ATTACHMENT 6 – COMPREHENSIVE SPILL CONTINGENCY PLAN

Exploration Spill Contingency Plan

May 2022

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1. Introduction and Background

1.1. BACKGROUND

Sabina Gold & Silver Corp. (Sabina) is actively exploring the Back River property mineral rights Including the Goose Property (and primary exploration camp at Goose Lake), as well as George Property (and a temporary exploration camp), unoccupied claim groups referred to as Boot Property, Boulder Property, Wishbone Property, Malley/Needle Property, and Del Property (Figure 1) (the Project).

1.2. PURPOSE

This Exploration Spill Contingency Plan (Plan) applies to activities related to water licenses 2BE-GOO2028, 2BE-GEO2025, and 2BE-MLL1722 and addresses applicable terms and conditions of NIRB Screening decisions for File No. 08EA084 (NIRB 2009).

Spill response related to Back River Project mining activities under Water Licence 2AM-BRP1831 and NIRB Project Certificate No. 007 are addressed separately in Sabina's Spill Contingency Plan and Oil Pollution Prevention Plan and Oil Pollution Emergency Plan (OPPP&OPEP).

This Plan has been implemented to ensure that Sabina respects all applicable laws, regulations and requirements from federal and territorial authorities during exploration activities. Sabina has obtained and complies with all required permits, approvals, and authorizations required for the operations. The following regulations and documents constitute an integral part of the Plan:

- Government of Nunavut's *Spill Contingency Planning and Reporting Regulations*.
- The Canadian Environmental Protection Act controls hazardous substances from their production and/or import, their consumption, storage and/or disposal.
- The federal *Fisheries Act* protects fish and their habitat from pollution and disturbances. Fisheries and Oceans Canada reviews permit applications and restoration plans submitted by other agencies.
- The federal *Transportation of Dangerous Goods Act* and Regulations ensure the protection of public health and safety, and the environment during the handling and transport of dangerous goods. The Regulations apply to all modes of transportation, by road, by sea, and by air.
- The federal *Territorial Land Use Regulations* define regulatory measures to maintain appropriate environmental practices for any land use activities on territorial lands that are under the control, management and administration of the Crown. These regulations require that land use permits be issued for operations such as mineral exploration and mining.
- The Guidelines for Preparation of Hazardous Material Spill Contingency Plans describe parameters that should be considered in the development of hazardous material spill emergency plans. It also defines the information that should be incorporated into a comprehensive contingency plan.
- The CCME Code of Practice for Used Oil Management defines appropriate environmental options for handling, storage, collection, recycling, transport, reuse, and/or disposal of used oils in Canada. It helps regulatory authorities formulate provincial and/or regional strategies for used oil management.

- The *Nunavut Environmental Protection Act* governs the protection of the environment from contaminants. The Act defines offences and penalties as well as the powers of government inspectors.
- The *Nunavut Spill Contingency Planning and Reporting Regulation*s describe requirements for spill reporting and emergency planning.
- The Field Guide for Oil Spill Response in Arctic Waters developed for the Emergency Prevention, Preparedness and Response Working Group, describes precise response methods and strategies for emergency response operations and provides technical support documentation.
- The *Land Transportation Emergency Response Guideline* for Petroleum Spills developed by the Canadian Petroleum Products Institute outlines scope, emergency response code of practice, response time guidelines, response equipment and personnel capability requirements.
- The *Canada Shipping Act* (CSA), as amended by Chapter 36, stipulates that operators of designated Oil Handling Facilities must have an on-site Oil Pollution Emergency Plan.
- The *Canada Shipping Act* Response Environmental Emergency Regulations

This document is a review and analysis of the preparedness for events which may occur due to unforeseen circumstances. The plan details response actions to be taken in the event of unintentional materials release during the ongoing exploration program and associated support such as camps and overland transport. The plan is dynamic and will be updated at least annually to address any significant changes in operating plans, should they occur.

A copy of the Plan will be available at the exploration camps and headquarter offices. Sabina believes building on experience and practices gained through implementation and management of spill measures under the existing water licences and supports the implementation of a coordinated approach to spill response.

