

17 May, 2017

Julian Morse
Regulatory Officer
Mackenzie Valley Land and Water Board
P.O. Box 2130
Yellowknife NT X1A 2P6

Waste Management & Engagement Plan updates - Advanced Mineral Exploration Project Update - Kennady Diamonds Inc. (KDI)

Dear Mr. Morse:

Kennady Diamonds Inc. (KDI) is providing a general project update as well as submitting updates to management plans as part of Permit conditions.

PROJECT UPDATE

KDI's winter drilling program was initiated January 8th and completed April 10th, 2017, acquiring 555 tonnes of kimberlite via reverse circulation drilling. Drilling was completed at Faraday 2, 3, and 1. Geophysical work was also completed at Blob Lake in order to delineate targets for diamond drilling. KDI's 2017 winter program was similar in scope to the 2016 program, but exploration plans for this summer and fall are modest. Despite receiving permits for advanced exploration work, KDI continues to work as a small exploration project, namely there are no immediate plans for increasing kimberlite extraction tonnage, no decline, no construction of infrastructure such as laydowns, roads, quarry, or airstrips, no plans to expand or modify the work camp, and no advanced construction equipment on site.

UPDATED PLANS

On 16 February 2017, the Mackenzie Valley Land and Water Board (MVLWB) granted interim approval for the Engagement Plan and Waste Management Plan, but required KDI to revise and resubmit the Plans in accordance with comments made during the review within 90 days following issuance of the Permit.

With respect to the Engagement Plan, KDI heard during the review that communities wished to be kept updated more regularly using different methods. KDI has developed and initiated a newsletter that we intend on updating and distributing up to 4 times per year to keep communities informed. The first newsletter was distributed on April 20th, 2017.

With respect to the Waste Management Plan, following discussions with the GNWT, KDI has updated the plan to provide more clarity on how we deal with human waste disposal in small exploration camps, including incineration and off-site disposal.

Please find attached both updated plans for your consideration.

Kind Regards,
Kennady Diamonds Inc



Rory O. Moore,
President and CEO



Waste Management Plan (Version 3.1)

for the

Proposed Advanced Exploration Program (AEP)

KENNADY NORTH EXPLORATION PROJECT

MV2013L2-0005 and MV2016C0030

SOUTH MACKENZIE DISTRICT, NWT

**Prepared in support of condition# 58 - Revision and re-submittal for Board approval within
90 days following issuance of the Permit.**

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Revision History

- Version 1 of the Waste Management Plan was submitted with the original application for MV2013L2-0005/ MV2013C0023 on December 9, 2013
- Version 1.1 was submitted on February 12, 2014 with revisions in response to initial reviewer comments (before issuance of the permit and licence)
- Version 1.3 was submitted on May 26, 2014 as per requirement Part E, item 3 of MV2013L2-0005 and condition 40 of MV2013C0023
- Version 1.4 was submitted on September 4, 2014 with revisions as recommended after the comment/review process of Version 1.3. Version 1.4 was approved by the MVLWB on September 11, 2014
- Version 2.0 was updated as follows:
 - Some minor wording changes
 - Updated maps of waste facility infrastructure for Bob and Kelvin Camps.
 - Changes to waste volumes to reflect increased camp size
 - Waste acceptance letter from KBL Environmental
- Version 3.0 has been updated as follows:
 - Additional information in support of KDI's amendment applications to the Mackenzie Valley Land and Water Board for advanced exploration.
- Version 3.1 (this document) has been updated as follows:
 - Minor wording changes clarifying human waste management in the presence / absence of ice roads ([section 3 b iv](#)).

1 INTRODUCTION

Kennady Diamonds Inc. (KDI) is currently exploring for diamondiferous kimberlites in the Kennady North area, located in the Northwest Territories approximately 280 kilometers (km) east—northeast of Yellowknife (Figure 1). The KDI property consists of 20 mineral leases and 58 mineral claims, totaling 165,942.78 acres or 67,154.66 hectares (ha). Activities on the site are currently regulated by a Class A Land Use Permit (MV2016C0030) and a Type B Water Licence (MV2013L2-0005), as issued by the Mackenzie Valley Land and Water Board (MVLWB). Both the permit and the licence require a Waste Management Plan prepared in accordance with the MVLWB's *Guidelines of the Development of a Waste Management Plan* (2011). Version 3.0 of KDI's Waste Management Plan was granted interim approval by the MVLWB in February 16 2017.

In February 2017, KDI was also granted approval for its advanced exploration program (AEP). The AEP is necessary at this stage of the Kennady North Exploration Project (the Project) in order to obtain the information necessary to complete a Feasibility Study for the Project. As described in Section 1, the AEP will increase the amount of infrastructure close to the Kelvin and Faraday kimberlites by installing a larger semi-permanent camp, an underground decline, a quarry, limited all-season roads and an all-season airstrip. This version of the Waste Management Plan (Version 3.1) describes the waste management infrastructure and processes that will be necessary to support the AEP.

1.1 Contact Information and Site Location

The Kennady North Project is owned and operated by:

Kennady Diamonds Inc.

Mr. Rory O. Moore

President & CEO

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Aurora Geosciences Ltd. has been contracted by KDI to manage and operate the exploration site since the beginning of exploration. With the initiation of the AEP, KDI will self perform and/or appoint additional experienced and qualified contractors as required to support advanced exploration activities.

