

LUPIN MINES INCORPORATED
(A Wholly Owned Indirect Subsidiary of Mandalay Resources Corp.)

October 19, 2020

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

RE: Water Licence 2AM-LUP2032 - Response to CIRNAC Response dated October 9, 2020 to Lupin Mines Incorporated Condition E 25-TM-Dome Design and Condition E-27 Exposed Tailings Preliminary Cover Design

Dear Mr. Dwyer,

Lupin Mines Incorporated (LMI) is writing to respond to the comments submitted by the Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) on October 9, 2020.

1.0 INTRODUCTION

Following a lengthy public hearing review processes, the Nunavut Water Board (NWB) confirmed on issuance of the Type A Water Licence 2AM-LUP2032 (Licence), the terms and conditions necessary to protect the environment, conserve the water resources, and provide appropriate safeguards in respect of the remaining reclamation and closure activities as well as Long-Term Post Closure Monitoring program to be undertaken by LMI at the Lupin Mine site (NWB decision dated February 28, 2020).

The current licence confirms approval of Final Closure and Reclamation Plan (July 2018) which outlines the measures proposed by LMI to complete final remediation of the Lupin Mine Site and previous approval granted by the Board related to the Closure Plan for Tailing Containment Area (January 2005). Refer to Part B, Item 13 of Licence 2AM-LUP2032.

2.0 RESPONSES TO CIRNAC COMMENTS ON CONDITION 25 DOME DESIGN

2.1 CIRNAC COMMENT 1:

Lack of Erosion Controls on 10% slopes of esker cover - LMI's September 30, 2020 reply indicates that the nature of the cover material is such that it will seal armour as surface erosion removes fines and annual inspections and equipment will be on site to monitor and repair if erosion is an issue.

It is unclear as to what assumptions have been made with respect to the anticipated design flows during both the freshet and summer storm events. CIRNAC does not agree with LMI's indication that during the freshet the dome cover will remain frozen (ponding of water on top of the dome would result in thawing of the upper portions of the esker cover) and thus protect the esker cover from scour and/or erosion. Furthermore, the gradation of the esker material may be such that the fine-grained sands and silts could be easily removed during intense precipitation events, thus resulting in esker covers being compromised. There was also no information

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provided to confirm that the riprap to be used in the chutes is sufficiently sized to remain stable during the high intensity runoff events.

LMI's also references the FCRP (Section 4.3.2.3) in the response that indicates that annual inspections will identify areas of mitigation work and these maintenance activities can be done using light construction equipment has not been accounted for in the security estimate for the mine site. The cost of mobilizing equipment to complete the necessary repair work would be expensive and needs to be accounted for in the security if the current dome construction design plan is accepted. CIRNAC is not confident that the design provided is sufficient for a long-term walk away solution.

CIRNAC Recommendation: CIRNAC recommends that interested parties are provided the opportunity to review the recently submitted FCRP, and that the cost of this potential post-closure work is considered in the reclamation security.

LMI RESPONSE

The NWB has provided the updated FCRP for interested parties to review and provide comments. As noted in the current security estimate, equipment will remain at site for various repairs as required until post closure monitoring is complete. Demobilization of this equipment is also included in the current security estimate.

2.2 CIRNAC COMMENT 2:

Lack of information to demonstrate stability of designs LMI's September 30, 2020 reply indicates that additional design details will be provided in their "Subsequent Issued for Construction Drawings" and provided additional comments on the intent of the designs. CIRNAC anticipates the opportunity to review the "Subsequent Issued for Construction Drawings" from LMI to confirm if it addresses CIRNAC's questions. More detailed topographic information is also required to ensure that water runoff is not allowed to migrate tangentially along the toe of the dome embankment. This work should be done in advance of the dome construction work so it is clear to all parties involved as to the work required to properly install the esker dome cap.

CIRNAC Recommendation: CIRNAC recommends that the 'Subsequent Issued for Construction Drawings' be provided by LMI for review in advance of the dome construction work.

LMI RESPONSE

LMI will provide the NWB with construction drawings as required under water licence 2AM-LUP2032.

2.3 CIRNAC COMMENT 3:

Notes on the design plan and lack of specific information on related underlying works LMI's September 30, 2020 reply indicates that the intent of the 8 June 2020 Technical memo was to address the specific requirements of Part E Item 25 of the Water Licence 2AM-LUP2032. LMI notes that clean-up work began in 2020 and were undertaken in accordance with their clean-up protocol (as summarized below).

