

APPENDIX C

SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN



**Comprehensive Spill Contingency
& Emergency Response Plan
2015 Site Preparation Activities**

October 2014

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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 satellite exploration camp at George Lake), and unoccupied claim groups referred to as the Boot, Boulder, Wishbone, Malley/Needle and Del properties.

The Back River Project is located in western Nunavut, south of Bathurst Inlet within the Slave Structural Province. It lies approximately 525 kilometres northeast of Yellowknife, NWT and 400 kilometres south of Cambridge Bay, NU. The project area is within the zone of continuous permafrost, and is represented on National Topographic System 1:250,000 scale map sheets 76F, 76G, 76J, and 76K.

1.2. Purpose

The purpose of the Spill Contingency and Emergency Response Plan (SCERP) is to outline Sabina's approach to risk management and to ensure that an adequate level of emergency and spill response preparedness is available for 2015 Site Preparation Activities at the Back River Project.

This SCERP has been developed to ensure that Sabina respects all applicable laws, regulations and requirements of the federal and territorial authorities. Sabina has applied for, or already obtained all required permits, approvals and authorizations required for the operations described below, in Section **Error! Reference source not found..**

This document outlines Sabina's state of preparedness for events which may occur due to unforeseen circumstances. The SCERP details response actions to be taken in the event of unintentional materials release or other emergency situations during the 2015 Site Preparation Activities. The SCERP is dynamic and will be updated at least annually to address any significant changes in operating plans, should they occur.

A copy of the SCERP will be available at Sabina's exploration camps and headquarter offices.

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 effects and to enhance positive effects.

To achieve these goals, Sabina is committed to:

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- 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 effects that could result 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 effects 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 activities when, in the opinion of management, Sabina is clearly associated, or likely associated with the spilled product. The guiding principles of Sabina's comprehensive SCERP is to comply with or exceed existing regulations to ensure protection of the environment, and to keep employees, government officials and the public aware of our plans.

2. ONGOING AND PROPOSED SITE PREPARATION ACTIVITIES

Activities planned for 2015 are divided into two groups, ongoing activities and proposed activities. The following sections describe each group.

Ongoing activities include:

- Goose Camp operations;
- Exploration and support activities; and
- Ice-based airstrip.

Proposed site preparation activities include:

- Ice road and associated water use;
- All-weather airstrip extension;
- Rascal Lake outflow stream realignment;
- Construction and use of a 6km all –weather road and associated crossings; and
- Quarry development and operation; and
- Staging of a Temporary Laydown Area (TLA) at the site of the proposed MLA.

2.1. Description of Ongoing Activities

Goose Exploration Camp

During site preparation activities for the Back River Property, it is anticipated that the existing Goose Exploration Camp (Goose Camp) will be used for ongoing exploration, engineering and baseline studies, and other site preparation activities.

Operation of Goose Camp

The Goose Camp will be utilized as a base for the aforementioned activities. No changes to the current camp accommodations are proposed.

Resupply of Goose Camp

The resupply of the Goose Camp and associated activities will take place utilizing all-weather and/or ice-based airstrips. No changes to the current resupply methodology are proposed.

Diesel Fuel Resupply and Storage

Additional fuel may be required for the proposed site preparation activities; this fuel will be supplied via aircraft and stored in the existing Goose Camp fuel storage area.

Arctic-grade diesel fuel will be used by motor vehicles and mining equipment on the site. Limited quantities of propane and gasoline will be used in maintenance facilities for smaller motorized equipment and machinery. All fuel to be used during the 2015 site preparation activities will be stored

within the existing 75,000 L tanks, within secondary containment. The Goose Camp fuel storage currently includes six 75,000 L tanks in tertiary containment and seven 75,000 L tanks that will require installation of a lined containment area, if used in 2015.

Explosives and Ammonium Nitrate Storage

Prepackaged explosives will continue to be delivered by air transport, sited and stored in accordance with legislative requirements and best management practices. Two magazines are currently located at Goose Camp; it is anticipated that additional magazines may be required.

