SABINA GOLD & SILVER CORP.

HACKETT RIVER CAMP

WASTE MANAGEMENT PLAN

Prepared by
Elizabeth Sherlock, PGeo
Scott Burgess, PGeo

1st Edition: March 17, 2010

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INTRODUCTION

Sabina Gold & Silver Corp. (Sabina) is actively exploring the Hackett River area under valid land use, mineral tenure and water permits. These include:

Table 1: List of Licenses and Permits issued for Hackett River Project

Permit No.	Permit Name	Expiry	Issuing Agency
Lease 2789		2018-02-19	INAC
Lease 2893		2020-12-07	INAC
Lease 2895		2021-01-04	INAC
Lease 2958		2021-09-19	INAC
Lease 2964		2022-01-15	INAC
Lease 3000		2022-06-26	INAC
Lease 3018		2023-02-24	INAC
Surface lease 76F16-1-4	Hackett River Camp	31/3/2017	INAC
KTL304C010	Hackett River	2010-03-17	KIA
2BE-HAK0915	Hackett River Camp	2015-12-31	NWB

The Hackett River Waste Management Plan has been developed to outline management and incineration operational practices. The purpose of this Plan is to ensure sound management of non-mineral waste management by minimizing the amount of waste generated and ensuring the safe handling and disposal of all generated wastes. NWB has also required a discussion of mineral waste management that is included in this Waste Management Plan.

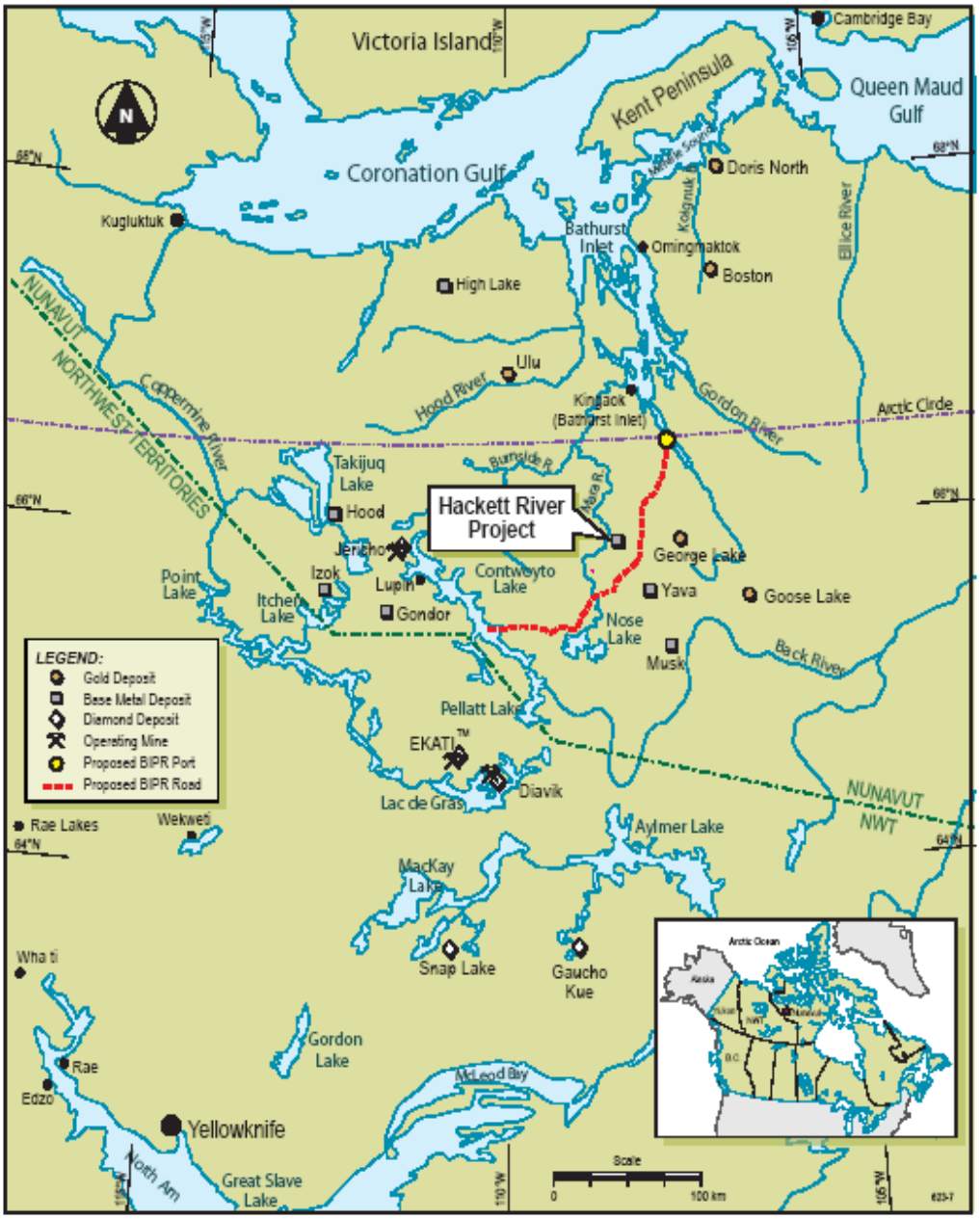
Managing wastes and working responsibly will ensure the protection of the environment and personnel safety. Sabina will implement this Waste Management Plan and will continue to look for opportunities to minimize or eliminate negative impacts to the environment as a result of its activities, products and services at the Hackett River Project.