Figure 1: Regional Location of Kennedy North Exploration Project

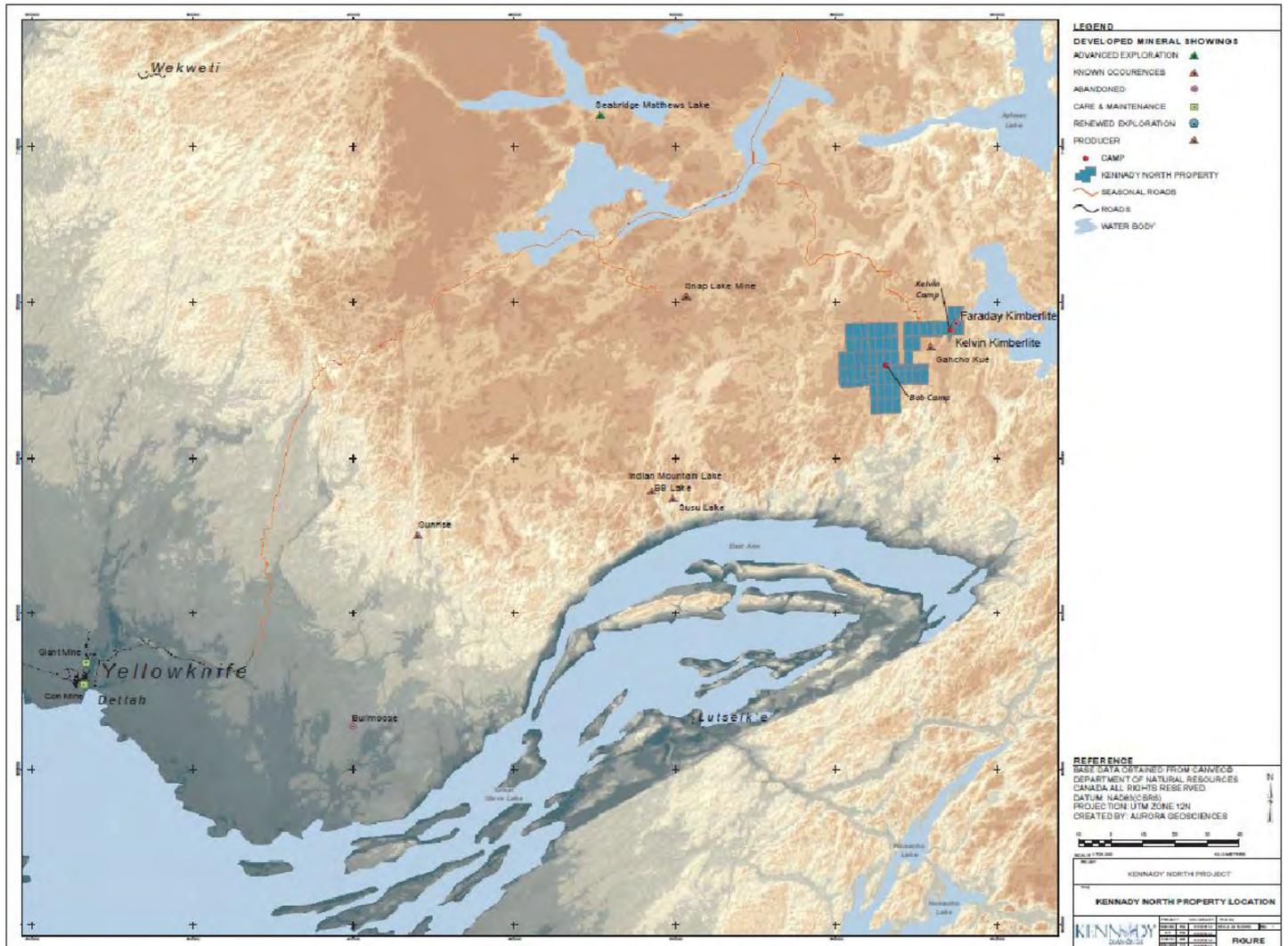
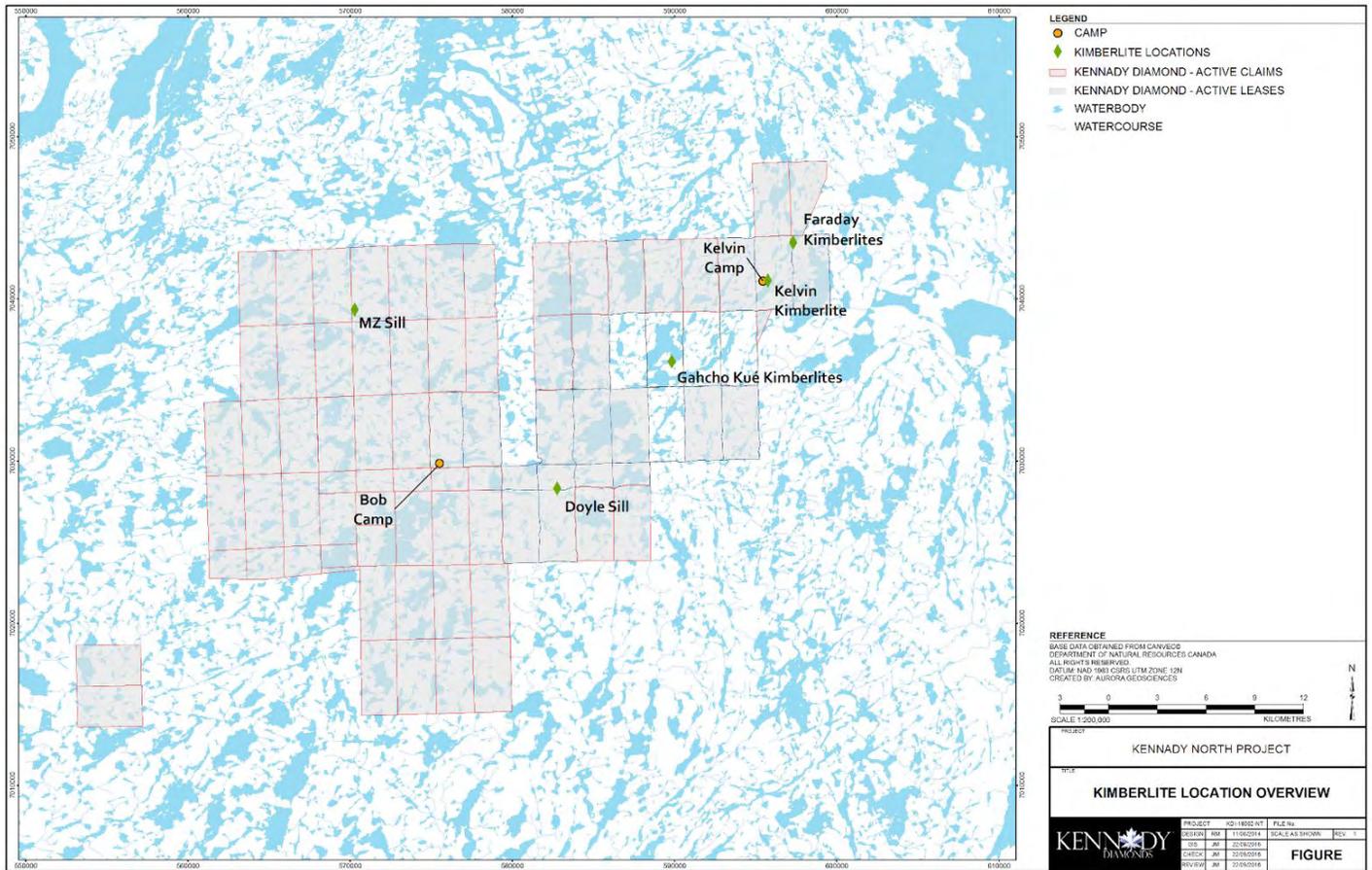


Figure 2: Kennady North Property Location Including Camps and Kimberlites



The Project area is located in the Northwest Territories approximately 280 km east—northeast of Yellowknife (Figure 1). There are no permanent roads in the area. A spur road off the seasonal Tibbitt to Contwoyto Winter Road passes through the property en-route to the Gahcho Kué Diamond Mine. Access is by float or ski-equipped fixed-wing aircraft or helicopter only. The nearest supply and logistics centre is in Yellowknife. The Project area encompasses mineral claims and leases near the Gahcho Kué Diamond Mine (Figure 2). The boundaries for the exploration activities from the current Land Use Permit and Water Licence are between 63°13'30"N to 63°36'00"N latitude and between 108°57'00"W to 109°51'00"W longitude.

1.2 Effective Date

This Plan will be effective upon approval by the MVLWB. Domestic waste and camp operations associated with this program are already in place for the operation of the exploration program as per the currently approved Version 2.0 of this Plan.

1.3 Proponent Principles

This Plan incorporates the basic principles of waste management, source reduction, re-use, recycle/recover, treatment, and disposal. KDI is committed to conducting operations within the accepted environmental standards of the mineral exploration industry. These methods are important to the mineral exploration industry in reducing the environmental footprint of operations.

- Source reduction is the elimination or decrease of the volume or toxicity of waste by adopting practical methods such as using alternative materials or processes. This can be achieved by material elimination, inventory control and management, material substitution, process modification and improved housekeeping, maintenance and training.
- Re-use is achieved by using a product more than once for the same application or for different purposes. Re-using material such as drilling fluids and construction materials is an industry expectation and can reduce the amount of waste generated.
- Recycling of products that typically have one use is an excellent method of reducing the volume of waste generated at a worksite. Sorting the products so that they can be managed in bulk eliminates the need for additional handling and allows for different products to be managed by efficient recycling processes.
- Waste treatment is used to reduce the volume, mass and/or toxicity of the material prior to disposal due to contaminants contained within the waste. There are a number of treatment options including thermal, chemical, biological and physical processing which may be used separately or combined to be the most effective and efficient.
- Disposal of waste is the final option for waste management. When disposing of waste, the type of waste, volume, location and final containment must be considered. The waste disposal options available to the mineral exploration industry include approved landfills and onsite

disposal. The physical and chemical characteristics as well as the regulatory requirements and liability associated with disposal may limit which options are available for waste disposal.