Exploration and Study Support

Ongoing exploration and scientific studies to support the permitting and engineering phases will continue onsite. These may include geological mapping, drilling, geophysics, environmental baseline studies, and engineering studies. These activities, although based out of Goose Camp, may occur over the entire Project area.

Ice-based Airstrip

An ice-based airstrip on Goose Lake will be required for the delivery of equipment and materials necessary for site preparation activities. The ice-strip, which has been constructed in previous seasons on Goose Lake, will be built to Transportation Canada regulations and standards. No additional water use is currently anticipated for this activity.

2.2. Description of Proposed Site Preparation Activities

2.2.1 Goose Property

Ice Roads and Water Use

Ice roads, totalling approximately 6 km in length, will be required to connect and access the proposed quarries and explosives storage locations at the Goose Property. To support this work, water for construction will be necessary. It is estimated that 120 m³/day of water will be required to build and maintain this access during ice road operations. In the open water season, an estimated 70 m³/day of this total volume will be used for dust suppression and compaction of placed construction materials.

Quarries

A total estimated volume of 550,000 m³ of quarried material will be required to complete the outlined site preparation activities. Two quarries have been identified for use: the existing quarry next to the airstrip and a new quarry located within the footprint of the future Umwelt open pit. Up to 550,000 m³ of rock will be required to support site preparation activities, and this material will be extracted from one or both of these quarries. As such, Sabina is seeking approval to extract up to 550,000 m³ of rock from each of the existing quarry and the proposed Umwelt quarry. The total volume of rock extracted from one or both quarries, however, will not exceed 550,000 m³.

Only geochemically and physically suitable material will be developed, and handled per current quarry management plans.

All-weather Airstrip Extension

The current airstrip will be extended to allow for servicing passenger and cargo aircraft. This airstrip will serve as the main air access to the Goose Property throughout the life of the Project. The all-weather airstrip will be designed to Transport Canada standard TP 312 Aerodrome Standards and Recommended Practices (2005). The airstrip will be approximately 1,524 m long and 45 m wide.

Rascal Lake Outflow Stream Realignment

One of the Rascal Lake outflows currently intersects the extended airstrip footprint. A realignment of the natural watercourse will be required to divert the water currently flowing from Rascal Lake directly to Goose Lake, to flow via Gander Pond to Goose Lake. This realignment will require the construction of two berms to divert 100% of the flow from Rascal Lake through Gander Pond to discharge into a nearby area of Goose Lake. Berm construction material will be sourced from an approved quarry source.

All-weather Road and Associated Water Crossings

The proposed road alignment at the Goose Property will be constructed as an all-weather road. This road alignment, totaling approximately 5 km in length, is required to access the existing rock quarry, the new Umwelt quarry, and the extended all-weather airstrip.

The all-weather road will be constructed with run-of-quarry rock placed directly onto the tundra to preserve the permafrost. A layer of graded surfacing material will be placed to provide a protective trafficking layer. Construction materials will consist of geochemically suitable rock sourced from the existing quarry and/or Umwelt quarry.

Stream flow through the road alignment will be conveyed using appropriately sized culverts.

2.2.2 Temporary Laydown Area

A TLA will be staged at the site of the future MLA location. Activities will include the offloading of two barges containing materials, equipment, and fuel for future use; these materials will be stored at the TLA. Explosives magazines will also be offloaded to the TLA and stored empty for 2015.

Arrival and offloading of the barges and staging of the TLA will occur in the open-water season of 2015 over a period of approximately 25 days. The barges will come from a western route, either from the Lower Mainland or from Hay River.

Material Storage and Access

An estimated laydown area of up to 1 ha will be required to store equipment, materials and fuel for future Project works. With the exception of large preassembly and modular equipment, materials arriving at the TLA will be housed in sea containers. The equipment and materials will be placed on dunnage or swamp mats to protect the permafrost.

The TLA will be accessed from the barge landing area using swamp mats provisionally placed directly onto the tundra to preserve the permafrost. Once the equipment and fuel are stored, the swamp mats along this corridor will be removed and transported offsite with the outgoing barges.

