure.

## 6.4 Emergency Response Flowchart



# 7 EMERGENCY RESPONSE TEAM

## 7.1 Membership

Membership of the ERT is comprised of team members from all departments of the mine. These members are trained in emergency response and mine rescue techniques and are required to maintain a current first aid credential of emergency first responder or higher while acting as a member of the ERT.

All members will undergo a pre-screening interview as well as medical assessments to determine fitness for role.

## 7.2 Equipment

Emergency equipment includes emergency response vehicle, water truck (if necessary), first aid equipment, breathing apparatus, gas detection equipment and absorbents and neutralizing agents.

Please see Appendix C for a listing of all ERT response equipment.

## 7.3 Maintenance

ERT members are responsible for the care and maintenance of all response equipment with the exception of the emergency response vehicle which falls under the scope of the mobile maintenance department.

All equipment must be captured in a preventative maintenance program as well as maintained and replenished post event.

# 8 RELATED DOCUMENTS AND RECORDS

- AGC - HS FRM – 006 Incident Report Management
- AGC - HS FRM - 004 Incident Report
- AGC – HS FRM – 033 Bomb Threat Information Form

# 9 REVIEW AND CONTINUOUS IMPROVEMENT

This Emergency Response Plan will undergo annual review and any changes or continuous improvement will be updated within this document. The changes will subsequently be communicated sitewide and distributed to any required support stakeholders in a timely manner.

# 10 ACRONYMS, UNITS, AND GLOSSARY

## 10.1 Acronyms and Abbreviations

| | |
|---|---|
| AMNS | Atlantic Mining NS Inc. |
| BMP | Best Management Practices |
| CEO | Chief Executive Officer |
| CFO | Chief Financial Officer |
| CMP | Crisis Management Plan |
| COO | Chief Operating Officer |
| CRT | Corporate Response Team |
| ERP | Emergency Response Plan |
| ERC | Emergency Response Coordinator |
| ERT | Emergency Response Team |
| H&S | Health and Safety |
| MSDS | Materials Safety Data Sheets |
| NRC | Natural Resource Canada |
| NSE | Nova Scotia Department of Environment |
| OHS | Occupational Health and Safety |
| PPE | Personal Protective Equipment |
| SMRT | Senior Management Response Team |
| SCP | Spill Contingency Plan |
| TDG | Transportation of Dangerous Goods |
| WHMIS | Workplace Hazardous Materials Information System |

# APPENDIX A
# EMERGENCY EVENT NOTIFICATION

**Table A-1: Injury Reporting**

| Reporting | Supervisor | Superintend. | Dept. Manager | Health & Safety Manager | General Manager | VP Business Integration & People | COO |
|---|---|---|---|---|---|---|---|
| **First Aid** | Immediately | Business Hours | Business Hours | Business Hours | Business Hours | Weekly Report | Weekly Report |
| **Medical Treatment Injury** | Immediately | Immediately | Immediately | Immediately | Immediately | Business Hours | Business Hours |
| **Alternate Duties Injury** | Immediately | Business Hours | Business Hours | Business Hours | Business Hours | Business Hours | Business Hours |
| **Potential Lost Time Injury** | Immediately | Immediately | Immediately | Immediately | Immediately | Business Hours | Business Hours |
| **Fatality** | Immediately | | | | | | |
| | | | | | | | |
| **Incident Moderate Risk Level** | Immediately | Business Hours | Business Hours | Business Hours | Business Hours | Business Hours | Business Hours |
| **Serious Incident High / Extreme Risk Level** | Immediately | Immediately | Immediately | Immediately | Immediately | Business Hours | Business Hours |
| **Reportable Incident** | Immediately | Immediately | Immediately | Immediately | Immediately | Business Hours | Business Hours |
| **Damage - > 20K** | Immediately | Immediately | Immediately | Immediately | Immediately | Business Hours | Business Hours |

**Notes**
Weekly Report – Details recorded in weekly report

**Figure A-1: Reporting Notification Flow Charts**

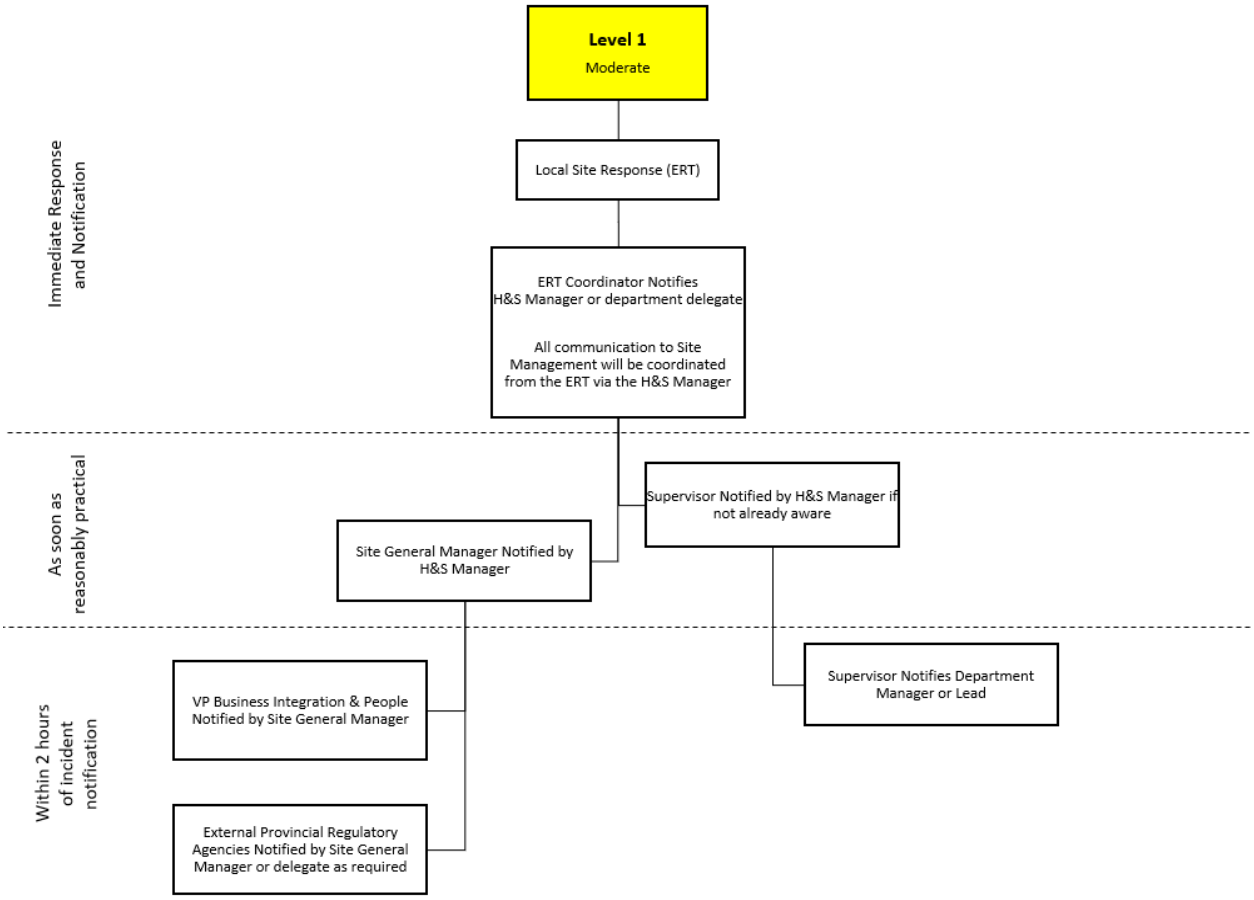
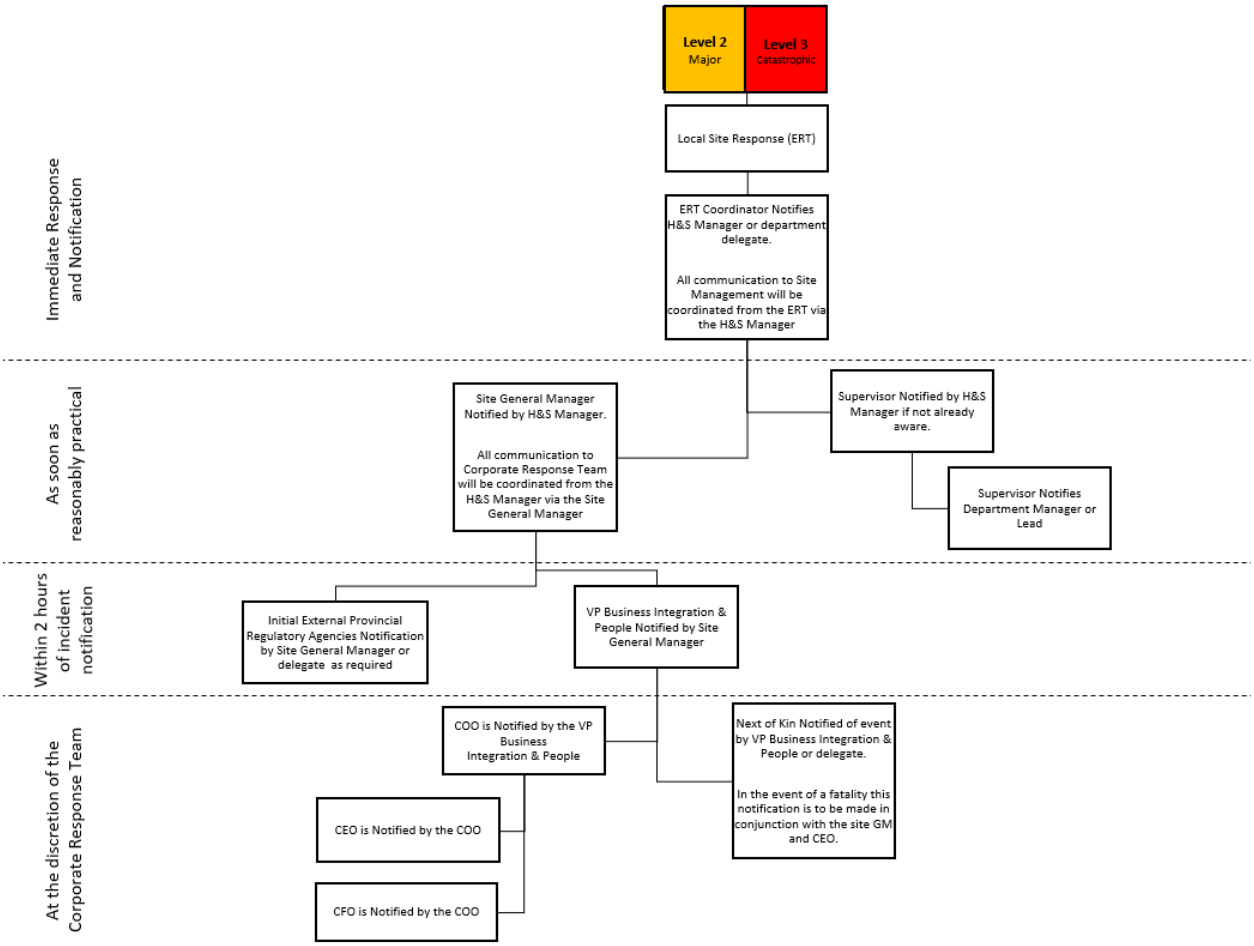


**Figure A-2: Reporting Notification Flow Charts**



# APPENDIX A-1
# STAKEHOLDER CONTACTS

**Table A-2: 24 Hour Emergency Contact Numbers**

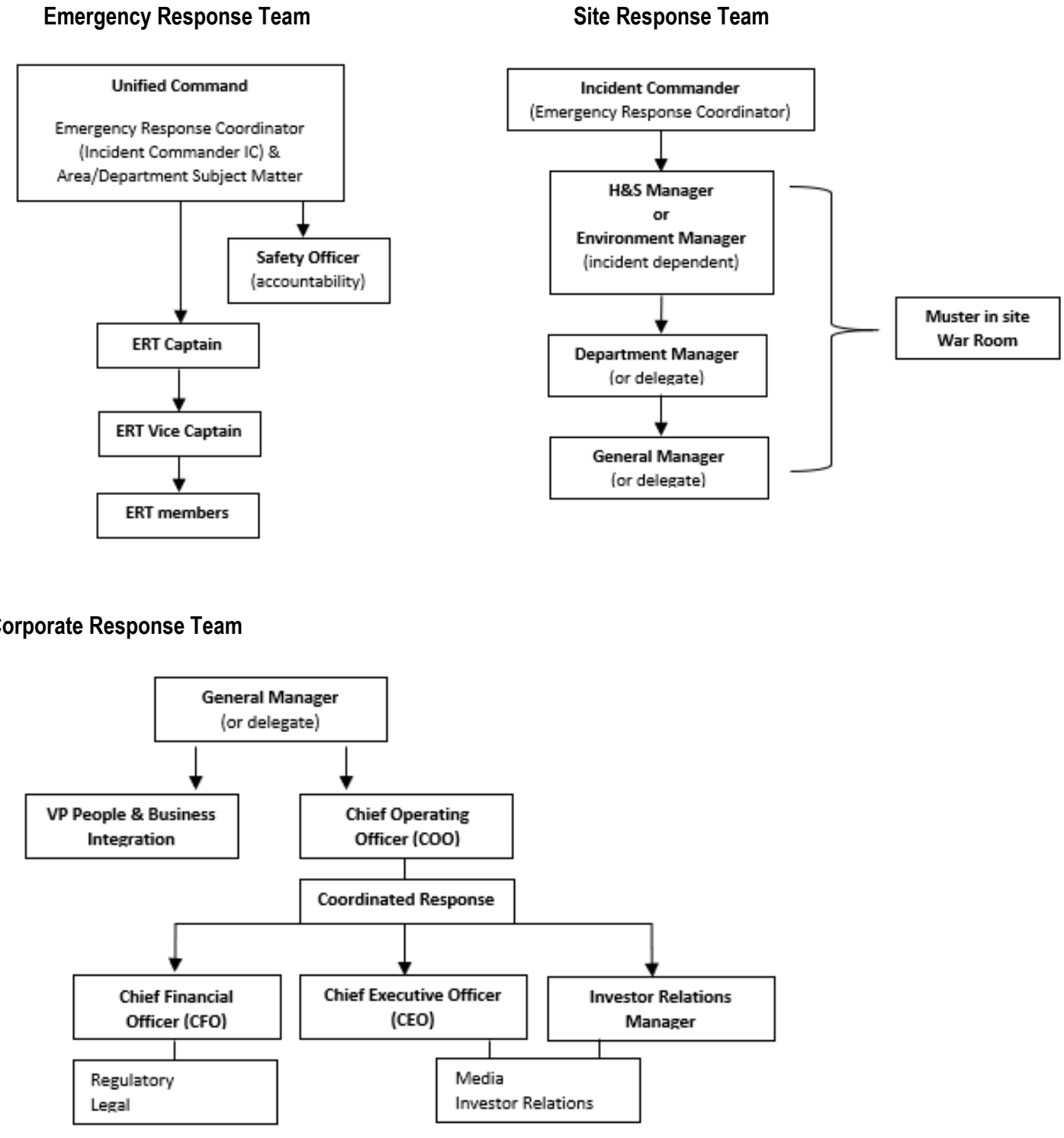
| | |
|---|---|
| Fire/Police/Emergency Health Services (Ambulance) | 911 |
| Nova Scotia Environment | 1-800-565-1633 |
| Occupational Health and Safety Nova Scotia | 1-800-952-2687 |
| Poison Control | 1-800-565-8161 |
| Environment Canada | **1-800-565-1633** |
| Irving Oil (Propane) | **1-888-310-1924** |
| Nova Scotia Power | **1-800-428-6230** |
| Halifax Regional Fire and Emergency (non-emergency) | **902-490-5530** |

**Table A-3: AMNS Stakeholders**

| Department | Function | Name | Phone |
|---|---|---|---|
| All | General Manager | Andrew Taylor | 705-626-9519 |
| Health & Safety | H&S Manager | Keith Closen | 902-384-3691 |
| Environment & Permitting | Manager Environment & Permitting | James (Jim) Millard | 902-403-1337 |
| Security | Security Superintendent | Terry Moser | 902-957-5729 |
| Mine | Mine Superintendent | Les Cook | 902-240-7238 |

# APPENDIX A-2
# EMERGENCY COMMAND STRUCTURE

**Figure A-3: Emergency Command Structure**



# APPENDIX A-3
# RESPONSIBILITIES & ACCOUNTABILITIES DURING CRITICAL EVENTS

# RESPONSIBILITIES & ACCOUNTABILITIES DURING CRITICAL EVENTS

In the event of an emergency which requires Level 2 (SMRT) and/or Level 3 (CRT) response which necessitates site control and response. There may be a need for augmented site report which would utilize all available personnel including management team members as well as others. To ensure appropriate tasks are being conducted, records maintained and appropriate controls in place personnel assisting in the event of an larger scale or more severe event a folder system has been created which identifies roles and responsibilities of all personnel assisting during the event.

The folders are kept in a cabinet located in the Admin Board Room and will be distributed as personnel arrive to the “war room” location following the occurrence of an event.

