



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
918 Nunavut Drive
Iqaluit, NU, X0A 3H0

Your file - Votre référence
2AM-LUP2032
Our file - Notre référence
GCDocs#139135178

July 16, 2025

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
Email: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the 2024 Annual Report for the Lupin Mine Project, Type A Water Licence No. 2AM-LUP2032.

Dear Richard,

Thank you for the April 08, 2025, invitation to review the 2024 Annual Report submitted by Lupin Mines Incorporated (LMI), a wholly owned, indirect subsidiary of Mandalay Resources Corporation, for Type A Water Licence No. 2AM-LUP2032.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the Annual Report and its associated documents pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown Indigenous and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum for boards consideration.

If there are any questions or concerns, please contact me at Aminul.Haque@caanc-cirnac.gc.ca or (867) 975-4282 or Andrew Keim at (867) 975-4550 or Andrew.Keim@rcaanc-cirnac.gc.ca.

Sincerely,

আমিনুল হক

Aminul Haque
Senior Environmental Assessment Specialist

GCDocs#139135178



Technical Review Memorandum

Date: July 16, 2025

To: Richard Dwyer, Manager of Licensing, Nunavut Water Board

From: Aminul Haque, Senior Environmental Assessment Specialist, CIRNAC

Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the 2024 Annual Report for the Lupin Mine Project, Type A Water Licence No. 2AM-LUP2032

Region: ☒ Kitikmeot ☐ Kivalliq ☐ Qikiqtani

A. Background

Water Licence 2AM-LUP2032 authorizes Lupin Mines Incorporated (LMI, Applicant) to use water and deposit waste during activities and undertakings carried out in support of the Closure and Reclamation of the Lupin Mine site (the Project). The Project is located on the west shore of Contwoyto Lake, approximately 285 kilometers southeast of Kugluktuk, within the Kitikmeot Region, Nunavut.

Lupin Mine site was an underground gold mine that operated from 1982 to 2005, with a temporary suspension of activities from January 1998 to April 2000. Production resumed in March 2004 and ceased in February 2005. From 2005 to 2019, the site remained in care and maintenance. In 2020, LMI initiated the active closure phase under the renewed Type A Water Licence 2AM-LUP2032. Since 2022, the site has transitioned to a care and maintenance phase, with limited seasonal access and ongoing reclamation and environmental monitoring. In 2024, site activities were restricted to short summer campaigns due to the cancellation of the winter road.

In July 2018, LMI initiated a water licence amendment and renewal process and on February 29, 2020, the Nunavut Water Board (Board) issued an amended Type A Water Licence 2AM-LUP2032. In Q1 of 2020-2021, LMI initiated the first year of the active closure phase, with post-closure phases scheduled to occur between 2022 and 2026.

The 2024 Annual Report, prepared by Falkirk Environmental Consultants and JDS Mining and Engineering, documents water use, site maintenance, monitoring activities, dam inspections, and fuel and waste management. The report satisfies many requirements under Part B, Item 2 of the licence, though CIRNAC has identified several issues that require further clarification or corrective action.



Summary of Activities 2024

The Lupin Mine remained in the Care and Maintenance Phase throughout 2024, with limited seasonal access and site operations conducted during the summer months. The site was accessible only by air, as the winter road had not been constructed, which restricted equipment mobilization.

The camp operated for 57 days over two seasonal periods:

- June 24 to August 5, and
- August 27 to September 9.

During this time, the following care, maintenance, and closure activities were carried out:

- Water Use and Management:
 - 392.79 m³ of freshwater was pumped from Contwoyto Lake (LUP-01) for camp operations.
 - No water was used from other ponds for industrial or dust suppression purposes.
 - 119.710 m³ of treated sewage effluent was discharged at Station LUP-14 under authorized limits.
 - No discharges occurred from tailings (LUP-10), underground workings (LUP-11), or other minewater sources.
- Monitoring and Inspections:
 - Water quality monitoring was conducted as required under the Water Licence (Schedule J), including at:
 - ✓ LUP-01 (intake)
 - ✓ LUP-14 (effluent)
 - ✓ LUP-EL-01 / BL-01 (East and Boot Lakes)
 - No unauthorized discharges or spills were reported in 2024.
 - A CIRNAC inspection occurred on July 15, 2024, identifying issues with erosion, culvert placement, and hazardous waste containment.
 - The annual geotechnical inspection and dam safety assessment were completed.
- Closure and Maintenance Work:
 - 1,660 m³ of hydrocarbon-contaminated soil was excavated and disposed of underground via the Crown Pillar.
 - A passive limestone drainage system was designed and installed in Cell 4 to manage acidic seepage.
 - 17,800 m³ of esker material was placed in the NW corner of Cell 4 for cover and stability.
 - Minor dam erosion repairs, thermistor installations, and water management upgrades were carried out.