To facilitate these efforts, personnel (10-14 staff) will be shuttled on a daily basis from the Goose Camp to the TLA. Minimal temporary structures (e.g. tents) will be used at the TLA site; these may include a first aid room, lunch room, and restrooms (pactos). Food, water, and waste will be temporarily stored and removed periodically. Local measures will be implemented to minimize wildlife attraction to the TLA.

Diesel Fuel Supply and Storage

Sabina will require 600,000 L of diesel fuel for future site preparation; this fuel will be shipped to the MLA (via barge) and stored in land-based steel tanks at the TLA. The tertiary containment for fuel tanks will be Arctic-grade manufactured instaberms or similar product. These will be placed on a stable foundation of interlocking swamp mats that will remain for the duration of the facility.

The capacity of each berm will be equal to the volume of the largest tank plus 10% of the volume of the remaining tanks or 110% volume of the largest tank, whichever is greater. In calculating the volume, the footprint of the smaller tanks is subtracted. The above basis is consistent with the document entitled Design Rationale for Fuel Storage and Distribution Facilities published by the Department of Public Works of the Northwest Territories (GNWT 2006; refer to Section 4.6 of these guidelines). The design of these containment products will be based on Arctic installation and industry storage standards. Fuel transfer will incorporate hoses and pumps within tertiary containment. Transfer methodology is described in the attached Oil Pollution Emergency Plan (OPEP).

3. RISK MANAGEMENT AND EMERGENCY CONTACTS

3.1. Risk Management

The likelihood of a significant spill event occurring at either the existing Goose tank farm or the proposed temporary fuel storage area at the MLA is very low, due to the use of double-walled tanks contained in the lined, bermed areas, or within instabermers, and the prescribed procedures for fuel transfer and anti-siphon devices in the tanks.

The greatest likelihood of an incident is present during refueling 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 of the solid product can be easily cleaned up. Regular inspection of storage areas will allow for rapid detection of any spill.

Explosives will be delivered in designated containers 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 immediately cleaned up and regular inspection will allow for rapid detection of any spill.

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

Despite the mitigation measures taken, should any incident arise as a result of human error or unforeseen circumstances, the operating procedures outlined in this SCERP will be implemented. An Oil Pollution Emergency Plan (OPEP) has also been developed which will be the governing document for spills occurring at the MLA.

3.2. Emergency Contact Information

Contact information for all Sabina staff members involved in emergency response is presented in Table 1 and will be updated in future iterations of this SCERP. External contacts that may provide additional assistance as necessary are presented in Tables 2 and 3. Key government contacts are provided in Table 4.

These contacts are reviewed and updated with every review of the SCERP.

Table 1 Emergency Response Team

Title	Name	Telephone No.
Environmental Superintendent	Cheryl Wray	(778) 588 1999
Environmental Coordinator	Merle Keefe	(778) 588 1999
Operations Superintendent	Rick Peter	(778) 558 5995

Manager Site Operations	John Laitin	(604) 998-4187
VP Sustainability	Matthew Pickard	(604) 998-4175
VP Project Development	Wes Carson	(604) 998-4175

Table 2 External Emergency Response Contacts

Emergency Situation	Agency Contact	Telephone No.
Medical emergency / medevac	Kitikmeot Regional Health Centre	867-983-4500
	Cambridge Bay Heath Center	867-983-4500
	Stanton General Hospital	1-800-661-0867
	Air Tindi	867-669-8200
Poisonous substance ingestion	Poison Control Centre	1-800-268-9017
Search and Rescue	Cambridge Bay RCMP	867-983-0123
	Kitikmeot Search and Rescue	867-983-5100
Fatality	Cambridge Bay RCMP	867-983-0123
Workers' Safety and Compensation Commission	Incident and Injury Reporting	1-800-661-0792
Hazardous material spill	Emergency/ Spill Report Line	867-920-8130
Crime	Cambridge Bay RCMP	867-983-0123
Wildlife management	Department of Environment – Cambridge Bay	867-983-4164

