Waste Management Plan V2.0

Effective date: October 2024

Diagras Project - Hardy Lake Area, Northwest Territories

Northwest Territories Mining District

Arctic Star Exploration Corp.
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Plain Language Summary

This Plan outlines Arctic Star Exploration Corp.'s approach to Waste Management, the process under which it Manages Waste and the types of Waste it manages. This Plan also contains a project description.

Revision History

The previous Plan was submitted by Margaret Lake Diamonds for the Diagras property 2018.

Revisions are largely administrative.

Revision Date	Section	Revision
Oct 2024	Throughout	Change Margaret Lake Diamonds Inc. to Arctic Star Exploration Corp.
Oct 2024	Preface	Add Glossary and Abbreviations Table
Oct 2024	Introduction	Update permit number
Oct 2024	Property Location and Description	Update information and maps to account for additional claims
Oct 2024	Project Description	Update with information from past 7 years

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Glossary and Abbreviations

Word, Term, Abbreviation	Meaning
ADD	Arctic Star Exploration Corp.
AIMAIO	Akaitcho Interim Measures Agreement Implementation Office
ARD	Acid Rock Drainage
CIRNAC	Crown–Indigenous Relations and Northern Affairs Canada
DKFN	Deninu Kų́ę́First Nation
ECCC	Environment and Climate Change Canada
FRMC	Fort Resolution Métis Council
GNWT	Government of the Northwest Territories
KIA	Kitimeot Inuit Association
KBWG	Kwe Beh Working Group
Km	Kilometer
LKDFN	Lútsël K'é Dene First Nation
LUP	Land Use Permit
NSMA	North Slave Métis Alliance
NGO	Non-Government Organizations
NWT or NT	Northwest Territories
Plan or PLAN	Engagement Plan
PWNHC	Prince of Wales Northern Heritage Center
RC	Reverse Circulation
the Company	Arctic Star Exploration Corp.
TG	Tlicho̧ Government
UTV	Utility task vehicle, ATV, quad
V.P. Exploration	Vice President Exploration
WLWB	Wek'èezhìi Land & Water Board
WRRB	Wek'èezhìi Renewable Resources Board
YKDFN	Yellowknives Dene First Nation

Introduction

Arctic Star Exploration Corp. has established this Waste Management plan to cover its activities during exploration and drilling programs 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.

The project currently operates under Land Use Permit **W2017C0005**. Upon receipt of additional or replacement Land Use Permit(s) the LUP Number should be recorded below and copies of this management plan updated in the field.

LAND USE PERMIT NUMBER: _____

This Plan was prepared and approved by Arctic Star Exploration Corp. Additional information or copies are available from Arctic Star Exploration Corp. at (604) 218-8772.

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

The Diagras project is located on and immediately south of Hardy Lake approximately 40 kilometers ("km") northeast of the Diavik diamond mine and 40 km east of the Ekati diamond mine in the Northwest Territories between Lac du Suavage and Pellatt Lake. Please refer to the location map below.

The Diagras project area is within the Wek'èezhì Land and Water Board jurisdiction and can be found on 1:250,000 N.T.S map sheets 76C and 76D. It consists of 58 mineral claims covering 47,879.34 hectares.

