

# WASTE MANAGEMENT PLAN PISTOL LAKE PROJECT, NUNAVUT, CANADA

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#### 1 Introduction

This Waste Management Plan ("WMP") has been developed for Leeward Capital Corp. in accordance with applicable legislation, guidelines and best practices. This WMP applies to the activities associated with the Pistol Lake Project (the "Property" or "Project"), located in the Kitikmeot Region of Nunavut, Canada.

# 1.2 Purpose and Scope

The primary objective of the Pistol Lake Project WMP is to provide employees and contractors with operational guidelines to minimize the generation of wastes and facilitate the collection, storage, transportation, and disposal of wastes while minimizing adverse effects on the environment. The WMP includes the following:

- A summary of regulatory requirements.
- Potential waste minimization, recycling, and reuse options.
- Methods for collection, storage, and disposal of hazardous and non-hazardous wastes.
- Ways to minimize environmental impacts.
- Training, inspection, and monitoring efforts.

#### 1.3 Other Plans

The WMP should be considered as a part of the Property wide management system. Other management plans in place at the Pistol Lake Project include:

- Abandonment and Restoration Plan (ARP)
- Wildlife Monitoring and Mitigation Plan (WMMP)
- Spill Plan (SP)

# 1.4 Property and Camp Description

Leeward Capital Corp. is a Calgary, Alberta based exploration company with projects currently in Nunavut (Pistol Lake) and British Columbia (Nithi).

The Pistol Lake Property is in NTS map sheet 76-N-2 in the Kitikmeot Region of Nunavut. The Property is located approximately 14 km southwest of Portage Bay on Bathurst Inlet, Nunavut, and 580 km from Yellowknife, Northwest Territories. The general geographic coordinates of the Property are 67°02′55″N and 108°47′10″W. Pistol Lake Property (the Property) has previously been explored in 1964-67 by Roberts Mining Co. and the Hope Bay Syndicate, then in 1979-84 by Goldfields Exploration Canada. Further work was done in 1984-91 by Silver Hart Mines then Chevron Minerals and more recently from 1991 to 2001 by Qikiqtaaluk Corporation (the Development Corporation of the Qikiqitani Inuit Association based in Iqaluit, Nunavut) and Leeward Capital Corp.

The Pistol Lake Property consists of two contiguous mineral leases named L-4240 and L-4241 for a total 700.63 hectares on Inuit Owned Subsurface Land (IOL) identified as

parcel BB-39 managed by the Kitikmeot Inuit Association (KIA) on behalf of Nunavut Tunngavik Incorporated (NTI).

Exploration activities proposed for the summer of 2021 includes construction and occupancy in a phased approach (construction, geologists for mapping etc., then drilling) starting at the beginning of July depending on weather. Camp will be a 16-person temporary camp to support prospecting, sampling, and 3000 meters of core drilling. This could be in operation from July 1, 2021 to October 1, 2021 depending on weather, and will be helicopter supported. Location of the temporary camp is expected to be in the area of historical exploration at 67° 02' 53.35" N 108° 47' 28.33" W to minimize wildlife and environmental disturbance and will be close enough to Knutsen Lake for camp and drill water use.

It is proposed that the temporary camp and infrastructure will support multi-year exploration based on program results. Work proposed for 2021 is modest in size and duration and every effort will be made to employ local employees and to purchase local goods when it makes business sense.

All field work and drilling will be confined to the Pistol Lake Project mineral claims as illustrated in the Project Location Figure located in <u>Appendix 1.</u>

# 1.5 Applicable Legislation and Guidelines

Acts, regulations, and legislation that relate to waste management in Nunavut are listed below:

#### 1.5.1 Federal

- Canadian Centre for Occupational Health and Safety Act
- Canadian Environmental Protection Act
- Fisheries Act
- Nunavut Waters and Nunavut Surface Rights Tribunal Act
- Transportation of Dangerous Goods Act
- National Fire Code of Canada
- Northern Land Use Guidelines
- Workplace Hazardous Materials Information System (WHMIS)
- CCME Environmental Codes of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products
- Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations
- Guidelines for Spill Contingency Planning (CIRNAC)

#### 1.5.2 Territorial

- Fire Prevention Act
- Environmental Protection Act

- Mine Health and Safety Act and Regulations
- Public Health Act
- Safety Act
- Nunavut Occupational Health and Safety Regulations
- Environmental Guideline for the General Management of Hazardous Waste

# 2 Waste Management

#### 2.1 Definition of Wastes

Waste at the Pistol Lake Project is considered to be any material or substance that can no longer be used for its intended purpose, and is destined for recycling, disposal, or storage. Hazardous wastes are broadly defined by the Nunavut Department of Environment's Environmental Guideline for the General Management of Hazardous Waste as being "any unwanted material or products that can cause illness or death to people, plants and animals". Hazardous wastes may include waste petroleum products, solvents, paints, waste chemicals, batteries, and any combination of hazardous and non-hazardous materials (i.e. mixed waste).

