



WASTE MANAGEMENT PLAN

Effective Date: October 1, 2017

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Introduction

Margaret Lake Diamonds Inc. has established this Waste Management plan to cover its activities during the proposed exploration and drilling program on the “Diagras” property. All personnel handling any type of waste shall make themselves familiar with the plan and the plan will be part of the induction to new personnel to any work program.

Once a Land Use Permit is approved the LUP Number should be recorded below for copies of this management plan used in the field.

LAND USE PERMIT NUMBER: _____

This Plan was prepared and approved by Margaret Lake Diamonds Inc. Additional information or copies are available from Margaret Lake Diamonds Inc. at (604) 630-2810

All non-hazardous waste materials will be either incinerated or transported to Yellowknife for appropriate disposal.

During drilling operations on land, drill water and cuttings are released into the natural environment. All drill muds used are nontoxic. There is no risk of acid drainage or other adverse effect as the rock material is non-reactive with water. When drilling on lake ice in winter, all cuttings are transported onto land at least 100 metres from the shore of any water body.

All hazardous wastes are removed from the property for appropriate disposal.

There are no industrial processing type operations at the project and so no industrial type materials are released into the environment as tailings.

Property Location and Description

Margaret Lake Diamonds Inc. has a small area of interest on and to the south of Hardy Lake approximately 35 km northeast of Diavik diamond mine and 35 km east of Ekati diamond mine, Northwest Territories. The primary mineral target will be diamond-bearing kimberlite. Historical exploration results have indicated a very good potential in the area of interest. The Diagras camp will be used as a staging area for all work site activities. See **Figure 1** for property and camp location.