1.4 Purpose of the Plan

KDI is committed to minimizing the impact of its activities on the environment and to protect the safety of communities, personnel and 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.

The Waste Management Plan was prepared to show KDI's commitment to environmental compliance as well as to ensure the health, safety and well-being of all personnel involved in the Project. This Plan will act as a directive on the proper handling and management of a variety of waste streams resulting from this exploration project.

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, Permits and licenses.

A relevant and up-to-date Waste Management Plan is necessary for projects requiring land and water use permits. Version 2.0 of this plan was submitted and approved as required by Condition 40 of KDI's Type A Land Use Permit (MV2013C0023) and Part E, item 3 of KDI's Type B Water Licence (MV2013L2-0005). Version 3.0 of this plan will be submitted in support of KDI's applications to the MVLWB for its proposed advanced exploration activities in September 2016.

1.5 Description of Project

The Kennady North Project consists of conducting exploration assessment work on claims and mineral leases held by the company. The location of the Project's two base camps—Bob Camp and Kelvin Camp—which support exploration activities such as geophysical surveys, geochemical surveys, drilling, and trenching, are shown in Figure 2. Currently, the Project site hosts approximately 50 to 150 people, operates 10 months of the year, and is accessible by air and seasonal ice road. Drilling, currently the main Project activity at site, consists of small diameter drilling (100 to 250 holes per year [/yr]) as well as large diameter drilling in the order of 1,200 tonnes/yr bulk samples. Drilling samples are sorted and sent offsite for analysis. The areas have several fuel caches in place to support the drilling and helicopter activity associated with normal exploration programs. During the operation of the field program there has been progressive restoration of field sampling and drilling sites.

Advanced exploration will be focused on obtaining a larger bulk kimberlite sample that can be used in part to assess the economic value of the mineral reserve. Applications will be submitted to the MVLWB in September 2016 to increase the allowable bulk sample rate up to 5,000 tonnes/yr from the currently

permitted 1,200 tonnes/yr. In addition to drilling from surface, KDI is proposing to obtain a larger kimberlite sample by constructing an underground decline (i.e., excavating an underground tunnel for machine access) and processing the bulk samples on site using a portable bulk sample processing plant. Localized use of all-season roads and airstrip, as well as a larger camp and laydown area are also proposed to support the advanced exploration efforts near the Kelvin and Faraday kimberlites (see Kennady Diamonds - Advanced Exploration Project Description).

In its September 2016 applications to the MVLWB, KDI is requesting the following new additions to its operations:

- increase in extraction from 1,200 to 5,000 tonne/yr bulk sample;
- construction and operation of an underground decline to access the Kelvin and Faraday kimberlite deposits for bulk sampling;
- construction and operation of a multi-purpose laydown and camp area (approximately 5 ha);
- construction and operation of a pioneer all-season airstrip (approximately 1,650 metres [m] by 45 m) to accommodate larger aircraft for workers and resupply;
- construction and operation of limited all-season roads linking the winter road to the laydown, airstrip, declines, dock, and drilling locations at the Faraday and Kelvin deposits;
- construction and operation of a new 140-person mobile camp on the laydown area and consolidation of existing Kelvin Camp modules with this new camp;
- quarrying and/or the use of cut and fill to obtain material for roads, laydown area and airstrip as necessary;
- increase in use of explosives (including mixing and storage) for quarrying and construction of the decline;
- installation and operation of a portable Bulk Sample Processing Plant (< 100 tonnes/d); and
- increase to the size and quantity of various types of equipment (e.g., trucks, loaders, underground equipment) as well as the amount of fuel storage allowed on site in order to accommodate the proposed activities.

This version of the Plan describes the waste management activities associated with the current activities as well as the planned advanced exploration activities.

1.6 Locations of Waste Management Activities

The camp infrastructure and location of waste related facilities for Bob Camp are shown in Figure 3; waste management facilities and practices at Bob Camp will not change due to the initiation of the AEP.

The layout of the current Kelvin Camp (Old Kelvin Camp) is shown in Figure 4. A conceptual layout for the new Kelvin Camp (New Kelvin Camp) which will be installed as part of the AEP, is provided in

Figure 5. Note that after construction of the New Kelvin Camp and as part of progressive reclamation, the Old Kelvin Camp may be taken down and the sleeping tents moved next to the new camp.

Figure 3: Infrastructure Locations for Bob Camp

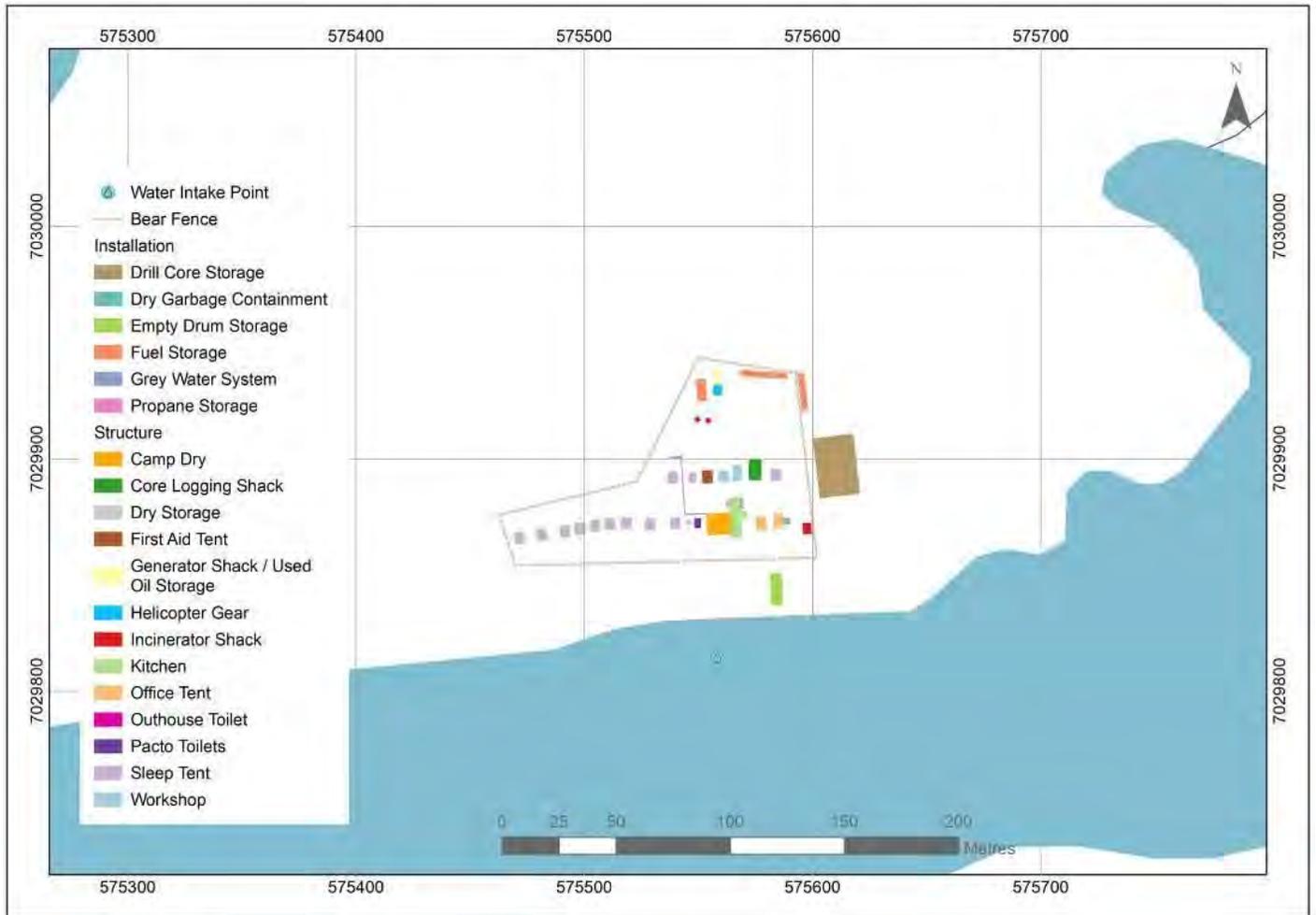


Figure 4: Infrastructure Locations for Existing Kelvin Camp (Old Kelvin Camp)

