



Water Resources Division  
Resource Management Directorate  
Nunavut Regional Office  
P.O. Box 100  
Iqaluit, NU, X0A 0H0

Your file - Votre référence  
2AM-LUP2032  
Our file - Notre référence  
GCdocs # 93305417

April 8, 2021

Mr. Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0  
sent via e-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada Review of the  
Water Quality Monitoring Plan and Water and Soil Quality Assurance /  
Quality Control Plan for Lupin Mine Project, Type A Water Licence No. 2AM-  
LUP2032**

Dear Mr. Dwyer,

Thank you for your March 18, 2021 invitation to review the Water Quality Monitoring Plan and Water and Soil Quality Assurance / Quality Control (QA/QC) Plan, submitted by Lupin Mine Incorporated (LMI) for Type A Water Licence No. 2AM-LUP2032.

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

If there are any questions or concerns, please contact me at (867) 975-4738 or by e-mail at [Vincent.okonkwo@canada.ca](mailto:Vincent.okonkwo@canada.ca) or Sarah Forté at (867) 975-3876 or [sarah.forte@canada.ca](mailto:sarah.forte@canada.ca)

Sincerely,

Vincent Okonkwo  
Environmental Assessment Coordinator

GCDOCS # 93305417



## **Technical Review Memorandum**

**Date:** April 8, 2021

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

**From:** Vincent Okonkwo, Environmental Assessment Coordinator, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada Review of the Water Quality Monitoring Plan and Water and Soil Quality Assurance / Quality Control Plan for Lupin Mine Incorporated, Type A Water Licence No. 2AM-LUP2032**

---

### **A. BACKGROUND**

The Lupin gold mine is located on the shores of Contwoyto Lake approximately 285 km southeast of Kugluktuk, in the Kitikmeot Region of Nunavut and is owned by Lupin Mine Incorporated (LMI), a subsidiary of Mandalay Resources Corporation. The Lupin gold mine is currently licensed under Nunavut Water Board (NWB) Water Licence No. 2AM-LUP2032, which was approved on April 9, 2020 by the Minister of Northern Affairs. The site had been in care and maintenance since 2005 and is presently undergoing final reclamation under the approved water licence.

In accordance with Part J, item 13 terms and condition of the type A Water Licence 2AM-LUP2032, the licensee LMI is required to submit a Post Closure Monitoring Plan (PCMP) to the Nunavut Water Board (NWB) for approval, within one year of the water licence approval. As a result, LMI is required to submit an updated QA/QC Plan to NWB for approval to reflect the current PCMP.

CIRNAC Provides the following comments and recommendations pertaining to the updated QA/QC version 4.0 Plan submitted by LMI dated February 26, 2021.



**Table 1: Summary of Recommendations**

Recommendation Number	Subject
R-01	Monitoring Parameters Omission
R-02	Field Blank Omission
R-03	Sampling Stations Coordinates
R-04	Sampling Stations Signage
R-05	Executive Summary Improvement
R-06	Title Page Project Status

## **B. RESULTS OF REVIEW**

### **1. Monitoring Parameters Omission**

#### **Comment:**

In the Document Control section, Revision No. 3.0, LMI stated monitoring parameters as one of the major updates performed on the QA/QC plan. In Table 2.1: Sample Collection Requirements, there was an omission of the following monitoring parameters in the QA/QC plan:

- Station ID. No. LUP-01, No visible sheen of Oil and Grease (O&G) parameter was not included; and
- Station ID. No. LUP-14, Total Phosphorous (TP) parameter was not included.

These monitoring parameters are required according to the Type A Water Licence No. 2AM-LUP2032 terms and conditions part J, Schedule J, Table 1 – Monitoring Program Requirements.

#### **Recommendation:**

(R-01) CIRNAC recommends that LMI update the QA/QC Plan to include the No visible sheen of O&G and TP monitoring parameters to Stations LUP-01 and LUP-14 respectively or provide a rationale for omitting these parameters.



## 2. Field Blank Omission

### **Comment:**

Section 3.0 of the QA/QC plan, does not contain any information about the field blank as one of the components of field quality control. It appears LMI has no plan to perform a field blank prior to sending the samples to the laboratory. This exercise is an important component of water field quality control measure used to detect and identify any contaminant from the sampling site.

CIRNAC is of the view that LMI update the QA/QC plan to include the field blank as one of the components of field quality control.