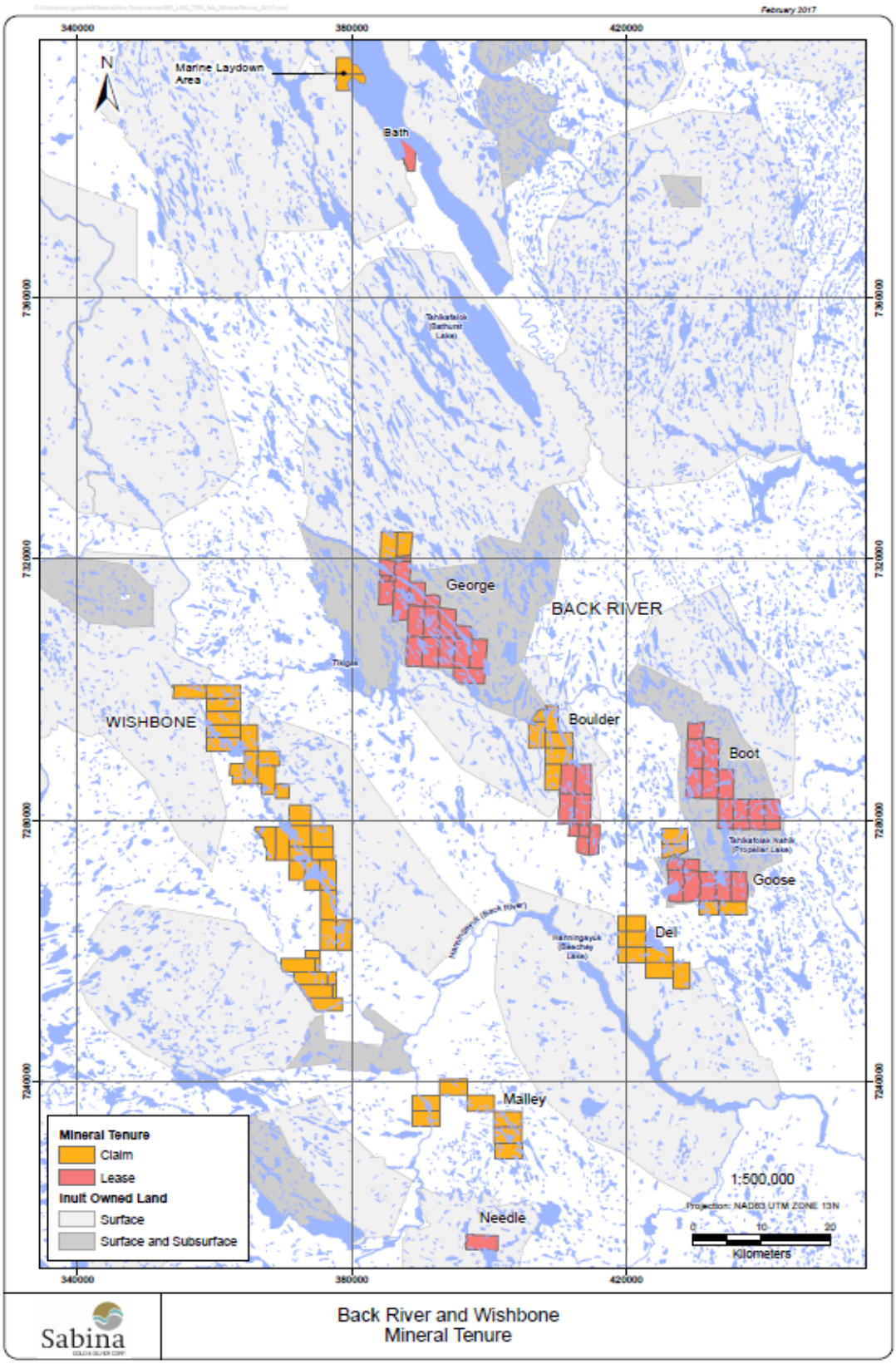


Figure 1. Location Map of Sabina Exploration Properties within western Nunavut.

1.3. SABINA SOCIAL AND ENVIRONMENTAL POLICY

Sabina is committed to environmentally responsible and socially acceptable exploration and mining practices. We are dedicated to creating and maintaining a safe environment for both the land we occupy and the people that drive its success. The company's philosophy is to conduct its operations to protect not only the environment, but the health and safety of its employees and the public as well.

Sabina also subscribes to the principles of sustainable development in mining. While exploration and mining cannot occur without an impact on the surrounding natural environment and communities, our responsibility is to limit negative environmental and social impacts and to enhance positive impacts.

To achieve these goals, Sabina is committed to:

- Seeking to be environmental leaders in the mining community by integrating responsible environmental management as an essential component of all business decisions;
- Comply with all applicable laws, regulations and standards; uphold the spirit of the law and where laws do not adequately protect the environment, apply standards that minimize any adverse environmental impacts resulting from its operations;
- Communicate openly with employees, the regulatory community and the public on environmental issues and address concerns pertaining to potential hazards and impacts;
- Assess the potential affects of operations and integrate protective measures into the planning process to prevent or reduce impacts to the environment and on public health and safety;
- Take appropriate corrective actions should unexpected environmental impacts occur. This will also include taking appropriate action to prevent reoccurrence of these impacts.
- Provide adequate resources, personnel and training so that all employees are aware of and able to support implementation of the environmental and social policy;
- Conduct and support research and programs that improve understanding of the local environment, conserve resources, minimize waste, improve processes, and protect the environment.
- Working with the appropriate local regulators and agencies, maximize benefits to the affected communities and residents;
- Balance all decisions with best management practices, scientific principles, and Traditional Knowledge.

1.4. SABINA POLICY ON INITIATION FOR CLEANUP ACTIVITIES

Sabina initiates cleanup activity when, in the opinion of management, Sabina is clearly associated, or likely associated with the spilled product. The guiding principles of Sabina’s Exploration Spill Contingency Plan is to comply or exceed existing regulations to ensure protection of the environment, and to keep employees, government officials, and the public aware of our plans.

1.5. RISK MANAGEMENT

The likelihood of a significant spill event occurring at the Project at either the Goose or George tank farms is very low, due to the double-walled tanks contained in the lined, bermed area, and the prescribed procedures for fuel transfer and anti-siphon devices in the tanks.

The greatest likelihood of an incident is associated with drummed fuel including the rupture of drums during movement or leaks during storage. The first risk can be mitigated through proper operator training

of equipment operation, clear marking and segregation of fuel supplies and heightened operator awareness when working near fuel supplies. The second risk is mitigated with secondary containment and frequent inspection of the drums (carried out during regular yard duties). Additional hazards are present during refuelling operations (mitigated with drip trays and absorbent mat), and during local drum movement (e.g., from storage to helipads), which is mitigated by using experienced operators, carefully securing the drums to the loader during movement, and safe driving practices.

As salt is delivered in pelletized form, any spill is easily cleaned-up. Regular inspection of this storage area will allow for rapid detection of any spill.

Explosives will be delivered in designated compartments approved for transport of explosives and stored within the original packaging in the magazines. Strict housekeeping and tracking standards will be kept. Any spill of explosive material would be easily cleaned up and regular inspection will allow for rapid detection of any spill.

Frequent inspections of the greywater line will turn up any leaks in the system which can be quickly repaired. Any issues would likely be noticed by most people in camp as either moisture and/or an odour would be present.

The likelihood of drill additives entering a waterbody is extremely small. With the exception of on-ice drilling, drills are located at least 31 m above the high water mark of lakes, ponds and streams, unless otherwise approved by the Board, with vegetation and overburden material providing an effective mechanical barrier to the transport of materials to the waterbody. As an added mitigation measure, geo-textile cloth fences are constructed on the downhill side of all new drill setups. For on-ice drilling, excess return water is pumped to a point on shore more than 31 m from the estimated high water mark (difficult to determine conclusively due to snow cover). Snow and lake ice also create an effective barrier and containment mechanism for spills of material at the drill site, allowing for easy cleanup. Drill sites are inspected for cleanliness upon completion of the hole.

Despite the mitigation measures taken, should any incident arise as a result of human error or unforeseen circumstances, the operating procedures outlined in this document will be implemented.

1.6. EXISTING FACILITIES

The Sabina mineral exploration camps are located in the Kitikmeot Region approximately 520 km northeast of Yellowknife, NWT and 400 km southwest of Cambridge Bay, NU.

1.6.1. Goose Exploration Camp

The Goose Exploration Camp is the primary camp for the Project and is located on the slope of the western shore of Goose Lake. It has the capacity to support up to 120 people (as of June 2012) and is accessible by air only using Goose Lake (ice and open water), a gravel airstrip north of Goose Lake and an all-weather airstrip and road west of the camp. The lakeshore is approximately 50 m toward the north and the regional topographical gradient surrounding the camp ranges from 2 to 6% towards the north. The camp is approximately 300 m in length from east to west and 100 m wide from north to south, covering an area of 30,000 m^2. The camp facilities are located on natural tundra underlain by a 10 cm organic layer overlying silt-sand parent material.