#### 2.2 Waste sources

Tables 1 and 2 provide a summary of the expected types of hazardous and non-hazardous (inert) wastes to be generated at the Pistol Lake Project.

Table 2.1: Non - hazardous (Inert) Wastes

Waste Type	Examples	Estimated Quantity Generated	Treatment/Disposal Method
Sewage	Human waste	10 – 20 people	Pacto toilets will be used. Waste in sealed bags will be stored in sealed drums for removal and disposal in Yellowknife at an approved facility.
Camp greywater	Water from kitchen and sinks, showers)	≤ 10 (m³/day)	Sumps located adjacent to camp; allowed to percolate into overburden; minimum distance of 31 m from nearby water sources
Combustible solid waste	Food wastes, paper, untreated wood	Variable	Incineration
Incinerator ash	Ash from the incinerator	Minimal	Stored in sealed containers, removed and taken to approved disposal site

Non-combustible solid waste, bulky items, scrap metal	Scrap metal (ie. empty drums, nails/screws), glass (ie. bottles, jars), rubber products (ie. tires, floor mats), plastics (ie. bottles, packaging, bags), non-hydrocarbon contaminated equipment (ie. motors, fans, heaters, pumps, screens)	Variable	Stored in sealed containers, removed and taken to approved recycling or disposal site
Hazardous waste or oil	Used oil	Minimal	Stored in sealed containers, removed and taken to approved disposal site
Contaminated soil/water	Hydrocarbons	Variable/ negligible	Stored in sealed containers, removed and taken to approved disposal site
Drilling Greywater	Drill cuttings & water	≤ 289 (m3/day)	Sump located adjacent to drillhole; allowed to percolate into overburden; minimum distance of 31 m from nearby water sources

Table 2.2: Hazardous Wastes and Pollutants

Waste Type	Examples
Petrochemicals	Diesel, jet fuel, gasoline, various oils
Solvents	Varsol, cleaning products
Contaminated soil	Contaminated soil/snow/water
Electronics	Computer parts, circuit boards, transformers
Fluorescent tubes	Regular and compact fluorescent tubes
Batteries	Dry cell batteries, button batteries, lead-acid based batteries

#### 2.3 Waste Management Activities

Waste management operations at the Pistol Lake Project comprise a number of activities with the common goal of reducing the amount of waste generated on site and to ensure that any wastes created are reused, recycled, or disposed of in a responsible manner. Wastes will be separated at the source into a number of categories including: organics (food wastes), materials for incineration, inert recyclables, inert non-combustible materials, and various hazardous materials. Materials that cannot be incinerated or burned will be stored in appropriate containers until they can be removed from site for treatment and/or disposal at an approved facility.

#### 2.4 Waste Recovery and Reuse

Recovery and reuse options at the Pistol Lake Project are limited due to the site's remote location, and are restricted largely by the technology and equipment available on the Property. However, any available opportunity for waste recovery and reuse will be taken.

# 3 Waste Classification and Disposal Plan

#### 3.1 Hazardous Wastes

All hazardous wastes will be placed in sealed containers and stored within "Arctic Insta-Berms", or similar, for secondary containment until they can be backhauled for recycling or disposal. A hazardous waste storage area will be established adjacent to the main fuel cache.

#### 3.1.1 Used Oil

Waste lubricating oils, from vehicles, generators, pumps, or other equipment will be collected and stored in labeled 205 L steel drums and backhauled to a registered hazardous waste receiver.

#### 3.1.2 Hydraulic Fluid

Whenever possible, hydraulic fluids will be filtered and reprocessed for reuse. Hydraulic fluid that cannot be reprocessed will be sealed in labeled 205 L steel drums and stored in the hazardous waste storage area until the product can be backhauled to an approved facility.