Though skill set and role are taken into consideration during an event, the system is based practically on availability of personnel during the event rather than job position.

# APPENDIX B
# HIGH LEVEL PROCEDURE – SITE EMERGENCIES

## Table B-1: Evacuation

**The evacuation of personnel is to provide a safe area to muster in the event of an emergency or threat.**

| Threat | Potential for injury of those you don't evacuate when alarm is raised. |
|---|---|
| **Notification** | **ERT, SMRT** |
| **Alarm** | **Area Evacuation Alarms,**<br><br>**Radio,**<br><br>**Direct Notification,**<br><br>**External Agency (Halifax Fire, EHS, RCMP as required)** |
| **Response** | **On Notification of Possible Evacuation**<br><br>• Secure confidential and valuable items if time permits, shut down electrical equipment and critical plant process' if safe to do so.<br>• Proceed to the designated Muster Point<br>• Follow instructions of the Person In Charge (Warden)<br><br>The PIC (warden) will arrange for evacuation. If area is unattended contact Department Manager **via the RADIO system** and provide particulars of the emergency. i.e. location, people involved and type of emergency.<br><br>**On Notification to Evacuate – shelter in place will be communicated if applicable**<br><br>**Mine/Mill Personnel**: Immediately leave building, work area, via the nearest safe exit and proceed to the Muster Point<br><br>**All staff**: remain at the muster points until otherwise directed by the PIC in conjunction with the ERT Unified Command.<br><br>PIC / Wardens will notify the Emergency Response Coordinator on the head count to determine if any all persons have been accounted for. If people have been identified as missing the Emergency Response Coordinator, General Manager and Emergency Services must be alerted.<br><br>Situational reports will be communicated to personnel through the PIC / Wardens.<br><br>**All Clear** will be communicated through the PIC in conjunction with the ERT Unified Command.<br><br>**Note:** If the emergency involves hazardous substances, evacuation will need to be up wind of the incident to prevent possible exposure to toxic vapours. |
| **External Response** | Halifax Fire<br>RCMP<br>EHS |

**Table B-2: Surface Mine Rescue**

**Depending on the location and nature of a failure, rescue may be required from the open pit mine facility.**

| **Threat** | • **Injury**<br>• **Disruption to Production** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 2**<br>• **Radio Channel 7** |
| **Response** | **If People Injured, Trapped or Missing: Raise the Alarm, via the RADIO system**, **stating "Emergency, Emergency, Emergency"**, and then provide particulars of the emergency. i.e. location, people involved and type and request ERT response.<br><br>**Response**: Emergency response (first-aid/ medical/ search /pit evacuation/ rope rescue etc). The Emergency Response Coordinator or delegate with the Chief Mine Engineer and Senior Geologist will assess the failure and determine the response<br><br>The Emergency Response Coordinator will determine if Emergency Services are required. If personnel are not accounted for, rescue plans will be developed and implemented.<br><br>The area is to be secured using Emergency Response Team or other site personnel to prevent personnel entering the danger zone<br><br>Emergency Response Coordinator will notify the H&S Manager who will communicate with the Chief Mine Engineer and General Manager regarding the failure. The General Manager or delegate will conduct the initial notification of the failure to LAE NS OHS Division.<br><br>**Rescue:** Medical response may be required and is to be lead under the direction of the rescue plan developed in coordination with the ERC. Supplementary site response procedures may be required during response.<br><br>Maintain security of affected area/s until PIC in conjunction with the ERT Unified Command gives "All Clear". |
| **External Response** | EHS<br>RCMP<br>NSE<br>LAE NS OHS Division<br>Project Management (if contractors involved)<br>Geotechnical Experts (advice on recovery) |

**Table B-3: Medical Emergency**

**Medical event requiring urgent medical treatment and transport to a medical facility.**

| Threat | Serious Injury / Illness |
|---|---|
| **Notification** | **ERT, SMRT**<br><br>**CRT (if level 3 event)** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7** |
| **Response** | Assess the scene quickly for any threatening situations (if safe to do so) and number of casualties<br><br>Remain with the casualty and provide appropriate support and treatment if safe to do so.<br><br>**Raise the Alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and extent of injuries. Request assistance.<br><br>Response: First aiders to coordinate and administer first aid to the injured person(s), advanced first aid to be administered by trained ERT personnel upon arrival on scene.<br><br>Notify Emergency Response Coordinator that an ambulance is required. The ERC or delegate shall call for an Ambulance by calling 911, and give site location, incident details, number of casualties and injuries.<br><br>Isolate any existing or potential hazards, eg – electrical power, source hazardous substances, crane operations, etc.<br><br>Protect the patient first aider and bystanders by isolating the area from traffic or any other hazards and make the area safe.<br><br>Reassure the injured person(s) that help is on the way and keep the casualty warm and avoid leaving the injured person (s) on his or her own.<br><br>A designate of the ERC will notify security to allow ambulance through entrance gate.<br><br>The ERC will delegate someone to meet EHS and direct to location of the casualty.<br><br>**Note**: Never leave the casualty alone. Do not move the casualty unless exposed to life threatening dangers. Provide support and appropriate assistance to casualty until emergency help arrives. |
| **External Response** | EHS<br>RCMP<br>LAE NS OHS Division |

**Table B-4: Emergency Transportation**

**Transportation to an emergency medical facility.**

| Threat | Serious Injury / Illness |
|---|---|
| **Notification** | **ERT, SMRT**<br><br>**CRT (if level 3 event)** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7** |
| **Response** | **Raise the Alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and extent of injuries. Request assistance.<br><br>Response: First aiders to coordinate and administer first aid to the injured person(s), advanced first aid to be administered by trained ERT personnel upon arrival on scene.<br><br>Notify Emergency Response Coordinator Charge that an ambulance is required. Supervisor or a member of the Emergency Response Team shall call for an Ambulance by calling 911, and give site location, incident details, number of casualties and injuries.<br><br>If an Ambulance is unable to provide timely response or transportation, the ERT vehicle will be utilized to transport casualties to the nearest available medical facility or to meet the Ambulance on route.<br><br>The ERT vehicle will only be driven by members of the ERT. |
| **External Response** | EHS |

### Table B-5: Fire Fighting

**A fire can occur at any location where fuel and ignition sources exist.**

| **Threat** | • **Injury**<br>• **Infrastructure / Asset Damage**<br>• **Disruption of Production** |
|---|---|
| **Notification** | **ERT, SMRT**<br><br>**CRT (if level 3 event)** |
| **Alarm** | • **Fire Detection Alarms**<br>• **Direct**<br>• **Phone**<br>• **Radio Channel 7** |
| **Response** | **Discovering a Fire**<br><br>Assist any person in immediate danger if safe to do so and isolate the fire by closing doors where applicable; pulling the fire alarms as they safely evacuate the space.<br><br>**Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and type and size of the fire and its location and request assistance.<br><br>Provide first aid to anyone injured and stay with the casualty until the assistance arrives if safe to do so.<br><br>Evacuation<br><br>The Person in Charge (Warden) will evacuate staff to the nearest muster point and remains there until personnel accounted for. The PIC will notify the Emergency Response Coordinator on the status of the head count.<br><br>**Fire Response**<br><br>The emergency response team will be despatched to the fire and will initiate minimal firefighting activities. **Note –** the site ERT will not partake in full scale firefighting activities, this is left to Halifax Fire. The Emergency Response Coordinator will report back to the H&S Manager, who will inform the General Manager.<br><br>The Emergency Response Coordinator will assess the fire event and determine if Halifax Fire, EHS or RCMP are required.<br><br>**Note**: If the fire is small, attempt to put out using the nearest Fire Extinguisher or hose reel, ONLY IF SAFE TO DO SO<br><br>**All Clear:** Halifax Fire, and/or the Emergency Response Coordinator will determine when the fire event has come to a conclusion and it is safe for personnel to return to normal duties. The all clear will be communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP |

**Table B-6: Vehicle Incident (on site)**

**Vehicle accident requiring emergency response from the site ERT and external emergency services.**

| **Threat** | • **Injury to occupants of the vehicles**<br>• **Environmental impact (dependant on vehicles involved)**<br>• **Impact to Company image / reputation** |
|---|---|
| **Notification** | **ERT, SMRT**<br><br>**CRP (if level 3 event)** |
| **Alarm** | • **Direct**<br>• **Phone**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, call **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. emergency type (vehicle accident), location, number of people involved and situational report on injuries and request ERT response.<br><br>Provide first aid to anyone injured and stay with the casualty (s) until assistance arrives and it is safe to do so.<br><br>Emergency response team and safety on call personnel are notified to respond.<br><br>The emergency response team will assess the accident and will initiate emergency management activities (triage of casualties, first aid, secure the vehicle i.e. fire or spill, secure the scene). The Emergency Response Coordinator will provide a situational report back to the H&S Manager, who will inform the General Manager.<br><br>The Emergency Response Coordinator will assess the accident and determine if Fire, EHS or Police are required and will notify the external emergency agencies (dial 911) of the accident and provide full details number of casualties and the condition of the casualties<br><br>If ambulance required, notify security of the pending arrival and to allow the ambulance through the entrance gate.<br><br>Delegate someone to meet EHS and direct to location of the accident.<br><br>Preserve the scene for investigation |
| **External Response** | RCMP<br>Halifax Fire (including HazMat)<br>EHS<br>LAE NS OHS Division<br>Transport Company (if Hazardous Substances / Explosives involved) |

## Table B-7: Cyanide Exposure

**Medical event requiring urgent medical treatment and transport to a medical facility.**

| Threat | Serious injury / death |
|---|---|
| **Notification** | • **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7**<br>• **Direct Contact with EHS via 911**<br>• **Direct Contact with AGC Contract Physician** |
| **Response** | **Raise the Alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and extent of injuries.<br><br>**Emergency Response**<br><br>Assess the scene for personnel that may have been exposed to cyanide, whilst maintaining your own safety.<br><br>Direct the personnel exposed to fresh air (if conscious)<br><br>If personnel unconscious, Emergency Response Team to respond and remove casualties to fresh air (using the appropriate PPE including SCBA)<br><br>Remove contaminated clothing.<br><br>Wash cyanide residue from the casualties.<br><br>Administer oxygen 15 lpm<br><br>Record baseline observations in preparation for communications with EHS.<br><br>Remain with the casualty and provide appropriate support and treatment.<br><br>Emergency Response Coordinator or delegate to contact EHS via 911 and request response to suspected cyanide exposure giving the contact details of the AGC contract physician on call identifying the availability of the CYANOKIT. EHS to request the approval for the attending Paramedics to administer the CYANOKIT when they arrive on site from the on-call physician.<br><br>Emergency Response Coordinator to request the CYANOKIT be collected from the site first aid room transported to the location of casualties.<br><br>Emergency Response Coordinator or delegate to notify security to allow ambulance through entrance gate.<br><br>Delegate someone to meet EHS and direct to location of the casualty.<br><br>**Note**: Never leave the casualty alone. Provide support and appropriate assistance to casualty until emergency help arrives. |
| **External Response** | EHS<br>RCMP<br>AGC On-Call Contract Physician |

## Table B-7: Cyanide Exposure

**Medical event requiring urgent medical treatment and transport to a medical facility.**

| Threat | Serious injury / death |
|---|---|
| **Notification** | • **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7**<br>• **Direct Contact with EHS via 911**<br>• **Direct Contact with AGC Contract Physician** |
| **Response** | **Raise the Alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and extent of injuries.<br><br>**Emergency Response**<br><br>Assess the scene for personnel that may have been exposed to cyanide, whilst maintaining your own safety.<br><br>Direct the personnel exposed to fresh air (if conscious)<br><br>If personnel unconscious, Emergency Response Team to respond and remove casualties to fresh air (using the appropriate PPE including SCBA)<br><br>Remove contaminated clothing.<br><br>Wash cyanide residue from the casualties.<br><br>Administer oxygen 15 lpm<br><br>Record baseline observations in preparation for communications with EHS.<br><br>Remain with the casualty and provide appropriate support and treatment.<br><br>Emergency Response Coordinator or delegate to contact EHS via 911 and request response to suspected cyanide exposure giving the contact details of the AGC contract physician on call identifying the availability of the CYANOKIT. EHS to request the approval for the attending Paramedics to administer the CYANOKIT when they arrive on site from the on-call physician.<br><br>Emergency Response Coordinator to request the CYANOKIT be collected from the site first aid room transported to the location of casualties.<br><br>Emergency Response Coordinator or delegate to notify security to allow ambulance through entrance gate.<br><br>Delegate someone to meet EHS and direct to location of the casualty.<br><br>**Note**: Never leave the casualty alone. Provide support and appropriate assistance to casualty until emergency help arrives. |
| **External Response** | EHS<br>RCMP<br>AGC On-Call Contract Physician |

### Table B-8: Hazardous Substance Release (other than cyanide)

**A release of hazardous chemicals can impact people over a wide area. If a major release occurs, an evacuation should be initiated, especially downwind of the release.**

| **Threat** | • **Injury / Illness**<br>• **Disruption to Production**<br>• **Adverse Impact on Company Image** |
|---|---|
| **Notification** | **ERT, SMRT**<br><br>**CRT (if level 3 event)** |
| **Alarm** | • **Area Alarms**<br>• **Direct**<br>• **Radio Channel 6**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. release type, amount released, location, people involved and request ERT response.<br><br>**Evacuation:** The PIC (Warden) will evacuate staff to the nearest muster point and remains there until personnel accounted for. The PIC will notify the Emergency Response Coordinator on the status of the head count and identify if any personnel are injured or have been exposed. Depending on wind conditions, evacuation should occur up wind, away from any vapour cloud.<br><br>The Emergency Response Coordinator will communicate with the H&S Manager and will initial report to the General Manager.<br><br>**Response**: The emergency response team will be dispatched to the spill / release and will initiate emergency response activities. The Emergency Response Coordinator in conjunction with area supervision will attempt to determine quantity and source of spill / release and will give a situational report back to the H&S Manager. The H&S Manager will communicate with the Manager Environment & Permitting as required.<br><br>The Emergency Response Coordinator will assess the spill / release event and determine if Emergency Services are required. If the incident is serious and cannot be contained, the Emergency Response Coordinator will call 911 and request assistance from the appropriate Emergency Services.<br><br>The SDS for the product leaking / spilt will be reviewed to assist in developing an emergency response and recovery plans and will be made available to the Emergency Services. Wind direction and strength should be considered during spill / release response.<br><br>Emergency Response Coordinator or delegate will arrange for the Emergency Services to be met at the gate and escorted on site.<br><br>**Recovery**: The Spill Response may require an area to be secured with barriers and signs to prevent access to the affected area until contained and cleaned up. |
| **External Response** | Halifax Fire (including HazMat)<br>EHS<br>RCMP<br>NSE |

**Table B-9: Entrapment/Confined Space Rescue**

**Any entrapment which may or may not be related to confined spaces. If supplementary hazards are present including but not limited to extreme atmospheric hazards, chemical release or an inability to extract personnel, the Halifax Fire Confined Space Rescue team must be notified and assistance requested.**

| **Threat** | • **Suffocation**<br>• **Fire / Explosion**<br>• **Injury / Illness**<br>• **Disruption to Production** |
|---|---|
| **Notification** | **ERT, SMRT**<br><br>**CRT (if level 3 event)** |
| **Alarm** | • **Area Alarms**<br>• **Direct**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. Workers trapped in Confined Space. Request assistance. ERC will determine required information for immediate notification of Fire, Police and EHS via 911.<br><br>**Rescue/Extraction**: The Mill/Processing Plant Area Emergency Alarm will be activated.<br><br>The area and (if possible) confined space must be inspected for additional hazards which may pose a threat to responders; this may include but is not limited to changes in atmospheric conditions, in flooding, etc. The area immediately surrounding the entrapment/confined space is to be secured and entry limited to response personnel and critical operations personnel assisting with rescue only. Confined space rescue trained personnel will act as primary responders and follow pre-designated confined rescue plan which had developed for the task. All equipment will be available on task site with supplementary equipment being provided by ERT as necessary.<br><br>The Emergency Response Coordinator communicate the incident to the H&S Manager who will give an initial report to the General Manager.<br><br>**Response:** The emergency response team will be despatched to the release and the Emergency Response Coordinator will assess the release and determine if the full need of Halifax Fire Confined Space Rescue and EHS support.<br><br>**All Clear:** Maintain involvement until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire Confined Space Rescue<br>EHS |

**Table B-10: Radiation Exposure**

**Any uncontrolled exposure to radiation or release. Supplementary notifications are required as per federal radiation regulations; additional information as per Canadian Nuclear Safety Commission license in compliance with the Nuclear Safety and Control Act. The site Radiation Safety Officer as well as Halifax Fire Hazmat team must be notified and assistance requested.**

| **Threat** | • **Injury / Illness**<br>• **Disruption to Production** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. Workers trapped in Confined Space. Request assistance. ERC will determine required information for immediate notification of Fire, Police and EHS via 911.<br><br>The Emergency Response Coordinator communicate the incident to the H&S Manager who will give an initial report to the General Manager.<br><br>**Response:** The emergency response team will be despatched to the release and the Emergency Response Coordinator will assess the release and determine if the full need of Halifax Fire Hazmat is required including EHS support. The entire mill facility should be evacuated to ensure no further exposure; all evacuations should be made to an upwind location. Any personnel who are suspected to have been directly exposed to radiation should be isolate and prepare for a hazmat decontamination; follow-up treatment will be conducted at the hospital. Halifax hazmat and potential additional external radiation resource support will determine the course of action for area specific decontamination.<br><br>**All Clear:** Maintain involvement until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire Hazmat<br>EHS<br>Radiation Subject Matter Experts |