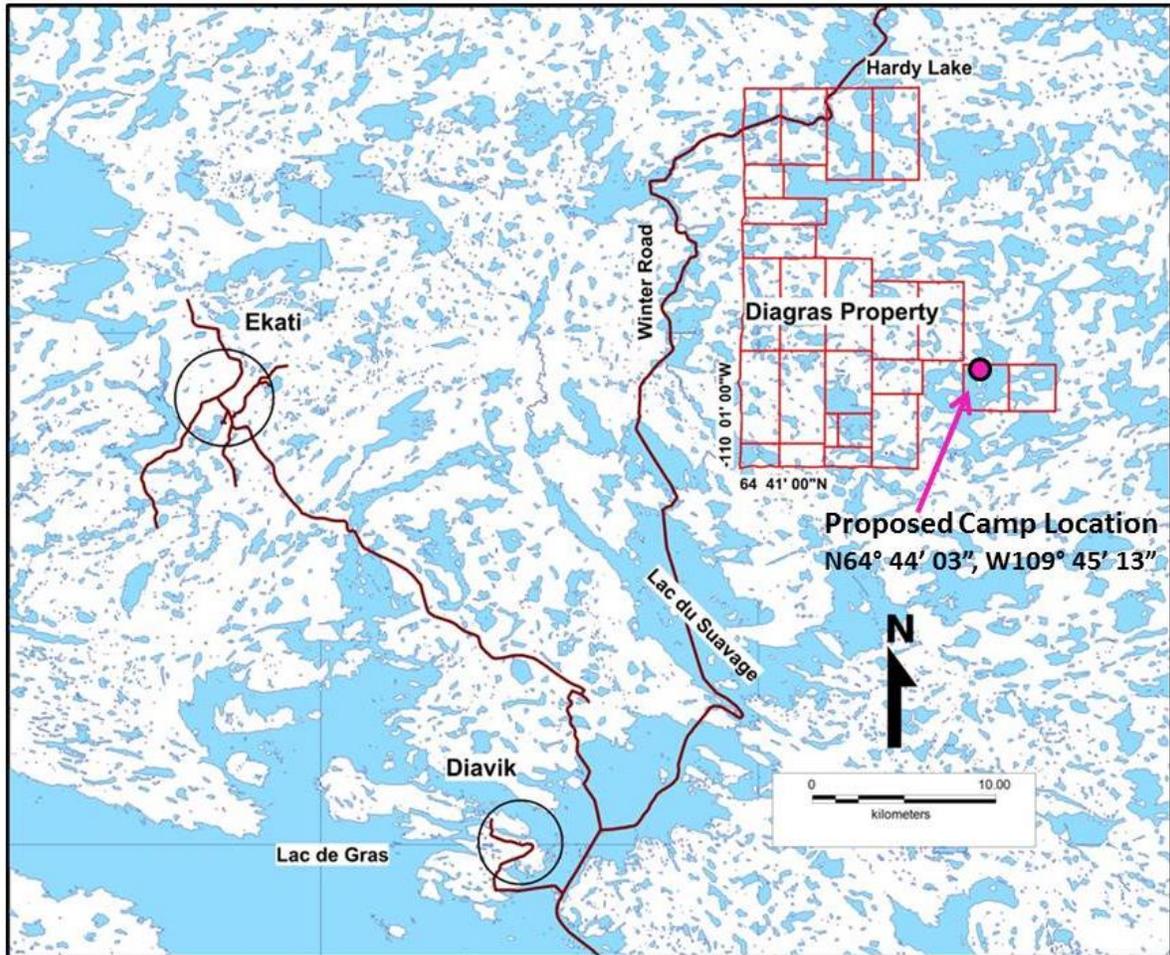


Figure 1: Diagrass property and camp location (NAD83)

Project Description

The Diagrass property is in its early stages of exploration. To date 12 kimberlites have been discovered on the property by previous explorers. The exploration activities associated with this Land Use Permit and Waste Management Plan will consist of constructing an exploration camp, employing exploration techniques such as till sampling and ground geophysics as well as drilling.

The proposed temporary exploration camp site location is N64° 44' 03", W109° 45' 13" on a flat, low lying esker in the southeast quadrant of the claim block. See Figure 1. It will be a typical exploration style camp consisting of wood framed canvas tents and/or Weather Haven style dwellings to a maximum of 24 person occupancy. Structures will include kitchen, dry, office, core shack and sleepers with a few smaller enclosures for storage and generator etc. A detailed camp layout can be found on **Figure 2 and 3**.

Drilling will be either core or reverse circulation (RC) or a combination of both. Light weight fly style drills will be used and transported from each location via helicopter or snowcat should logistics and conditions be favourable. The exact locations of drill sites are not yet known and dependent on the preceding geophysical surveys.