Table 3 External Spill Response Contacts

Expediting Company	Contact Name	Telephone No.
Shell Canada, Mobile Environmental Response	Steve Bassett	867-874-2562
Kitnuna	Wilf Wilcox	867-983-2331
Nuna Logistics Ltd.	Court Smith	867-682-4667
Dupont (Fuel Dye)	-	905-821-5660
Frontier Mining (Sorbents)	-	867-920-7617
Acklands (Sorbents)	-	867-873-4100 867-920-5359

Table 4 Key Government Contacts

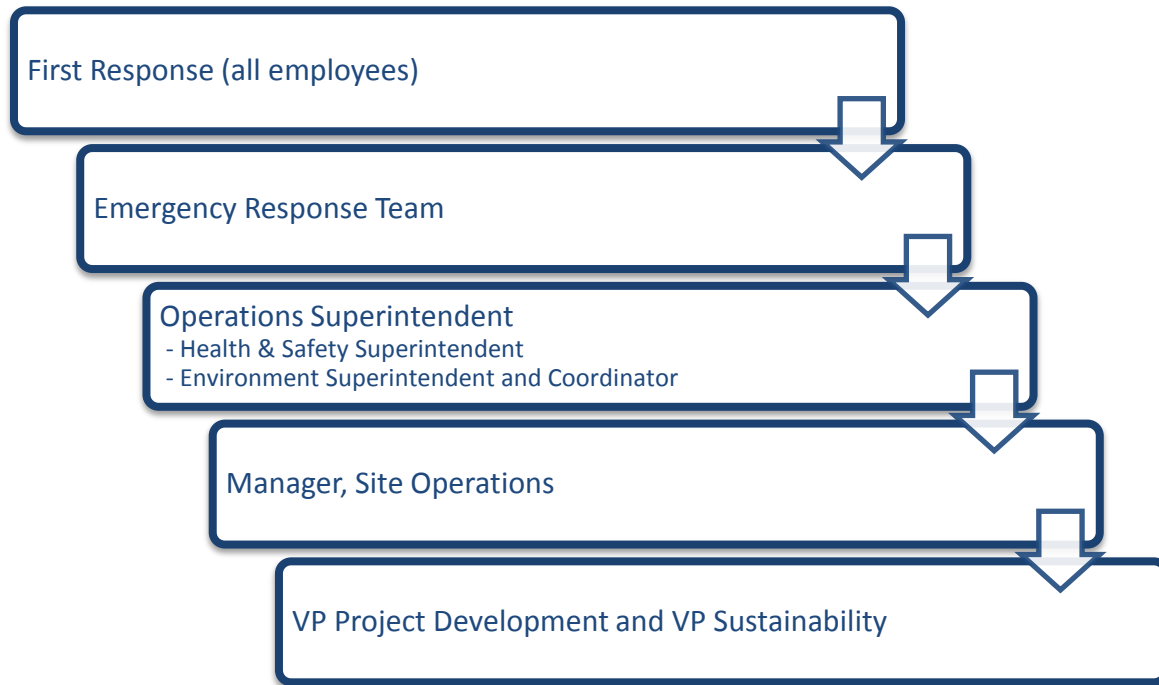
Agency/Organization	Contact	Telephone No.
Aboriginal Affairs and Northern Development Canada	Eva Paul, Water Resources Officer Baba Pederson, Resource Mgmt. Officer Erik Allain A/Manager of Field Ops	867-982-4308 867-975-4296 867-975-4295
Canadian Coast Guard	-	1-800-265-0237

Department of Fisheries and Oceans	Margaret Keast	867-979-8000
Environment Canada	Craig Broome, Manager of Enforcement Wade Romanko, Env. Emerg. Officer	867-669-4730 867-669-4736
Government of Nunavut Environmental Protection	Robert Eno, Director Environment	867-979-7800
Kitikmeot Inuit Association (KIA)	-	867-983-2458
Nunavut Water Board	N/A, Exec. Director Phyllis Beaulieu, Manager of Licensing	867-360-6338
RCMP (Kugluktuk)	-	867-982-2111
RCMP (Yellowknife)	-	867-669-1111

4. ROLES AND RESPONSIBILITIES

The initial stage of any spill or emergency incident and resultant response is critical. An effective and timely response is essential to minimize environmental impacts and prevent an emergency situation from escalating to a higher level. Therefore, all relevant personnel must be fully aware of their individual duties and responsibilities as presented in this SCERP.