### Table B-11: Explosion

**The most likely sources of an explosion is a premature blast detonation or from propane fueled process equipment.**

| **Threat** | • **Serious Injury**<br>• **Loss of Company Assets**<br>• **Disruption to Production**<br>• **Adverse Impact on Company Image** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7** |
| **Response** | An incident involving explosives (e.g. propane fuelled process equipment, premature detonation of explosives) has the potential to result in a major explosion and multiple injuries.<br><br>**Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and type and size of the fire and its location and request assistance.<br><br>**Evacuation**: The Person in Charge (Warden) will evacuate staff to the nearest muster point and remains there until personnel accounted for. The person in charge will notify the Emergency Response Coordinator on the status of the head count.<br><br>**Emergency Response**: The emergency response team will be placed on alert and will assist with evacuation of personnel. No attempt is to be made to approach or extinguish the fire.<br><br>The Emergency Response Coordinator will determine if emergency services (fire, ambulance and police) are required and will communicate with the H&S Manager.<br><br>**Safe Zone**: The emergency response team will establish and maintain a safe zone around the magazine. The size of the safe zone will be determined through consultation with explosive experts / engineering department.<br><br>The H&S Manager will notify the General Manager.<br><br>Maintain security of affected area until Emergency Response Coordinator gives "All Clear" |
| **External Response** | Halifax Fire<br>EHS<br>RCMP<br>LAE NS OHS Division |

### Table B-12: Pit Wall/Ramp Failure

**Open pit wall failures can pose a risk, depending on the location and nature of the failure.**

| **Threat** | • **Injury**<br>• **Disruption to Production** |
|---|---|
| **Notification** | **ERT, SMRT, CRT**<br>**NSE**<br>**LAE NS OHS Division** |
| **Alarm** | • **Direct**<br>• **Radio Channel 2**<br>• **Radio Channel 7** |
| **Response** | **If People Injured, Trapped or Missing: Raise the Alarm, via the RADIO system stating "Emergency, Emergency, Emergency"**, and then provide particulars of the emergency. i.e. location, people involved and type and request assistance.<br><br>**Response**: Emergency response (first-aid/ medical/ search /pit evacuation/ rope rescue etc). The Emergency Response Coordinator or delegate with the Chief Mine Engineer and Senior Geologist will assess the failure and determine the response.<br><br>The Emergency Response Coordinator will determine if Emergency Services are required. If personnel are not accounted for, rescue plans will be developed and implemented.<br><br>The area is to be secured using Emergency Response Team or other site personnel to prevent personnel entering the danger zone<br><br>Emergency Response Coordinator will notify the H&S Manager who will communicate with the Chief Mine Engineer and General Manager regarding the failure. The General Manager or delegate will conduct the initial notification of the failure to LAE NS OHS Division.<br><br>**Recovery:** The Geotechnical Expert (s) with Site Management will develop and implement a recovery plan.<br><br>General Manager advise LAE NS OHS Division of recovery plan. H&S Manager will communicate with external service providers if further assistance is required (e.g. additional rescue equipment etc)<br><br>**All Clear:** Maintain involvement until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP<br>NSE<br>LAE NS OHS Division<br>Project Management (if contractors involved)<br>Geotechnical Experts (advice on recovery) |

**Table B-13: Ground Collapse**

**A major ground collapse is likely to result in significant injury, equipment damage and disruption to mine production.**

| **Threat** | • **Injury**<br>• **Disruption to Production**<br>• **Impact of Company Image** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 2**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and type and request assistance.<br><br>The Emergency Response Coordinator will communicate with the H&S Manager and confirm the incident; the H&S Manager will give an initial report to the General Manager.<br><br>**Evacuation:** The Mine GF or Supervisor on learning of the event will assess the impact on personnel and initiate an evacuation (if applicable).<br><br>**Emergency Response**: The Chief Mine Engineer / Mine GF and/or Supervisor, and the Emergency Response Coordinator will assess the situation and develop a response plan.<br><br>The Emergency Response Coordinator in conjunction with the H&S Manager will determine if the Emergency Services (Halifax Fire, EHS and RCMP) are required.<br><br>ERT will report back to the Emergency Response Coordinator on the head count received from mine supervision. The Emergency Coordinator will notify the H&S Manager who will notify the General Manager.<br><br>If personnel unaccounted for, the Crisis Management Plan will be initiated and the CEO notified as per reporting hierarchy.<br><br>The area is to be secured using Emergency Response Team or other site personnel.<br><br>**Recovery:** The Geotechnical Expert (s) with Site Management will develop and implement a recovery plan. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP<br>LAE NS OHS Division<br>NSE<br>Geotechnical Experts (advice on recovery) |

**Table B-14: Severe Electrical Storm**

**Activities in the open during an electrical storm should be stopped due to the risk of being struck by lightning.**

| **Threat** | • **Personnel being struck by lightning**<br>• **Lightning initiating fire or explosion**<br>• **Disruption to power** |
|---|---|
| **Notification** | **SMRT** |
| **Alarm** | • **Observations of lightning / thunder**<br>• **Alarm**<br>• **Radio Channel 2 (mine operations)**<br>• **Radio Channel 6 (mill operations)**<br>• **Radio Channel 1 (safety & security)** |
| **Response** | Management to monitor the weather and to notify personnel when there is an approaching storm or threat of lightning strikes.<br><br>Personnel working out in the open - All personnel to move into a building, closed in environment for protection<br><br>Personnel working in closed cab vehicles and equipment - Operators to park their vehicle up, stay inside the cab and not touch handles / winders etc until the threat of lightning strike has past.<br><br>**If injury, damage or loss; raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. emergency type, location, number of people involved and situational report on injuries requesting assistance.<br><br>The Emergency Response Coordinator will confirm the incident and give an initial report to the H&S Manager who will communicate with the General Manager.<br><br>Emergency response will be determined by the extent of the injuries, damage or loss and in line with the specific emergency response criteria.<br><br>If rubber-tired equipment struck by lightning, park in secured/ isolated area for 24 hours<br><br>**All Clear:** Maintain involvement until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | EHS<br>Halifax Fire (as necessary)<br>NS Power<br>DNR |

**Table B-15: Forest Fire**

**A major forest fire could have a significant impact on the operations and surrounding community**

| **Threat** | • **Injury**<br>• **Damage / loss of Infrastructure** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Direct (department briefing sessions)**<br>• **Phone**<br>• **Radio** |
| **Response** | Monitor forest fire threat through the media and communications with the Halifax Fire, Department of Natural Resources and RCMP.<br><br>Initiate the Emergency Response Team to undertake a fire watch of the mining lease. If fire detected, raise the alarm, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the fire and location.<br><br>Emergency Response Coordinator will notify the H&S Manager who will communicate with the General Manager or delegate of the fire.<br><br>Emergency Response Coordinator regular communicates with the H&S Manager who will communicate with staff and contractors on the fire threat. An incident action plan will be developed and communicated as necessary.<br><br>Evacuation points for consideration depending on wind direction and extent of fast moving fire:<br><br>Mining: Open pit<br><br>Processing: Mill Control<br><br>Mining Maintenance Workshop: Open pit<br><br>Administration: Open pit<br><br>Take directions from DNR, Halifax Fire and RCMP.<br><br>**All Clear:** Maintain involvement until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire<br>RCMP<br>DNR |

**Table B-16: Natural Event**

**A major natural event, earthquake or seismic event is one that may cause damage to mine infrastructure and result in disruption to the operation.**

| | |
|---|---|
| **Threat** | • **Collapse of mine infrastructure (e.g. Tails Dam, pit walls, operations facilities, buildings or structures)**<br>• **Loss of access to mine (loss of ramps)**<br>• **Induces major fire/explosion (e.g. LPG or fuel storage)**<br>• **Disruption to security/communications** |
| **Notification** | **ERP, SMRT, CRT** |
| **Alarm** | • **By the event**<br>• **Site Alarms (emergency channel call out)**<br>• **Radio Channel 7** |
| **Response** | **Surface Assessment of Possible Impact**: The Supervisors / Managers on learning of the event will assess mine and plant infrastructure for integrity and operation and report any damage or losses.<br><br>**Emergency Response Team**: The Emergency Response Team will be placed on standby until a full assessment of operations has been completed.<br>If injury, damage or loss; raise the alarm via the RADIO system stating "Emergency, Emergency, Emergency", and then provide particulars of the emergency. i.e. emergency type, location, number of people involved and situational report on injuries requesting assistance.<br><br>Emergency Response Coordinator will notify the H&S Manager who will notify General Manager.<br><br>Emergency response will be determined by the extent of the injuries, damage or loss and in line with the specific emergency response criteria.<br><br>**All Clear:** Site security to me maintained until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP |

**Table B-17: Flooding**

**In rush of water or material into the mine area is likely to have an impact on personnel.**

| **Threat** | • **Injury**<br>• **Disruption to Production**<br>• **Impact of Company Image** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Direct**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system** stating "Emergency, Emergency, Emergency", and then provide particulars of the emergency. i.e. location, people involved and type and size of the fire and its location and request ERT response to the affected area.<br>The Emergency Response Coordinator will confirm the incident and give an initial report to the H&S Manager who will communicate the event to the General Manager.<br><br>**Consider Evacuation**: The Mine GF or Supervisor on learning of the in rush will determine if a full mine evacuation is required. If a full mine evacuation is required, a radio broadcast of the emergency will be communicated.<br><br>**Emergency Response**: The Chief Mine Engineer / Mine GF or Supervisor, and the Emergency Response Coordinator will assess the situation and develop an incident action plan.<br><br>The Emergency Response Coordinator will notify the Emergency Services (Fire, Ambulance and Police) if required. Emergency Response Team will initiate the response plan and account for all personnel. ERT will report back to the Emergency Response Coordinator on the head count. The Emergency Response Coordinator will notify the H&S Manager who will notify the General Manager<br><br>The area is to be secured using Emergency Response Team or other site personnel to prevent personnel entering the danger zone<br><br>**Recovery**: The General Manager / Chief Mine Engineer with technical support will develop and implement a recovery plan<br><br>**All Clear:** Site security to me maintained until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP<br>Geotechnical Expertise (if applicable) |

**Table B-18: Tire Fire**

**A tire fire can occur due to overheating or failure. Tire fires generate significant heat, smoke and can explode.**

| **Threat** | • **Potential for Serious Injury**<br>• **Equipment Damage**<br>• **Production Loss** |
|---|---|
| **Notification** | **ERT, SMRT** |
| **Alarm** | • **Area Evacuation Alarms**<br>• **Direct Report**<br>• **Radio Channel 7** |
| **Response** | Equipment operator/driver to park-up equipment / vehicle in designated safe location (if possible) and leave area immediately<br><br>**Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. location, people involved and type and size of the fire and its location and request assistance.<br><br>Park vehicle in designated area (if applicable and possible) evacuate all personnel to a "safe" distance of approximately 300 metres from the vehicle (due to possible tire explosion).<br>If there is no fire, but tire has overheated (delaminated, failed etc): park vehicle up in a safe location and raise the alarm. A fire watch will be established.<br><br>**If there is no fire, but the tire has overheated**: Park vehicle in a safe position (off decline and away from development and production headings) and raise the alarm. ERT team will responded and will establish a fire watch.<br><br>**Emergency response**: The Emergency Response Coordinator will assess the fire and determine the of the plan of attack based on the extent and severity of the fire communicating with the H&S Manager. The H&S Manager will notify the General Manager of the fire.<br><br>**Post Fire**: Maintain secure access to vehicle / burnt tire location for 24 hours. Emergency Response Team to monitor for 24 hours or until the "All Clear" is given. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP |

**Table B-19: Hazardous Substance Release**

**A release of hazardous substances can impact people over a wide area. If a major release occurs, an evacuation should be initiated, especially downwind of the release.**

| **Threat** | • **Injury / Illness**<br>• **Disruption to Production**<br>• **Adverse Impact on Company Image** |
|---|---|
| **Notification** | **ERT, SMRT**<br>**CRT (if level 3 event)** |
| **Alarm** | • **Area Alarms**<br>• **Direct**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. release type, amount released, location, people involved and request assistance.<br><br>**Evacuation** the PIC (Warden) will evacuate staff to the nearest muster point and remains there until personnel accounted for. The PIC will notify the Emergency Response Coordinator on the status of the head count. Depending on wind conditions, evacuation should occur up wind, away from any vapour cloud.<br>The Emergency Response Coordinator communicates the incident to the H&S Manager who will give an initial report to the General Manager.<br><br>**Response**: The emergency response team will be dispatched to the spill / release and will initiate emergency response activities. The Emergency Response Coordinator attempt to determine quantity and source of spill / release and will give a situational report back to the H&S Manager.<br>The Emergency Response Team will assess the spill / release event and determine if Fire, Ambulance or Police are required. If the incident is serious and cannot be contained, the Emergency Response Coordinator or delegate will call 911 and request assistance from the appropriate Emergency Services which may include Halifax Fire HazMat.<br>The Safety Data Sheet (SDS) for the product leaking / spilt will be reviewed to assist in developing an emergency response and recovery plans and will be made available to the Emergency Services. Wind direction and strength should be considered during spill / release response.<br>Emergency Response Coordinator will arrange for the Emergency Services to be met at the gate and escorted on site.<br><br>**Recovery**: The Spill Response may require an area to be secured with barriers and signs to prevent access to the affected area until contained and cleaned up.<br>Notify H&S Manager in the event that any personnel are exposed. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP<br>LAE NS OHS Division |

**Table B-20: LPG Release**

| **Threat** | • **Fire / Explosion**<br>• **Injury / Illness**<br>• **Disruption to Production** |
|---|---|
| **Notification** | **ERT, SMRT**<br>**CRT (if level 3 event)** |
| **Alarm** | • **Area Alarms**<br>• **Direct**<br>• **Radio Channel 7** |
| **Response** | **Raise the alarm**, **via the RADIO system stating "Emergency, Emergency, Emergency",** and then provide particulars of the emergency. i.e. LPG leak / fire and people involved. Request assistance. ERC will determine required information for immediate notification of Fire, Police and EHS via 911.<br><br>**Evacuation**: The Mill/Processing Plant Area Emergency Alarm will be activated.<br>The PIC (Warden) will evacuate staff to the muster point clear of the emergency and will remain there until personnel are accounted for. The PIC will notify the Emergency Response Coordinator on the status of the head count<br>The Emergency Response Coordinator communicates the incident to the H&S Manager who will give an initial report to the General Manager.<br><br>**Response:** The emergency response team will be despatched to the release and the Emergency Response Coordinator will assess the release and determine if the full need of Halifax Fire, EHS and RCMP support. Secure an exclusion zone around the vessel (500 to 1000-meter radius). The Emergency Response Team to assist in establishing exclusion zone.<br><br>**LPG Gas Management**: Shut down leak if safe to do so and isolate any ignition sources. Emergency Response Team to set up a perimeter and await the response of Halifax Fire. **(ONLY IF SAFE TO DO SO)**<br><br>Determine likely impact of any explosion and ensure potentially affected areas are evacuated.<br>Contact LPG supplier and advise them of the release and seek advice on management.<br><br>**All Clear:** Site security to me maintained until the all clear is communicated through the PIC in conjunction with the ERT Unified Command. |
| **External Response** | Halifax Fire (including HazMat)<br>EHS<br>RCMP<br>LPG Supplier |

**Table B-21: Civil Unrest**

**A civil unrest is any breach of the peace by a significant number of people assembled in one area or the gathering of an unruly mob. This may include any situation which could develop into a riot or significant event. Any civil unrest must be taken seriously; Management and Police must be notified immediately.**

| | |
|---|---|
| **Threat** | • **Injury**<br>• **Damage**<br>• **Operational downtime**<br>• **Community impact**<br>• **Media** |
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Phone**<br>• **Direct** |
| **Response** | Do not panic. Notify the Manager, Supervisor, Security and raise the alarm via phone ***(do not use the radio to communicate as it may alarm personnel)***<br><br>The threat will be communicated to the General Manager or delegate. The General Manager or delegate will notify the RCMP and appoint a Person in Charge (PIC), generally the Security Manager.<br><br>The PIC in conjunction with the Emergency Response Coordinator will arrange for the area of threat to be evacuated in an orderly manner.<br><br>**Response:** When directed, alert all employees to evacuate calmly to a designated safe location away from the potentially threatening environment if it is safe to do so. All employees should avoid confrontations with demonstrators if evacuation is necessary. If evacuation is not safe, have all employees shelter in place and await further instructions from security personnel or the RCMP.<br><br>All sensitive areas should be secured and all security access controls put in place. All media communication or external communication originating from the site should be silenced during the event as to not conjure further alarm. Maintain involvement until "All Clear/ Stand-down" given by General Manager / RCMP. |
| **External Response** | RCMP |