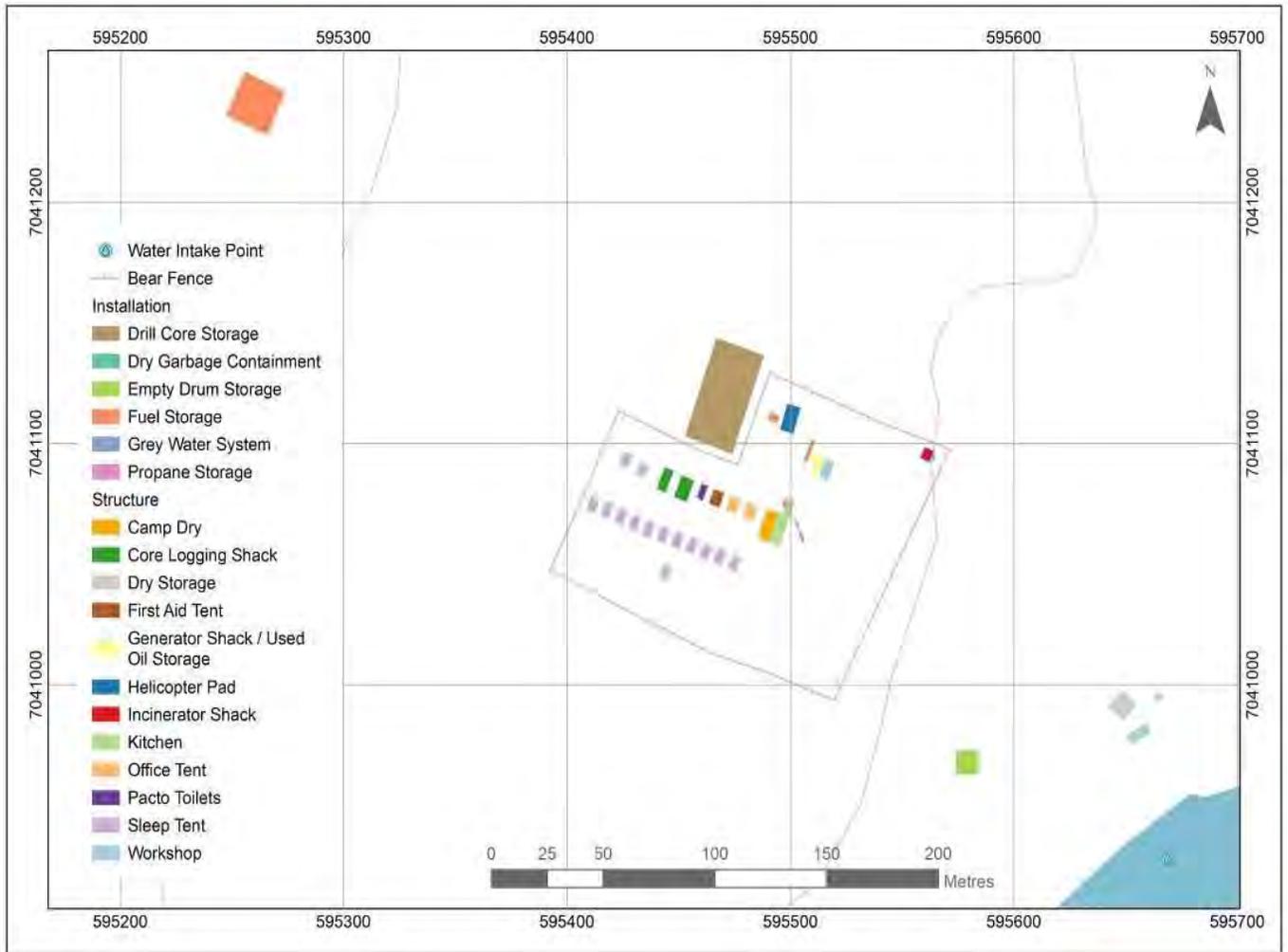


Figure 5: Planned Infrastructure Locations for the New Kelvin Camp



1.7 Site Description

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 to 440 m above sea level. Drainage in the area is by the Lockhart River watershed to the south, eventually emptying into the Arctic Ocean via Great Slave Lake and the Mackenzie River. The area lies above the tree line and has sparse vegetation cover, consisting of dwarf birch and willow, Labrador tea, tundra grasses and sedges, moss, and lichen. Some sheltered and well-watered locations contain pockets of boreal forest.

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

2 IDENTIFICATION OF WASTE TYPES

Waste characterization is used in assessing the appropriate handling, treatment, transportation, and disposal of the waste. Characterization is the assessment of the physical, chemical and toxicological properties of the waste product. These properties are used to determine the dangers relating to handling, storage, and transportation of the waste on public roads, and to determine the environmental consequences of the waste so that an appropriate disposal option can be determined. This also allows the determination of a hazardous or non-hazardous waste as well as dangerous drilling waste classification. Waste transportation and disposal is regulated by the Government of the Northwest Territories (GNWT) and Environment and Climate Change Canada (ECCC).

Regulated wastes include any waste material which is specifically regulated as hazardous¹, and dangerous for transport². Drilling wastes (drilling fluids and drill cuttings) and processed kimberlite disposal and management is conducted under the guidance of the GNWT Lands inspector and the MVLWB.

All waste for this project will be classified into three basic categories from which best management practices can be applied.

1. Hazardous or Potentially Hazardous Wastes (Table 1).
2. Non-Mineral Waste (Table 2).

¹ i.e., in the Canadian Environmental Protection Act (CEPA) or through the various guidelines issued by the Environmental Protection Service (EPS) of Environment and Natural Resources, Government of the Northwest Territories

² i.e., in CEPA or the Transportation of Dangerous Goods Act (TDGA)

3. Mineral Waste (Table 3).

Types of waste for each category are listed in the tables below along with characteristics, source and estimated volumes of each type generated on site. Note that unless otherwise indicated in the tables below, the estimated quantities of waste are for the entire Project including the proposed AEP.

Table 1: Hazardous or Potentially Hazardous Wastes

Waste	Characteristics	Source	Est. Volume/mass per year <i>ESTIMATED</i>
Incinerator/Ash residue	Ash	Incinerator	7 m ³
Lead acid batteries and alkaline batteries	Sealed batteries	Various electronic equipment	100 kg
Used oil, fuels, lubricants, greases, oil filters, and solvents	Fuels, oils and additives	Operation of the drilling rig, water pump and generators, Surface and Underground Equipment	20,000 L
Chemical wastes – liquids or solids (e.g., paint)	Camp cleaning and operations materials	Cleaning solutions, paint	700 L
Contaminated soils - Hydrocarbon	soil material with potentially hazardous contamination from hydrocarbons or additives	Hydrocarbon spills	7,000 L
Contaminated Soils - Ammonium Nitrate (AN) or its fuel oil (ANFO) mixture	soil material with potentially hazardous contamination from ANFO spillage	Transport and Handling of AN	10 m ³

Table 2: Non-Mineral Waste

Waste	Characteristics	Source	Est. Volume/mass per year <i>ESTIMATED</i>
Domestic refuse	Dry waste / garbage	Camp activities	40,000 kg
Putrescible waste	Food Waste	Kitchen	16,000 kg
Construction materials	Wood, metal and other solid materials	Construction and camp activities	35,000 kg
Sewage– Black water	Sewage	Pacto toilets	10,000 kg*
Brush / Trees	Brush removal as part of infrastructure development	Clearing associated with infrastructure development	1000 kg
Sewage – Grey water	Drained water used for washing	Kitchen and Dry	250,000 L *
Sewage Treatment Plant Effluent	Treated Effluent (treated sewage and grey water)	Sewage Treatment Plant Operation (New Kelvin Camp)	10,000 m ^{3**}
Sewage Treatment Plant Solids	Pressed Solids from Sewage Treatment Plant	Sewage Treatment Plant Operation (New Kelvin Camp)	10,000 kg**

*Note that these amounts will be only half as much once the New Kelvin Camp is operational and the Old Kelvin Camp is closed down; at that time, this

waste stream will only come from the Bob Camp.

