Slave Lake Zinc

WASTE MANAGEMENT PLAN

O’CONNOR LAKE PROJECT, NWT

Effective Date: June 2021

Version 1.2 October 2021

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REVISION HISTORY

The table below is a revision history table that outlines the revisions made by Slave Lake Zinc in response to Mackenzie Valley Land and Water Board's Reasons for Decision for MV2016C0037 and MV2021L8-0008 dated September 9, 2021. The summary of changes outlines the comments and conformances from the MVLWB, the location of revised sections indicates the sections where the changes can be found.

Slave Lake Zinc Waste Management Revision History Table

Version	Item	Summary of Changes	Location of revised section(s)
1.0	-	Submitted with the applications for MV2016C0037 and MV2021L8-0008 and approved by the MVLWB in the Reasons for Decision dated September 9, 2021. Nighthawk was directed to submit Version 3.1 with the revisions listed in the Reasons for Decision.	-
1.2		The Board requires that the Licensee revise the Waste Management Plan and submit Version 1.2, within 90 days of the effective date of the Licence, to reflect updates as agreed to during this regulatory proceeding, to reflect the proposed activities, to meet the applicable guidelines, and to include the following: • Update with proof of acceptance of non-combustible and hazardous waste by the waste receiver	Appendix
1.2		Update to correct the formatting issue in Table 2.1	Table 2.1
		Update Table 2.2. to identify the estimated quantity of each hazardous waste type that could be generated in a given time (e.g., annually)	Table 2.2
		Update to indicate that Slave Lake Zinc will not establish any fuel storage facilities or refueling stations, or store chemicals or wastes, within 100 metres of the Ordinary High-Water Mark of any Watercourse.	Section 1.2
		• Update to indicate that Slave Lake Zinc will not discharge waste, including wastewater, to any watercourse, or to the ground surface within 100 metres of the Ordinary High-Water Mark of any watercourse.	Section 1.2
		• Update to use and cite the revised 2017 Guideline for Hazardous Waste Management (e.g., Sections 1.5.2 and 2.1)	Sections 1.5.2 and 2.1
		Update to include the following details about incineration36: o the capacity of the incinerator, the frequency of operation, and the quantity of auxiliary fuel used, if any; and o revise the statement about burn quality to correlate with incineration temperature, or other system factors that affect the quality of burn	Section 4.2

1 Introduction

This Waste Management Plan ("WMP") has been developed for Slave Lake Zinc. in accordance with applicable legislation, guidelines, and best practices. This WMP applies to the activities associated with the O'Connor Lake Project (the "Property" or "Project"), located in the South Slave Region of the Northwest Territories, Canada.

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1.2 Purpose and Scope

The primary objective of the O'Connor 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.

It is understood that Slave Lake Zinc will not establish any fuel storage facilities or refueling stations, or store chemicals or wastes, within 100 metres of the Ordinary High-Water Mark of any watercourse. In addition, Slave Lake Zinc will not discharge any waste, including wastewater, to any watercourse, or to the ground surface within 100 metres of the Ordinary High-Water Mark of any watercourse.

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 O'Connor Lake Project include:

- Abandonment and Restoration Plan (ARP)
- Spill Contingency Plan (SCP)

1.4 Property and Camp Description

Slave Lake Zinc Corp (SLZ). is a Vancouver-based junior exploration company exploring for lead, silver, and zinc in the South Slave Region of the Northwest Territories. The O'Connor Lake Project has a long history of exploration activities since 1948 and is located on the south of the East Arm of Great Slave Lake, at O'Connor Lake, some 195 km southeast of Yellowknife and 150km northeast of Hay River and 100 km east of Fort Resolution.

The O'Connor Lake Mine which previously operated in 1952, is now a contaminated site managed by Crown Indigenous Relations and Northern Affairs Canada (CIRNAC), Contaminants and Remediation Division (CARD).

The property lay idle until acquired by present ownership in 2002. The current owners (Slave Lake Zinc) have conducted prospecting, trench sampling and geophysical surveys. The company has also surveyed the property and taken the claims to lease, renewable at 21-year intervals. Slave Lake Zinc has acquired mineral claim MWK97540 from the CIRNAC Mining Recorder's Office. The claim was staked on September 15, 2006.