**Table B-22: Bomb Threat**

**A bomb threat must be taken seriously; Management and Police must be notified immediately.**

| **Threat** | • **Injury**<br>• **Damage** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Phone**<br>• **Direct** |
| **Response** | **Instructions for Person Receiving a Telephone or Written Bomb Threat**<br>**Receiving A Telephone Bomb Threat:**<br><br>• Listen – Be calm and courteous;<br>• Prolong the conversation. DO NOT put the caller on hold. Do not transfer the caller;<br>• Obtain as much information as possible using the "Bomb Threat Checklist";<br>• If possible, alert a co-worker to the situation while the caller is on the phone so that the following steps can be initiated:<br>- Acquire a copy of the "Bomb Threat Checklist" so you can collect all available information;<br>- Call Security "3630" and inform them that a Bomb threat is the process of being received<br>- Notify your supervisor<br>• Complete the "Bomb Threat Checklist" and provide it to Security personnel; and<br>• If the call is on an internal line, document where the call is coming from on the "Bomb Threat Checklist".<br><br>**Receiving a Written Bomb Threat**<br>Handle the letter as little as possible and then only by the edges;<br><br>• Call Security "3630" and notify them of the written bomb threat; and<br>• Information will be provided to security personnel:<br>- How was the letter received/delivered<br>- Who delivered it with date and time, when known<br>- Where is the letter/envelope<br>- Contents of the letter – postmark<br><br>Security Management in collaboration with Senior Management will contact "911" as appropriate. Emergency Dispatch will be advised that there is a Bomb Threat in progress. The following information will be provided:<br><br>- Your name, location and the number of a dedicated phone line for communications<br>- The information collected on the "Bomb Threat Checklist"; and<br>- Whether the threat is specific or non-specific<br><br>Security personnel, in collaboration with Site Management will organize search leads and set up Search Command Centre. Ensure that the Command Centre is searched first and a secure, hard wired phone line is in place. Ensure that building floor plans are in the Command Centre. |

| | |
|---|---|
| | **If an Unidentified Object is found**<br><br>• DO NOT TOUCH OR MOVE the object(s) or packages(s);<br>• Withdraw searchers from the immediate area;<br>• Do not touch electrical switches etc;<br>• Ensure there is a clear path to and from the object; and<br>• Advise the search lead of the following:<br>- Your name<br>- Location of the object<br>- Reason(s) suspected<br>- Description of the object<br>- Any other useful information<br>- Complete search of the area<br><br>Once an object is located, a second search should be initiated (to determine whether there are additional bombs.<br><br>**Whether to Evacuate?**<br>The decision to evacuate should be governed by certain facts:<br><br>• The size, design and construction of the threatened building;<br>• Proximity of the threatened building to other edifices, which could pose an added risk;<br>• The likelihood of that building's being targeted by bombers;<br>• How often recently the community or Atlantic Gold Corporation has received bomb threats and the extent of the publicity these received;<br>• The possibility of carrying out an effective search without having to evaluate; and<br>• Whether the threat was specific or non-specific.<br><br>**How to Evacuate**<br>Continuous security during evacuation should be a priority.<br><br>• Evacuation routes and safe areas must be thoroughly searched;<br>• Once the safe area is deemed safe, all personnel, including command center staff should be relocated;<br>• Evacuating personnel should be requested to leave in a calm and orderly manner. Some staff should be employed to assist in directing traffic; and<br>• Personnel should also be instructed to take their small, valuable personal belongings with them.<br><br>**Conclusion of a Search**<br><br>• In consultation with the RCMP, the CEO/designate will determine when the bomb threat will be deemed a hoax or whether to take further precautionary action;<br>• In addition, the CEO/Designate should be the only person responsible to cancel the "bomb threat" after every area to be searched has been searched or the time for a bomb to detonate has sufficiently passed, again asking to account the information obtained and the existing condition. |
| **External Response** | Halifax Fire<br>EHS<br>RCMP |

**Table B-23: Security Breach**

| **Threat** | • **Injury / Harm** |
|---|---|
| **Notification** | **SMRT**<br>**CRT (event dependent)**<br>**Security** |
| **Alarm** | • **Nil** |
| **Response** | The following information has been put together to assist you in the event of an intruder(s) entering the site. It is only a guide as every situation is different.<br>People who enter the site must be carefully monitored to ensure that their reasons for being on site are valid.<br>**Staff confronted by intruder(s) should:**<br>• Remain calm.<br>• What you do next depends on the individual situation and what you feel comfortable with **NEVER PUT YOURSELF AT RISK**.<br>• Approach him/her and inquire as to the purpose of their visit and if appropriate inform them that an appointment must be made to attend the site. Any person acting suspiciously or non-specific in their reason for being on site must be asked to leave and escorted off site. **DO NOT** under any circumstances attempt to confront or resist them.<br>• **OBEY** requests or demands of armed intruder(s) using your judgement<br>• Be courteous and speak if asked by the intruder(s).<br>• Move slowly. Only do this with safety. Advise the intruder(s) of any sudden unexpected movements you may have to make.<br>• If a weapon is present observe it and be aware of it.<br>• Note the intruder(s) conversation including any indecent language, accent, nicknames or speech peculiarities.<br>• Unless otherwise ordered, continually watch the intruder(s), making a mental note of their description. Pay particular attention to scars, tattoos and any other unusual or prominent features.<br>• When the intruder(s) depart, record vehicle type, registration number and route taken. Report the emergency to security on channel 7 who will notify the RCMP via 911. RCMP should also be asked to attend if there are concerns regarding potential intruder(s) from outside the site. |
| **External Response** | RCMP |

**Table B-24: Power Failure**

**A power failure may occur due to weather related conditions, equipment failure or malicious occurrence. Nova Scotia Power must be involved in any power failure occurrence to ensure that the grid system does not experience catastrophic overload when re-energization occurs.**

| **Threat** | • **Damage**<br>• **Operational downtime** |
|---|---|
| **Notification** | **ERT, SMRT, CRT** |
| **Alarm** | • **Phone**<br>• **Direct** |
| **Response** | Alarm is unnecessary, power failure should be communicated to site management including the general manager. All mill operational personnel should prepare their respective areas by ensuring that all equipment is controlled appropriately to ensure that no damage occurs during re-energization. Nova Scotia Power must be communicated with during all power failure events to ensure controlled re-energization.<br><br>***Always assume equipment is energized even during a power failure, ensure safe isolation prior to any work***<br><br>All workers in operational areas should have adequate emergency lighting available to conduct their tasks in a safe manner. Should an incident, medical emergency or other emergency event occur during a power failure all standard response protocols are to be followed.<br>Upon re-energization all site management plus the COO are to be notified. |
| **External Response** | Nova Scotia Power |

# APPENDIX C
# MAPS - TO BE UPDATED DURING OPERATIONAL PHASE OF PROJECT

**Table C-1: For detailed Emergency Supplies Locations please refer to area specific maps below. To be updated during the operational phase of the Beaver Dam Project.**



**Figure C-1: Supplies Legend**

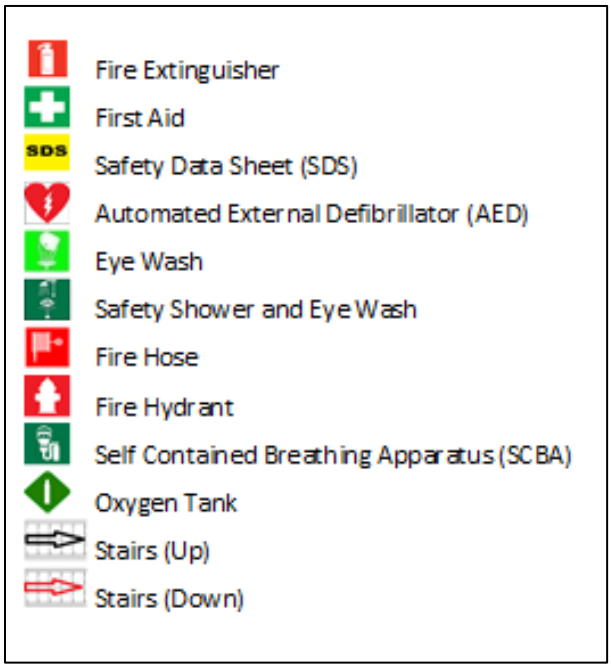


**Figure C-2: Proposed Site Map**

# APPENDIX D
# EMERGENCY SUPPLIES

**Table D-1: Emergency Supplies**

| | | | |
|---|---|---|---|
| Starter Kit V-Vac | Tychem suit | Cling Gauze - 10 pack | Saline Solution 0.9% 1 L x 10 |
| Gauze Non-sterile 1x5 yd 4/box | Duct Tape | 4x4 gauze - sleeve | WaterJel Burn Dressing (4x4") x 8 |
| Bandage Elastic Econo-wrap 2inx5yd | Air mover | Abdominal Pad - 10 pack | Assorted Bandages plastic |
| Bandage Elastic Econo-wrap 3inx5yd | intrinsically safe tool set | Triangular bandage | Assorted Bandages fabric |
| Ointment Polyspoirn 15gm | Reciprocating Saw | Splint, semi rigid (SAM) | Blood Pressure Cuff x 2 |
| Penlight w/o batteries black | Pry Bar | Saline (irrigation) 1000cc | stethoscope double head |
| Tweezers for F/A kit | Glass master | Shears, trauma | Accel TB Wipes x 2 |
| Monitor Blood Pressure | Automatic centre punch (glass breaker) | Blood Pressure cuff - adult | BZK Wipes (Antiseptic Towelettes) |
| Kendrick Extraction Device | halligan bar | Stethoscope | Vomitus Bags x 12 |
| SKED Stretcher | flathead axe | Backboard, Ferno plastic with pins | Instant Cold Packs x 20 |
| Stretcher Wire Basket GALV Coated | Bolt cutters | Head immobilization device, ferno | Rapid Relief Hot/Cold Packs x 4 |
| Head immobiliser universal | Portable lights | Cervical collar - adult | Adult Collars- adjustable x 6 |
| Pillow Case, disposible 25/pkg | Universal spanner wrench - hastings brass HB-10 | Backboard immobilization straps, set of 4 | Sam Splints- flat x 12 |
| Stretcher Ambulance bed type | Economy nozzle and combo nozzles | Femur Traction Splint, bilateral | Spine Board- Plastic x 3 |
| Film poly g/p heavy clr 120inx100ft | 1-1/2in rubber covered fire hose 100ft | Kendrick Extraction Device (KED) | assorted wooden splints 6/pk |
| Garage broom natural palmira 18in | 2-1/2in rubber covered fire hose 100ft | ASA 81mg chewable | 24" x 3" wire splint |
| Brush vehicle synthetic hair 10in | 1in rubber covered fire hose 100ft | Diphenhydramine (Benadryl) | half arm splint |
| Handle extension twist lock 12ft | Hazmat decontamination pool | Epinepherine auto injector (EPI Pen) 0.3mg IM | hand and wrist splint |
| Rubber Mallet 24oz | Tarps 8x10 | Airway management kit x 4 | full leg splint |
| Gillette Shave Cream 49gm | Battery ram 40lbs | BVM x 2 | half leg splint |
| Plug N Dike dry granular 48lb 5 Gal | Sterling 200ft - 12.5mm nylon static rope red, blue | BVM (reusable) x 2 | foot and ankle splint |
| Bag Carry 100ft rope | omniblock swivel pulley - single | Pocket mask w/O2 port x 4 | Stair Chair x 1 |
| Carabiner aluminum high grade 5 pk | omniblock swivel pulley - double | One-way valves for pocket masks x 6 | Wool Blankets x 6 |
| Wypall cloths x90 | prusik minding pulley | Non-rebreather O2 masks x 18 | Cloth Slings--No substitutes x 6 |
| Pad Oil Only 15inx19in 100/bale | petzl aveo site harness - rescue harness | Easifix 7.5 cm (3") x 9 | Conterra Speed Straps (sets of 6) x 3 |
| Rescue Randy | First Response Bag | Easifix 10 cm (4") x 9 | Nitrile (powder free) gloves- S x 1 |
| ERG Books | Oxygen Cylinder - Size D | Super Scissors (heavy duty) x 12 | Nitrile (powder free) gloves- M x 2 |
| Delineators | Oxygen Regulator - Size D | ABD, Sterile medium (8x10) x 24 | Nitrile (powder free) gloves- L x 3 |
| absorbent pads (oil and water) 100/box | Bag Valve Mask - adult | ABD, Sterile medium (12x16) x 24 | Nitrile (powder free) gloves- XL x 3 |
| 65 Gallon Overpack | Non Rebreather Mask - Adult | Non-Sterile 8 ply (5cm)-2" x 3 | Medical Back Pack (capable of holding a D cylinder) |
| Super Absorbent Flake socks 3in 30/case | Nasal Cannula - adult | Non-Sterile 8 ply (7.5cm)-3" x 3 | Sheets (disposable) x 6 |
| Oil containment boom 10ft (4xbundle) | Oral Pharyngeal Airway (set) | Sterile (5cm)-2" x 3 boxes | Pillows x 2 |
| absorbent bulk 10kg bags | Nasal Pharyngeal Airway (set) | Telfa Non-Adherent 5cm x 1 box | For Speakman Portable Eyewash/Shower-Preservative x 2 |
| chem gloves | Manual Suction (v-vac) | Tongue Depressors x 100 | |

# APPENDIX E
# EMERGENCY CALL PROCESS

**Table E-1: Touquoy Mine Radio Channels**

| Radio Channel | Department / Area |
|---|---|
| 1 | Health & Safety |
| 2 | Mine Operations/Pit |
| 3 | TMF Operations |
| 4 | Warehousing |
| 5 | Mill Projects |
| 6 | Mill Operations |
| 7 | Security |
| 8 | EMERGENCY |

**Table E-2: Proposed Beaver Dam Mine Radio Channels**

| Radio Channel | Department / Area |
|---|---|
| 1 | Health & Safety |
| 2 | Mine Operations/Pit |
| 3 | Environment |
| 4 | Warehousing |
| 5 | Site Services |
| 6 | |
| 7 | Security |
| 8 | EMERGENCY |

### Emergency Call-Out

In order to effectively communicate the need for assistance in an emergency the following procedure is to be followed when conducting an emergency call out via radio:

1. Contact Security on Channel 7 first stating EMERGENCY, EMERGENCY, EMERGENCY. Inform them of the type of emergency, location and if ERT is requested.

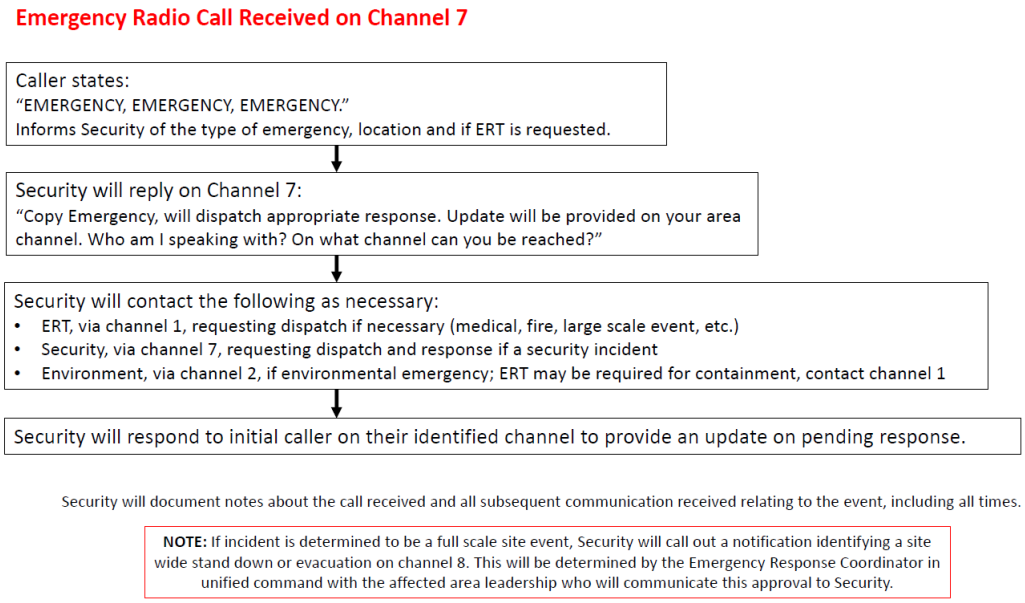
2. Security will call out the emergency evacuation (if necessary) on the channel specific to the work area, as noted above. They will state EMERGENCY, EMERGENCY, EMERGENCY and give very brief instructions on muster requirements.

3. Security will contact the ERC or delegate via channel 1 to inform of the emergency.

4. ERT members will be contacted by the ERC or delegate on their respective radio channels informing them to muster at the ERT facility for further briefing prior to response.

5. Should the emergency or evacuation require a site wide response, Security will provide the required information via the all-call Emergency channel 8.