The general response and notification chart is:



4.1. All Employees (First Responders)

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

4.2. Emergency Response Team

- Members determined by Operations Superintendent based on response needs;
- Members report to the scene of the incident;
- Work closely with the Operations Superintendent to determine appropriate response strategy;
- Contact departmental resources via radio as required during the emergency response;
- Direct ERT members in their respective tasks as required; and

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- Participate in a post-emergency debriefing session.

4.3. Operations Superintendent

- Evaluate the initial situation and assess the magnitude of the emergency;
- Assemble and manage the Emergency Response Team, as required;
- Develop an overall plan of action;
- Notify Manager, Site Operations, Health & Safety Superintendent, and Environmental Superintendent and Coordinator of incident;
- For spills, report to NWT-NU 24-hour Spill Report Line at 867-920-8130 and ensure cleanup is completed to Sabina standards in line with direction from the Manager, Site Operations, Health & Safety Superintendent, Environmental Superintendent Coordinator;
- Provide liaison with management to keep them informed of response activities;
- Act as the spokesperson with government agencies as appropriate;
- Document all actions and decisions;
- Collect photographic records of the event and response efforts;
- Participate in post-emergency debriefing;
- Assist in the accident/incident investigation process;
- Complete Government Agency notification processes;
- Document the cause of the emergency and effectiveness of the response effort, and recommend the appropriate measures to prevent a recurrence;
- Ensures Emergency Response Team is adequately trained;
- Ensures Emergency response and/or monitoring equipment and supplies are regularly inspected and maintained;
- Ensure that all involved departments complete reporting process; and
- Prepare and submit follow-up documentation required by appropriate regulators.

4.4. Manager Site Operations

- Provides advice and ensures response is completed to Sabina standards in line with direction from the Operations Superintendent and VP Sustainability;
- Organize with Operations Superintendent emergency response training and exercises; and
- Lead investigation and identify measure and/or training to prevent similar incidents occurring.

4.5. Environmental Superintendent and Coordinator

- Provides advice and ensures incident is documented appropriately as per this plan and regulatory requirements;
- For spills; record date, location (GPS), material spilled, volume, reason for release, any negative impact, status of cleanup, and corrective actions taken; confirm these details with Operations Superintendent.
- For spills; obtain photographs of spill site before clean up 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 by applicable agencies; and
- Assist with investigation and identify measure and/or training to prevent similar incidents occurring.

4.6. Health & Safety Superintendent

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

4.7. VP Project Development and VP Sustainability

- Engage Legal Counsel and Sabina Senior Management and Board of Directors as required; and
- Notify and update Senior Management and Board members as required.

5. TRAINING AND TESTING

Sabina will ensure that personnel involved in emergency and spill response have received prior training and the requisite skills to safely minimize risks and respond to emergencies.

The personnel directly linked to emergency and spill response operations will receive training to familiarize themselves with the SCERP and Hazardous Materials Management Plan (HMMP) on a regular basis according to their duties and responsibilities. All completed training will be recorded in the training register.

The personnel directly linked to emergency and spill response operations, contract employees and the other responders identified in this SCERP should take part in the annual training program. Training will be conducted to ensure adequate numbers of responders are available for all levels, times, and work shifts.

5.1. Training

4.1.1 Site Orientation

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

- What First Responders are to do in case of an emergency situation;
- The location of MSDS sheets and Spill Report Forms;
- The location of the Spill Response Kits;
- The general locations of fire extinguishers and firefighting equipment; and
- The location of the Spill Action Plan and the Fire Action Plan.

5.1.2. Role Specific

Specific on-site training will be provided to all 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 an 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; and
- Turn off valves to stop the flow of fuel.

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