- Latitude: 65º 32’N, Longitude: 106º 25’W
- UTM Coordinates 569405 E, 7265007N on NTS Map Sheet 76G/09

1.6.2. Temporary Camps for Resupply for Exploration

Temporary camps for approximately 20 people may be established for a season in target areas away from the main camps and would be established for safety, environmental, and economic reasons. The intent is not to establish a network of camps across the exploration area, but to have the opportunity and flexibility to establish these temporary camps as needed. No sewage system will be installed in the camp as no water is needed for Pacto toilets. All solid waste will be carried to the existing camps (Goose and/or George) and disposed as outlined in the approved waste management plan for those facilities.

Grey-water is pumped to a suitable disposal sump or natural depression located 31 metres away from the ordinary high water mark of any local waterways and would be allowed to naturally percolate into the underlying ground.

1.6.3. Overland Corridors

A winter road links the two camps (Goose and George) and extends to Bathurst Inlet. Temporary camp facilities and fuel and chemical storage areas may also be accessed as needed to support exploration activities.

Overland transportation occurs during mid-February to mid-May depending on environmental conditions and operational requirements. Environmental conditions that will determine the route include:

- Ice thickness of a sufficient thickness to support heavy equipment so that pumping and using water to build up will be unnecessary.
- Snow thickness will be a minimum of 15 cm on land to prevent damage to soil and vegetation.
- Weather conditions permit safe transport of equipment and materials.

Diesel fuels and lubricants will be used during the construction and operation of the winter road. Other fuel and materials to be transported along the corridor include diesel fuel, aviation gas, drilling additives such as calcium chloride and construction materials.

Storage of these products and wastes will be in compliance with legislation and the National Fire Code that ensures the hazardous materials are stored safely, in a dry manner with clear labeling and secondary containment. All storage areas will be clearly identified with proper labeling and signage. All storage areas will be regularly inspected and stored at least 31 m from the high water mark of any waterbody within secondary containment.

Safety Data Sheets (SDS) information for the potential contaminants and products to be transported along the winter road are available on-site.

2. Materials Transport and Storage

2.1. FUEL STORAGE

Diesel fuel is required to generate power on-site, heat buildings, and to fuel mobile equipment. The diesel fuel storage at the camps consists of 205 L drums, as well as double walled tanks (up to 75,000 L ULC-approved) and bladders (up to 40,000 L) situated within a lined secondary berm. Secondary containment (Instaberms) is used for all of the drummed fuel on-site.

Supplies will be replenished with quantities dependent on the scope of the program. Inventories of fuel at each site are dynamic and dependent on exploration activities and personnel in camp.

Drummed fuel is required to support drilling and helicopter activities outside of camp and strategically relocated as required. All drums are located at least 31 m above the high water mark of any waterbody. Specialized oils and greases used by the drilling contractors are stored in sheds or sea-cans designated for that purpose. Propane tanks are stored on pallets, strapped together, and area marked with pylons.

The Goose Property has thirteen 75,000 L double walled tanks and one 40,000 L bladder to support exploration activities.

During the construction of the Back River Project mine additional fuel storage facilities will be constructed at both Goose and the MLA. As previously identified, spills from these facilitates and/or related to Back River Project bulk fuel transfer activities are addressed separately in Sabina's Spill Contingency Plan and Oil Pollution Prevention Plan and Oil Pollution Emergency Plan.

2.2. DOMESTIC GREYWATER, SEWAGE AND CONTACT WATER

Greywater from the kitchen and shower facilities is screened for coarse particles (e.g., food), and released to a sump for settling, after which it is released to the environment at least 31 m away form the closest waterbody. Sewage is dealt with using a Pacto toilet system with incineration of the waste generated.

Contact water is water that collects within the fuel secondary containment berms. Water collected in temporary berms is discharged using an oil/water separator unless an oily sheen is noted. Water collected in bulk fuel storage facility berms is tested and discharged according to applicable requirements outlined in 2BE-GOO2028 and 2BE-GEO2025.

2.3. SOLID WASTE

Combustible solid wastes generated from the camp activities are incinerated. Products such as putrescible domestic and office waste are burned. Noncombustible wastes such as scrap metal, non-reusable barrels, incinerator ash, etc., are placed in megabags and are removed from site using back-haul flights to Yellowknife or landfilling at the Back River Project mine landfill (per Sabina's Landfill and Waste Management Plan). Hazardous solid waste for backhaul is sealed in drums for transport to Yellowknife and disposal at an approved facility.

Although the potential for waste rock (including drill core) to be acid producing is unlikely, any such waste would be disposed of in an approved location and under acceptable practices.

Drill cuttings and sludge from core saws are collected and returned to designated drill cutting consolidation areas for disposal and management in a trench.

2.4. CHEMICALS

Waste chemicals that require special attention and handling include waste oil, hydraulic oil, lubricating oil, calcium chloride, grease, and ethylene glycol.

Waste oil is used to either heat the warehouse, maintenance and core logging facilities, or to fuel the incinerator at Goose Exploration Camp. If not used to fuel heaters or incinerator, waste oil and oil from filters are backhauled for appropriate disposal. Drained spent oil filters will be stored in drums for removal from the site for disposal at an authorized disposal facility.

There are minimal quantities of reagents such as dilute HCl (<5L), concentrated HNO_3 (vials of <10mL), and other materials on-site for geological testing and environmental sample preservation.

Sabina anticipates the maximum quantity of ammonium nitrate (in sold form) at the MLA during initial development works at any time during the calendar year to be 1525 tonnes.

Calcium chloride is added to the fresh water to form a brine solution that acts as antifreeze when drilling in permafrost conditions. The drilling return water is reheated and reused using a mega-bag system which catches the drill cuttings as well. Salt is stored in bags, with 28 sealed in a megabag and placed on a pallet.

Explosive products, when/if on-site, will be stored in appropriate facilities at designated explosives storage site(s).

Fire extinguishers and dust suppression is also used on-site as needed and is stored in appropriate facilities. Small quantities of various household chemicals are on-site for domestic use.

SDS's will be collected and kept at the site for all chemicals and fuel products. Appropriate storage and handling of these products will be undertaken.

For development works no additional management of hazardous waste is required. Management will be done in accordance with 2BE-GOO1520 and 2BE-GEO1520 water licence terms and conditions.