Site Location and Description

The Hackett River Project is located in the West Kitikmeot Region of Nunavut about 104 km south of Bathurst Inlet (Figure 1) approximately 65° 55' North Latitude, 108° 22' West Longitude.

The Hackett River exploration project consists of a single exploration camp located on the southwest shore of Camp Lake (Figure 2) and seven crown mineral leases. The camp can support up to 75 people to directly support exploration activities involving surficial mapping, geophysical surveys, core logging, diamond drilling. The exploration camp is located on Surface Lease 76F 16-1-4 which permits the presence of mineral exploration camp structures subject to certain terms and conditions.

Figure 1: Location of Hackett River Project



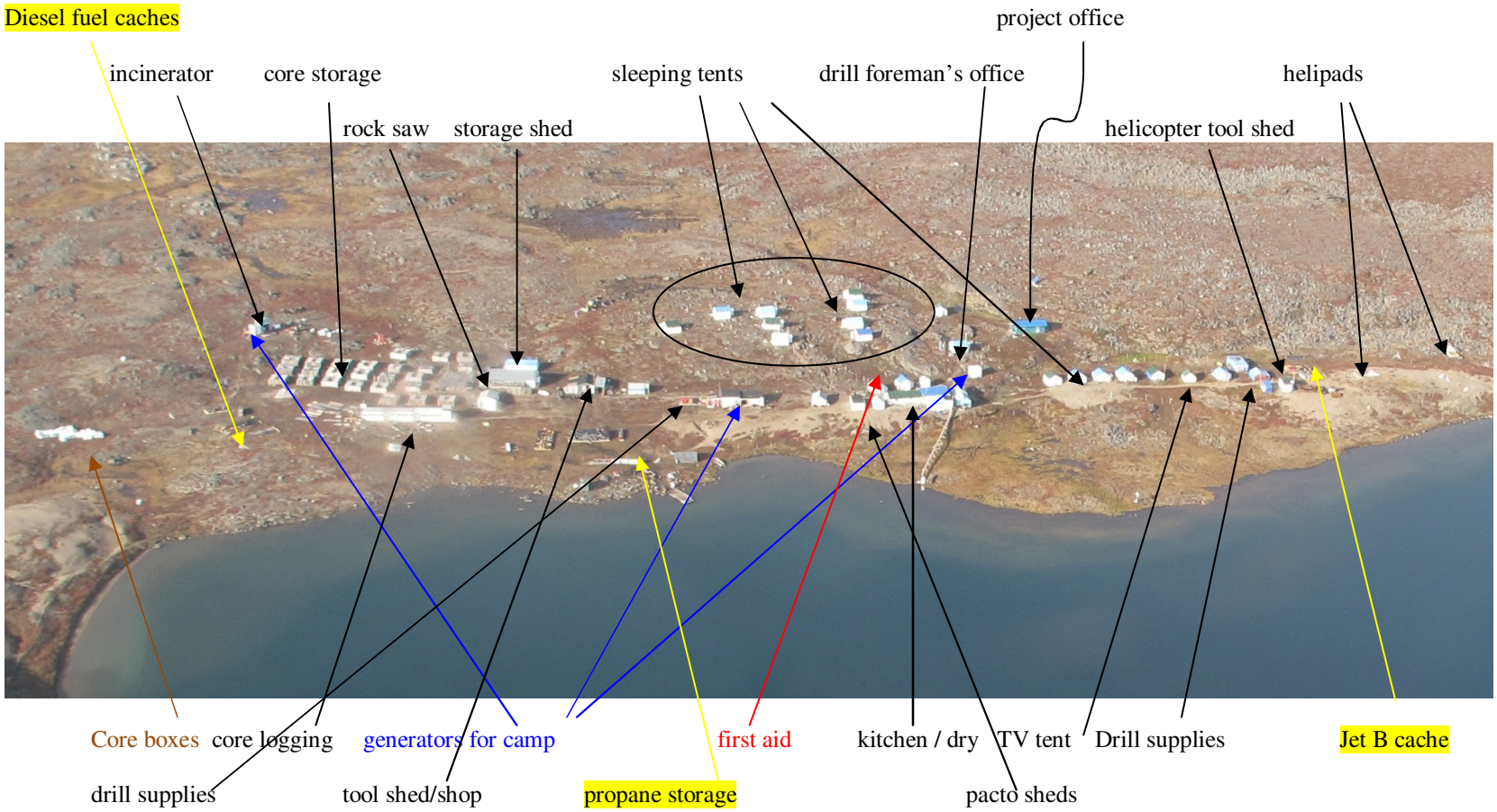


FIGURE 2: Hackett River Camp, looking SW. (Photo Sept 3, 2009).

Scope of Report

This Waste Management Plan has been written to meet requirements under the NWB license and applies to the Hackett River Camp and all associated mineral leases and claims. Subject to annual internal review and revision, it will remain applicable throughout the duration of the NWB license, or until a material change in the scope of the Project occurs.

The goal of any waste management plan is to reduce and prevent impacts to the environment. Managing wastes and working responsibly will also ensure personnel safety while involved in mineral exploration activities.

Sabina conducts waste management under the following guidance:

- Wherever and whenever possible, Sabina and its employees will work toward the 3Rs – reduce, reuse and recycle;