## Figure E-1: Emergency Call-Out Flow Chart



## APPENDIX F

## EMERGENCY RESPONSE PLAN – PROPANE - – NOT INCLUDED WILL BE DEVELOPED AS PART OF THE INDUSTRIAL APPROVAL

# APPENDIX G
# SPILL CONTINGENCY PLAN


**DRAFT**

# SPILL CONTINGENCY PLAN
# VERSION 1

**Beaver Dam Mine Project 2021**
**Marinette, Nova Scotia**
**October 2021**

# REVISION HISTORY

| Version | Date | Notes/Revisions |
|---|---|---|
| Version 1 | October 2021 | Submitted with the Beaver Dam Mine Project 2021 Environmental Impact Statement Update application to the Canadian Environmental Assessment Agency and Nova Scotia Environment. Describes the protocols for the action for prevention, response to and recovery of an uncontrolled release of a hazardous material to the environment. |

# Table of Contents

## List of Tables

## List of Figures



## List of Appendices

# 1 INTRODUCTION

## 1.1 Project Overview

Atlantic Mining NS Inc. (AMNS) is proposing the construction, operation, decommissioning, and reclamation of an open pit gold mine in Marinette, Nova Scotia (Figure 1). The Beaver Dam Mine Project (the Project) will have an ore production rate of approximately 6,000 tons per day, over a five-year period. Ore from the Project would be crushed and transported approximately 31 km by road to the Moose River (Touquoy) mine for processing. Components of the Project include an open pit, material storage facilities (i.e., waste rock, topsoil and organic materials), mine haul roads, mine infrastructure for crushing, water management, hauling, truck maintenance, administration, and road upgrades.

## 1.2 Purpose

The Spill Contingency Plan (SCP) provides a plan of action for prevention, response to, and recovery of the uncontrolled release of hazardous material to the environment. This Plan is intended to supplement the site Emergency Response Plans (ERP) and should be read in conjunction with the ERP.

## 1.3 Scope

The SCP identifies potential spill scenarios that could occur during the operation of the Beaver Dam Mine Project and establishes the framework for response and recovery from such an event. This framework includes personnel responsibilities, training, spill response/containment/cleanup procedures, notification and reporting requirements. All AMNS employees and contractors are required to comply with both the ERP and SCP.

## 1.4 Health, Safety and Environment Policies

AMNS is committed to providing a healthy and safe work environment for its employees and integrating that commitment into our everyday activities. We believe all accidental loss of resources, including employee and physical assets, is preventable.

As a company, we acknowledge our responsibility to the environment and to local communities in which we work and do business. AMNS actively encourages its staff to recognize these responsibilities and behave in a positive manner toward the society in which we function.

## 1.5 Nature of Activities

The Beaver Dam Mine Project will include an open pit, material storage facilities (i.e., waste rock, topsoil and organic materials), mine haul roads, mine infrastructure for crushing, water management, truck maintenance, and administration buildings. During the operational phase of the project, there will be a figure attached to this plan that shows major project components and storage areas

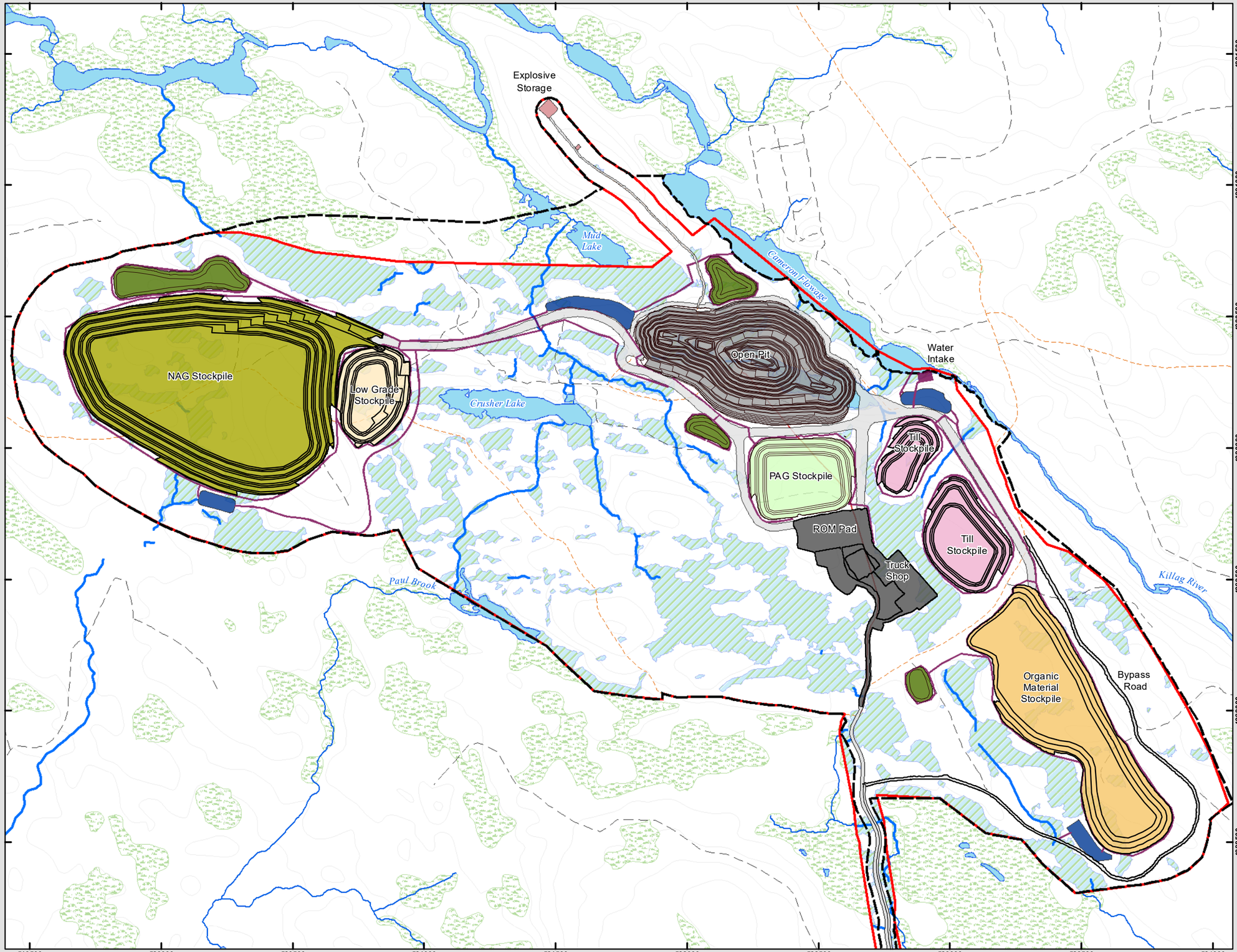
Prepared For:

Atlantic Gold

**FIGURE 1**

# Beaver Dam Mine Site

## General Mine Layout




**Proposed Infrastructure**

- Crusher Pad
- Open Pit
- Low Grade Stockpile
- NAG Stockpile
- PAG Stockpile
- Organic Material Stockpile
- Topsoil Stockpile
- Till Stockpile
- Explosive Storage
- Road
- Settling Pond
- Water Management

- Topo Line - 5m contour
- Local Road
- Dry Weather / Seasonal Road
- Track
- NSTDB Mapped Watercourses outside PA
- Field Delineated Watercourses within PA
- Open Water / Lake
- Field Delineated Wetlands within PA
- NSE Mapped Wetlands outside PA
- Preliminary Property Boundary
- Project Area Boundary


Coordinate System: NAD 1983 CSRS UTM Zone 20N
Projection: Transverse Mercator
Datum: North American 1983 CSRS
Units: Meter

0 125 250 500 m

1:13,500 Scale when printed @ 11" x 17"

Drawn By: LP
Reviewed By: XX

Date: 2021-04-12



McCallum Environmental Ltd.

Document Name: BD_EIS_Fig2.1-X General Mine Arrangement

of bulk hazardous material located on the project site. Hazardous material will be used and stored on-site for water treatment, equipment operation, and blasting activities. A list of hazardous material can be found in Appendix E.

# 2 DEFINITIONS

.

**Table 2-1: Definitions of terms used in the Spill Contingency Plan**

| Term | Definition |
|---|---|
| Ammonium Nitrate (AN) | The most commonly used oxidizer in explosives and blasting agents. |
| Corrosive Agent | A substance that has the power to cause irreversible damage or destroy another substance by contact. |
| Emergency | A serious unplanned event that poses potential harm to health, safety, production, equipment or environment that requires immediate action. |
| Emergency Response Coordinator (ERC) | Person responsible for the management of incident activities at the site of the emergency. |
| Emergency Response Plan (ERP) | A course of action developed to mitigate the potential damage of serious sudden or unplanned events that have the potential to endanger health, safety or business continuity. |
| Emergency Response Team (ERT) | A group of employees trained in emergency response and rescue that provide the field response activities to an emergency. |
| Emulsion | An explosives material containing substantial amounts of oxidizers suspended in water droplets surrounded by an immiscible fuel. |
| Hazardous Material | An item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. |
| Haze(ing) | Hazing is a process where you disturb the animal's sense of security to such an extent that it decides to leave and move on. |
| Hydrocarbon | A compound of hydrogen and carbon, such as any of those that are the chief components of petroleum and natural gas. |
| NSE | Nova Scotia Department of Environment. Environmental regulatory body. |
| Process Water | Water which is used in connection with mining operational processes. |
| Rehabilitation | The action of restoring something that has been damaged to its former condition. |
| Senior Management Response Team (SMRT) | A group consisting of department managers and/or supervisors that provide internal resources (people, equipment, materials) to support the emergency response activities. An authority structure in which the role of the incident commander is shared. |
| Spill | A release of a hazardous product out of its containment and into the environment. |
| Spill Contingency Plan | A comprehensive plan of action for spill prevention, response to, and recovery of hazardous material released (spill) to the environment (land or fresh water). The plan also identifies the resources and their locations that are needed to implement spill response. |

# 3 ROLES AND RESPONSIBILITIES

The general responsibilities of both internal and external responders during an emergency are outlined in the site ERP and presented in the table below:

.

**Table 3-1: Description of Roles and Responsibilities**

| Role | Responsibilities |
|---|---|
| General Manager | • Ensure appropriate resource availability for ERT and SMRT<br>• Responsible for timely and effective communication of events as per reporting and notification structure<br>• Liaise with regulatory agencies when required |
| Department Manager | • Provide timely and effective communication of ERP to department personnel<br>• Participate in timely and effective communication during an event as per reporting and notification structure and procedures |
| Emergency Response Coordinator (ERC) | • Act as liaison between ERT and H&S Manager<br>• Provide scene control and direction in the event of an emergency |
| Emergency Response Team (ERT) | • Act as first responders in the event of an emergency<br>• Provide area control in specific emergency circumstances<br>• Work under the direction and oversight of the ERC |
| Health and Safety Department | • Act as liaison between ERC and site management; chiefly the site General Manager<br>• Provide situational updates to the SMRT as necessary and as per notification and reporting procedures<br>• Liaise with external OHS regulators |
| Environmental Department | • Act as liaison between ERC and site management as required in any type of environmental event<br>• Provide situational updates to the SMRT as necessary and as per notification and reporting procedures related to environmental events<br>• Liaise with external environmental regulators<br>• Provide secondary assistance to ERC in regards to scene control and ERT direction as necessary during environmental events<br>• Assist as subject matter experts related to spills and remediation |
| Human Resources Department | • Provide personnel information to emergency services if necessary |
| Superintendent / Supervisor | • Provide area subject matter expertise as requested during an emergency event; provide direct support if requested |
| Employees / Business Partners | • Review and acknowledge requirements and procedures outlined in SCP |
| Technical Consultants | • Provide technical input in the case of an emergency or potential emergency. |

# 4 REGULATORY FRAMEWORK

The SCP has been developed and implemented to ensure that AMNS respects all applicable laws, regulations, and requirements from federal and provincial regulatory bodies.

The Plan is developed in accordance with Nova Scotia Environment's (NSE) Contingency Planning Guidelines (NSE 2016) as a potential condition of the Industrial Approval for the Project,

The following federal and provincial statutes and regulations also apply to spill contingency planning, response and reporting.

## 4.1 Federal Regulations

Canadian regulatory agencies administering explosives:

- Transportation of Dangerous Goods (TDG)
- Natural Resource Canada (NRC)

## 4.2 Provincial Regulations

### 4.2.1 Nova Scotia *Environment Act*

The following regulations apply to spill contingency planning, response and reporting.

- *Dangerous Goods Management Regulations*
    - *Environment Act, Section 84 - Dangerous Goods Management Regulations (amended to N.S. Reg. 57/2016)*
- *Environmental Emergency Regulations*
    - *Environment Act, Sections 74, 136 and 171 and subsection 122A (3) - Environmental Emergency Regulations (N.S. Reg. 16/2013)*
- *Contaminated Sites Regulations*
    - *Environment Act, Clause 25(1)(g) and Section 91 - Contaminated Sites Regulations (amended to N.S Reg. 36/2020)*
- *Petroleum Management Regulations*
    - *Environment Act, Sections 25 and 84 - Petroleum Management Regulations (N.S. Reg. 44/2002)*
- *Approval and Notification Procedures Regulations*
    - *Environment Act, Section 66 - Approval and Notification Procedures Regulations (amended to N.S. Reg. 8/2017)*

#### 4.2.1.1 Contaminated Sites Regulations

Spills that occur may be subject to the Contaminated Sites Regulations and the following protocol:

"The Notification of Contamination Protocol provides requirements for notification when required under Section 8 and Section 9 of the Contaminated Sites Regulations. The protocol addresses two contamination situations: a) free product presence in soil or groundwater; and b) soil, sediment, surface water or groundwater contamination." (NSE 2013)

Remediation of the spill site may proceed as prescribed by the Contaminated Sites Regulations under the direction of a qualified site professional.

### 4.2.2 Nova Scotia *Occupational Health and Safety Act*

- *Workers' Compensation General Regulations, Section 184 – Workers Compensation Act (amended to N.S. Reg. 183/2018)*
- *Workplace Hazardous Materials Information System (WHMIS) Regulations*
    - Occupational Health and Safety Act, Section 82 - Workplace Hazardous Materials Information System (WHMIS) Regulations (amended to N.S. Reg. 143/2014)

# 5 APPROACH TO SPILL RESPONSE

A spill is defined as the uncontrolled release of a hazardous product out of its containment and into the environment. Such releases may result in potential hazards to humans, vegetation, water resources, fish and wildlife which vary in severity, depending on several factors including the nature of the spilled material, quantity spilled, location and season.

There are generally two types of spills that could occur:

1. **Operational Spills**

   Spills of this nature result from the mine or mill operations. The area of concern in this context is the immediate vicinity of the Beaver Dam Mine Site. Spilled material could include reagents, diesel fuel, gasoline, waste oil, tailings slurry and/or process water to on-site land, waterbodies, watercourses, or wetlands.

2. **Carrier Spills**

   These are spills which could result from an isolated incident. Spills of this nature normally involve an independent carrier or a site vehicle and would occur on the site access/haul roads or on the public roads. Most spills would likely be on land, however since roads do cross watercourses there is potential danger of these spills entering a water system.

AMNS requires all site personnel to be trained on the specific procedures required for spill response initiation and reporting. All site personnel must comply with the following procedure upon initiation of a spill involving a regulated substance:

- Immediately warn other personnel working near the spill area;
- Evacuate the area if the health and safety of personnel is threatened;
- In the absence of danger, and before the ERT arrives at the scene, take any safe and reasonable measure to stop, contain and identify the nature of the spill;
- Notify the Environmental Department, who will aid in spill response operations as required. Notification of the area Supervisor is also required; and
- Complete necessary reporting documentation

## 5.1 Response Process

Upon initiation of spill response, the following procedure shall be completed by site personnel:

**Source Control** – If safe to do so, reduce or stop the flow of product. This may include actions such as turning off a pump, closing a valve, sealing a puncture, raising a leaking or discharging hose to a level higher than the material inside the tank, or transferring the material to a secondary container.

**Contain and Control the Free Product** – If safe to do so, prevent or minimize the spread of spilled material. Accumulate/concentrate spilled product in an area to facilitate recovery. Barriers positioned down-gradient of the spill will slow or stop the progression of the spill. Barriers can consist of absorbent booms (socks), dykes, berms, or trenches.

**Protection** – Evaluate the risk of the impacted area to the surrounding environment. If safe to do so, protect sensitive ecosystems and natural resources at risk by isolating the area and/or diverting the spilled material away from sensitive receptors such as watercourses, water bodies and wetlands.

**Report the Spill** – Provide basic information such as location, date and time of the spill, type and an estimate of material discharged, cause, photographic records, location, personnel involved, actions already taken to stop and contain the spill, meteorological conditions and any perceived threat to human health or environment.

An accurate record of the time and type of action taken, and people contacted, must be maintained by the on-scene Supervisor or respondent.

Reports shall be completed as per AMNS' Environmental Incident Report Form (see Appendix A) and emailed to: **environmental.incident@atlanticgold.ca**

**Spill Clean-up** – Recover and contain as much free material as possible. Ensure proper clean-up and spill controls are in place.