### **Recommendation:**

(R-02) CIRNAC recommends that LMI updates the QA/QC Plan to include field blank and ensure that field blank is performed prior to sending the samples to the laboratory.

## 3. Sampling Stations Coordinates

### **Comment:**

In Table 2.4, of the QA/QC Plan, LMI provided the summary list of the current active sampling stations with some of their Global Positioning System (GPS) coordinates. The coordinates of eight (8) sampling locations in the landfarm and Landfill facilities were not provided.

This will undermine the essence of the QA/QC Plan, which is to promote sampling integrity by ensuring that samples are always taken from the same location, within the same temporal scope.

The provided coordinates were all captured in Universal Transverse Mercator (UTM) coordinate system. During the March 25, 2021 teleconference, the inspector requested the GPS coordinates be provided in degrees, minutes and seconds which is consistent with Type A Water Licence No. 2AM-LUP2031, Part J, Item 2, which states that:

*“The Licensee shall provide the GPS co-ordinates, in degrees, minutes and seconds of latitude and longitude, of all locations where sources of Water are utilized for all purposes”*

This appears to be contradictory to the water licence provision.



### **Recommendation:**

(R-03) CIRNAC recommends that LMI:

- Provide the GPS coordinates of the missing eight (8) sample stations for the landfarm and landfill facilities; and,
- Represent the GPS coordinates of all the sampling stations in degrees, minutes and seconds of latitude and longitude as per the water licence.

## **4. Sampling Stations Signage**

### **Comment:**

In August 5, 2018 inspection report, CIRNAC inspector expressed concerns about the signage at the sampling stations. The concerns include the signage is physically short, not clear enough to be read from a close distance, constructed with wood and not firmly planted to the ground. Reading signage correctly prevents an avoidable error, enhances sampling integrity, and promotes consistency by ensuring samples are taken from the same location. It will also ensure continuity during staff changes.

Part B, Item 4, of the Type A Water Licence No. 2AM-LUP2032 terms and condition states that:

*“The Licensee shall maintain to the satisfaction of the Inspector, all the signs necessary to identify the stations of the “Monitoring Program”, detailed in Schedule J”*

### **Recommendation:**

(R-04) CIRNAC recommends LMI ensure that all sample stations signage align with the following criteria:

- About six (6) feet tall above ground to ensure visibility above snow;
- Built with metal for durability;
- Clearly marked with four (4) inch reflective lettering indicating the sample station (e.g. LUP-01) to ensure it is legible and visibility.



## 5. Executive Summary Improvement

### **Comment:**

In the executive summary, LMI did not capture the overview of the QA/QC plan and did not provide the Inuktitut and Inuinnaqtun translation of the executive summary.

This information is vital as the executive summary intends to provide readers with the overview of the QA/QC plan. The essence of translating the executive summary is to provide interested parties including community members the opportunity to participate effectively in the review process.

It will be helpful if LMI expand the executive summary to capture the overview of the QA/QC Plan.

### **Recommendation:**

(R-05) CIRNAC recommends that LMI:

- Further develop the executive summary of the QA/QC plan to present the overview of the plan.
- Translate the executive summary of the QA/QC plan to Inuktitut and Inuinnaqtun for the benefit of the interested parties including community members involve in the review process.

## 6. Title Page Project Status

### **Comment:**

In the title page of the QA/QC Plan, LMI indicated the current phase of the closure period as Care and Maintenance. In section 6.0, of the Post Closure Monitoring Plan (PCMP), LMI stated that the Active Closure Period (Phase 1 monitoring), began in the summer of 2019 and forecasted that reclamation will be completed in the summer of 2021. This statement shows the project has moved away from Care and Maintenance phase to an Active Closure status.

It will be helpful if LMI indicate the current status of the project reclamation to avoid confusion to the readers.

### **Recommendation:**

(R-06) CIRNAC recommends that LMI updates the QA/QC Plan title page to reflect the current Active Closure period.



## **C. REFERENCES**

*Nunavut Waters and Nunavut Surface Rights Tribunal Act (2016)*

*Department of Crown-Indigenous Relations and Northern Affairs Act (2020)*

Nunavut Water Board, February 2020: Amended and Renewed Type A Water Licence  
No: 2AM-LUP2032, P 18-19

CIRNAC Inspection Report, August 05, 2018.