****These waste streams will be realized only after the New Kelvin Camp is constructed and the sewage treatment plant is commissioned.**

Table 3: Mineral Waste

Waste	Characteristics	Source	Est. Volume/mass per year <i>ESTIMATED</i>
Drill cuttings	Non-Toxic Solid Waste	Drilling - finely fragmented rock material and water	300,000 L
Processed Kimberlite	Fine and coarsely ground Kimberlite (approximately 30% solids)	Bulk sample processing plant byproduct	6,000 m ³

3 WASTE MANAGEMENT

Various wastes are generated during the day to day activities associated with an advanced exploration operation. In remote locations such as the Kennady North 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 KDI will utilize for activity on the Kennady North Project.

a) Hazardous or Potentially Hazardous Waste

The hazardous and potentially hazardous materials are kept in secure storage at the Bob Lake and Kelvin Lake camps. Used materials from camp, and that which is returned from the drills, are sorted by the site services group and stored in sealed containers in the Generator Shack at Bob and Old Kelvin camps or a designated waste management area at the New Kelvin Camp to await shipment via fixed-wing aircraft to Yellowknife. If materials can remain safely on site they may also be stored and backhauled on the next winter road. There are separate storage containers for incinerator ash, lead acid batteries, lithium batteries, oil filters, waste oil and fuel, chemical wastes, contaminated soils and sludge. Upon arrival in Yellowknife, KDI will have the materials expedited to Hazardous Waste Transfer Facility operated by KBL Environmental at #17 Cameron Road in Yellowknife for proper disposal (see Appendix E for letter of acceptance from KBL). There is an average of two flights to Yellowknife per week which ensures there is minimal storage of materials onsite.

Waste oil is a potential energy source. For the AEP, the site will review options to utilize this energy source as a heat source for various site facilities including workshops, waste management facility, bulk sample processing plant and others. Prior to waste oil being utilized as a heat source, a properly sized and purpose built burner designed for the types of waste oils

generated on site will be sourced. If segregation of waste oils is required, KDI will ensure that designated containers are available to do so.

b) Non-mineral Waste

The non-mineral waste materials are inspected and sorted by the site services group to remove all reusable or recyclable materials and separate into domestic refuse, putrescible waste, construction materials, black water sewage and greywater sewage. All materials are then kept in secure storage at base camp.

- i. Domestic refuse (Dry waste) and cleaned recyclables are kept in enclosed structures prior to incineration or transportation back to Yellowknife. Any materials that are transported to Yellowknife are immediately received by KDI and transported to a suitable landfill.
- ii. Putrescible waste - Used or old food items will be incinerated on a daily basis or removed from site on back-haul flights. This is done to prevent the attraction of wildlife. Food items should only be consumed in the kitchen area or designated lunch rooms only. Dual chamber, diesel incinerators will be used to dispose of food waste in camp. Any waste stored onsite or backhauled to Yellowknife will be properly packaged (i.e., double bagged). The kitchens contain two waste receptacles for burnable and non-burnable items. The Camp manager is responsible for sorting the two waste streams to ensure compliance. All paper, cardboard and untreated wood will be incinerated with kitchen burnable waste on a daily basis. When immediate incineration is not available the putrescible wastes are double bagged with industrial grade garbage bags and stored in an enclosed structure lined with plastic and sealed with a removable lid to ensure it can be regularly cleaned and restrict odours from escaping and prevent the attraction of wildlife.
- iii. Construction materials are to be sorted by the site services group to remove any potentially reusable or recyclable materials. Any materials identified as re-useable are stored for future use. Non-recyclable and re-useable materials are separated to be either incinerated or removed to Yellowknife for disposal. Materials that are returned to Yellowknife are immediately received by KDI and transported to a suitable landfill. Any brush and trees removed during construction will be stockpiled with overburden and may be mulched and used during reclamation activities.
- iv. At the Bob Camp and the Old Kelvin Camp, black water sewage is collected daily from the Pacto toilets and treated in one of two approaches. When ice-roads are in place, frozen sewage is stored in sealed wet storage bins until removal to Yellowknife for proper disposal. When ice-roads are not operational, waste is incinerated in medical grade incinerators designed to handle human waste.

- v. At the Bob Camp and the Old Kelvin Camp, grey water from the kitchen and dry is collected in a sump. The kitchen uses strainer baskets to prevent food material from entering the grey water waste stream. The grey water sump is located over 50 m from the lake shoreline. The sump is situated in a patch of coarse-grained, gravelly sand.
- vi. At the New Kelvin Camp, greywater and sewage will be directed to the Sewage Treatment Plant (STP) for treatment. Clean effluent will be discharged to land at a location to be approved by the GNWT Inspector.
- vii. STP solids are collected in manageable sized batches and incinerated in the onsite incinerator.

c) Mineral Waste

Drill cuttings will be placed in a natural depression or sump at least 100 m from the ordinary High Water Mark of the nearest water course (stream or lake) as required under condition 29 of Land Use Permit MV2013C0023. All on-ice drilling activities are using 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.

Processed kimberlite (PK) and processed water from the portable bulk sample processing plant will be contained in the quarry sump. The PK and process water used in the plant is expected to be inert but this assumption will be confirmed by the results of geochemical analysis prior to commissioning the processing plant and monitoring of PK during plant operation. Details of processed kimberlite management can be found in KDI's Rock Management Plan.

4 INFRASTRUCTURE REQUIRED FOR WASTE MANAGEMENT

The infrastructure required for waste management of the Kennady North project consists of a combination of on-site storage, incineration, and off-site disposal facilities.

a) Onsite Storage

- i. Putrescible storage (wet kitchen scraps) - Consists of an insulated bin a minimum size of (32" by 64" by 54") and lined with 10 millimetre clear poly. The bin has been designed to ensure that there is no ability for seepage of liquid out of the bin and while closed the box creates a seal that prevents the escape of odours. The bin is washed as needed to eliminate potential animal attracting odours and inspected daily for potential wildlife attractants.
- ii. Dry storage – Consists of sealed sheds. Dry, odourless materials are placed into garbage bags, cardboard boxes or plastic bins as for short term storage prior to incineration or removal from camp. The bin is swept and cleaned out weekly and inspected daily for potential wildlife attractants.
- iii. Hazardous and potentially hazardous waste – This type of waste is stored in the

generator shack at the Bob and Old Kelvin camps or at a designated waste management facility at the New Kelvin Camp. These are dedicated buildings with shelving and storage for a small quantity of materials awaiting shipment offsite. The buildings are cleaned weekly, and all materials are stored in sealed drums, lube cubes or pails with ready access to fuel absorbent pads and spill kits. The building and materials stored there are inspected daily for leakage and potential wildlife attractants.