## 5.2 Levels of Emergency Spill Response

To effectively manage emergency response, a tiered emergency classification scheme is implemented. Each level of emergency, based on the significance of the event, requires varying degrees of response, effort and support. The impact on normal business operations will also differ as will the requirements for investigation and reporting. The emergency spill response classifications are defined by the following three emergency levels:

**Level 1 Emergency (Low Risk**) – Minor accidental release of a hazardous substance with;

- No threat to public safety; and/or
- Negligible environment impact to receiving environment

**Level 2 Emergency (Medium Risk)** – Moderate accidental release of a hazardous substance with;

- Some threat to public safety and threat to project personnel safety; and/or
- Moderate environmental impacts to receiving environment

**Level 3 Emergency (High/Extreme Risk)** – Major accidental release of a hazardous substance with;

- A threat to public safety and jeopardizes project personnel safety; and/or
- Significant environmental impacts to receiving environment

Emergency response levels are determined by the potential impact to human and environmental health. The potential impact is based on substance released, quantity spilled, and receiving environment. This includes specific consideration given to spills

occurring within engineered secondary containment. In general, a level 1 (low risk) incident would be a spill of any hazardous product that the discoverer, or other personnel within close proximity of the incident can competently, safely, and efficiently manage in terms of assessment, prevention, containment and clean-up. In general, A level 2 or 3 emergency spill response classification is a release of a hazardous product where there is potential for that product to enter a watercourse, wetland, or waterbody, and/or cause significant danger to life, health or environment. Consultation with the Environmental Department and SMRT may be needed to correctly classify emergency level.

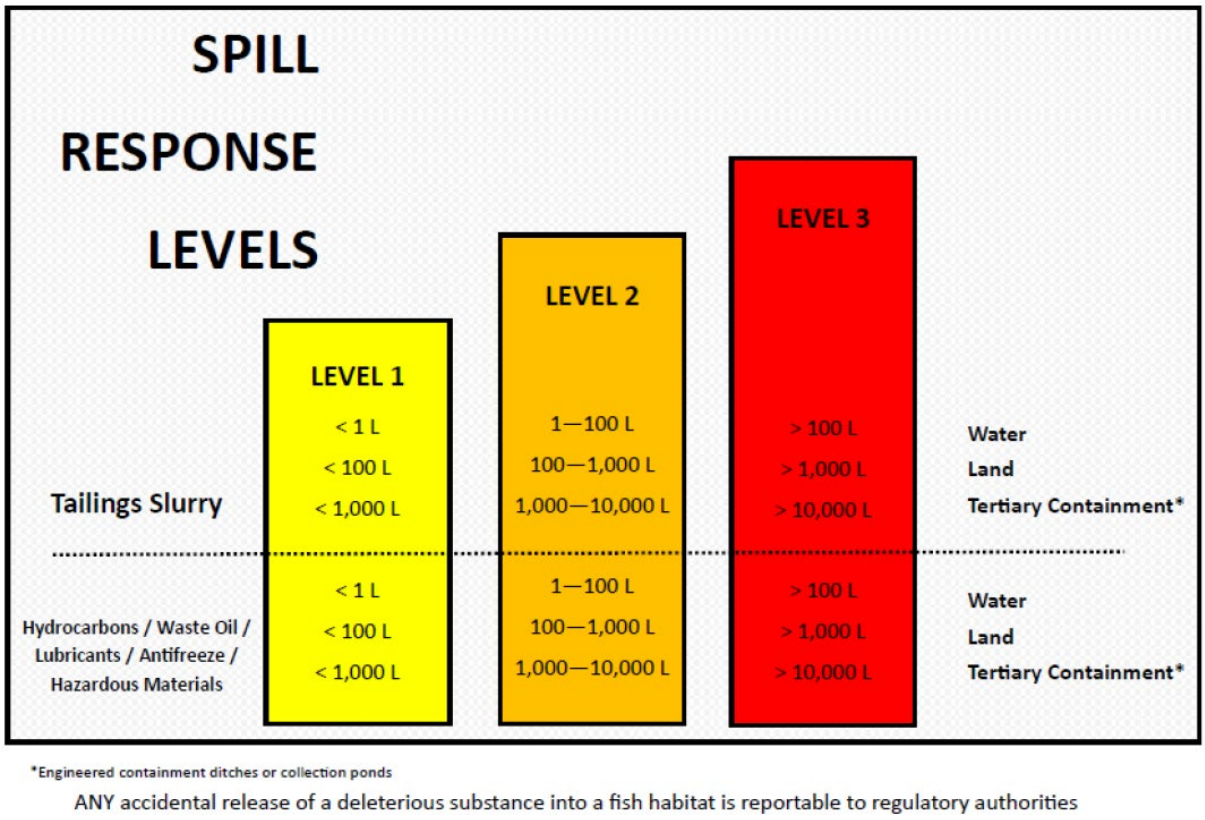



**Figure 5-1 Spill Response Levels**

## 5.3 Reporting

### 5.3.1 Internal Reporting Requirements

All spills (whether reportable externally or not) must be reported by the first responder to their immediate supervisor and then to the Environmental Department following assessment of the scene.

Responsible department supervisors are required to document the spill and provide notice to the Environmental Department within 4 hours of the spill occurrence. Documentation should be completed via the AMNS Spill Report Incident Heads Up Form (ENV FRM-001), provided in Appendix B. The Heads-Up form requires an initial assessment of the spill including spilled material,

quantity, location, description of receiving environment, immediate actions taken, and immediate cause. The spill can be reported via the **environmental.incident@atlanticgold.ca** email address or via phone, depending on the severity. Moderate to high level spills (such as spills of hazardous material over 100L on land or over 10L to water) are to be reported as soon as reasonably practical and safe.

The level of investigation is based on the risk level as determined by consideration of the worst-case realistic scenario (actual and potential consequence). If further investigation is required, the Environmental Incident Report (ENV-FRM-002) provided in Appendix A must be initiated within a reasonable timeframe (72 hours). This report requires inclusion of photos, a description of clean-up activities, subsequent actions, identifies root cause and determines any required corrective actions. This form may not be required for some low-level incidents (i.e., small "routine" spills to land under 30 L).

**All external reporting requirements for regulatory agencies shall be completed by the AMNS Environmental Department**

### 5.3.2 Regulatory Reporting Requirements

Under federal and provincial regulations, the Environmental Superintendent or designate will call the 24-hour Nova Scotia Spill Report line should a spill of a reportable quantity occur as per the reportable quantities in Appendix C. Several government agencies at the federal and municipal levels may ultimately be informed through the 24-Hour Spill Report line. The Environmental Superintendent or designate will ensure that the appropriate information is collected before reporting to the Spill Report line. Any reportable spill that occurs on or affects a third party (including leased crow property) must also be reported to the property owner.

Any spill of an amount greater than those listed in Appendix B is a "reportable spill".

The following information should be provided to the 24-Hour Spill Report line:

- Name
- Distance to drinking water wells
- Phone number
- What happened
- Product spilled
- Responsible party
- Quantity spilled
- Actions to contain the spill
- Quality of product (thin, viscous etc.)
- Location of spill
- Distance to water

Most reportable spills are formally reported to NSE by the Environmental Department using regulatory approved templates. Depending on the nature of the spill, NSE and/or Environment Canada may require the spill clean-up efforts and reporting be completed by an independent contaminated site professional.

### 5.3.3 Public Relations

In the case of a large environmental release occurring, it should be expected that local, regional and national media may reach out to employees or stakeholders of the organization in an attempt to receive information or to attempt to confirm information that may have already been received. As employees of AMNS, it is vitally important to remember a few points when approached with these types of questions:

- If you receive a media request, please ask the member of the media to identify themselves and the media outlet they represent. At that point, you are asked to direct them to make their inquiry to AMNS' Communications Manager.
- Employees who receive outreach from media sources are also asked to report those interactions to the Communications Manager themselves to ensure all information requests are followed up on.

# 6 EMERGENCY SPILL RESPONSE PROCEDURES

## 6.1 Reporting

The following general emergency response procedures should be followed as soon as a spill occurs or is detected by site personnel. This procedure may differ on a case-by-case basis.

- Ensure your personal safety and the safety of personnel in the vicinity
- Contact your immediate Supervisor
- If required based on the nature of the event as specified by the site ERP, contact ERT. Remove personnel from spill site.
- Don additional protective clothing (respirator, Tyvek, etc.) if appropriate to deal with the spill as per SDS.
- Absorb any liquids with appropriate absorbents from a spill kit.
- Prevent liquids or spill material from entering watercourses, streams, etc. by diking or by digging ditches to contain the spill.
- Take other actions as directed by the Emergency Response Coordinator (ERC).
- Delineate the spill area.
- Remove contaminated clothing/PPE, place in plastic bag and seal for disposal at an approved location.

The general investigative actions for a spill should include the following:

- Estimate quantity spilled.
- Delineate the area of contamination through visual identification. Sampling and analytical testing of spilled material, soil and/or water may be required with support from the Environmental Department.
- Evaluate available clean-up technologies (excavation, skimmers, vacuum trucks, booms, absorbent pads, etc.).
- Assess impact of clean-up on environment.
- Continuously evaluate worker safety.
- Evaluate treatment and/or disposal options.
- Assess root cause and develop corrective actions to prevent future occurrences.

## 6.2 Spills on Land

For small spills, a spill kit should be deployed to control the migration of the spill and to facilitate the cleanup.

For larger spills, the main spill control techniques involve the use of two types of barriers: dykes and trenches. These barriers should only be constructed if it is deemed safe to do so. Barriers should be placed down gradient from the source of the spill. Barriers slow the progression of the spill and also serve as containment to allow recovery of the spill.

Depending on the volume spilled, the site of the spill, as well as available material, a dyke may be built with soil, booms, lumber, snow, etc. A plastic liner should be placed at the foot and over the dykes to protect the underlying soil or other material and to facilitate recovery of the spill. Construct dykes in such a way as to accumulate a thick layer of free material in a single arc (V shape or U shape).

Trenches are useful in the presence of permeable soil and when the spilled material is migrating below the ground surface. A plastic liner should be placed on the down-gradient edge of the trench to protect the underlying soil. Liners should not be placed at the bottom of the trench to allow water to continue flowing underneath the layer of floating contaminant if applicable.

The use of large quantities of absorbent materials to recover large volumes of spilled fluids should be avoided. Large volumes of free-material should be recovered and containerized, as much as possible, by using vacuums and pumps appropriate for the material. Mixtures of fuel and water may be processed through an oil-water separator in the event of a hydrocarbon spill. Absorbent sheets should be used to soak up residual fuel on water, on the ground, and on vegetation.

Hazardous material is collected using techniques mentioned above and stored within appropriate containers. The hazardous material is then transported off-site by an approved contractor for disposal at an appropriate facility.

## 6.3 Spills on Water

Responses to spills on water include the general procedures previously detailed. Various containment, diversion and recovery techniques are discussed in the following sections. The following elements must be considered when conducting response operations:

- Type of water body or water course (lake, stream, river);
- Water depth and surface area;
- Wind speed and direction;
- Type of shoreline;
- Seasonal considerations (open-water, frozen); and
- Behavior of spilled product when mixed with water (i.e. hydrocarbons will float on water surface).

Containment of hydrocarbons (fuel, gas, oil) on water requires the deployment of mobile floating booms to intercept, control, contain and concentrate the floating oil. For a large water course (such as Cameron Flowage), typically, one end of the boom is anchored to shore for recovery using a skimmer. Reducing the surface area of the slick will consequently increase the oil thickness and

increase recovery. Mechanical recovery equipment (i.e. skimmers and oil/water separators) will need to be mobilized to site if required.

If hydrocarbons are spilled in a water body such as a lake, it may not be possible to deploy booms using a boat. In this case, measures are taken to protect sensitive (wetlands) and accessible shoreline. The fuel slick is monitored to determine the direction of migration. Measures will be taken to block and concentrate the oil slick on the lake using booms where it will sequentially be recovered using a portable skimmer, a vacuum, or sorbent materials.

In small slowly-flowing streams, channels, inlets or ditches, inverted weirs (i.e. syphon dams) are used to stop and concentrate moving fuel spills for collection while allowing water to continue to flow unimpeded. In both cases fuel will then be recovered using a portable skimmer, vacuum, or sorbent material.

In the unlikely case of a spill in the Killag River, diversion booming is used to direct the oil slick ashore for recovery. Single or multiple booms (i.e. cascading) may be used for diversion. Typically, the booms are anchored across the river at an angle. The angle will depend on the current velocity. Choosing a section of a river that is both wider and shallower makes boom deployment easier. Diversion booming may also be used to direct oil slick away from a sensitive area to be protected.

Hazardous material is collected using techniques mentioned above and stored within appropriate containers. The hazardous material is then transported off-site by an approved contractor for disposal.

In the event of a process water spill near a watercourse, depending on the volume spilled, the site of the spill, as well as available material, a dyke or trench may be built to divert and/or capture the spilled material prior to the watercourse. The material can then be disposed of with the use of a hydrovac or by portable pumps.

## 6.4 Spills on Snow and Ice

In general, snow and ice will slow movement of spilled substances. The presence of snow may also hide the spill and make it more difficult to follow its progression. Snow is generally a good natural sorbent; most spills tend to be soaked up by snow through capillary action.

However, the use of snow as absorbent material is to be limited as reasonably practical. Snow and frozen ground also prevent spills from migrating down into soil or at least slow the process. Ice prevents seepage of spilled substance into the underlying water body.

Response to spills on snow and ice includes the general procedures previously detailed. Most response procedures for spills on land may be used for spills on snow and ice. The use of dykes (i.e. compacted snow berms lined with plastic sheeting) or trenches (dug in ice) slow the progression of the spill and serve as containment to allow recovery.

Free-material is recovered by using a vacuum, a pump, or sorbent materials. Contaminated snow and ice are scraped up manually or using heavy equipment depending on volumes. The contaminated snow and ice are placed in containers or within lined berms on land. The contaminated material will be shipped off-site for treatment/disposal.

Hazardous material is collected using techniques mentioned above and stored within appropriate containers. The hazardous material is then transported off-site by an approved contractor for disposal.

## 6.5 Wildlife Protection Procedures

When required, the following audible and visual techniques shall be used to prevent wildlife from interacting with spilled product or a contaminated area(s) following a spill;

- Visual scare tactics, i.e. emergency response vehicles or personnel;
- Broadcast sounds, i.e. horns, shouting, hazing equipment;
- Exclusion, i.e. netting or sheeting applied in smaller spill areas.

To minimize environmental impact, these devices are most effective when initiated immediately.

The size of the spill and location in relation to sensitive wildlife areas must be assessed at the time of the event as to correctly apply the appropriate level of deterrence. Only workers trained in the safe and proper use of certain hazing equipment will be permitted to haze wildlife. Personal protective equipment (PPE) will be worn by all personnel using deterrent equipment, as per manufacturer's instructions, with minimum PPE consisting of eye and ear protection.

Hazing should be administered in such a way as to prevent wildlife from entering an area where they may become endangered. It is also important to ensure that hazing efforts do not cause already contaminated animals to scatter away before they are able to receive treatment. Techniques should be applied as soon as possible to prevent wildlife from interacting with spilled product or contaminated areas and becoming oiled or contaminated.

In the event of a spill occurring, the affected areas will be inspected for contaminated or dead wildlife. The collection of said wildlife will be done under the direction of applicable wildlife agencies, Table 6-1. Canadian Wildlife Services is required to be consulted and approval shall be obtained prior to disposing of any dead wildlife.

**Table 6-1: Emergency Contacts in Case of Spills Affecting Wildlife**

| Name | Location | Phone Number | Purpose |
|---|---|---|---|
| Nova Scotia Department of Lands and Forestry – Wildlife Division | 136 Exhibition St<br>Kentville NS<br>B4N 4E5 | During work hours<br>902-679-6091 | Wildlife interactions, effects on plants and other species. |
| Environment and Climate Change Canada - Canadian Wildlife Service - Atlantic Region | 17 Waterfowl Lane, P.O. Box 6227<br>Sackville NB<br>E4L 1G6 | Direct: 506-364-5044<br>Toll Free: 1-800-668-6767 | For information on incidental take of migratory birds, their nests and eggs. |
| Nova Scotia Environment (NSE) | 30 Damascus Road, Suite 115<br>Bedford Commons, Bedford NS<br>B4A 0C1 | During work hours<br>Phone: 902-424-7773<br>Fax: 902-424-0597<br><br>After hours<br>1-800-565-1633 | NSE emergency phone line. Can be consulted in case of emergency. After hours is through the Canadian Coast Guard. |
| International Bird Rescue | International | 707-207-0380 | Wildlife rehabilitation specialists, that manage various aspects of wildlife response. |

## 6.6 Disposal/Remediation of Contaminated Materials

Appropriate containers as approved by NSE can be used to contain and transport contaminated soil for treatment. In general, metal barrels should be used for any material containing hydrocarbons and plastic barrels for any corrosive agents. Disposal and/or remediation of material to be completed off-site at an approved facility.

## 6.7 Facilities and Contractors

See Appendix C for key contractor response contacts.

## 6.8 Equipment and Supplies

Equipment and supplies are necessary for conducting countermeasure activities in the event of a spill. A spill kit supply list is included in Appendix D. The location of all spill kits will be indicated once Project is in construction phase.