2.5. DRILLING FLUIDS AND CUTTINGS

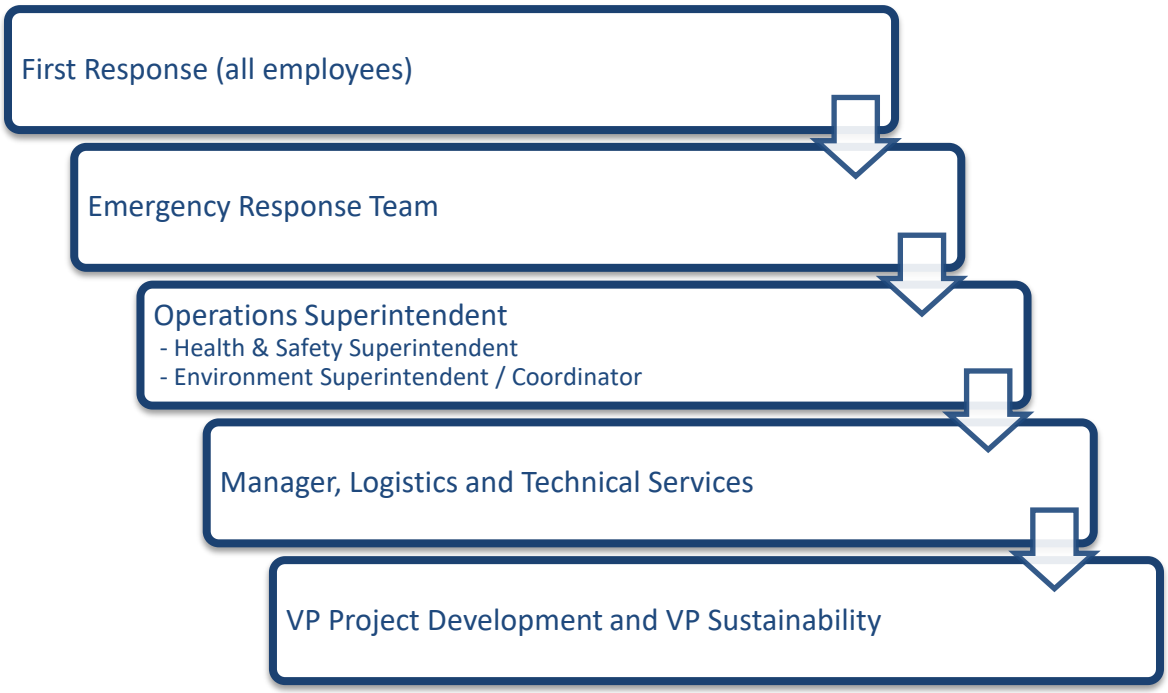
Drilling activities make use of water to lubricate the drill and flush rock dust from the drill hole. When, when drilling in permafrost on land or on ice which is frozen to the lake bottom salt may be added to the drill water to make a brine solution, thereby lowering the water's freezing point and reducing the risk of the drill freezing in. Sodium Chloride or Calcium Chloride may be used for this purpose, with a preference for the latter due to it's lower environmental impact.

During drilling, drill water (whether freshwater or brine) is pumped down the drill hole to lubricate the drill bit and is then recirculated back up between the drill rod and the drill casing, flushing the rock dust generated during drilling with it. On return to the surface, the water is pumped to the drill settling and recirculation bin. Water is drawn off the top of this settling bin for reuse, while cuttings (the settled rock dust) are periodically drained from the bottom of the bin and transferred to a portable container which is transported to one of the Back River Project cuttings consolidation sumps for management and disposal. Alternately, these cuttings may be pumped directly from the drill settling bin to a nearby sump or natural depression. All sumps are to be located at least 31 m from the high water mark of any adjacent waterbody where direct flow into a water body is not possible.

Drilling is conducted in a manner to prevent drilling wastes spreading to surrounding waterbodies. Drill sites are located at least 31 m from water or on ice, and sites are constructed in a manner to minimize impacts. Garbage is removed daily and sites are maintained in a orderly fashion and in accordance with applicable requirements of water licences 2BE-GOO2028, 2BE-GEO2025, and 2BE-MLL1722 and NIRB Screening decision for File No. 08EA084 terms and conditions.

3. Roles and Responsibilities

The general response and notification chart is presented in the following:



3.1. ALL EMPLOYEES (FIRST RESPONDERS)

- Immediately warn other personnel working near the spill area.
- Evacuate the area if the health and safety of personnel is threatened.
- Notify direct supervisor or Site Superintendent, who will initiate the spill response operations.
- In the absence of danger, take any safe and reasonable measure to stop, contain and identify the nature of the spill.
- Participate in spill response as directed by the Site Superintendent.

3.2. EMERGENCY RESPONSE TEAM (SPILL CLEANUP CREW)

- Members determined by Site Superintendent based on response needs.
- Conduct cleanup of significant spills under direction of Site Superintendent.

3.3. SITE SUPERINTENDENT

- Assemble and manage the Emergency Response Team, as required.
- Ensures cleanup is completed to Sabina standards in line with direction from the Manager, Logistics and Technical Services (TS), Health & Safety Superintendent, Environmental Superintendent and Environmental Coordinator.
- Notify Manager, Logistics and TS, Health & Safety Superintendent, and Environmental Superintendent/Coordinator of incident.

- Provides update within Sabina in camp and headquarters.
- Record date, location (GPS), material spilled, volume, reason for release, any negative impact, status of cleanup, and corrective actions taken.
- Keep and maintain database of all reportable and non-reportable spills as identified in the Plan.
- Conducts ongoing monitoring of cleanup operations leading to close-out.
- Notify HQ staff including VP Project Development and VP Sustainability for any reportable spills as identified in this plan
- Classify spill level as minor, moderate or major and ensure appropriate response initiated
- Assists in developing effective spill management and prevention practices.
- As directed by the VP Project Development and Manager, Logistics and TS report spill to 24-hour Spill Reporting Line.
- Liaise with NWT/NU applicable agencies regarding on-going cleanup activities.
- Co-ordinate inspections and spill closure by applicable agencies.
- Assist in spill response training and exercises.

3.4. MANAGER LOGISTICS AND TECHNICAL SERVICES

- Provides advice and ensures cleanup is completed to Sabina standards in line with direction from the Site Superintendent and VP Sustainability.
- Ensures Emergency Response Team is adequately trained in spill response.
- Ensures Emergency response and/or monitoring equipment and supplies are regularly inspected and maintained
- Organize with Site Superintendent spill response training and exercises.
- Lead investigation and identify measure and/or training to prevent similar spills.