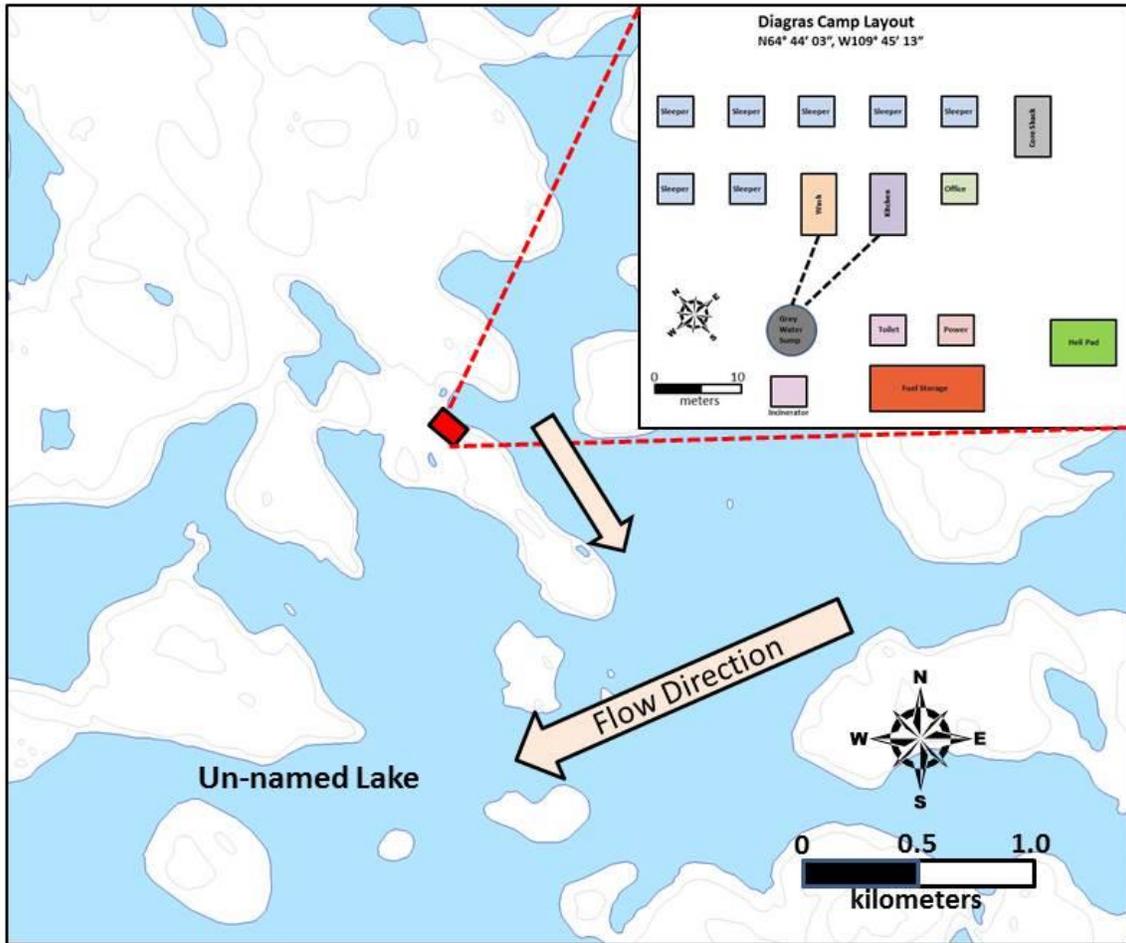


Figure 2: Detailed camp location and flow direction (NAD83)

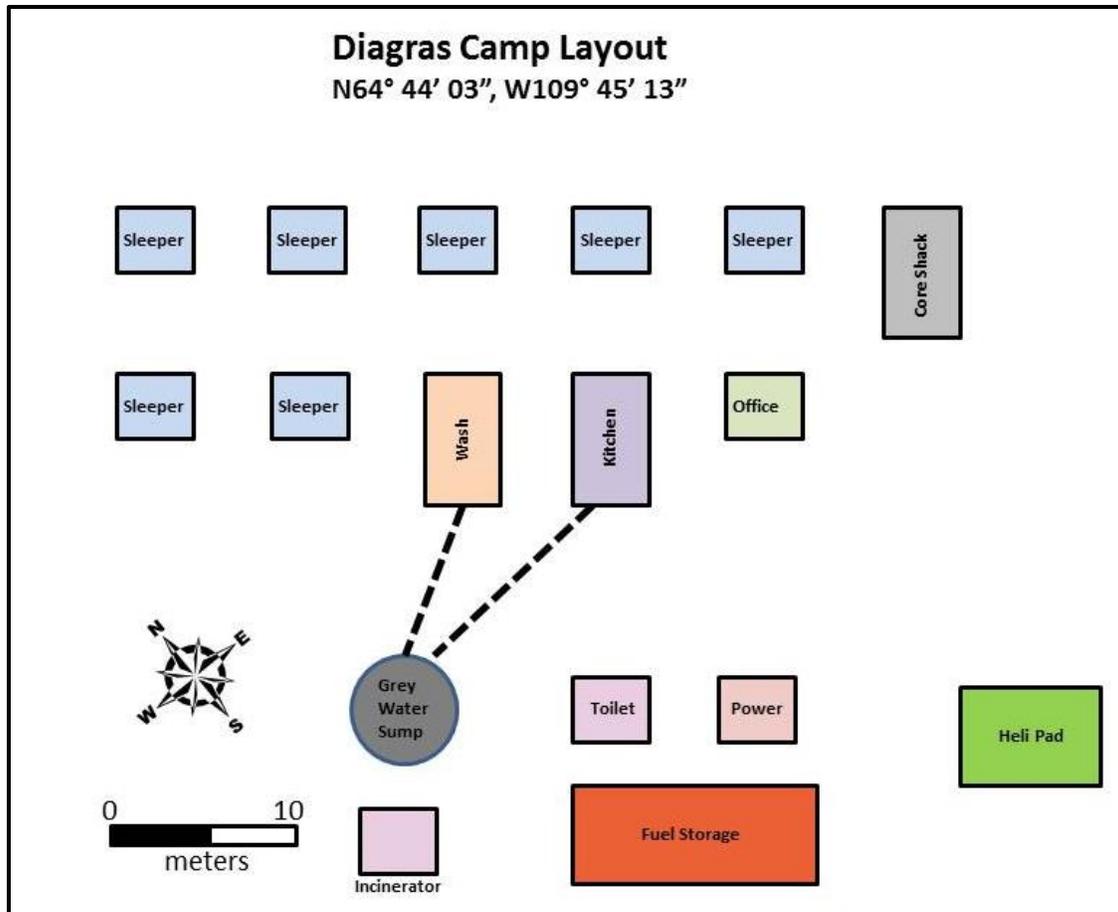


Figure 3: Detailed camp layout, fuel storage, grey water, incinerator (NAD83)