In 2016 the company applied for and received a Type A Land Use Permit (MV2016C0037) from the Mackenzie Valley Land and Water Board (MVLWB) for a small (10-person) camp and one drill. Exploration activities included diamond drilling, airborne/ground geophysical survey's; and was accessible via fix-wing aircraft on floats or helicopter on O'Connor Lake. A water licence was not required as the exploration activities were under 100m^3/day.

An amendment to the current Land Use Permit is proposed to increase the number of drills and equipment on site and expand the camp to accommodate 49 persons. Proposed exploration activities including prospecting, sampling, land and/or air geophysics and drilling. It is anticipated that the camp will operate seasonally, from March to October annually.

Slave Lake Zinc plans to apply for a Type B Water Licence to support increased equipment and camp size.

All field work and drilling will be confined to the O'Connor Lake Project mineral claims as illustrated in the Project Location Figure located in Appendix 1.

1.5 Applicable Legislation and Guidelines

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

1.5.1 Federal

- Canada Waters Act
- 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

- NWT Waters Act
- Mackenzie Valley Resource Management Act
- Mackenzie Valley Land Use Regulations
- Fire Prevention Act
- Environmental Protection Act
- Mine Health and Safety Act and Regulations
- Public Health Act
- Safety Act
- NWT-Nunavut Occupational Health and Safety Regulations
- Guideline for Hazardous Waste Management (2017)

2 Waste Management

2.1 Definition of Wastes

Waste at the O'Connor Lake Project is 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 GNWT Department of Environment and Natural Resources (GNWT ENR) Guideline for 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 2.1 and 2.2 provide a summary of the expected types of hazardous and non-hazardous (inert) wastes to be generated at the O'Connor Lake Project.

Table 2.1: Non - hazardous (Inert) Wastes

Waste Type	Examples	Estimated Quantity Generated	Treatment/Disposal Method	Estimated volume
Sewage	Human waste	20-49 people	Pacto toilets will be used. Waste in sealed bags will be incinerated daily. Ash from the incinerator will be stored in sealed 45-gallon drums and taken to an approved disposal site.	1M³
Camp greywater	Water from kitchen and sinks, showers)	≤ 10 (m^3/day)	Sumps located adjacent to camp; allowed to percolate into overburden; minimum distance of 31 m from nearby water sources	5,000L
Combustible solid waste	Food wastes, paper, untreated wood	Variable	Incineration	1M³
Incinerator ash	Ash from the incinerator	Minimal	Stored in sealed containers, removed and taken to approved disposal site	2M³
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	1M³
Hazardous waste or oil	Used oil	Minimal	Stored in sealed containers, removed, and taken to approved disposal site	600L
Contaminated soil/water	Hydrocarbons	Variable/ negligible	Stored in sealed containers, removed, and taken to approved disposal site	50L
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	479m³

Table 2.2: Hazardous Wastes and Pollutants

	Examples	
Petrochemicals	Diesel, jet fuel, gasoline, various oils	600 litres
Solvents	Varsol, cleaning products	3 x 5-gallon pails
Contaminated soil	Contaminated soil/snow/water	3 x 205-liter drums
Electronics	Computer parts, circuit boards, transformers	None anticipated
Fluorescent tubes	Regular and compact fluorescent tubes	12
Batteries	Dry cell batteries, button batteries, lead-acid based batteries	4 x 12-volt lead acid, 60 various dry cell (AA, AAA etc)

2.3 Waste Management Activities

Waste management operations at the O'Connor 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 several 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 O'Connor 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 InstaBerms", 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 Slave Lake Zinc “Spill Contingency Plan.” 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 O'Connor 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 O'Connor 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. 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 O'Connor 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. Wastepaper and cardboard will be incinerated.

3.3.3 Waste Lumber

Whenever possible, lumber will be reused at the O'Connor 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 O'Connor Lake Project camp will utilize Pacto systems, and the sewage will be collected, bagged, and incinerated daily. The ash from the incinerator will be sealed in 205 L drum for disposal at an approved facility.

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 100 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 diesel powered, air incinerator, to dispose of combustible solid wastes. Combustible waste will be incinerated daily, and ash stored in a sealed 45-gallon drum for removal and disposal in an approved facility. The amount of waste to be incinerated will be variable depending on how many persons are in camp. The capacity is up to 3,000 kg of waste per batch although it is highly unlikely that those volumes will be realized. Employees will be trained in the proper use of the incinerator to ensure a consistent hot burn to reduce or eliminate black clouds.