- iv. Sump Box (at Bob and Old Kelvin camps) – The grey water from the kitchen and dry is passed through a grease trap and collected in a sump. The kitchen uses strainer baskets and a grease trap (Appendix B, Figures B1 and B2) to prevent food material from entering the grey water waste stream. The grey water sump is located over 50m from the lake shoreline. The sump is situated in a patch of coarse-grained, gravelly sand. The area contains a plywood box which acts as the initial catchment. The sump dimensions are 1 m by 6 m by 10 m for a total volume of 60 m³ (Appendix B, Figures B3, B4 and B5). This volume is sufficient to handle grey water production from camp. Grey water outflow lines are checked for leaks on a daily basis, as is the sump. Drains are flushed to keep them odour-free during operation and seasonal closures. At final closure all grey water lines will be drained, dismantled and removed from site. The sump will be examined and any extraneous waste packaged and removed and then backfilled as necessary.
- v. Incinerators – Currently, one Incinerator is available at Bob Camp and one at the Old Kelvin Camp. Two incinerators will be installed and operated at the New Kelvin Camp. Incinerators are sized to handle the camp waste streams designated for incineration. For the New Kelvin Camp, one incinerator will be the primary and the other will serve as a back-up to the primary providing maximum redundancy. This will ensure that waste isn't stockpiled and acts to further deter wildlife.

Further details about the incinerator units include:

- The incinerator units the Bob and Old Kelvin camps are Inciner8 i8-40 dual chamber diesel incinerators.
- The primary incinerator unit at the New Kelvin Camp is an Ecowaste CA100 dual chamber diesel incinerator. The secondary incinerator unit at the New Kelvin Camp is the relocated Inciner8 i8-40A dual chamber diesel incinerator from Old Kelvin Camp. Links to the specifications for these units can be found in Appendix D.
- These incinerators, when properly operated and maintained, are capable of meeting the Canada-wide Standards for dioxins/furans (80 pg I-TEQ/Rm3 @ 11%

O₂) and mercury (20 µg/Rm³ @ 11% O₂).

- These incinerators have built-in timers to allow for a complete combustion and cooling cycle.
- These incinerators will meet or exceeds all recommended emissions guidelines as outlined by Environment Canada under proper operation and maintenance. Links to incineration practices and standards can be found in Appendix D.

During the course of operation records will be kept onsite that includes:

- a list of all staff who have been trained to operate the incinerator; type of training conducted and by whom; dates of the training; dates of any refresher courses;
- all preventative maintenance activities undertaken on the equipment;
- records of operation of the incinerator – Dates operated, volume of waste in and volume of ash out;
- summarized annual auxiliary fuel usage; and
- a list of all shipments of incinerator residues, including the weight transported and disposed of by type if necessary, and the location of the disposal site.

Ashes are raked for non-burnable items then packaged in sealed pails for backhaul to Yellowknife and disposal by KBL environmental.

- vi.** Pacto toilets – At the Bob and Old Kelvin camps, Pacto toilets are used for the collection of human waste – the sealed bags are removed from the toilets daily for incineration. The Pacto toilets works so that after each individual use the bags are sealed to prevent escape of odours or waste materials. See Appendix C.
- vii.** Sewage Treatment Plant (STP) - A sewage treatment plant will be installed at the New Kelvin Camp to treat sewage from flush toilets as well as greywater. STP options, including a rotating biological contactor or membrane bioreactor type plant, are still being investigated by KDI, however, KDI will choose a technology and plant that will produce treated effluent of sufficient quality to be discharged to land at a location, approved by the GNWT Inspector, that is 100m from the nearest waterbody. This plan will be updated upon installation of the STP at the New Kelvin Camp.
- viii.** Quarry Sump - The AEP requires the establishment of a quarry on site to provide the crushed rock necessary to build limited all-season roads, certain pads and an airstrip. In the event that KDI decides to install and operate a portable bulk sample processing plant on site, the quarry sump will be enlarged to 25,000 m³ to collect water that will be

used to supply the plant. As shown in the diagram in Appendix F, bulk sample processing will use water from the quarry sump in a closed loop so that the process water does not need to be discharged. Any processed kimberlite generated from the plant will also be placed within the sump. Additional information on the use of the quarry sump for the storage of PK and process water during operations can be found in KDI's Rock Management Plan.

e) Off-site Disposal

- i. KBL Environmental Hazardous Waste Facility – Hazardous and potentially hazardous waste materials will be transported to the KBL facilities in Yellowknife for storage, segregation and consolidation of approved waste streams for bulk transportation to specialized end receivers. The facilities are designed, engineered, constructed and maintained to prevent environmental impact through the management of industrial waste. In 2009 KBL developed the Northwest Territories first approved and licensed Hazardous Waste Transfer Facility regulated by the Government of Northwest Territories, Environment and Natural Resources (ENR) to receive waste. The facility is located in Yellowknife's Kam Lake Industrial Park at #17 Cameron Road. The operations are situated on 3.0 acres of Medium Industrial zoned land. The Kam Lake Industrial Area is physically located southwest of the Yellowknife International Airport and Southeast of the City of Yellowknife. The Yellowknife office is located at #343 Old Airport Road Yellowknife, NT X1A 2N8. Ph. 867-873-5263 (Appendix E for Waste Acceptance Letter).

5 SUMMARY OF WASTE PLANNING

Each class of waste generated in Kennady's operation is identified in the attached Waste Management Table which contains the following:

- Waste Stream
- Description
- Handling Method
- Management Method
- Comments

The waste management table/poster will be posted at the operations site to help field staff determine how wastes are to be managed. The Site Services manager is responsible, in conjunction with the project manager, to ensure that all wastes are managed accordingly. This Waste Chart is included for reference as Appendix A.

6 REVIEW AND UPDATE

The Waste Management Plan will be subject to annual review and update to ensure compliance with regulations, permits and relevant legislation. The plan will also be reviewed prior to, during and after any on-site activity to determine if adjustments are required.