3.5. ENVIRONMENTAL SUPERINTENDENT AND COORDINATOR

- Provides advice and ensures spill is documented appropriately as per this plan and regulatory requirements.
- Record date, location (GPS), material spilled, volume, reason for release, any negative impact, status of cleanup, and corrective actions taken; confirm these details with Site Superintendent.
- Obtain photographs of spill site before cleanup starts if possible and after the cleanup has been completed. Take pictures of undisturbed area beside the spill area for a comparison. If spill occurs on snow, stake or otherwise identify the affected area so that it can be evaluated once the snow melts.
- As directed by the VP Sustainability and Site Superintendent liaise with NWT/NU applicable agencies regarding on-going cleanup activities, inspections and incident closure
- Assist in initial and ongoing response efforts.
- Provide advice to assist with cleanup.
- Co-ordinate inspections and spill closure by applicable agencies.
- Assist with investigation and identify measure and/or training to prevent similar spills.

3.6. HEALTH & SAFETY SUPERINTENDENT

- Assist in initial and ongoing response efforts.
- Provide advice to assist with cleanup.
- Assist with investigation and identify measure and/or training to prevent similar spills.

3.7. VP PROJECT DEVELOPMENT AND VP SUSTAINABILITY

- Engage Legal Counsel and Sabina Senior Management and Board of Directors as required.
- Notify and update Senior Management and Board members as required.
- Notify and communicate with the Kitikmeot Inuit Association regarding any spills reported to the NT/NU Spill Report Line

4. Training and Testing

4.1. TRAINING

4.1.1. Site Orientation

On-site orientation will be provided to all on-site personnel to ensure employees are aware of:

- What First Responders are to do in case of a spill.
- The location of SDS sheets and Spill Report Forms.
- The location of the Spill Response Kits.
- The general locations of fire extinguishers and firefighting equipment.
- The location of the Spill Action Plan and the Fire Action Plan.

4.1.2. Role Specific

Specific on-site training will be provided to employees whose job function may have a higher probability of experiencing a spill to ensure they are aware of:

- WHMIS and Transportation of Dangerous Goods.
- Identify and avoid the conditions which may lead to a spill.
- Develop an understanding of the potential environmental impacts of a spill.
- Develop and understanding of the financial costs of a spill.
- Recognize the hazards associated with sources of ignition (smoking, electrical sparks) near a fuel source.
- Spill kit contents and use of them.
- Turn off valves to stop the flow of fuel.

For employees involved in fuel handling, additional training would be provided regarding appropriate refuelling techniques and drum handling procedures.

4.1.3. Emergency Response Team

Members of the Emergency Response Team will be provided a higher level of training to allow for safe and adequate response. This includes:

- All information given as part of the Role Specific Training.
- Fire extinguishers and water pump locations and use.
- Details of the Spill Action Plan and the Fire Action Plan.
- Identify, evaluate and mitigate the hazards posed by any spilled product by using appropriate PPE (personal protective equipment).

4.2. TESTING

Spill drills and training are routinely conducted to ensure familiarization of on-site personnel with their responsibilities in case of a spill. Drills may also include hands-on scenarios where the Emergency Response Team utilizes equipment to deal with the spill scenario. Records of this training and testing are kept on file and posted to provide access for those who were unable to attend.

5. Spill Response Equipment

5.1. GENERAL EQUIPMENT

Heavy equipment and aircraft may be used in the area for emergency use to respond to spill incidents. Spill kits and spill response equipment are to be located in key locations and are to be accessible to responders.

Site specific maps illustrating spill kit locations onsite can be found in Appendix D.

5.2. SPILL KITS

Table 1. Location of Spill Kits.

Goose Exploration Camp	Marine Laydown Area	George	Seasonal Exploration Camp
Tank Farm	Shoreline Pad	Tank Farm	Fuel Cache
Drummed Fuel Storage	Freight Storage Pad	Helipad	Helipad
Generator Buildings	Generator	Each Diamond Drill	Each Diamond Drill
Coreshack	Camp Location		
Drum Crusher	Temporary AN and Fuel Storage		
Incinerator	Construction Laydown Pad		
Helipad Area	Mechanics Shop		
Dock	Quarry Area		
Each Diamond Drill			
South Quonset			
Shop North Quonset			

Table 2. General Spill Kit Contents.

Quantity	Item(s)
1	45 gal, 16 Gauge Open Top Drum, c/w Bolting Ring & Gasket
20	Short Putty Epoxy Sticks
1	48” x 48” x 1/16” Neoprene Pad (Drain Stop)
1	Splash Protective Goggles
1	Pkg. - Polyethylene Disposable Bags (5 ml) 10 per Package
1	Shovel (Spark Proof)
1	Case T-123” x 10’ Absorbent Boom, 4-Booms/Case;
1	Pkg. – Universal absorbent Mats, 16 ½” x 20”, 100 Mats per Package
1	Roll – Oil only absorbent mats 150’ x 33”

** Drill rigs are equipped with a roll of absorbent mat for minor spills. Other appropriate equipment for spill response (PPE, shovel, bags) is typically already located at the drill for general use.*

An exhaustive spill kit appropriate for bulk fuel transfer activities per Transport Canada requirements is additionally available at the MLA. A complete list of it's contents as well as all heavy equipment, vessels, and fuel storage which may be available for use at the Back River Project can be found in Sabina's OPPP&OPEP.

6. Spill Response Procedure

A spill is defined as the discharge of a hazardous product out of its containment and into the environment. Potential hazards to humans, vegetation, water resources, fish, and wildlife vary in severity, depending on several factors including nature of the material, quantity spilled, location, and season. Fuel is the main product that may be spilled and therefore spill response procedures focus on this hazardous material. Other chemicals that may be spilled include sewage water, and small quantities of lubricants and oils.

All site personnel are briefed on the procedures to be followed to report a spill and initiate spill response. The first person to notice a spill must take the following steps:

- Immediately warn other personnel working near the spill area.
- Evacuate the area if the health and safety of personnel is threatened.
- Notify their direct supervisor or Site Superintendent, who will initiate the spill response operations.
- In the absence of danger, and before the spill response team arrives at the scene, take any safe and reasonable measure to stop, contain and identify the nature of the spill.

The following details the steps to be taken in the event of a spill. Steps are listed in order of importance; however, circumstances and conditions may alter the order of these steps to meet a specific situation.