- Sabina is committed to considering additional best management practices and alternatives to hazardous products; and if an appropriate method and/or substitute is identified then it will be incorporated into exploration activities;
- Every effort will be made to purchase products from suppliers with programs and policies of return for used containers and/or unused product where available and economically feasible to do so; and
- Compliance with company policies, legislation and terms and conditions of water licenses and land use permits.

With this guidance, Sabina understands the steps of waste management to include:

- Understand waste streams
- Reduce amount generated
- Separate
- Safe handling/transportation and disposal
- Incineration

UNDERSTANDING WASTE AND WASTEWATER STREAMS

This Plan covers non-mineral wastes generated as a result of Hackett River operations. Non-mineral wastes include, but not limited to, waste generated through the operation and maintenance of exploration facilities such as:

- Drill sites – used oil, antifreeze, used absorbent pads, greases, lubricants, batteries, scrap metal, empty fuel drums, timber/lumber scraps, drill rods, drilling fluids and additives, and drill cuttings with a potential for acid generation/metal leaching.
- Generators and Heavy Equipment - used oil, antifreeze, used absorbent pads, greases, lubricants, batteries, scrap metal, empty fuel drums
- Camp (kitchen, offices and sleeping quarters) – recyclables, food, wood, cardboard, plastic, rubber, glass, batteries, solvents, scrap metal, empty fuel drums, sewage, greywater, construction debris, paint.