Appendix A Kennady Waste Management Table

Waste Stream	Description	Handling Method	Management Method	Comments
Absorbents	Absorbent materials used for spill clean up	Store in drum with rags	Handled and stored by camp man prior to transport to waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Aerosols	Not Empty	Bulk in a drum or pail	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Antifreeze / Glycol	From engines	Store in drum or lube cubes	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Batteries (acid)	Lead / acid batteries	Wear glove, handle carefully, store upright in battery bins or palletize	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Batteries (alkali)	Alkali batteries	Wear gloves, handle carefully, store upright in battery bins or palletize	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Batteries (gelcell)	No free liquid and unable to leak if battery were damaged	Bulk in a drum or pail	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Batteries (NiCd)	Rechargeable consumer batteries	Bulk in a drum or pail	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Beverages Cans and Plastics	Pop and juice containers	Bulk in a drum or pail	Transport to Yellowknife for Recycling	Ensure cans and bottles are cleaned and free of potential animal attractants
Fuel containers with Residue	Empty fuel drums	Store in secure area on sides, lids and bungs on	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Construction waste	Leftover camp construction and operation materials	Sort and designate as reuseable, recyclable, burnable or to be removed from site	Store the separated material in their designated locations on-site until they can be utilized or transported to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Contaminated Soil	Soil contaminated with either diesel, oil, drilling fluid or other spill material	Consolidate contaminated soil and place in sealed drums or pails	Consolidate containers for shipment to an approved receiving facility	Contact KDI Logistics Coordinator prior to shipment
Domestic Garbage	Camp waste, kitchen waste, burnable debris/wood	Food waste must be stored in secure, animal proof containers	Dispose of all burnable waste in onsite incinerators, pull out plastic from the incinerator waste stream	
Drilling Waste – Drill cuttings	Drilling cuttings	Pump to natural depression	Placed in a natural depression or sump at least 100 meters from the ordinary High Water Mark of the nearest water course (stream or lake)	Inspect cuttings as they are being deposited for any contaminants and potential seepage into waterways
Drilling Waste (Hydrocarbons Based)	Drilling sump liquids and solids where the drilling mud is invert or diesel based	Waste will be stored and transferred to offsite disposal facilities	Off-site disposal – store waste in sealed containers for disposal offsite	Contact KDI Logistics Coordinator prior to shipment
Filters	Process (glycol, dips, water)	Store in on site filter container	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Incinerator Ash	Feed source is generally burnable domestic waste and paper products	Package in plastic bag when cool	Transport to an approved waste receiving facility	Weigh material before shipment
Kitchen Grease	Kitchen Grease	Burn in an incinerator	Dispose of grease waste in onsite incinerators or Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Paint	In cans or pails	Package in a drum or pail	Transport to an approved waste receiving facility	Contact KDI Logistics Coordinator prior to shipment
Processed kimberlite	Fine and coarsely ground kimberlite (approx 30% solids)	Place in quarry sump	Processed kimberlite will be pumped from the bulk sample processing plant to the quarry sump. Process water will be reused by the plant.	Processed kimberlite and associated process water will be left in the quarry after closure.
Sewage – black water (from Bob and Old Kelvin Camp)	In pacto bags	Burn in an incinerator or transport offsite as operational requirements dictate	Dispose of all sewage waste in onsite incinerators (no ice-road) or Transport to an approved waste receiving facility (ice-road present)	If shipping out, contact KDI Logistics Coordinator prior to shipment
Treated sewage (New Kelvin Camp)	Greywater and sewage will be sent to a sewage treatment plant on site.	On-site sewage treatment plant will be installed at the New Kelvin Camp.	Greywater and sewage at the New Kelvin Camp will be treated in a sewage treatment plant; treated sewage will be discharged to land.	Discharge location to land will be approved by the Inspector.
Waste Oils	From oil changes	Bulk in sealed drums or lube cubes	Transport to an approved waste receiving facility or if approved, used as an energy source in waste oil heaters	Contact KDI Logistics Coordinator prior to shipment

Appendix B Grey Water Management Drawings and Detail

Figure B1 Grease Trap



Figure B2 Grease Trap operation

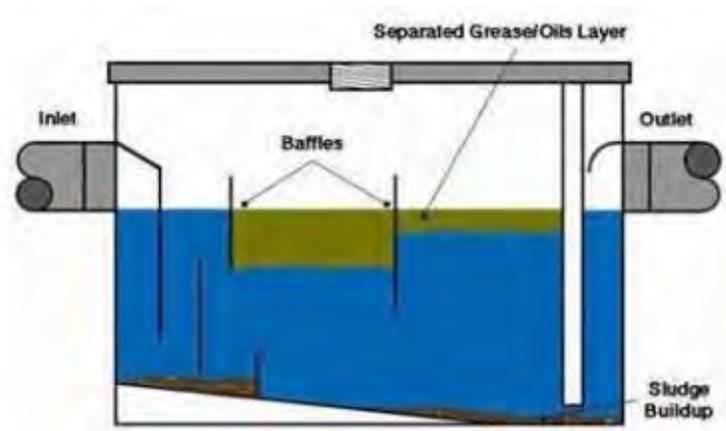


Figure B3 Sump overview

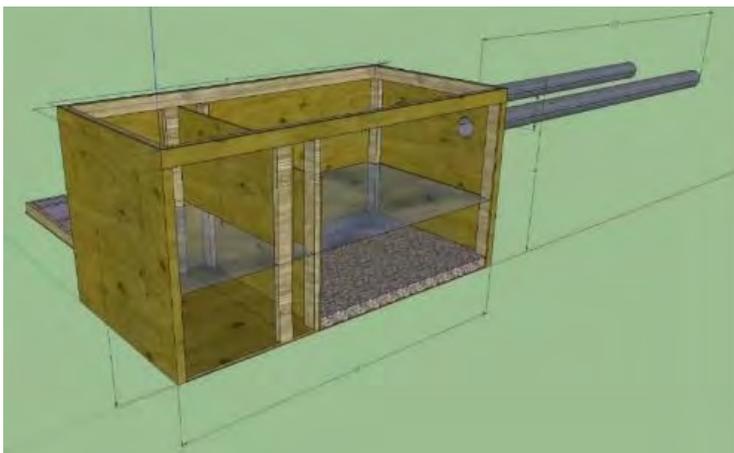


Figure B4 Sump Detail view 1

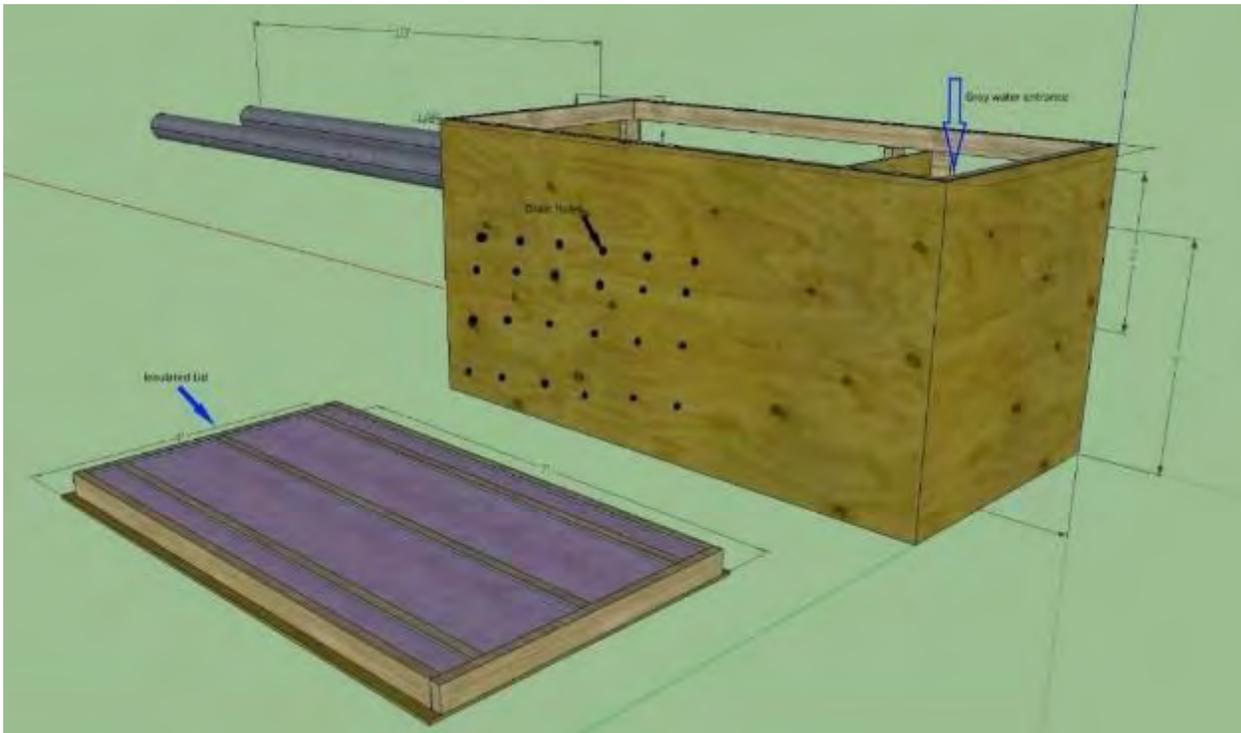
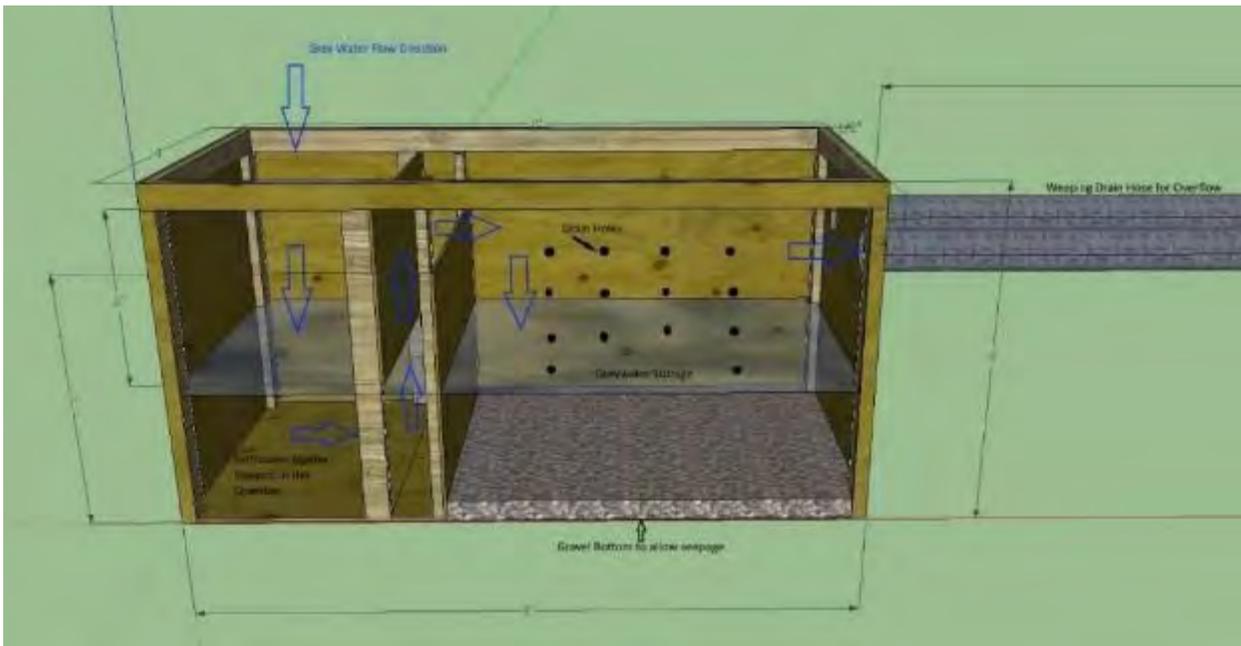