Purpose of Waste Management Plan

The purpose, goal and objectives of the waste management plan are to mitigate the effect of exploration activities on the land, water, air, wildlife, fish and vegetation. In addition, by good practice in construction of drill sites, the camp and other activities, effects on aesthetics and land use are minimized. This plan is also designed to achieve compliance with all applicable Acts, Regulations, authorizations and land use permits.

Environmental Policy Relating to Waste Management

The Company's environmental policy is to minimize disturbance to the environment and leave behind the smallest footprint possible. This is largely achieved by environmental awareness of all site personnel and starts before field activities commence.

Margaret Lake Diamonds Inc. has been effectively working in the NWT for several years. It is the Company's policy to respect the land during operation periods, carefully abiding by land use regulations. This Contingency Plan has been developed as part of Margaret Lake's commitment

to the concept of sustainable development and the protection of the environment and human health. Margaret Lake's environmental health and safety policy is to:

- Protect employees, the public and the environment
- Fully comply with all applicable legislation, regulations and authorizations
- Work proactively with federal, territorial and aboriginal governments, other relevant organizations, and the general public on all aspects of environmental protection
- Anticipate future spill control requirements and make provisions for them
- Keep employees, contractors, Inspectors, Land and Water Boards, appropriate governments (Aboriginal, Federal and Territorial), and the public informed of any changes at the site or with project activities.

Proper selection of equipment pre-program ensures that the disturbances to the environment are minimized by using appropriately sized and powered machinery to achieve the desired task yet reducing the disturbance to the land and surroundings. This also ensures that the minimum amount of waste possible is generated during the task. Oversized equipment creates excessive waste through unnecessary disturbance and fuel consumption while undersized equipment often requires work-arounds to get the job done which can lend itself to creating additional waste outside of the direct task at hand.

The environmental policy also invokes Progressive Reclamation. This eliminates the buildup of excessive waste and lessens related issues. In the case of drill sites, sumps are reclaimed upon completion of each hole. Where winter conditions are present, the sumps are revisited for evaluation and further reclamation if required after snow melt. Food wastes and combustibles are incinerated daily (if daily weather conditions permit). Empty fuel drums are back hauled as supply flights permit. This type of ongoing waste management prevents a creeping footprint from growing and also lessens the economic burden on the company at the end of the program cycle.

The Company's environmental policy also addresses wildlife and waste management. All food wastes, grey water and hydrocarbons (greases and oils) are stored in such a way to prevent interaction with wildlife. Food wastes are stored in a closed structure in such a way to prevent wildlife access. Grey water sumps are covered or fenced to prevent access to wildlife and greases and oils are stored in a dry storage building.

Environmental awareness is part of the site orientation procedure that each personnel undergoes upon arrival. Proper disposal of waste from drinking containers to drill cuttings is

discussed with personnel and catered to match their job descriptions ensuring all environment – waste interactions that may be encountered with their job tasks are addressed.

Location of Waste Management Activities

The majority of all waste management activities will occur at camp with the exception of drilling. Drill cuttings will be deposited in a natural depression discussed in detail further on in this Plan. The location of drill holes is not yet known.

Locations of waste management activities in camp such as grey water sump and incinerator can be found in **Figure 2 and 3** detailing the camp site along with coordinates.

Site Physical, Surface and Subsurface Characteristics

The project area is located within the Barren lands of the Northwest Territories. The landscape in the proposed Exploration area is dominated by bedrock outcrops, interspersed with veneers of unconsolidated till overlying bedrock and topographic depressions consisting of organic and glacial accumulations of variable depth. Some of the veneer horizons are poorly drained, as they are subject to permafrost, which has led to the preponderance of bogs in these areas.