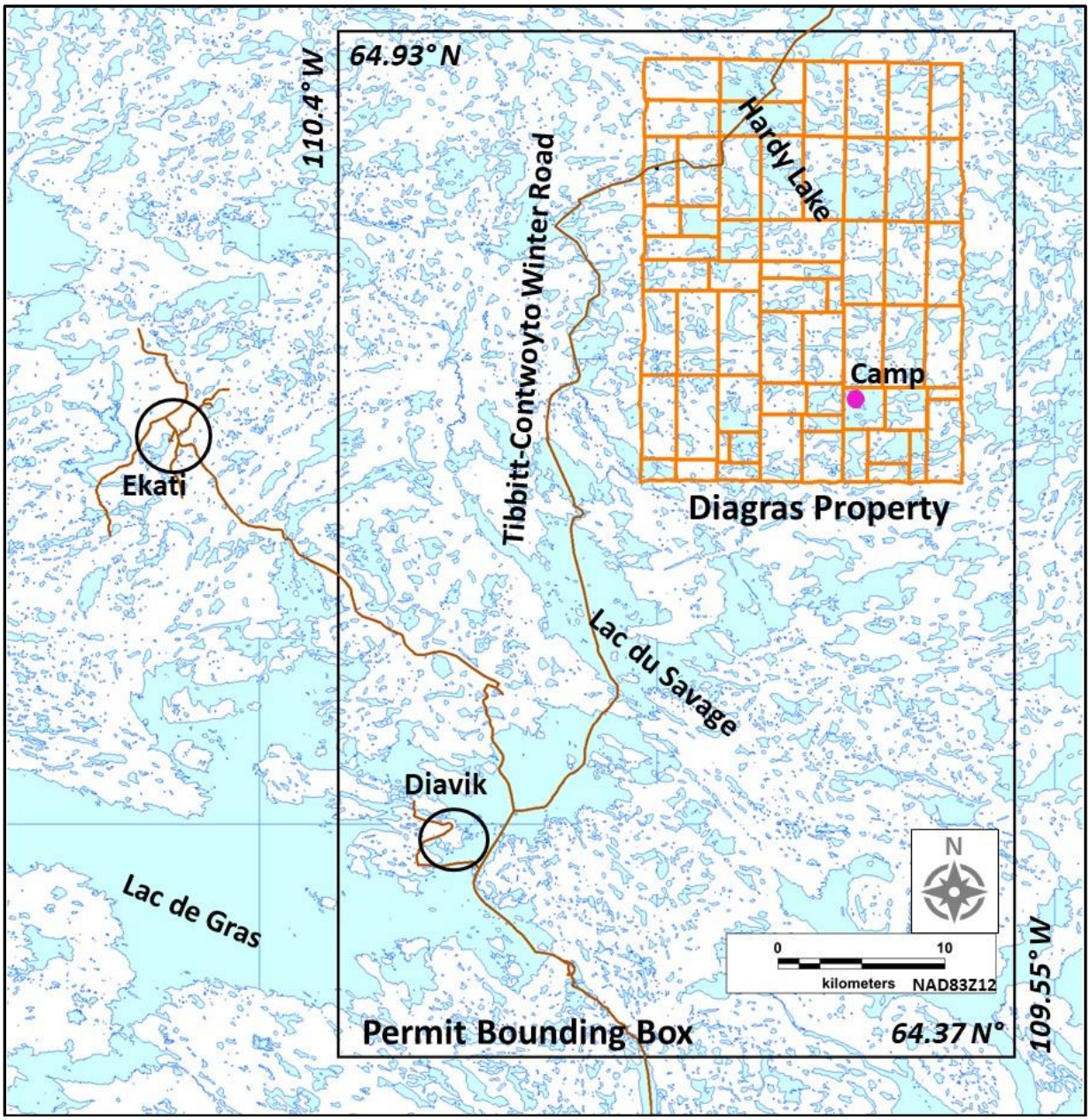

Figure 1: Diagras property

Project Description

Arctic Star Exploration Corp. intends to further explore and evaluate the Diagras property with the anticipation of discovering kimberlite with sufficient quantities of diamond to be economic. Kimberlite is the rock type that has the potential to contain diamond although not all kimberlite has diamond and if present, the amount and quality can be varied. Exploration campaigns thus far have proven additional diamondiferous kimberlites remain to be found. Additionally, work thus far on the Sequoia kimberlite complex discovered in 2021 have shown it to be of significant size and diamond content that exploration should continue to further evaluate its economic potential.

To be able to cost effectively and scientifically advance the understanding of the Sequoia kimberlite and its diamond content, as well as explore for additional kimberlites Arctic Star will require the use of various drill types. The project scope may include up to:

- 1 reverse circulation drill
- 2 core drills.
- Ancillary equipment required to operate the drills such as pumps, generators etc.
- Temporary exploration camp.
- Fuel storage
- Permit bounding coordinates to allow for winter road use and temporary equipment and supply staging areas.
- Helicopters and fixed wing aircraft to move crews and supplies.

Schedule of Activities

The schedule of activities is unknown at this point. Any activities will be results dependent as each successive season of exploration is undertaken. Activities and timing will also be financing dependant which the Company cannot predict. Should results be positive and funding available it is conceivable that a winter 2025 program could occur permitting dependent.