6.1. IDENTIFY AND ASSESS

- Ensure safety of all people in the area.
- Check for fire and explosion risk:
  - Extinguish all ignition sources in the area
- If unsafe, raise alarm and close off affected area

6.2. STOP FLOW

- Stop flow at source of spill (e.g. turning off a pump, closing a valve, sealing a puncture hole with almost anything handy (e.g., a rag, a piece of wood, tape, etc.), raising a leaky or discharging hose at a level higher than the product level inside the tank, or transferring fuel from leaking containers)
- Contain spill utilizing absorbent pads, drip pans, or other secondary containment berms to catch any slow or unexpected leaks.
- Attempt to limit the spread of the spill. Prevent movement using sorbent material and berms to form a barrier
- If the spill occurs on ice, attempts should be made to stop the spill from reaching ice-free ground.

6.3. NOTIFY SUPERVISOR

- Provide as much information as possible about the source, material, amount, fire risk, injuries etc.

6.4. SPILL CONTAINMENT

- For all spills, use absorbents to contain and soak up the fuel

- Prevent spread of fuel by using booms and berms
- Response operations should not be commenced in the affected area until it is safe.
- Evaluate the potential dangers of the spill in order to protect sensitive ecosystems and natural resources
- Block or divert the spilled material away from sensitive receptors (e.g. using absorbent booms, dykes, berms, or trenches (dug in the ground or in ice)).

6.5. RECOVERY AND CLEANUP

- Recover as much of the spill as possible using absorbent materials and/or digging up the affected area if applicable.
- Store any contaminated or recovered material in secondary containment
- Disposal should be by approved methods and facilities as per the Site Superintendent instructions.
- Ensure spill is recorded in Environmental Incident Log

6.6. RESPONSE BY SPILL LOCATION

6.6.1. Spills on Land

Response to spills on land will include the general procedures previously detailed. The main spill control techniques involve the use of two types of barriers: dykes and trenches. Barriers should be placed down-gradient (down-slope) from the source of the spill, and as close as possible to the source of the spill. Barriers slow the progression of the fuel and also serve as containment to allow for recovery.

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 of and over the dykes to protect the underlying soil or other material and to facilitate recovery of the fuel. Construct dykes in such a way as to accumulate a thick layer of free product in a single area (V shaped or U shaped).

Trenches are useful in the presence of permeable soil and when the spilled fuel 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 oil.

The use of large quantities of absorbent materials to recover important volumes of fuel should be avoided. Large volumes of free-product should be recovered, as much as possible, by using vacuums and pumps, and containerized. Mixtures of water and fuel may be processed through an oil-water separator. Absorbent sheets should be used to soak up residual fuel on water, on the ground (soil and rock), and on vegetation.

6.6.2. Spills on Water

Response to spills on water includes the general procedures previously detailed. Various containment, diversion and recovery techniques are discussed in the following sections. The following elements must be taken into consideration when conducting response operations:

- Type of waterbody or water course (lake, ocean, stream, river).
- Water depth and surface area.
- Wind speed and direction.
- Resonance and range of tides.

- Type of shoreline.
- Seasonal considerations (open-water, freeze-up, break-up, frozen).

Containment of an oil slick on the ocean requires the deployment of mobile floating booms to intercept, control, contain and concentrate (i.e., increase thickness) the floating oil. One end of the boom is anchored to shore while the other is towed by a boat or other means and used to circle the oil slick and return it close to shore for recovery using a skimmer. Reducing the surface area of the slick increases its thickness and thereby improves recovery. Mechanical recovery equipment (i.e., skimmers and oil/water separators) will be mobilized to site if required.

If oil is spilled in a lake it may not be possible to deploy booms using a boat. In this case, measures are taken to protect sensitive and accessible shoreline. The oil slick is monitored to determine the direction of migration. In the absence of strong winds the oil will likely flow towards the discharge of the lake. Measures are taken to block and concentrate the oil slick at the lake discharge using booms where it will subsequently be recovered using a portable skimmer, a vacuum, or sorbent materials.

In small slowly-flowing rivers, streams, channels, inlets or ditches, inverted weirs (i.e., siphon dams) is used to stop and concentrate moving oil for collection while allowing water to continue to flow unimpeded. In the case of floating oil, in a stream, heading for a culvert (i.e., at a road crossing) a culvert block is used to stop and concentrate moving oil for collection while allowing water to continue to flow unimpeded. In both cases oil will then be recovered using a portable skimmer or sorbent materials.

In the case of spills in larger rivers, with fast moving currents, 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 an oil slick away from a sensitive area to be protected.

Spills in the marine environment occurring during fuel offload with be managed in accordance with the Oil Pollution Emergency Plan (OPEP) and the Shipboard Oil Pollution Emergency Plan (SOPEP) required by Transport Canada.

6.6.3. Spills on Snow and Ice

In general, snow and ice will slow the movement of hydrocarbons. The presence of snow may also hide the oil slick and make it more difficult to follow its progression. Snow is generally a good natural sorbent, as hydrocarbons have a tendency to be soaked up by snow through capillary action. However, the use of snow as a sorbent material is to be limited as much as possible. Snow and frozen ground also prevent hydrocarbons from migrating down into soil or at least slow the migration process. Ice prevents seepage of fuel into the water.

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 fuel and also serve as containment to allow recovery of the fuel. Free-product is recovered by using a vacuum, a pump, or sorbent materials. Contaminated snow and ice is scraped up manually or using heavy equipment depending on volumes. The contaminated snow and ice is placed in containers or within plastic lined berms on land. If required, a contaminated snow storage site is to be located in close proximity to one of the four (4) main work sites to facilitate inspection and monitoring, in an area which is still easily

accessible once it is time to remove the snow (i.e., spring or summer), and at least 30 m away from any body of water or ditch. Once enough snow has melted, the oily water is removed from the storage and processed through an oil-water separator that would be mobilized to site. Hydrocarbons recovered will be burned in the camp incinerator or shipped off-site for processing.

6.7. RESPONSE BY MATERIAL SPILLED

6.7.1. Fuel

Detection of leaks will be using two methods - a fuel inventory reconciliation and inspection. A weekly reconciliation of storage volumes will be completed and a spill response will be initiated in the event of any unexplained loss over five or more weeks.

Weekly inspections will be conducted to ensure either there has not been a leak or that the conditions of the area could result in a leak. These inspections will include the fuel drums and storage containers, secondary containment sumps and associated spill containment devices, any pumps and product-handling equipment, and an overfill protection devices. These inspections will be recorded to include who completed the inspections, areas included in the visual inspection and any deficiencies noted.