- **Fuel and Waste Management:**
 - A fuel conversion program was completed, converting remaining jet fuel to diesel.
 - As of Dec 31, the site stored ~453,424 L of diesel fuel and no jet fuel.
 - Large volumes of hazardous waste and old fuel products remain onsite and are planned for offsite shipment in 2025/2026.
 - Waste Management Plan was updated to address CIRNAC and ECCC feedback.
- **Engagement and Reporting:**
 - Engagement with local communities was limited due to the winter road cancellation.
 - Plans and reports revised or submitted:
 - ✓ Revised Closure Schedule (Table 14)
 - ✓ As-Built Report for the Temporary Fuel Farm
 - ✓ Passive Drainage System Design
- **Deferred Activities:**
 - Due to the winter road deferral, some closure and reclamation activities were postponed to 2025 and beyond. These include:
 - ✓ Final cleanup of Main Tank Farm
 - ✓ Additional dam repairs
 - ✓ Hazardous waste shipment
 - ✓ Road and culvert upgrades

CIRNAC provides the following comments and recommendations pertaining to the annual report package. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.

Table 1: Summary of Recommendations

Recommendation Number	Subject
R-01	Compliance with Inspection Items
R-02	Fuel and Waste Management Practices
R-03	Sediment and Erosion Control Measures
R-04	Reporting Transparency and Water Testing

B. DOCUMENTS REVIEWED AND REFERENCED

The following table (Table 2) provides a list of the documents reviewed under the submission and reference during the review.

Table 2: Documents Reviewed and Referenced

Document Title	Author, File, No., Rev., Date
2024 Annual Report	Mandalay Resources, 2025-03-31
Water Licence No. 2AM-LUP2032	Nunavut Water Board, 2020-04-09
Water Licence Inspection for 2AM-LUP2032	CIRNAC, 2024-07-15



C. RESULTS OF REVIEW

1. Compliance with Inspection Items

Comment:

The July 15, 2024 CIRNAC inspection identified non-compliances with respect to erosion near dams, hazardous waste storage, culvert function, and potential contaminated water ponds. While the Annual Report documents partial corrective actions (e.g., 1,660 m³ of contaminated soil placed underground), some issues remain unaddressed or were deferred to the 2025 field season.

Recommendation:

(R-01) CIRNAC recommends LMI provide an updated action plan with timelines to fully resolve the non-compliance issues noted in the 2024 inspection report, particularly regarding:

- a) Hazardous waste containment and landfill management;
- b) Culvert reinstallation and drainage improvements;
- c) Final cleanup of hydrocarbon-impacted areas.

2. Fuel and Waste Management Practices

Comment:

The 2024 Annual Report indicates the ongoing storage of large volumes of fuel (~453,000L of diesel) and waste oils on-site. CIRNAC's 2024 inspection recorded the presence of leaking barrels and containers in the landfill. These pose risks to the environment if not managed in accordance with the Waste Management Plan.

Recommendation:

(R-02) CIRNAC recommends that LMI:

- a. Ensure that all hazardous and hydrocarbon wastes are stored within the designated hazardous waste berms, in accordance with the updated Waste Management Plan;
- b. Submit a timeline for removal of leaking containers and clean-up of the landfill area;
- c. Confirm that all waste and chemicals will be shipped offsite during the 2025 winter road season, or by other means if the winter road cannot be constructed again this year.

3. Sediment and Erosion Control Measures

Comment:

The Annual Report acknowledges erosion at Dam 2 and Dam 6 and notes that remediation was limited due to site access constraints. However, under Water Licence



Part G, Item 5, LMI is required to implement erosion and sediment control measures prior to and during closure activities.

Recommendation:

(R-03) CIRNAC recommends LMI submit:

- a) A detailed erosion control plan addressing Dam 2, Dam 6 and the Esker Haul Road culvert;
- b) Confirmation that identified areas of concerns will be repaired during the 2025 field season;
- c) Photographic or geotechnical evidence in the 2025 Annual Report demonstrating completed remedial work.

4. Reporting Transparency and Water Testing

Comment:

The 2024 Annual Report includes comprehensive laboratory results and field data for scheduled water quality monitoring stations (e.g., LUP-01, LUP-14, LUP-EL-01, LUP-BL-01), satisfying many core requirements of the water licence monitoring program. However, CIRNAC notes that the report does not clearly identify any sampling or results associated with ponded water at the crown pillar area or near the truck shop, where contaminated soil was excavated, as identified during the July 15, 2024 inspection.

Furthermore, the Annual Report and appended water quality data do not confirm whether testing was completed prior to any discharge from these areas, nor whether results were submitted to CIRNAC inspectors 10 days in advance, as required under Part E, Item 10 of Water Licence 2AM-LUP2032.

Recommendation:

(R-04) CIRNAC recommends that LMI:

- a) Clarify whether any water from areas where hydrocarbon-contaminated soil was removed (e.g., crown pillar zone, truck shop) was sampled in 2024, and if not, whether any discharge occurred from those locations;
- b) If water was discharged, provide confirmation that analytical results were submitted to CIRNAC inspectors at least 10 days prior to release, as per licence requirements;
- c) For future reports, include a dedicated section or table cross-referencing ponded water sampling locations, results, and associated inspection findings to demonstrate compliance with Part E, Item 10;
- d) Affirm in writing that no ponded or potentially contaminated water will be released without advance testing and notification to CIRNAC inspectors.