WASTE MANAGEMENT

It is important that wastes are sorted and safely handled and disposed of. Whenever practical waste is sorted at the source and divided into the following categories:

1) Non-hazardous
   a) Combustible
   b) Non-combustible

i) Recyclables
ii) Reusables
iii) For disposal

2) Hazardous

Non-hazardous waste includes food, sewage wood, cardboard, plastic, rubber, glass scrap metal and empty fuel drums. Hazardous waste includes used oil, oil filters, used absorbent pads, paint, chemicals, batteries and used grease. The following outlines management of hazardous and non-hazardous materials on site.

NON-HAZARDOUS WASTE MANAGEMENT

Non-hazardous waste are identified below with a description of how they will be separated on site, sorted and disposed of:

- Recyclable and reusable wastes – will be collected, sorted and stored until they can be backhauled to Yellowknife for inclusion in their recycling program. This includes plastic and aluminum drink containers, printer cartridges, metal containers, plastics (#1 thru #6).
- Combustible wastes – will be incinerated on site as per guidance from "Technical Document for Batch Waste Incineration", Environment Canada (March 2009) incorporated into this plan. This includes kitchen waste, pacto sewage waste, cardboard, wood. The waste ash will be stored and backhauled to Yellowknife for disposal.
- Scrap metal – will be separated, sorted and stored until backhaul available to Yellowknife and included in scrap metal recycling program. This includes principally empty 205L fuel drums that will be stacked and stored in secondary containment; this also includes some construction waste and equipment parts.
- Non-combustible inert waste – will be sorted and stored on site until backhaul to Yellowknife for inclusion in recycling programs and/or disposal in municipal landfill as appropriate. This includes glass containers, paint cans and batteries

Note that backhaul quantities will be tracked and recorded by camp management to include the type and volume of waste backhauled and note of final destination. Combustible material will be tracked as identified under "incineration management".

- Greywater from the camp kitchen and the two drys is currently collected by drainage pipes and gathered in a 500-gallon (1893 litre) open tub and then pumped by a trash pump to a greywater disposal pit located further back (about 110m) from Camp Lake with an automatic, float-controlled pump. Sewage is collected in the Pacto toilet system and included in the combustible waste management.

HAZARDOUS WASTE

Transportation

Hazardous material wastes will be stored and transported in an appropriate container clearly labeled, and backhaul to Yellowknife. The GN-DoE administers the *Transportation of Dangerous Goods Act and Regulations* and monitors the movement of hazardous wastes, classifies dangerous goods into nine classifications and sets requirements for the packaging and labeling

of materials. The classifications of hazardous materials at Hackett camp are highlighted in bold below:

- Class 1: Explosives
- **Class 2: Gases; compressed, deeply refrigerated, liquefied or dissolved under pressure**
- **Class 3: Flammable and combustible liquids**
- Class 4: Flammable solids
- Class 5: Oxidizing substances; organic peroxides
- Class 6: Poisonous (toxic) and infectious substances
- Class 7: Radioactive materials
- Class 8: Corrosives
- Class 9: Miscellaneous

There are other legislation that applies to the storage, handling and transport of hazardous materials including, but not limited to:

- National Fire Code of Canada
- Fire Prevention Act
- Nunavut Guidelines for Waste Management
- The Mine, Health and Safety Act and Regulations (Nunavut)
- The NWT and Nunavut Safety Act, the Occupational Health and Safety Regulations
- The Workplace Hazardous Materials Information System (WHMIS)

The GN-DoE monitors the movement of hazardous waste from the producer to the final disposal location through the use of a tracking document, a waste manifest. A waste manifest form is filled out and must accompany all hazardous waste while in transit. Camp management will complete these forms and keep copies on site.