No activities from the proposed Exploration program will have any adverse effects in the area. Historic exploration drilling in the area shows that with the minimal drill footprint and effective clean up, the area quickly reverts back to natural conditions.

Water

Margaret Lake Diamonds Inc. will follow any and all conditions as they apply to water use and gray water discharge that are set out in the Land Use Permit.

The only facilities involving water is the kitchen / dry. Fresh water for washing and general kitchen use is obtained from a nearby lake. The water is held in a tank in the dry and piped into the kitchen, the clothes washer is in the dry, along with washing and shower facility.

Discharge of grey water will be into a sump, to be located in a natural depression within the camp. The characteristics of the grey water sump are as follows:

- waste generation volumes that enter sump are between 1 and 2 m³/day of grey water.
- There is a single drain which will flow into a natural sump formed by cracks in bedrock or sandy areas of esker material.
- Construction of a frost box enclosure may be required to keep drains from freezing.
- The sump will be monitored any time the camp is occupied.

No flush toilets are used in the camp and no black water is discharged into water bodies. The camp will use a traditional outhouse for the beginning smaller exploration programs. If the project has success and expands to a larger size other toilet options will be considered. All human waste will be buried and all outhouse holes will be backfilled and reclaimed.

Other Waste at Camp

The camp sorts waste into the following categories:

1. Food wastes.
2. Paper, cardboard and other burnable waste.
3. Conventional household recycling items (food and beverage cans, plastic food containers, etc).
4. Hazardous waste items (Pb-acid batteries, other batteries, solvents and paint).
5. Waste from machinery (oils, grease, etc).

Food and burnable wastes are incinerated using a diesel fired incinerator at least once per day during camp operations. Food and associated wastes are estimated at 250 grams / person / day. During the exploration stage up to 24 personnel will occupy the camp. It is estimated that 5 kilograms of food and associated wastes will be generated. Paper and cardboard waste will be variable and range from minimal during normal daily operations to a maximum on supply deliver days as a result of food shipping boxes. 20 – 30 cardboard boxes are expected once weekly. These cardboard boxes can be recycled.

All conventional household type recycling items are bagged and flown to Yellowknife for appropriate disposal. Prior to departure from camp these items are stored in such a manner as to prevent attracting wildlife. Recycling is estimated at 4 - 5 containers / day / person

Hazardous waste items comprise largely batteries, either consumer type solid batteries (AA, D cells etc) or lead-acid batteries. These are packaged suitably for transportation by air to Yellowknife and disposed of through an authorized disposal agency. The batteries are not stockpiled at site, but removed promptly. Minor amounts anticipated.

All waste oil from drills, generators, vehicles and other equipment, is put in waste oil containers and shipped back to Yellowknife for proper disposal. Oil filters are drained and packaged for shipment to Yellowknife to be disposed of in a suitable waste facility. Aerosol cans such as some solvents are punctured to ensure that they are not under pressure, and then shipped off site with other solid waste material. Waste oil is estimated at 2 liters / 4 days for the generator

and 1 filter every 8 days. A drill is estimated to generate 5 liters of waste oil / 4 days plus 1 filter.

There may be minor amounts of emptied cans from paint or solvents, and these are disposed of appropriately by sending to Yellowknife along with waste oil. Minor amounts of scrap metal are anticipated. No waste tires are expected to be generated.

Incinerator Operation

Margaret Lake Diamonds will follow any and all conditions as they apply to incineration, that are set out in the Land Use Permit.

A diesel fired incinerator will be used for batch waste combustion. It is anticipated that an **Inciner8 i8** incinerator or similar unit will be employed. These types of incinerators are dual chamber having an afterburner for the re-burn of harmful emissions. Timers allow for the complete combustion and cooling of gasses. These incinerators, when properly operated and maintained, are capable of meeting the Canada wide Standards for dioxins, furans and mercury.

Exact model is unknown at time of writing and will be dictated by availability and pricing.

The incinerator is operated by the camp manager, or individuals who have been trained by the camp manager. Incinerator operation and routine maintenance will strictly adhere to, and follow the manufacturer's operations manual ensuring optimum efficiency as well as addressing operator safety. In addition, incinerator operation will incorporate information from *Environment Canada Technical Document for Batch Waste Incineration January 2010*: http://ec.gc.ca/gdd-mw/F53EDE13-1D01-4D05-B97D-1F3818D28657/Summary_Technical%20Doc%20for%20Batch%20Waste%20Incineration.2010.pdf with particular consideration to **Step 4**: Operate the Incinerator for Optimum Combustion and **Step 5**: Safely Handle and Dispose of Incinerator Residues.