All combustible wastes will be incinerated in accordance with applicable federal and territorial regulations. The incinerator is diesel generator powered with no auxiliary power.

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 spill response, as outlined in the O'Connor Lake Project "Spill Contingency Plan".

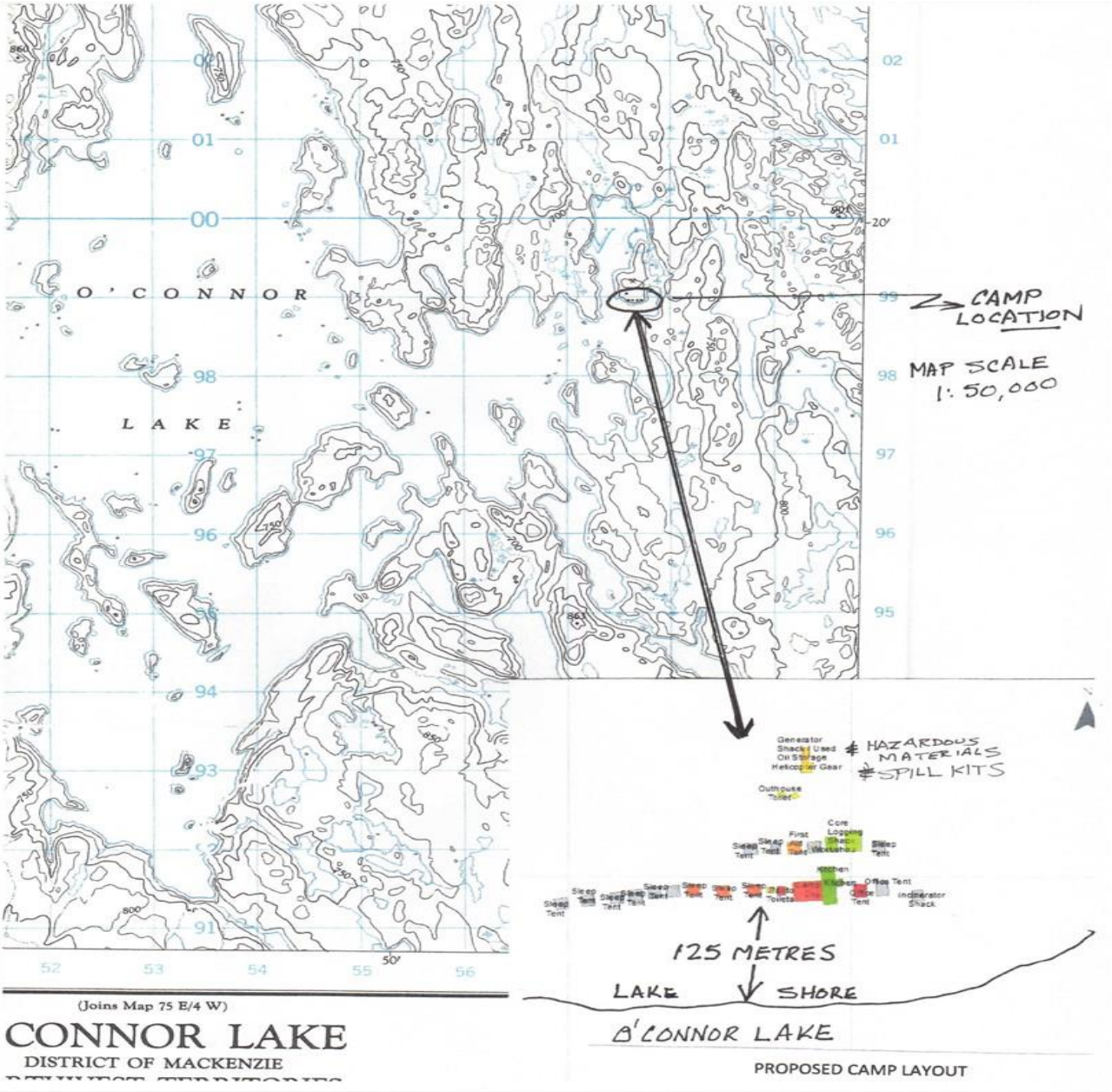
Personnel responsible for operating or maintaining the incinerator will receive hands on training to ensure the equipment is operated safely and efficiently.