LMI's reply states that "Note 1 is deliberately stated in general terms in order to require the Contractor to comply with any relevant terms in the water licence and the PCR". LMI further states that the relevant background documents are publicly available and contain extensive information on location and nature of various aspects of soil and rock requiring cleanup; that LMI has developed a protocol for cleanup activities

(field screening and laboratory testing) to establish excavation limits; and that disposal of the materials into the crown pillar and openings and shafts has been described in the FCRP; and that WSCC Chief Inspector of Mines Approval was granted 29 June 2020. CIRNAC suggests that it is challenging to expect the general contractor responsible for the construction of the esker dome cover to read both the requirements of the NWB and FCRP in sufficient detail to ensure that all engineering aspects of the work are appropriately addressed. LMI should ensure that there is a sufficient level of detail provided on the Issued for Construction drawings that will provide clarity to all program stakeholders to fully understand the work to be done, and ensure inspectors have the means by which to ensure the work is being executed in accordance with the design documents.

CIRNAC has not seen the referenced approval document granted by the WSCC Chief Inspector of Mines approving the disposal of waste rock in the crown pillar opening. Furthermore, it is incumbent on LMI to provide more than a conceptual plan on how this material will be placed into the crown pillar opening and shafts.

CIRNAC Recommendation: CIRNAC recommends the following;

- i. The recently submitted FCRP be provided for review by interested parties.
- ii. LMI to ensure that there is a sufficient level of details provided on the Issued for Construction drawings that will provide clarity to all program stakeholders to fully understand the work to be done, and inspectors have the means by which to ensure the work is being executed in accordance with the design documents.

LMI RESPONSE:

The NWB has provided the updated FCRP for interested parties to review and provide comments. LMI will provide the NWB with construction drawings as required under water licence 2AM-LUP2032. Please find below, the WSCC Chief Inspector of Mines approval documentation.

3.0 RESPONSES TO CIRNAC COMMENTS ON CONDITION 27 EXPOSED TAILINGS PRELIMINARY COVER DESIGN

3.1 CIRNAC COMMENT 4:

LMI's September 30, 2020 reply referred to the previously provided "decision matrix" and supporting information provided in response to Commitment No. 8 from the Technical Meeting/Pre-Hearing Conference and also referred to Appendix H-1 and H-10 of the recently submitted FCRP (28 September 2020). CIRNAC has not reviewed the referenced FCRP document. CIRNAC's design request emanated from review of LMI's previous submissions.

CIRNAC Recommendation: CIRNAC recommends that the recently submitted FCRP be provided for review by interested parties.

LMI RESPONSE:

The NWB has provided the updated FCRP for interested parties to review and provide comments.

4.0 CLOSURE

LMI has, as required under Part I, Item 2 of the current licence, presently working on “an update to the Final Closure and Reclamation Plan, to address relevant comments and recommendations provided by intervening parties and the Board during the review process for the Application”. This updated FCRP was submitted to the NWB on 28 September 2020 and is currently out for review by interested parties.

As stated previously, LMI looks forward to working with CIRNAC on the development of a Post Closure Monitoring Plan (PCMP) in accordance with Schedule J of the Licence wherein LMI is required to in the development of the PCMP to consult with community members and organizations in Kugluktuk (i.e. KIA).

We trust our comments address CIRNAC comments, if you require any further information, please contact me at K.Lewis@mandalayresources.com or by telephone at (778)-386-7340.

Regards,

“Karyn Lewis”

Karyn Lewis
LMI Project Manager

2020-06-29

Gord Peckford
Mine Manager
Lupin Mine Remediation Project
Nahanni Construction Ltd
100 Nahanni Drive
Yellowknife, NT X1A 2P6

lupinmanager@NahanniNCL.com

Dear Mr. Peckford:

Approval - Lupin Mine Remediation Project Drilling and Blasting Plan

This is in response to your Lupin Mine Remediation Project submittal received via email requesting approval of the Drilling and Blasting Plan.

Pursuant to the applicable Nunavut *Mine Health and Safety Act and Regulations*, various emails, teleconferences and review of the following documents:

- 2020-06-25 Drilling and Blasting Plan Approval;
- West Zone Crown Pillar Blast Locations - Plan view;
- 180727 2AM-LUP1520 5_0_Final_Cre_Reclamation_Plan Ver.0-IMLE 123;
- Site safety plan Lupin Mine June10, 2020;
- M8277C Break-Away Drill and Blast-Lupin Mine Closure-West Zone Pilla.._; and
- Email addressing WSCC questions dated June 18, 2020 10:47 AM MST,

The documentation is deemed acceptable and found to be in compliance with the applicable Nunavut *Mine Health and Safety Act and Regulations*.

Sincerely,

Cary Ingram
CRSP
Chief Inspector of Mines

cc: Jared Buchko

jared@nahannincl.com