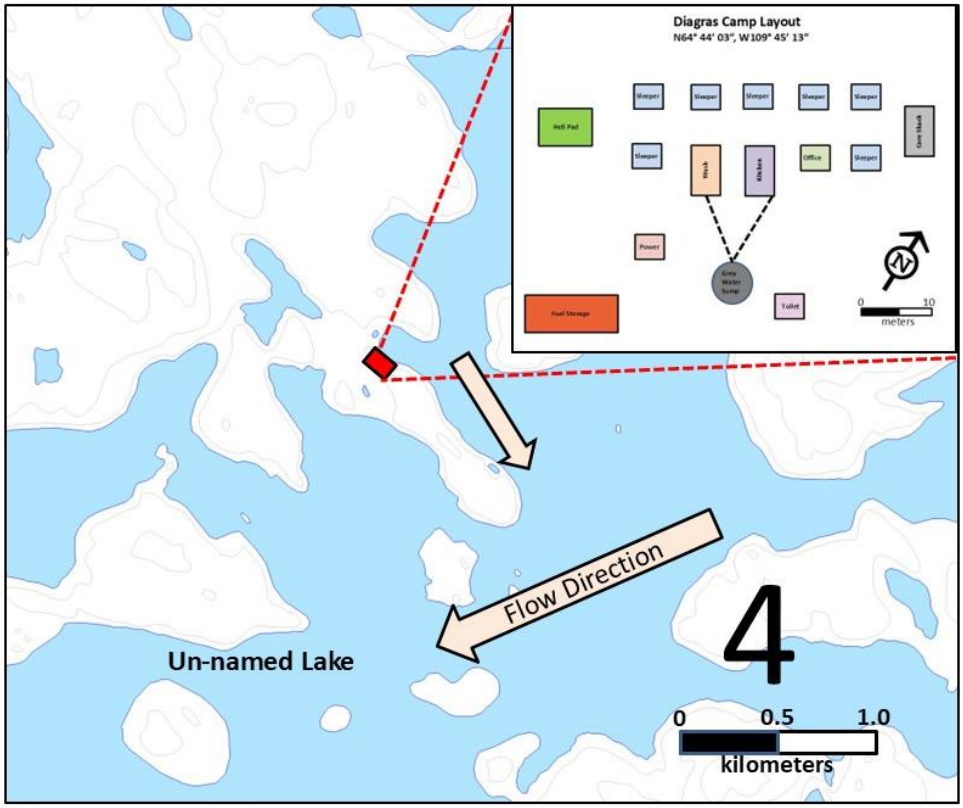

Figure 2: Detailed camp location and flow direction (NAD83)

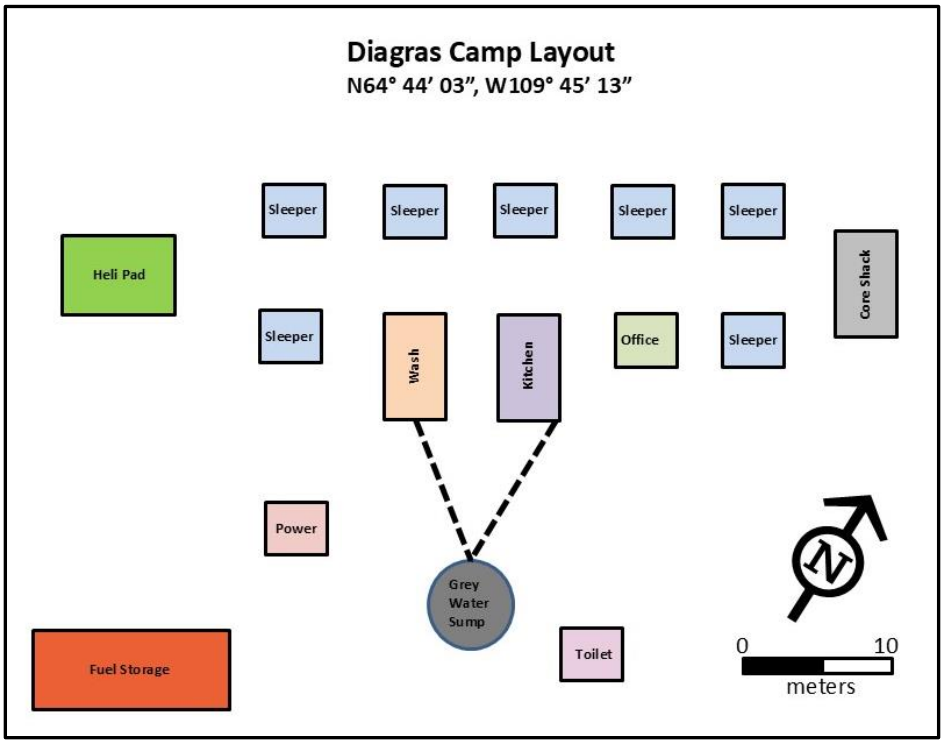

Figure 3: Detailed camp layout, fuel storage, grey water, incinerator (NAD83)

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.

Arctic Star has been effectively working in the NWT for over 2 decades. It is the Company's policy to respect the land during operation periods, carefully abiding by land use regulations. This Plan has been developed as part of Arctic Star's dedication to the concept of sustainable development and the protection of the environment and human health. Arctic Star'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, locations 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 undergo 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. Should the program expand significantly and the camp require expansion, it is possible that a different, yet unknown, more suitable location be used.

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

Arctic Star 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 and dry. 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 m^3/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 or Pacto 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 or backhauled to an approved disposal facility in Yellowknife. 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 or backhauled to an approved facility in Yellowknife. Food and associated wastes are estimated at 250 grams / person / day. During the smaller exploration stage up to 24 personnel will occupy the camp. It is estimated that up to 6 kilograms / day 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 – 50 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 and 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

Arctic Star 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, 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 size will generate minimal 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 are pumped directly from the drill to a natural depression on land at least 100 metres from any water body. After the drill has been removed from 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

Arctic Star's exploration 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 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 or cross staked partially covered to prevent ingress of precipitation.

Arctic Star's drill core should not carry the risk of generating acid rock drainage (ARD) as the minerals of interest are not contained in sulphide minerals. Any sulphides inadvertently intercepted will be of minimal quantity.

Wildlife

All waste (including food, domestics waste and petroleum-based chemicals) will be contained and sealed in such a manner as to not attract any wildlife, small or large. All recycling will be washed to avoid any food residue odor, and all food waste will be stored in sealed containers until it is incinerated. All waste will 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 will 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 or sealed in Pacto bags	Pacto - Appropriate disposal in Yellowknife	Outhouse - 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