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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SPILL KITS
125 METRES
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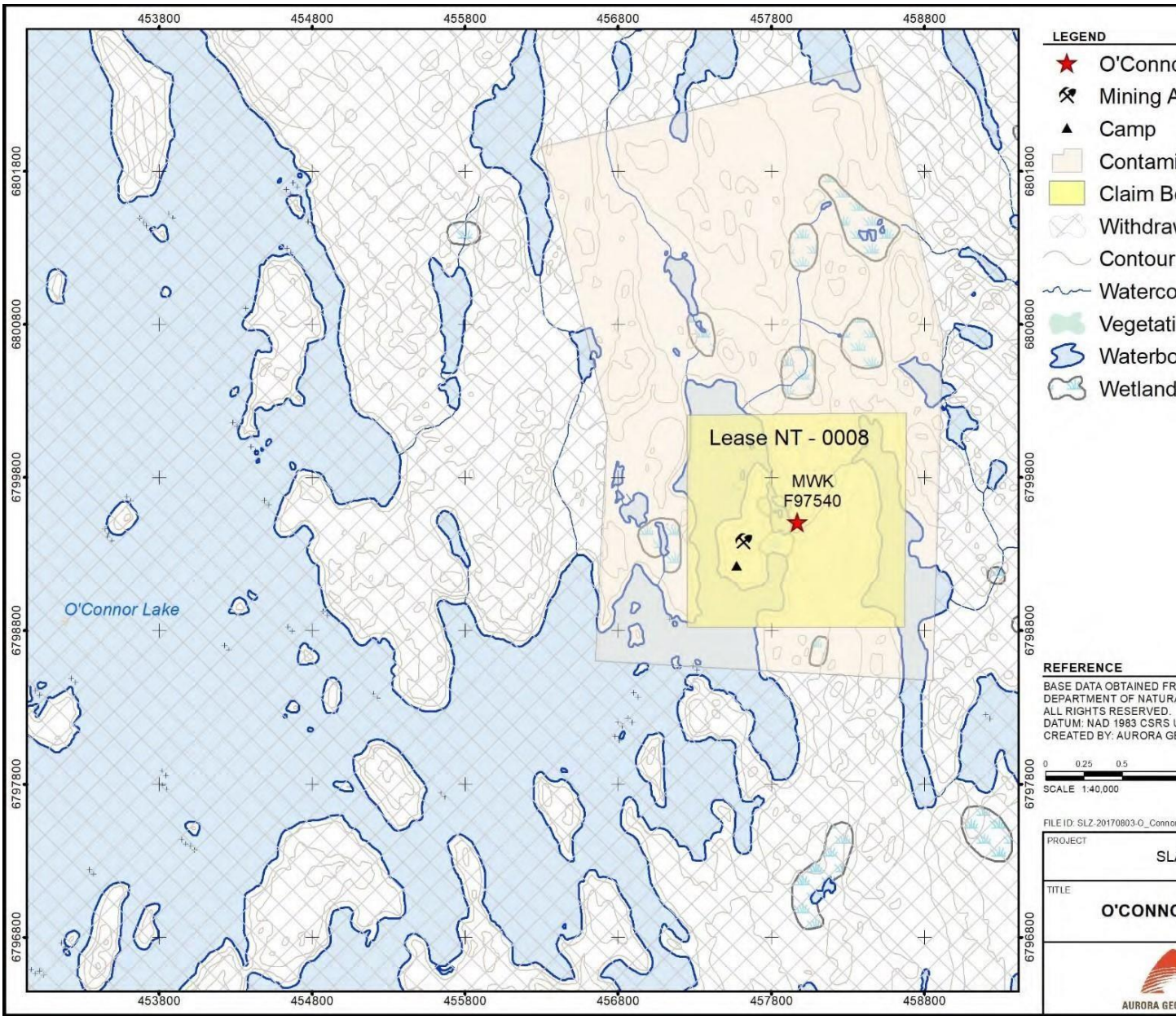
Outhouse Toilet
Core Logging Shed
Kitchen
Office Tent
Incinerator Shack
Sleep Tent
First Aid
Toilets
(Joins Map 75 E/4 W)
CONNOR LAKE
DISTRICT OF MACKENZIE
PROPOSED CAMP LAYOUT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