Storage

All hazardous materials and wastes will be labeled accordingly to comply with regulations and to inform personnel/contractors of the contents. MSDS sheets will be available for all hazardous materials and will be located in a binder in the office, helicopter shack and drill foreman's tent. MSDS sheets are also included in the Spill Contingency Plan. All personnel/contractors who have to handle hazardous materials will be trained appropriately.

Storage of these products and wastes will be in compliance with the 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 as outlined in the Spill Contingency Plan. Petroleum products will be stored at least 100m from the high water mark of any waterbody and within secondary containment.

MINERAL WASTE MANAGEMENT

These are non-hazardous wastes associated with exploration activities. They are identified below with a description of how they will be separated on site, sorted and disposed:

- Where mineral exploration drilling occurs near, or on lakes, the drill return water containing drill cuttings will be pumped well back from the shore of the lake to a natural

depression, or sump, the location of which is surveyed and recorded. Because drill cuttings are mechanically pulverized rock, they are geologically similar to the locally present glacial till. If the drill cuttings have a potential for acid rock drainage/metal leaching, it is anticipated that the distance from the water will minimize the impact if the potential is realized. It is expected that drill cuttings will, in time, be colonized by plants and lichen.

- Mineral waste is also associated with rock/core sampling that involves cutting using a rock saw. The rock saw is expected to produce approximately 1/2 m^3 of sludge cleaned from the bottom of the settling container in the course of the season. The sludge will consist mostly of sulfides. The sludge will be cleaned from the settling container on an as needed basis, placed in emptied and cleaned 205L fuel drums, allowed to dry out, and eventually flown out to the Yellowknife for disposal at a hazardous waste materials handling facility.

WASTE INCINERATION

The incinerator system at Hackett River camp is an Eco-waste Oxidizer model CA 50 installed in 2008. It is a diesel-fired, two stage, dual chambered controlled air batch incinerator contained within its own building on site. It can accommodate the current camp size of 50 and the planned camp size of 75. The capacity of the incinerator, based on typical mixed camp waste, is about 200lbs indicating that 2 to 4 cycles can be processed on a daily basis to incinerate the camp waste.

Photo: Hackett River Camp Incinerator, (Aug 2009)

Personnel training is an important component of successful operation of the incinerator. Eco-waste Solutions, the incinerator manufacturer, provides on-site training to Sabina personnel and incinerator maintenance. Camp management will track who completes this training and any refresher courses completed. They will also record all preventative maintenance activities undertaken on the equipment.

Guidelines for personnel:

- Be sure to wear gloves, goggles, dust mask and face shield before handling waste or incinerator ash.
- Separate waste into what can be burned, and what cannot be burned at the source (e.g. kitchen)
- Burn food wastes daily to avoid accumulation of garbage (minimizes wildlife attractant). The operation of the incinerator will be recorded on a daily basis.
- Make sure the ash is cleaned out prior to recharging for the next burn cycle
- Once cooled the incinerator can be opened and the ash placed in an empty drum which will be sealed, labeled and properly stored for backhaul and disposal in approved landfill. The weight of ash for backhaul will be recorded.
- Waste to be added to the incinerator should be monitored recording type of waste and weight. Note that Pacto toilet waste should make up 1/5 of each batch.
- When the incinerator is charged with the appropriate mix and quantity of waste, the door should be closed, ensure it is locked and the burn cycle started.
- When satisfied that the burn is proceeding in a controlled manned, the incinerator may leave the area while the equipment completes the burn cycle.
- Do not add waste to the burn cycle once started.
- Do not use waste oil or any hydrocarbon as an accelerant
- Keep the area around the incinerator tidy

Items that cannot be burned at Hackett Camp include:

- Styrofoam
- Wood treated with preservatives
- Metal

REVIEW OF WASTE MANAGEMENT PLAN

The activities and costing of waste management activities will be reviewed internally on an annual basis relative to the long-term exploration strategy for the Project and operational needs.