

Lac de Gras Project

Waste Management Plan



Dominion
Diamond Mines

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WASTE MANAGEMENT PLAN

1.0 Introduction

Dominion Diamond Mines ULC (Dominion) is committed to minimizing the impact of its activities on the environment and to protecting the safety of communities, personnel & contractors, wildlife and the land from unacceptable risk. Preventative maintenance reduces the likelihood of environmental concerns. Grassroots exploration activities generally are low-impact, and with diligence and good management practices it is possible to minimize any potential environmental impact.

This Waste Management Plan (the Plan) allows for the identification of the different waste streams produced during the Lac de Gras Project (the Project) and outlines the procedures for managing same. Proper execution of the Plan will mitigate and minimize the effects of waste on the local environment. The Plan is designed to employ best practices that are also in compliance with relevant Acts, Regulations and Permits.

2.0 Site Characteristics

The exploration property is located in the Central Tundra Natural Region. This is characterized by rolling hills, low ridges (drift-covered) and abundant glaciofluvial features (kettles, eskers and outwash plains). Outcrop exposure ranges up to 25% with the remainder covered by undifferentiated glacial drift.

Topographic relief is low with elevations ranging between 400 – 440m asl (above sea level). Drainage in the area is by the Lockhart River watershed in the south and the Coppermine River watershed in the north, both eventually debouching into the Arctic Ocean. The area lies above the Tree Line and has sparse vegetation cover, consisting of dwarf birch & willow, Labrador tea, tundra grasses & sedges, moss and lichen. Some sheltered and well watered locations contain pockets of boreal forest.

Climatic conditions vary between +20°C in the summer months to -45°C during the winter. Average annual snow fall is about 1m, which predominantly falls during autumn and spring storms. Winds of 20-30 km/h are fairly consistent with winds up to +30 km/h being common.

3.0 General Camp Site

The HW camp consists of 14 plywood and canvas structures. Most of the use is temporary and occupies less than 1 ha. An expanded facility at HW camp as described in the LUP Application and Project Description document would see the land use area be less than 2 ha.

If a temporary camp or camps are required they would typically consist of plywood and canvas structures (shacks/tents), comprising sleeping tents, First-Aid/Refuge, kitchen, dry, core shack, and office space as required. Alternatively, hard wall portable structures may be employed. Additionally, there would be structures erected for the power generator, waterless or privy toilets and general storage. A dock, a laydown area for drill equipment, fuel storage and waste storage and disposal area may also be established. The footprint of a camp would be approximately one to two hectares.

4.0 Waste

Daily exploration activity will generate several types of waste materials. To effectively manage waste in a manner protective of wildlife and the environment, the following basic rules will apply:

- a) No garbage will be left in the field at any time. All refuse and cigarette butts will be collected and properly disposed of upon return to camp.
- b) Garbage will be separated by type and properly disposed of on site or removed from site for disposal.
- c) Garbage receptacles will be placed at work locations and around camp for convenience of personnel. Cigarette butts will be extinguished and placed in an appropriate receptacle and will not be thrown on the ground.
- d) Wastes removed from site are to be delivered to appropriate waste handling facilities. Dominion's Ekati Mine is a facility which can safely receive all wastes generated by the Project. Third parties such as the City of Yellowknife operated transfer facility and KBL Environmental are other examples of facilities capable of receiving non-hazardous and hazardous materials respectively.

5.0 Waste Types

Various wastes are generated during the day to day activities associated with an exploration operation. In remote locations such as the Project, it is essential that these wastes are handled, stored and managed in a safe and environmentally responsible manner. Remote sites often face logistical challenges that must be rectified prior to project commencement. This project will be only accessible by aircraft during the summer so additional considerations will apply pertaining to the movement of waste off-site for disposal to an approved facility. This section of the plan will detail the type of waste management options Dominion will utilize for activity on the Project.