The incinerator consumes less than 15 litres of diesel fuel per day during normal camp operations. As the amount of waste generated daily is small, due to the small size of the camp, formal digital records are not kept for the volume or weight of ash removed.

All ash from the incinerator is stored in appropriate sealed containers and removed to Yellowknife for proper disposal.

The project is at the early Exploration stage and operations of this small size will generate very little waste which will be incinerated daily or backhauled to Yellowknife for appropriate and / or authorized disposal. If the project has success and expands, an appropriate Incineration Management Plan shall be documented and submitted for approval.

Drilling Operations

On Land

All drilling on land is completed creating the least disturbance of vegetation as possible. Drill water and cuttings may be channelled away from the drill collars in order to avoid unsafe conditions around the drill. Rather than engineered sumps, drill water is discharged into natural depressions (“natural sumps”) at least 100 metres from water bodies. Natural depressions are utilized in order to minimize ground disturbance that would be caused by excavating artificial sumps. Water in these sumps seeps away naturally and no discharge of drill cuttings reaches water bodies.

After drilling completion, the upper parts of drill holes may be cemented whether on land or lake ice.

On Lake Ice

During drilling on lake ice all drill water and cuttings is pumped directly from the drill to land at least 100 metres from any water body, as will be required in the permit. After the drill has been pulled off a lake ice drill site, considerable effort is taken to clean the site, with all ice or snow that shows any foreign matter being completely removed for disposal on land. Photographs are regularly taken of completed drill sites.

Any waste materials from the drill site are removed to camp and are dealt with as described in the section above on camp.

Spill Plan

Margaret Lake Diamonds’ site is fully equipped with spill contingency equipment and the company has a separate spill contingency plan not included in this document.

Core Storage

Drill core generated during the Margaret Lake Diamonds’ exploration activities is partially shipped off site for analysis and partly stored at camp as an archive of the geological information. Drill core at the camp is stored in core boxes, in racks partially covered to prevent ingress of precipitation.

Margaret Lake Diamonds’ drill core should not carry the risk of generating ARD as the minerals of interest are not contained in sulphide minerals.

Wildlife

All waste (including food, domestics waste and petroleum based chemicals) should be contained and sealed in such a manner as to not attract any wildlife, small or large. All recycling should be washed to avoid any food residue odor, and all food waste should be stored in sealed containers until it is incinerated. All waste should be stored in a central location until it is removed from camp, preferably within a building or a solid wooden structure such as a garbage box. All waste water entering the camp sump should be treated with bleach on a regular basis to avoid the odor of food waste particles.

Summary of Disposal Methods

Item	Class	Primary disposal	Secondary Disposal	Environmental effect
Ash or incinerator residue	Hazardous or potentially hazardous	Sealed containers removed to Yellowknife	Appropriate disposal in Yellowknife	Minor release of smoke into atmosphere producing residue for disposal
Batteries	Hazardous or potentially hazardous	Package and remove to Yellowknife	Recycle if possible	None - removed
Chemical Waste	Hazardous or potentially hazardous	Package and remove to Yellowknife	Appropriate disposal in Yellowknife	None - removed
Human Waste (toilet)	Hazardous or potentially hazardous	Buried	N/A	Buried to prevent wildlife interaction. Subject to natural degradation.
Grey water	Non-mineral waste	Directly into on-site sump	N/A	Very minor release of some organic matter in kitchen drains, this should compost naturally
Used oils and Lubricants	Hazardous or potentially hazardous	Package and remove to Yellowknife	Appropriate disposal in Yellowknife	None - removed
Domestic Refuse	Non-mineral waste	Incinerate on site or package and remove to Yellowknife	Appropriate disposal in Yellowknife	Minor release of smoke into atmosphere producing residue for disposal
Scrap Metals	Non-mineral waste	Package and remove to Yellowknife	Recycle if possible	None - removed
Materials for recycling	Non-mineral waste	Package and remove to Yellowknife	Recycle in Yellowknife facility	None - removed