Figure B5 Sump detail view 2



Appendix C Pacto Toilets

Information on Pacto Toilets specifications and operations can be found at:
http://www.pacto.se/wp-content/uploads/Danfo-Pacto-Toilet_2016_ENG.pdf

Appendix D Incinerator Manual and Reference Material

D1 i8-40A Incinerator Specifications

<http://www.inciner8.com/incinerator-print.php?ProductID=9&ProductType=3>

D2 Ecowaste CA100 Incinerator Specifications



ECO WASTE SOLUTIONS

Clean Burning Solutions Product Spotlight

CA Model

technical description

Two Stage Process: 1st stage (Primary Burner) burns waste and produces inert ash and combustible gases. 2nd stage Afterburner (Secondary Chamber) combusts off-gases to eliminate smoke and minimize contaminants.

Cycle Time: Burn cycle of 2-6 hours per batch depending on waste type and density. Followed by a 1-2 hour cool down. Average total cycle length is 5 hours.

Controls: Integrated control panel with programmable logic control, supervisory control, monitoring, data acquisition and remote diagnostic capability. PC computer workstation optional.

Operating Environment: Inside a building or protected from the weather. Weatherproofing options available.

Other Options: Air Pollution Control System (APCS) - Scrubber, Continuous Emissions Monitoring System (CEMS).

Warranty: 1 year after start-up on defective parts or workmanship.

technical specifications

External Casing/Finish: 1/4" (0.6 cm) mild steel, sandblasted and coated with rust inhibiting and heat resistant paint.

Burners: Electronic auto spark, packaged industrial burners, secondary burners modulate.

Fuel Supply Options: Diesel, Fuel Oil, JP8, Natural Gas, Arctic Diesel, Propane. Auxiliary waste oil burners can be added.

Operating Temperature:

Primary Chamber: 1200°F (650°C) - 1560°F (850°C)

Afterburner: 1832°F (1000°C), with a 2 second retention time.

Power: Typically 3 phase, 120/208 V, 60 Hz. Other power supply options available.

advantages

- Available in 3 standard sizes
- Compact format
- Easily transportable
- Reduces waste volumes by over 90%
- Smokeless and odourless
- Automatic process control
- Low operating and maintenance costs



acceptable waste streams

Community Waste
Camp Waste
Biomedical Waste



capacities

Model		CA-50	CA-100	CA-600
Waste Capacity	Domestic Waste* lbs/batch	200	400	750
	Biomedical Waste** lbs/batch	120	240	450

*Based on typical solid waste densities.
**Based on typical biomedical waste densities.



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ECO WASTE SOLUTIONS

5195 Harvester Road - Unit 14
Burlington, ON Canada L7L 6E9

T 905.634.7022
F 905.634.0831

info@ecosolutions.com
www.ecosolutions.com

All products are subject to design and model change without notice. Actual technical specifications and equipment performance are project specific.

D3 Technical Document for Batch Waste Incineration

<https://www.ec.gc.ca/gdd-mw/F53EDE13-1D01-4D05-B97D-1F3818D28657/Technical%20Doc%20for%20Batch%20Waste%20Incineration.2010.pdf>

D4 Technical Document for Batch Waste Incineration: Executive Summary and Overview of Six-Step Process for Batch Waste Incineration

https://www.ec.gc.ca/gdd-mw/F53EDE13-1D01-4D05-B97D-1F3818D28657/Summary_Technical%20Doc%20for%20Batch%20Waste%20Incineration.2010.pdf

D5 Canada-Wide Standards for Dioxins and Furans (Incinerators)

http://www.ccme.ca/files/Resources/air/dioxins_furans/waste_incinerators_coastal_pulp/d_and_f_standard_e.pdf

Appendix E Waste Acceptance Letter

KBL Environmental LTD.

#17 Cameron Road
P.O. Box 1108
Yellowknife, NT X1A 2N8

P 867.873.5263
F 867.669.5555
kblenvironmental.com

October 20th, 2015

Attention: Garry Vivian
Aurora Geosciences
3506 McDonald Dr.
Yellowknife, NT X1A 2H1

Subject: Kennady North Project c/o Aurora Geosciences – Letter of Waste Acceptance

KBL Environmental Ltd. (KBL) owns and holds a regulatory approval to operate an Industrial Waste Transfer Facility located at #17 Cameron Road in Yellowknife, Northwest Territories. The facility is permitted and regulated through the jurisdiction of the Northwest Territories Department of Environmental and Natural Resources under approval number NT00123. Under this approval KBL is an end receiver of hazardous and non-hazardous wastes.

KBL has been contacted to provide services to manage acceptance of waste generated through exploration activities from Kennady Diamonds, Kennady North project in the Northwest Territories care of Aurora Geosciences. More specifically waste material that we may receive at KBL's Yellowknife Industrial Waste Transfer Facility is as follows but not limited to:

- Metal drums
- Tank or barrel sludge and solids
- Batteries
- Gas cylinders
- Hazardous and non-hazardous liquid hydrocarbon or chemical waste
- Leachable and non-leachable soils impacted with: hydrocarbons and/or metals
- PCB Amended Paint (PAP) coated construction waste
- Lead Paint coated metal

If there are any questions regarding content included herein please contact our office as required.

Regards,



Jeffrey Bembridge
KBL Environmental LTD.