#### 3.1.3 Contaminated or Expired Fuels

Contaminated or expired fuels, such as Jet B aviation fuel, should remain clearly labeled and tightly sealed in their original containers within the fuel storage area. The fuels will be moved to the hazardous waste storage area for backhaul to an approved facility.

#### 3.1.4 Solvents

Whenever possible, non-toxic alternatives will be used in place of petroleum-based solvents. Excess or waste solvents will be packaged in clearly labeled, original, tightly sealed containers, or manufactured containers designed for solvent transport. Waste solvents will be stored in the hazardous waste storage area until backhauled to an approved facility.

#### 3.1.5 Contaminated Soil, Snow, and Ice

Any contaminated soil, snow, or ice will be cleaned up immediately in accordance with the Leeward Capital Corp., Pistol Lake Project "Spill Contingency" All contaminated soil, snow, and ice will be sealed in 205 L steel drums and stored in the hazardous waste storage area to await backhaul to an approved facility.

#### 3.1.6 Used Rags and Sorbents

Used rags and sorbents will be placed in clearly labeled, tightly sealed containers, such as 205 L steel drums, and stored in the hazardous waste storage area until disposal or backhaul is possible. Rags and sorbent pads will be incinerated on site. Granular sorbent will be stored in drums and backhauled to an approved facility.

#### 3.1.7 Empty Hazardous Material Containers and Drums

Empty containers will be stored in a designated area and returned to the supplier. Drums may alternatively be drained, air dried, backhauled to a recycling facility. Any residual fuels drained will be consolidated into drums and backhauled to an approved facility.

#### 3.1.8 Waste Batteries

Generation of waste batteries will be reduced by properly maintaining batteries to prolong life and by replacing non-rechargeable batteries with rechargeable alternatives whenever possible. Even with proper maintenance, all batteries will eventually deteriorate and reach the end of their useful life. Waste batteries must be properly handled to avoid spillage of corrosive materials and the release of metals into the environment.

Dry cell batteries are used in equipment such as hand-held radios and GPS units, flashlights, and cameras. Some of these types of devices utilize rechargeable battery packs, but others use general dry cell battery types such as AAA to D cells, 6 or 9 volt consumer batteries, and button batteries. Specific containers will be set up in the office, common spaces, and drill sites to collect dry cell batteries. The batteries will be placed in appropriate shipping containers and backhauled to an off-site recycling facility.

Waste lead acid batteries and rechargeable batteries will be temporarily stored in a 205 L plastic drum, within the hazardous waste storage area. These types of batteries can only be stored in this manner in quantities of 1000 kg or less and for periods of less than 180 days. All waste lead acid and rechargeable batteries will be backhauled from site as necessary to conform to regulations.

#### 3.1.9 Aerosol Cans

Use of aerosol cans at the Pistol Lake Project will be limited. Whenever possible, alternatives, such as spray bottles, will be used in place of aerosol cans. Any waste aerosol cans will be collected in specific containers around camp and at drill sites. The cans will be stored in the hazardous waste storage area until backhauled for disposal.

#### 3.1.10 Fluorescent Bulbs and Tubes

Waste fluorescent bulbs and tubes will be packaged in their original (or equivalent) containers and stored in a watertight enclosure in the hazardous waste storage area until backhauled to a hazardous waste recycling or disposal company. Fluorescent bulbs and tubes are considered hazardous waste if broken, and should be handled accordingly.

#### 3.2 Inert Non-Combustible Solid Wastes

Labeled bins will be provided at various locations around camp and at drill sites for each type of waste listed below. Effort will be taken to reuse or repurpose any materials before disposal is considered.

#### 3.2.1 Tires and Other Rubber Materials

Waste tires, hoses, and other rubber materials that cannot be repaired or repurposed will be backhauled for recycling or disposal.

#### 3.2.2 Scrap Metal and Glass

Scrap metal and glass will be repurposed for alternative uses whenever possible. Any residual metal or glass that cannot be reused will be placed in 205 L steel drums and backhauled for recycling.

#### 3.2.3 Electronics

Electronics and electrical equipment will be collected and stored in sealed containers within the hazardous waste storage area and removed from site for recycling or disposal.

#### 3.2.4 Mechanical Equipment

Mechanical equipment, such as generators, that are no longer usable, will be removed from site for refurbishment or recycling/disposal. Equipment awaiting backhaul will be stored in a specially designated, bermed area.