a) Hazardous or Potentially Hazardous Waste

The hazardous and potentially hazardous materials are to be kept in secure storage at camp or laydown locations. Used materials from camp, and that which is returned from the drills, are to be sorted by the camp manager and/or logistics coordinator and stored in sealed plastic or steel containers to await off site disposal. Separate storage containers are to be used for incinerator ash, lead acid batteries, lithium batteries, oil filters, waste oil and fuel, chemical wastes, contaminated soils and sludge. Following dispatch from site, materials will be expedited to Hazardous Waste Transfer Facility such as KBL Environmental at #17 Cameron Road in Yellowknife for proper disposal.

b) Non-mineral Waste

The non-mineral waste materials are to be inspected and sorted by the camp-manager or logistics coordinator to remove all re-useable or recyclable materials and separate into domestic refuse, putrescible waste, construction materials, black water sewage and grey water. All materials are then kept in secure storage at base camp within the perimeter of the bear fence.

- i. Domestic refuse (Dry waste) and cleaned recyclables are to be kept in enclosed structures prior to incineration or transportation off site. Any materials that are transported off site are to be immediately received by Dominion representatives and transported to appropriate waste handling facilities.
- ii. Putrescible waste - Used or old food items are to be incinerated or regularly backhauled off site for disposal. This is done to prevent the attraction of wildlife. Food items should only be consumed in the kitchen area, not in the sleeping, office or core shack tents. A dual chamber, diesel incinerator may be used to dispose of food waste in camp. Any waste stored onsite or backhauled from site will be properly

packaged (i.e. double bagged). The kitchen is to contain two waste receptacles for burnable and non-burnable items. The Camp manager is responsible for the sorting of the two waste streams to ensure compliance. When immediate incineration is not available, the putrescible wastes are to be double bagged with industrial grade garbage bags to restrict odours from escaping and prevent the attraction of wildlife.

- iii. Burnable waste such as wood, paper, cardboard may be incinerated or burned in a burn barrel.
- iv. Construction materials are to be sorted by the camp manager or logistics co-ordinator to remove any potentially reusable or recyclable materials. Any materials identified as re-useable are stored in the workshops for future use. Non-recyclable or re-useable materials are separated to be either incinerated or removed from site for disposal. Materials that are removed from site are immediately received by Dominion representatives and transported to appropriate waste handling facilities
- v. Black water sewage is to be collected daily from waterless toilets and incinerated following all Territorial and Federal incineration guidelines, or incinerated at point of collection with an incinerating toilet, or collected daily and removed regularly from site for proper disposal, or deposited directly in privy toilets. When incineration is not possible the sewage is to be stored in a sealed wet storage bin until removal from site.
- vi. Grey water from the kitchen and dry is to be collected in a sump. Strainer baskets are to be used in kitchen sinks to prevent food material from entering the grey water waste stream. A grey water sump is to be located over 50m from the lake shoreline. Sumps are to be situated in a patch of coarse-grained, gravelly sand.

c) Mineral Waste

Drill cuttings will be placed in a natural depression or sump at least 100 metres from the ordinary High Water Mark of the nearest water course (stream or lake) as required under typical land use permit conditions. On-ice drilling activities may use mud recovery units to minimize the water used and make it easier to manage cutting waste material for eventual disposal in an appropriate land based sump.

Summary of Waste Types and Handling

Waste Type	Disposal Method
Food Waste	Burn using incinerator or backhaul regularly for off site disposal
Burnables	Burn using incinerator, or burn barrel on site or remove from site for off site disposal.
Ash Residue	Raked for non-combustibles, sealed in pails for off site disposal
Recyclables	Sorted and packaged for off site disposal
Hazardous Waste	Packaged appropriately removed from site for disposal
Machinery Waste	Packaged appropriately removed from site for disposal
Tires & Scrap	Package appropriately and removed from site for disposal
Human Waste	Collected daily for regular removal from site and/or incineration in accordance with Territorial and Federal guidelines, incinerated at point of collection in an incinerating toilet or deposited directly in a privy toilet.
Greywater	Sump located on site that drains from kitchen and dry
Other Waste	Sort, package and remove from site for reuse, recycling or disposal
Contaminated Soils	As per Spill Contingency Plan

6.0 Review and Update

The Waste Management Plan will be subject to review annually to ensure compliance with regulations, permits and relevant legislation as well as to determine if adjustments to the plan are necessary



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