## 6.9 Rehabilitation Procedures

The goal of rehabilitation is to restore the site so that it can be safely used for the same purposes as it was prior to the occurrence. Rehabilitation may involve replacing contaminated soil with clean fill or routing watercourses away from the contaminated site until it can be cleaned up.

Rehabilitation procedures specific to spill type and location will be reviewed with NSE as required. Rehabilitation should commence immediately following spill clean-up as appropriate.

Monitoring should continue for a reasonable amount of time following rehabilitation to ensure that that clean-up and restoration activities were successful.

# 7 TRAINING REQUIREMENTS

Emergency spill response training subject to the requirements of this plan shall be completed in conjunction with AMNS' ERP, whereby the ERC, with support from the Manager, Environment and Community, will identify project training needs and the resources required to provide the necessary skills to personnel tasked with duties in emergency and spill response. Circumstantially, emergency spill response often occurs in parallel with other emergency responses (i.e. an overturned fuel tanker accident along the road not only causes imminent hazards to site personnel, but also to the surrounding environment). To facilitate efficient response to overall emergency response and preparedness, project personnel trained to respond to Health and Safety emergencies (ERT) shall also receive sufficient training to effectively respond to accidental releases of hazardous materials. Emergency and spill response training shall be developed and implemented throughout the lifecycle of the project to ensure the following requirements are fulfilled:

- Training meets or exceeds the requirements of Nova Scotia Health and Safety regulations
- Training enables responders to competently operate the equipment employed for emergencies and spill response purposes; and
- Training includes practices, drills and full-scale exercises for responding to the types of emergencies that are reasonably predictable for the operation

## 7.1 Training Objectives

The training objectives are to prepare site personnel in response procedures. The procedures that need to be reviewed include most topics described in this contingency plan:

- Notification Procedures
- Health and Safety Procedures
- Hazard Analysis
- Response Command System
- Reporting Requirements
- Equipment Inventories and Operation

## 7.2 Drills and Exercises

While drills and exercises can be used for training purposes, their primary function for this Plan is to provide the means of testing the adequacy of the plan's provisions and the level of readiness of response personnel. The ERC with support from the Environmental Department are responsible for coordinating the development of and assisting in conducting drills and exercises. The drills and exercises will include table top, functional drills and full-scale exercises. Refer to the ERP for further descriptions.

## 7.3 Training Preparation

Preparation for emergency and spill response exercises will vary depending on the type and scope involved; however, planning for these events shall include:

- Plan review and identification of possible problem areas;
- Establishing objectives;
- Identifying resources to be involved, including personnel;
- Develop exercise scenarios, a major sequence of events list, and expected action checklists; and
- Assigning and training controllers and evacuators.

AMNS will engage the appropriate regulators, contractors and consultants to conduct the training drills and exercises. All scenarios shall be realistic and based upon current operating conditions. The primary event (i.e. spill) shall be determined based on the objective of the exercise and completed in accordance with the prescribed regulatory requirements.

# 8 POTENTIAL SPILL ANALYSIS

To prepare for emergency spill response, potential spill analysis will be conducted on various worst-case spill scenarios. The exercise serves to identify potential risk areas, as well as to determine the fate of spilled products and their environmental effects. This analysis examines spill scenarios as they relate to the types of project activities.

Several types of materials have been identified as capable of causing environmental, health, and safety concerns should a spill occur while being transported, used, stored and/or handled. These include: fuel, explosives (emulsion), lubricants, and oils. These materials are typically utilized daily during project operations, often in sufficiently large quantities, warranting the evaluation of potential spill scenarios. All other hazardous materials, chemicals or wastes are handled/used/stored in smaller quantities and packaged/transported in small containers that limit the magnitude of the spills that can occur.

# 9 PETROLEUM MANAGEMENT

## 9.1 Introduction

Petroleum based fuel products in the form of diesel, gasoline and propane will be used throughout the life of the Project and stored in various locations within the Project area. The majority of the large mobile equipment (haul trucks, front-end loaders, dozers, graders, etc.) will consume diesel. Gasoline powered vehicles will largely be restricted to smaller vehicles (pickups, vans, etc.). Propane will be used for temporary and permanent facilities for space heating. Limited quantities of propane and gasoline will be used in maintenance facilities for smaller motorized equipment and machinery.

The containment area will be designed to contain a minimum of 110% of the volume of the largest tank and will be equipped with an oil/water separator to handle draining of stormwater runoff from within the containment. Any bulk storage tank proposed to be located outside an appropriately bermed area will be of the double-walled ("Envirotank") variety with appropriate barricades. No underground fuel storage tanks will be used at the Project.

The delivery of diesel fuel, gasoline, and propane will be conducted by tanker trucks from suppliers who routinely transport and distribute petroleum products. Transfer of these products from the tanker truck to double-walled tanks with bollards will be constantly supervised by the delivery person to ensure constant observation and immediate response should a spill occur.

As well, during each of the construction, operations and closure phases, smaller fuel storage tanks may be in use at various locations throughout the property in support of specific activities and/or facilities. Such tankage may take the form of:

- Stationary fuel supply "day" tanks;
- Mobile vehicle fuel supply tanks ("Tidy" tanks);
- Mobile bulk fuel service truck;
- Mobile equipment fuel tanks; and,
- Propane in both portable and fixed tankage.

Petroleum based fuel products will be delivered to the Project by road using tanker trucks under contract to third party licence commercial suppliers with proper certification and training in fuel transport. Fuel suppliers will be required to provide proper documentation supporting their authority to transport fuel and present their procedures and measures to minimize the risk of and to respond to the accidental release of fuel. The third-party supplier will be responsible for the fuels during transport to the Beaver Dam Mine Site and transfer to above ground bulk storage tanks at the site, at which point the AMNS will take possession of and responsibility for the fuel.

Surface mobile equipment will fuel-up at a dispensing station at the main fuel storage tank farm. Diesel and gasoline will be available for use using a cardlock system for dispensing. The fuel dispensing station will be constructed within a lined and graded or bermed area to contain minor spills or leaks during refuelling. The liner (e.g., 40 mm High-density polyethylene (HDPE) liner or equivalent) will be protected by aggregate bedding. Vehicles and mobile equipment will drive onto this bedding for refuelling. Fixed equipment will be supplied by the fuel service truck.

Fuel storage areas will be equipped with standard instrumentation and controls to monitor and safely manage the inventory in the tanks. Fuel storage areas and fuel service vehicles will be equipped with spill kits for emergency response. Each spill kit contains the appropriate type, size, and quantity of equipment for the volume/type of product present in the storage.

## 9.2 Safety and Environmental Management Measures

Petroleum based fuel products will be required at the site during the Construction and Operation phases of the Project. The following measures will be implemented to address the safe and proper transportation, storage and handling of petroleum-based fuel products to protect the health and safety employees, to cause no accidental harm to property or the public, and to protect the environment from deleterious effects associated with the accidental release of these products.

### 9.2.1 Transportation

All petroleum products will be transported to the Beaver Dam Mine Site by licenced contractor in compliance with Transportation of Dangerous Goods (TDG) and WHMIS legislation and handled by personnel with TDG and WHMIS training. All necessary documentation, including manifests and WHMIS Materials Safety Data Sheets (MSDS) will be required to accompany each product. Fuels will be properly secured and labelled during transport.

Drivers will be required to complete a site orientation prior to or upon arrival to site. Planning of delivery timing will consider weather and road conditions and availability of appropriate transportation equipment and personnel.

The transport of petroleum-based fuel products will include the following requirements:

- Trucks and containers will be properly marked, labelled, and placarded;
- Containers will be appropriate for the material being shipped and properly secured;
- Manifests will be maintained in accordance with federal and provincial regulations;
- MSDS will accompany all shipments and will be made available to all employees working with or in the vicinity of such products;
- Smoking will be prohibited while transporting, transferring or otherwise handling fuel products;
- Fire extinguishers and fire prevention materials will be adequate and appropriate for the material being transported;
- Spill response materials will be adequate and appropriate for the materials being transported; and
- Drivers will be adequately trained and equipped for spill first response, containment, and communication.

Best Management Practices (BMPs) related to tank trucks and transportation include the following:

- It is expected that all bulk fuel tank trucks will be certified as required to the current CSA standard and all fuel transport conducted in accordance with TDG Regulations;
- All bulk fuel tank trucks will be inspected as per Transport Canada current requirements:
    - Inspection by a facility that is registered by Transport Canada;
    - Visual inspections and a leak test every year and an internal inspection and pressure testing every five years;
- All large TDG tanks greater than 454 L will meet current standards for flammable or combustible liquids;
- All tank trucks, trailers, and semi-trailers used to transport fuel tanks will meet commercial vehicle inspection requirements; and,
- No person will drive or operate on a highway a vehicle carrying a load unless the load is secured in a manner which ensures that:
    - The load will not escape from the vehicle;
    - The load will not shift or sway in a manner that may affect the operation of the vehicle.

### 9.2.2 Delivery

Bulk fuel storage tanks at the Project site will be filled from the fuel transport tanker truck by the contract supplier. AMNS will take possession of the fuel once it has been transferred to the bulk storage tank. As a result, fuel delivery will be the contractor's responsibility up to that point. All fuel deliveries will be supervised by an employee of AMNS.

Transfer from tanker trucks to tanks at the fuel storage facilities will be done using enclosed lines, hoses, and pumps. Diesel and gas will be delivered to larger storage tanks on site by commercial purpose designed tanker trucks equipped with the necessary instrumentation to ensure no spills.

Fuel will be transferred as per the established procedures of the fuelling contractor. Before fuel transfer, it is important to ensure that:

- All fuel transfer hoses have been connected properly and couplings are tight;
- Transfer hoses are not obviously damaged;
- Fuel transfer personnel are familiar with procedures;

- For fuelling stations, personnel are located at both the fuel truck and fuel transfer tank(s) and have the ability to shut off fuel flow manually;
- A means of communication has been established between the two people transferring fuel;
- A high liquid level shutoff device can be substituted for the person at the delivery tank, in which case operation of the shutoff should be verified each time it is used; and,
- Prevention of the overfilling storage tanks will be provided by one or both of the following:
    - Continuous supervision of the filling operations by personnel qualified to supervise such operations;
    - An overfill protection device that meets the current standard for Flammable Liquid Storage Tanks.

### 9.2.3 Storage

Fuel will be stored away from ignition sources and environmentally sensitive areas, with consideration of site drainage and surface flows and pathways to the nearest waterbody. These storage sites will be well ventilated, and the areas will be designated as non-smoking. Sites will be equipped with fire extinguishers and spill kits and anti-spill devises like drip pans, interceptor drains, high level sensors, and one-way valves. Signage will be posted at all fuel storage areas for the purpose of controlling and/or restricting access to the area.

BMPs related to bulk fuel storage include the following:

- Storage tanks for combustible and flammable liquids will be built and maintained in accordance with current standards (eg. Underwriters Laboratories of Canada (ULC) tank specifications, and bear a current ULC certification plate or label);
- Aboveground storage tanks will be installed on firm foundations designed to minimize uneven settling and corrosion, and to prevent the design stress of the tank from being exceeded;
- Aboveground storage tanks, which will be out of service for a period not exceeding 180 days, will be isolated by closing and securely locking the necessary valves, or by capping the piping from the tank;
- Tanks will have a minimum 1 m separation between them;
- Current certification plates or labels will be checked to ensure that all tanks meet a specified engineering standard;
- Tanks will be filled to an acceptable safe filling level corresponding to approximately 90% of capacity; and,
- Valves at the storage tank must be constructed of steel according to the Fire Code.

### 9.2.4 Dispensing

Fuel dispensing personnel will receive training and must demonstrate an understanding of the procedures and work instructions.

Key components to be included in the fuel handling procedures include:

- Fuel dispensing system will meet applicable regulations and codes;
- Fuelling to be conducted outdoors;
- Dispensing fuel with approved hose-reel and automatic closing nozzles;
- An automatic shut-off nozzle must be used when using an integral hold-open device;
- Tanks must not be filled beyond their safe filling level;
- Measures to ensure no overfilling of tanks;
- Operators will always stay with the nozzle during refuelling;
- Precipitation will not be allowed to accumulate within containment area;
- Monitoring and reporting of any release (reportable or not) should they occur; and,
- Oil/water separators installed where necessary.

### 9.2.5 Handling and Use

- WHMIS MSDS will accompany all petroleum-based fuel products and will be made available to all employees working with or in the vicinity of such products;
- All petroleum based fuel products will only be handled by personnel with TDG and WHMIS training and the appropriate certifications for handling explosives;
- Appropriate placards will be visible on all four sides of any fuel truck or mobile refuelling trailer that is greater than 2,000 L whether filled or empty and all fuel handling procedures will be posted;
- All vehicles used to transport fuel and all fuel system locations must have spill response kit, capable of containing and absorbing fuel spills;
- Legible operating instructions will be clearly posted at card or key activated dispensers and emergency instructions will be conspicuously posted;
- Refueling equipment from a tank vehicle will be permitted if the following conditions are met:
- The fuelling is conducted in connection with commercial or industrial operations;
- The fueling is conducted outdoors on commercial or industrial establishments;
- The fuelling is conducted using approved hose-reel and automatic closing nozzles; and
- Appropriate draining and equipment are supplied to deal with any incidental spillage.

- Fueling and servicing of equipment will not occur within a riparian management area of a stream or wetland, or within 30 m of a lakeshore, unless:
- The equipment is hand held; or
- The fuelling or servicing is required for carrying out fire fighting activities, required to move broken down equipment, or authorized by the Environmental Manager.

#### 9.2.5.1 Safety Considerations

- Sites will be selected that are easily visible and that are located away from high traffic areas;
- Fuel storage areas will be physically protected from collisions with vehicles either by moving the tank vehicle or mobile skid or by placing a barrier between traffic areas and tanks. Fixed dispensers will be protected against collisions by either a concrete island not less than 100 mm high, or guard rails;
- MSDS will be made available at all locations where fuel products are stored and used;
- Signs indicating that ignition must be turned off, smoking is prohibited, and any other fuelling procedures will be visible to all drivers approaching the dispenser; and,
- Two portable fire extinguishers will be available within 9 m of the fuel area and proper bonding, grounding, and isolation components will be established for protection against static charges.

When working with diesel products, the following handling procedures will be followed:

- Do not get in eyes, on skin, or on clothing;
- Avoid breathing vapours, mist, and fumes;
- Do not swallow;
- Wear protective equipment and/or garments if exposure conditions warrant;
- Wash thoroughly after handling;
- Launder contaminated clothing before reuse;
- Use in areas with adequate ventilation;
- Keep away from heat, sparks, and flames;
- Store in a closed container in a well-ventilated area; and,
- Bond and ground during transfer.

When working with unleaded gasoline, the following handling procedures will be followed:

- Avoid skin contact;
- Avoid breathing vapours, mist, or fumes;
- Launder contaminated clothing before reuse;
- Store flammable liquids area away from heat, ignition sources, and open flames; and,
- Bond and ground during transfer.

### 9.2.6 Environmental Measures

The environmental protection measures relating to fuel management include reasonable practices and procedures aimed at minimizing the risk of a negative environmental effect (i.e., release to ground or water) and equipment and storage facilities designed with best available technology to minimize the risk of the release of fuel to the environment.

Environmental protection measures are incorporated into the transportation, storage and handling measures for petroleum fuel products as described above and summarized below:

- The Project facilities will be sited and designed to minimize the risk of accidents and/or malfunctions from occurring and to minimize the potential impact from a release of a deleterious substance from an accident and/or malfunction;
- Fuel will be stored away from ignition sources and environmentally sensitive areas, with consideration of site drainage and surface flows and pathways to the nearest waterbody;
- AMNS will maintain a supply of spill response and clean up equipment on site throughout the various construction sites;
- AMNS will employ a site based Environmental Manager in advance of the commencement of construction to ensure that suitable environmental precautions and standards are being employed;
- The mine access road will be constructed to accommodate safe passage of trucks hauling potentially hazardous commodities to and from the Beaver Dam Mine Site including petroleum products. The road will be closed to public access and speed limits will be established and enforced to prevent accidents. The road will be maintained by site-based personnel or a contractor to ensure that trucks are travelling on a safe road surface during both summer and winter conditions;
- A containment area will be designed to contain a minimum of 110% of the volume of the largest tank. If small fuel tanks (not including 205 L barrels) are required for refuelling they will either be double-walled “Envirotanks” or will also have either a containment berm or a sealed concrete containment area. All areas where petroleum products are stored or handled will have fire extinguishers and spill kits in clearly visible areas;

- Site wide procedures will be developed and employed to regulate where and how field refuelling and servicing activities are to occur. These procedures will be a term of contract for all site construction contractors. Such procedures will dictate that re-fuelling and servicing cannot take place in close proximity to water bodies or into areas where spills can easily reach watercourses; for example,
    - Refuelling and servicing of mining equipment will take place either within the boundaries of the open pit or at designated sites where spills relating to accidents and malfunctions can be contained;
    - Equipment will not be serviced, refuelled, or washed within 100 m of the watercourse or in areas that may receive runoff that could potentially enter the watercourse;
    - All hydraulic, fuel, and lubrication systems of equipment working in the vicinity of a watercourse will be in good repair to prevent leakage and deposition of deleterious substances into the water.
- All petroleum products no longer required will be removed from the site once mining cease;

# 10 REVIEW AND CONTINUOUS IMPROVEMENT

The plan will be reviewed annually but also following drills, exercises and spill responses. Updates will consider the accuracy and currency of the information included in the plan and changes to equipment, personnel and the site/risk. Records such as equipment inventory and maintenance, personnel training, drills and exercises, and updates of plans will be maintained.