#### 3.3 Inert Combustible Solid Wastes

The Pistol Lake Project will use a batch feed dual-chamber controlled air incinerator to dispose of combustible solid wastes. All combustible wastes will be incinerated in accordance with applicable federal and territorial regulations and the Nunavut Department of Environment Guideline for the Burning and Incineration of Solid Waste. Incinerator ash will be properly stored in sealed containers, removed and taken to approved disposal site

### 3.3.1 Food Waste and Packaging

Dedicated steel bins, lined with plastic garbage bags, will be provided for the collection of food waste and packaging at a number of locations throughout camp and at drill sites. The bins will be secured in place and use locking lids to avoid interference by wildlife. Food waste and packaging will be incinerated daily to minimize the attraction of wildlife. Waste oil and grease collected from the kitchen will be stored in sealed plastic pails, and remain in the kitchen until transferred to the incinerator for immediate disposal.

#### 3.3.2 Paper and Cardboard

Use of electronic methods for communication will be encouraged at the Pistol Lake Project to minimize the amount of paper used. Effort will be taken to restrict the amount of corrugated cardboard coming to site, and waste cardboard will be reused as needed, possibly as packaging for backhauled materials. Specific containers, located throughout

camp, will be used to collect paper and cardboard. Waste paper and cardboard will be incinerated.

#### 3.3.3 Waste Lumber

Whenever possible, lumber will be reused at the Pistol Lake Project. Excess waste lumber will be stored in appropriate areas and either backhauled or burned in a burned when the camp is completely removed.

#### 3.4 Sewage

The Pistol Lake Project camp will utilize Pacto systems and the sewage will be incinerated with incinerator specifically designed for that waste type. Ashes from incineration will be removed and taken to approved disposal site

#### 4 Site Facilities

#### 4.1 Hazardous Waste Storage Area

The hazardous waste storage area will be located adjacent to the main fuel cache, away from any structures and a minimum of 31 metres from the normal high-water mark of any water body. It will be used for storage of any hazardous wastes until they can be backhauled for recycling or disposal. All hazardous wastes will be sealed in appropriate, clearly labeled, watertight containers, such as 205 L steel or plastic drums.

All containers housing hazardous waste will be stored within "Arctic Insta-Berms", or similar, for secondary containment. These types of berms utilize chemical and fire-resistant fabric (generally polyurethane coated nylon or vinyl coated polyester material) designed for extreme arctic temperatures and puncture resistance. "Rain-Drain" or similar hydrocarbon filtration systems will be used to safely remove any water collected inside the berms, and as a safeguard against any potential overflows of contaminated water.

All waste storage areas will be clearly marked and labeled with appropriate signage. Within the storage area, wastes will be segregated by type, and labeled to ensure safety for handlers and appropriate disposal.

#### 4.2 Incinerator

The Property will utilize a batch feed dual-chamber controlled air incinerator to dispose of combustible solid wastes. These types of incinerators typically produce the highest quality burn, with the least amount of ash and airborne particles.

All combustible wastes will be incinerated in accordance with applicable federal and territorial regulations and the Nunavut Department of Environment Guideline for the Burning and Incineration of Solid Waste.

If sewage is to be incinerated it will be with an incinerator specifically designed for that waste type. Ashes from incineration will be removed and taken to approved disposal site.

# 5 Training

All on site management and any personnel required to handle hazardous wastes must have valid First Aid, WHMIS, and Transportation of Dangerous Goods (TDG) training. Site and job-specific training will be provided to all personnel who are required to handle waste materials. All employees and contractors will receive training in emergency response and spill response, as outlined in the Pistol Lake Project "Spill Contingency Plan".

Personnel responsible for operating or maintaining the incinerator will receive hands on training to ensure the equipment is operated safely and efficiently.

# 6 Inspection and Monitoring

Inspections of the hazardous waste storage area and other waste storage facilities will be conducted daily. Regular inspections will include an assessment of the condition of waste receptacles and storage containers, checking for any damaged or leaking containers or berms, and ensuring that waste is collected and stored in the correct containers and storage areas. More detailed weekly inspections will be conducted to ensure the hazardous waste inventory is up to date, secondary containment is in place and in good condition, and spill kits are fully stocked and available. Any leaks or spills will be treated as outlined in the "Spill Contingency Plan."

The Project Supervisor is responsible for supervising the monitoring and inspection program, and keeping a detailed inventory of all hazardous wastes on site.

# Appendix 1: Figures