Fuel spills, leaks at storage facilities or vehicle accidents will be handled by following these steps:

- Identify the source of the leak or spill.
- Contact the Environmental Coordinator/Site Superintendent.
- Stop leaks from tank or barrel by.
- Turning off valves.
- Utilizing patching kits to seal leaks.
- Placing plastic sheeting at the foot of the tank or barrel to prevent seepage into the ground.
- Contain the spill and the source if possible.
- Take photographs of the spill site before and after the cleanup.

Small spills will be cleaned up by removing the contaminated soil and storing it in empty 205 L drums for backhaul and disposal at an approved hazardous waste disposal site. Should a large spill occur, cleanup and disposal efforts will be coordinated as necessary with the appropriate authorities and agencies.

6.7.2. Domestic Sewage, Solid Waste, and Contact Water

Any problems with the incinerator or other waste disposal mechanism will be immediately reported to the Site Superintendent.

In the event of a power failure, the stand by generator will be put into operation as soon as possible. Similarly, in the case of a pump failure, the backup pump will be put on-line. Any greywater drainage problems will be addressed as quickly as possible to minimize the chance of a spill. As necessary appropriate safety equipment and personal protective clothing will be available to site personnel.

6.7.3. Chemical

Assess the hazard of the spilled material by referring to the relevant SDS sheet. Each response will vary based on the material. If the chemical is hazardous, ensure personnel protective equipment is utilized (latex gloves, eye protection, etc.) before approaching the spill. As chemicals are only used in extremely

small quantities on-site use absorbent mats to soak up spilled liquids and place in appropriate container for treatment and/or disposal.

6.7.4. Drilling Salt, Brine or Cuttings

The Back River exploration programs use salts to produce brine for use when necessary when drilling in permafrost. The salts lower the freezing point of the water helping prevent the drill rods from freezing in. Calcium Chloride is used to create the brine. Salts are only added when drilling on land or through ground-fast ice and are recirculated in the sealed drilling process. In the winter and shoulder seasons the water is additionally heated to reduce freezing.

Drill equipment, including casings, are inspected daily to ensure suitable for use and water usage and return is monitored to ensure recirculation efficacy. To minimize spills, Sabina management practices include the installation of tarps underneath the rigs, coco matting, spill pads, drip trays, as well as a catchment basin for drips and return water directly where the bit enters the ground which houses an active sump pump.

The main risk of a salt and brine spill is to the environment, including both aquatic and terrestrial environments, and permafrost. However, care must be taken when handling the dry salts as well as the brine as they may be a skin irritant. Spill response for spills of dry salt product as well as of brine are outlined below:

1. Spills of Dry Product

The source of the spill will be stopped as soon as possible. If there is risk of the spill entering a waterbody, all reasonable measures will be taken to prevent this from occurring. Spilled dry salt product will be picked up and repackaged for reuse if possible, if not it will be shipped off site to a licenced waste disposal facility. If appropriate, a shallow excavation of the material would be performed to remove contaminated material and minimize impact to downslope vegetation or waterbodies. Collected salt-contaminated soil will be disposed in one of the designated drill cuttings sumps.

2. Brine Spills

The spill will be stopped as soon as possible, and, if feasible, the spilled brine will be pumped up (or if frozen; scraped up) and returned to the drilling circuit or to a drill cuttings sump. Similar to a hydrocarbon spill, a trench or diversion may be dug and lined with plastic to collect and remove flowing water. Additional remediation measures may be applied on a case-by-case basis.

3. Spills of Cuttings

The spill will be stopped as soon as possible. Cuttings spills within 31 m of water or with the potential for direct flow into a waterbody will be removed to the extent practical and material placed in a designated cuttings sump. Runoff control measures may be placed downslope of the spill site if runoff of sediment to water is possible.

4. Artesian flow

Should artesian flow be encountered while drilling, drilling will cease and the hole plugged and permanently sealed.

6.8. RESPONSE TO A FIRE

Various products, including fuel, may be flammable under certain circumstances. It is important to ensure that the spill does not present a risk of fire prior to commencing the cleanup. If a fire does break out refer to relevant site firefighting procedures.

6.9. DISPOSAL

Appropriate disposal, as directed by the Environmental Manager, for any recovered product and contaminated soil, water, or absorbent cleanup material is regulated and must be authorized by the agency investigating the incident. Obtain approval from all appropriate government agencies before disposal. A hazardous waste generator number has been acquired and used by the expeditor when disposing of camp waste.

Fuel contaminated soil can be remediated at camp through incineration or alternatively, the contaminated soil can be flown out to Yellowknife for disposal in an approved disposal/treatment site.

Any non-reusable recovered product, contaminated soil and cleanup material, which cannot be incinerated, will be stored in containers and returned to camp prior to disposal.

7. Spill Potential Analysis

7.1. CAMPS

7.1.1. Fuel

Fuel spills could potentially occur from:

- Fuel storage containment (tanks, barrels) leaks.
- Spills during drum transport from aircraft to fuel storage area.
- Spills from vehicles or equipment as a result of accidents.
- Spills during fuel transfer from barrels to equipment or heaters.
- Spills during transport from barge to fuel storage area.
- Spills during marine transport.

Spills occurring during fuel handling, transfer, or storage operations will be minimized by:

- Secondary containment and/or drip trays.
- Proper storage of barrels.
- Inspections of the storage facilities and barrels.
- Inventory tracking.
- Staff training in proper fuel handling procedures.
- Spill response training for personnel associated with fuel handling.
- Immediate cleanup of minor spills.
- Enclosing spigots on fuel containers with absorbent mat to collect any slow drips.
- Fuel line walkers will be used to monitor the fittings etc. during fuel transfers
- Implementation of approved OPEP and SOPEP for transport in marine waters.

The potential for spills affecting surface waters is low, as fuel storage and transfer points are located away from watercourses and lakes. Close inspection of fuel transfer activities will be undertaken during all times while fuel is being pumped/transferred to equipment. Secondary containment will be used at all refueling points and storage areas.

7.1.2. Domestic Sewage and Solid Waste

Waste from the kitchen and Pacto systems are carried to the incinerator in a small trailer, with virtually no risk of spillage. The greywater lines are routinely inspected for leaks and repaired as necessary. The screens at the greywater sump are cleaned of debris daily.