The controlled copy of this document will be updated, and copies made as required. It is the responsibility of all employees to refer to the most current version of the plan. Copies or extracts of this document, which have been printed, are uncontrolled copies and cannot be guaranteed to be the latest version.

# 11 REFERENCES

AMNS. 2021a. In progress. Updated Environmental Impact Statement. Beaver Dam Mine Project. Submitted to the Impact Assessment Agency of Canada and Nova Scotia Environment. April 2021. Marinette, NS.

Nova Scotia Environment (NSE). 2013. Notification of Contamination Protocol. Effective Date Jul 6, 2013

Nova Scotia Environment (NSE). 2016. Contingency Planning Guidelines. Effective Date: May 10, 2016

Nova Scotia Environment (NSE). 1994-95, c. 1, s. 1. Nova Scotia Environment Act.

Prospectors and Developers Association of Canada (201 e3 Plus: A Framework for Responsible Exploration, Excellence in Environmental Stewardship e-toolkit (EES) Version 01 Chapter 11 Spill Management ES-SM-v1.0

# 12 ACRONYMS, UNITS, AND GLOSSARY

## 12.1 Acronyms and Abbreviations

| | |
|---|---|
| AMNS | Atlantic Mining NS Inc. |
| BMP | Best Management Practices |
| ERP | Emergency Response |
| ERC | Emergency Response Coordinator |
| ERT | Emergency Response Team |
| ETP | Effluent Treatment Plant |
| H&S | Health and Safety |
| HDPE | High-density polyethylene |
| MSDS | Materials Safety Data Sheets |
| NRC | Natural Resource Canada |
| NSE | Nova Scotia Department of Environment |
| OHS | Occupational Health and Safety |
| PPE | Personal Protective Equipment |
| SMRT | Senior Management Response Team |
| SCP | Spill Contingency Plan |
| TDG | Transportation of Dangerous Goods |
| ULC | Underwriters Laboratories of Canada |
| WHMIS | Workplace Hazardous Materials Information System |

# APPENDIX A
# SPILL REPORTING FORMS

Atlantic Gold

# SPILL REPORT
# INCIDENT HEADS UP FORM

AGC ENV FRM 001 REV 2

*NOTIFY: environmental.incident@atlanticgold.ca*

## INITIAL REPORT OF THE INCIDENT (Supervisor)

| Date of Event | Time of Event | Date Reported | Time Reported | Main Person Involved | Reported By |
|---|---|---|---|---|---|
| | | | | | |

| Employer | Contractor (If Applicable) | Department | Location |
|---|---|---|---|
| ❑ Atlantic Gold<br>❑ Contractor | | | |

| | | | | |
|---|---|---|---|---|
| UTM Coordinates | Northing | | Easting | |
| Geographic Coordinates | Latitude | | Longitude | |

## Spill / Release

| **Substance Spilled** | **Quantity** (Estimate Acceptable) | **Receiving Environment (i.e. Where did the spill go?)** |
|---|---|---|
| | | |

Is the spill controlled/contained? Yes ❑ No ❑

Is the spill into a watercourse or wetland? Yes ❑ No ❑

Does the spill have potential to travel off-site? Yes ❑ No ❑

| Initiating Event | Method of Cleanup |
|---|---|
| | |

Spill Waste (i.e. contaminated soil, oil-soaked pads, etc.) Storage Location

**Detailed Description**

**Immediate Actions Taken to Secure Scene, Protect Peoples or Environmental and Equipment**

**Immediate Cause of the Incident**

Atlantic Gold

# SPILL REPORT
# INCIDENT HEADS UP FORM

AGC ENV FRM 001 REV 2

**FOR ENVIRONMENTAL DEPARTMENT TO COMPLETE**

Further Investigation Required? ❑ Yes ❑ No

If Yes - Use Environmental Incident Report Form
AGC ENV FRM 002 Rev 3

Reportable? ❑ Yes ❑ No

Regulator Notified? ❑ Yes ❑ No

Regulator Name

Date Reported

Reference Number

Contact Name

**Environment Department Comments**

Atlantic Gold

# ENVIRONMENTAL INCIDENT REPORT FORM

AGC ENV FRM 002 REV 3

*NOTIFY: environmental.incident@atlanticgold.ca*

## STEP 1. INITIAL REPORT OF THE INCIDENT (Supervisor)

| Date of Event | Time of Event | Date Reported | Time Reported | Main Person Involved | Reported By |
|---|---|---|---|---|---|
| | | | | | |

| Employer | Contractor (If Applicable) | Department | Location |
|---|---|---|---|
| ❑ Atlantic Gold<br>❑ Contractor | | | |

| | | | | |
|---|---|---|---|---|
| UTM Coordinates | Northing | | Easting | |
| Geographic Coordinates | Latitude | | Longitude | |

### Environment

❑ Spill/Release ❑ Wildlife Interaction ❑ Other: _____

### Spill / Release

| | Quantity (Estimate Acceptable) | Receiving Environment (i.e. Where did the spill go?) |
|---|---|---|
| | | |

Is the spill controlled/contained? Yes ❑ No ❑

Is the spill into a watercourse or wetland? Yes ❑ No ❑

Does the spill have potential to travel off-site? Yes ❑ No ❑

| Initiating Event | Method of Cleanup |
|---|---|
| | |

Spill Waste (i.e. contaminated soil, oil-soaked pads, etc.) Storage Location

### Detailed Description

Atlantic Gold

# ENVIRONMENTAL INCIDENT REPORT FORM

AGC ENV FRM 002 REV 3

**Immediate Actions Taken to Secure Scene, Protect Peoples or Environmental and Equipment**

**Immediate Cause of the Incident**

Using the Incident Classification, the **Actual** Consequence of this incident was _____

Using the Incident Classification, the **Reasonable** Potential Consequence of this incident was _____

| Consequences | Insignificant | Minor | Moderate | Major | Catastrophic |
|---|---|---|---|---|---|
| **Environment** | Non-reportable event<br>No impact | Reportable Event<br>No Impact | Reportable Event<br>Reversible Impact | Reportable Event<br>Long-Term Impact | Reportable Event<br>Irreversible Impact |

## STEP 2. INFORMATION GATHERING (Investigator)

**Investigator (s)**

Lead Investigator

Others

❑ Witnesses Present ❑ Photos available of the Incident?

**Witness Statements (Attach as Appendix)**

| |
|---|
| 1 |
| 2 |
| 3 |

## FOR ENVIRONMENTAL DEPARTMENT TO COMPLETE

Reportable? ❑ Yes ❑ No

Regulator Notified? ❑ Yes ❑ No

Regulator Name

Date Reported

Reference Number

Contact Name

## STEP 3. CAUSAL ANALYSIS (Investigator)

At least one must be selected (two or three are typical).

Atlantic Gold

# ENVIRONMENTAL INCIDENT REPORT FORM

AGC ENV FRM 002 REV 3

Contact Environmental Department for guidance, if necessary.

| Equipment Failure Issues | Procedural Issues | Communication Issues | Engineering Issues |
|---|---|---|---|
| ☐ 1.1 Defective Parts/Tools/ Equipment | ☐ 3.1 No Procedure | ☐ 5.1 Shift Change Impact | ☐ 7.1 Workplace/ Roadway Layout/ Design/ Conditions |
| ☐ 1.2 Design Issue | ☐ 3.2 Error in Procedure | ☐ 5.2 Failure to Agree on how task to be Performed | ☐ 7.2 Congested Work Area/ Restricted Action |
| ☐ 1.3 Preventative Maintenance Issue | ☐ 3.3 Procedure too Complex | ☐ 5.3 Failure to Understand Communication | ☐ 7.3 Inadequate display, signs, labels, alarms, warnings |
| ☐ 1.4 Repeat Failure | ☐ 3.4 Procedure not Followed | ☐ 5.4 Inadequate Communication | ☐ 7.4 Inadequate Guards of Barriers |
| ☐ 1.5 Tolerable Failure | | ☐ 5.5 Cross-Department Communication Issue | ☐ 7.5 Noise/ Vibration/ Light |
| | | | ☐ 7.6 Poor Body Mechanics, Body Placement, Positioning, Repetitive |
| **Natural Elements Issue** | **Training Issue** | **Work Direction Issue** | **Quality Control Issue** |
| ☐ 2.1 Temperature Extremes | ☐ 4.1 No Training | ☐ 6.1 No Direction Provided | ☐ 8.1 No Quality Controls |
| ☐ 2.2 Weather Conditions | ☐ 4.2 Training not Followed, Unintentional | ☐ 6.2 Inadequate Direction Provided | ☐ 8.2 Inadequate Quality Controls |
| ☐ 2.3 Ground Movement | ☐ 4.3 Trained but Inexperienced | ☐ 6.3 Failure to Follow Work Direction | **Other** |
| ☐ 2.4 Flooding | | ☐ 6.5 Fatigue | ☐ 9.1 Other (explain below) |
| | | ☐ 6.6 Impairment | |

**Cause Explanation (For Each Cause Identified in Casual Analysis - Provide a Brief Explanation of Why)**

| Code | Explanation |
|---|---|
| | |
| | |
| | |

**Corrective Actions:**

| No. | Description | Issued To (Name) | Due Date |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

Atlantic Gold

# ENVIRONMENTAL INCIDENT REPORT FORM

AGC ENV FRM 002 REV 3

| Investigation Team and Factors Limiting | | |
|---|---|---|
| **Name** | **Position** | **Signature** |
| | | ❑ Investigation Accepted |
| | | ❑ Investigation Accepted |
| | | ❑ Investigation Accepted |

| STEP 4. FINAL COMMENTS BY INVESTIGATORS OR MANAGEMENT | | |
|---|---|---|
| **Name** | **Comment** | **Date** |
| | | |
| | | |
| | | |

# APPENDIX B
# REPORTABLE RELEASE AMOUNTS

**Table B-1: Reportable Release Amounts**

| TDGA Class* | Description of Substance | Reportable Release Amount |
|---|---|---|
| All Class 1 | Explosive | Any amount |
| 2.1 | Compressed gas (flammable) | 100L or more |
| 2.2 | Compressed gas (non-corrosive, non-flammable) | 100L or more |
| 2.3 | Compressed gas (toxic) | Any amount |
| 3 | Flammable liquid | 100L or more |
| 4.1 | Flammable solid | 25kg or more |
| 4.2 | Spontaneously combustible solid | 25kg or more |
| 4.3 | Water reactant solid | 25kg or more |
| 5.1 | Oxidizing substance | 50L or more -or- 50kg or more |
| 5.2 | Organic peroxide | 1L or more -or- 1kg or more |
| 6.1 | Poisonous substance | 5L or more -or- 5kg or more |
| 6.2 | Infectious substance | Any amount |
| 7 | Radioactive substance | Any amount |
| 8 | Corrosive substance | 5L or more -or- 5kg or more |
| 9 (in part) | Miscellaneous product or substance, excluding PCB mixtures and environmentally hazardous substances | 25L or more -or- 25kg or more |
| 9 (in part) | PCB mixture of 50 or more parts per million | 0.5L or more -or- 0.5kg or more |
| 9 (in part) | Environmentally hazardous substance | 1L or more -or- 1kg or more |
| N/A | Asbestos waste as defined in the Asbestos Waste Management Regulations made under the Act | 50kg or more |
| N/A | Used oil as defined in the Used Oil Regulations made under the Act | 100L or more |
| N/A | Contaminated used oil as defined in the Used Oil Regulations made under the Act | 5L or more |
| N/A | Pesticide in concentrated form | 5L or more -or- 5kg or more |
| N/A | Pesticide in diluted form | 70L or more |
| N/A | Unauthorized sewage discharge into fresh water or sensitive marine water | 100L or more |
| N/A | Ozone-depleting substance as defined in the Ozone Layer Protection Regulations made under the Act | 25kg or more |

*"TDGA Class", in relation to a substance, refers to the class of that substance as listed in the Schedule to the Transportation of Dangerous Goods Act (Canada). Nova Scotia Environment (NSE). 1994-95, c. 1, s. 1. Nova Scotia Environment Act.

# APPENDIX C
# KEY CONTRACTOR RESPONSE CONTACTS

**Table C-1: Key Contractor Response Contacts**

| Company | Contact | Phone | Email |
|---|---|---|---|
| Alva Construction | Colin Maas | (902) 870-2087 | Colin@alva.ns.ca |
| Clean Earth Technologies | Russel Campbell | (902) 835-9095 | rcampbell@cleanearthtechnologies.ca |
| GHD - FIRST | Murray Vidito | 1-800-679-9082 | Murray.Vidito@ghd.com |
| McCallum Environmental | Meghan Milloy | (902) 443-8252 | Meghan@mccallumenvironmental.com |
| AECOM | Rory McNeil | (902) 428-2055 | rory.mcneil@aecom.com |
| Stantec | Mark Flinn | 1-866-569-6577 | |
| **Emergency Response Consultant** | **Service** | | **Telephone Number** |
| Stantec Consulting Ltd, Dartmouth. | 24-hour Emergency Spill Response Services | | (866) 569-6577<br>(902) 468-7777 (Daytime) |
| GHD – Emergency Response, Dartmouth | Emergency Spill Response Services | | 24-hour Hotline: 1-800-679-9082<br>Dartmouth Office:(902) 468-1248 |
| Intrinsik Consulting, Halifax | Toxicology | | (902) 429-0278 |
| McCallum Environmental Ltd., Bedford | Biology/Wetlands | | (902) 446-8252 |
| **Emergency Service Providers** | **Service** | | **Telephone Number** |
| Canadian Helicopters (Goffs, NS) | Emergency Helicopter Access | | (902) 873-0015 |
| Cougar Helicopters (Goffs, NS) | Emergency Helicopter Access | | (902) 873-8346 |
| Vision Air Helicopters (Goffs, NS) | Emergency Helicopter Access | | (902) 873-3488 |
| Battlefield – Cat Rentals - Ken Totten | Pump Supplier | | (902) 292-1715 |
| External Contractor - Colin Mass (Alva) or Allan MacDonald | Contractors/Heavy Equipment Fleet | | Radio Channel 3<br>(902) 870-2087 |
| United Rentals - Tyler Arnone | Pump Supplier | | (905) 643-0999 or (289) 439-8318 |
| Sansom Equipment Ltd. -Duane Webber | Pump Supplier | | (902) 895-2885 |
| Clean Earth Technologies | Hydro Vac / Soil Remediation | | (902) 835-9095 |
| Northeast Equipment Ltd. - Gord Skinner | Pipelines | | (902) 468-7473, Gords.northeast.ns.ca |
| Engineered Pipe Group -Brian Parker | Pipelines/pumps/flanges | | (902) 465-2200 |
| Can-Am Instruments Ltd - Lou Dinato - | Metering Equipment | | (905) 829-0030 |
| MacGregors Industrial | Metering Equipment | | (902) 759-7410 |

# APPENDIX D
# SPILL KIT SUPPLY LIST

# SPILL KIT SUPPLY LIST

There are several spill kits available on-site. The kits are packed inside marked yellow drums. Each kit contains personal protective equipment and spill containment materials. All light vehicles contain a smaller, portable spill kit. Spill Kit contents are listed below. New spill kits can be found in the warehouse.

**Table D-1: Contents of portable spill kits**

| Item | Quantity |
|---|---|
| Absorbent pads (15" x 19") | .10 |
| Absorbent socks (3" x 4') | 2 |
| Disposal Bag | 1 |
| Instruction Sheet | 1 |
| Pair Nitrile Gloves | 1 |

**Table D-2: Contents of 30-gallon spill kits**

| Item | Quantity |
|---|---|
| Spill pads (15" x 19") | 25 |
| Spill socks (3" x 4') | 4 |
| Spill pillows (18" x 24") | 4 |
| Disposable Bags w/ Ties | 3 |
| Emergency Response Guide Book | 1 |
| Pair Nitrile Gloves | 1 |

# APPENDIX E
# HAZARDOUS MATERIALS LIST & SAFETY DATA SHEETS

# HAZARDOUS MATERIALS LIST & SAFETY DATA SHEETS

**Table E-1: Potential Hazardous Materials**

| Material | Storage Location | State | Purpose |
|---|---|---|---|
| Activated Carbon (Coconut shells) | TBD | Solids | Carbon Adsorption |
| Anti-Scalant | TBD | Liquid Solution | Anti-Scaling |
| Coagulant | TBD | TBD | Water Treatment |
| Polymer | TBD | TBD | Water Treatment |
| DT9040 | TBD | Liquid Solution | Dust Suppression |
| Hydrated Lime | TBD | Solids | pH Control |
| Hydrochloric Acid | TBD | Liquid Solution | Acid Wash |

**Note:** SDS can be found at: *S:\PoliciesProcedures\Safety Data Sheets (SDS)*