7.1.3. Solid Waste

Failures may occur in the handling of solid waste through the following situations:

- Incinerator at Goose Exploration Camp fails.
- Accidental damage to the incinerator and it components, or the heaters and/or their fuel supplies.
- Mechanical breakdown.
- Improper maintenance.

Visual inspection of the incinerator and its combustion products will be carried out frequently, typically in the normal course of operation. The incinerator will be operated according to the manufacturer's instructions.

7.1.4. Chemicals

Any chemicals brought on-site are stored in manufacturers' approved packaging. Although unlikely, leaks may occur resulting in minor spills of chemical product in storage. It is more likely a leak will occur during the transfer of chemicals or from accidental failure of containers.

Sabina provides training to its staff in product handling and inspection procedures, which we feel, will result in reduced occurrences of chemical spills.

7.2. OVERLAND TRANSPORT

The following table identifies possible incidents which may occur along the winter and all-weather road, the consequences of that incident and the preventative measures to be implemented.

Table 3. Summary of Potential Incidents and Preventative Measures along Transportation Corridors

Incident	Description	Consequences	Preventative Measures
Refuelling of vehicles	Refuelling hose could break, spring a leak, overfilling of equipment tank, spillage from gas storage tank	Puddles of fuel over limited area Hose breaks at equipment and sprays a large amount of fuel over a larger area "slick" flows steadily from equipment	All refuelling will occur in area 30m from waterways in designated areas Personnel will be aware of emergency shut-off valves and trained in spills response Spill Kit available Refuelling occur within containment and/or absorbent material in place
Vehicle storage and operation	Vehicles could leak fuel while in operation or during a stop along route.	Puddles of fuel over limited area to the entire contents of a tank being discharged.	Vehicles will stop 31 m from waterways Vehicles parked on ice will have absorbent material placed underneath Personnel will be trained in spills response Spill Kit available
Fuel containers leaking	Fuel being brought to the vehicles could leak fuel while in operation or during a stop along route.	Puddles of fuel over limited area to the entire contents of a tank being discharged.	Regular visual inspection will occur to ensure tanks are not leaking Personnel will be trained in spills response Spill Kit available

(continued)

Table 3. Summary of Potential Incidents and Preventative Measures along Transportation Corridors (completed)

Incident	Description	Consequences	Preventative Measures
Vehicle accident	Accident on road that involves equipment going off road/overturning	This worst case scenario could result in a tank of fuel and any materials being transported spilling entire contents over a large area.	Safe road corridor will flagged Speed limits will be in effect Transportation of Dangerous Goods manifest if necessary Coordination and communication between the cat-haul and camps will be maintained Camp personnel will be ready to mobilize in case of accident Spill kit available with cat-haul and on-site
Temporary fuel storage leakage and/or spill	Fuel caches leak fuel or due to accident contents are spilled	Puddles of fuel over limited area Storage container breaks and fuel spreads over a larger area	All storage will occur in area 30m from waterways Secondary containment berms will be used for fuel caches Personnel will be aware of emergency shut-off valves and trained in spills response Spill Kit available Regular monitoring and inventory tracking will occur at these remote/temporary fuel storage areas
Calcium Chloride spill	Bags of salt could be torn and spilled in temporary storage area or in transport	Tears and bag breakages could lead to salt spread over limited area Bags could break in a manner that salt is spread over a larger area	Personnel will be trained in proper material handling and transport methods Salt will be stored and transported in 50lb bags on pallets wrapped in plastic Secondary containment will be used at temporary storage locations Spill kits and equipment available.

7.3. FIRE PREVENTION

The most serious spill incident would involve fire and a hydrocarbon-based fuel source. To minimize the risk of fire, **No Smoking** and **Flammable** signs will be posted as needed at storage areas and with the cat-haul train along with a dry chemical fire extinguisher. Workers will be trained in the use of the fire extinguisher and be instructed of the risk caused by electrical and open flame fire hazards near fuel.

8. Reporting Procedures

All spills are to be reported to the Site Superintendent or their designated representative. It is their responsibility to notify headquarters staff and external parties as outlined in the roles and responsibilities of this plan.

An internal log of spills, no matter how small, is to be kept and maintained by the Site Superintendent. Each record will include date, location, material spilled, volume, reason for release, any negative impact, status of cleanup, and corrective actions taken. Photo's (before, during and after cleanup) shall also be taken of all significant spills. To assist with internal tracking a Sabina Spill Form is included in Appendix C.

Reportable spills, as identified in this plan, are to be externally reported to the NWT/Nunavut Spill Response Line. The Site Superintendent will ensure spills are reported externally as required. The Spill response form (Appendix B) is to be completed for all externally reported spills and forwarded to the NWT/Nunavut Spill Response Centre within the required 24 hour reporting period. The Manager, Logistics and TS, or their designate, will notify Sabina Headquarter senior management of any reportable spills as listed below.

Any spill, or incident that may likely result in a spill, of an amount equal to or greater than the amount listed in the table below shall be promptly externally reported. Spills adjacent to or into a surface water or ground water access shall be externally reported regardless of quantity.

Spills within secondary containment will be reported and included in the internal log. In the situation that the spill within the containment is above the thresholds noted below, an external report to the NWT/Nunavut Spills will be submitted if the spill exceeds 40% capacity of the secondary containment.

Notification of spills within the marine environment will also be provided to community representatives of Kingaok and Omingmaktok.

Table 4. External Reporting Volumes

TDGA Class	Description of Contaminant	Amount Spilled
1	Explosives	Any amount
2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity greater than 100 litres
2.2	Compressed gas (non-corrosive, non-flammable)	Any amount of gas from containers with a capacity greater than 100 litres
2.3	Compressed gas (toxic)	Any amount
2.4	Compressed gas (corrosive)	Any amount
3.1, 3.2, 3.3	Flammable liquid	100 litres
4.1	Flammable solid	25 kg
4.2	Spontaneously combustible solids	25 kg
4.3	Water reactant solids	25 kg
5.1	Oxidizing substances	50 litres or 50 kg
5.2	Organic Peroxides	1 litre or 1 kg
6.1	Poisonous substances	5 litres or 5 kg
6.2	Infectious substances	Any amount
7	Radioactive	Any amount
8	Corrosive substances	5 litres or 5 kg
9.1 (in part)	Miscellaneous products or substances,	50 litres or 50 kg
9.2	Environmentally hazardous	1 litre or 1 kg
9.3	Dangerous wastes	5 litres or 5 kg
9.1 (in part)	PCB mixtures of 5 or more parts per million	0.5 litres or 0.5 kg
None	Other contaminants	100 litres or 100 kg