## **Summary of Additional Commitments and Issue Resolution**

## January 15, 2020

At the time CIRNAC filed its Final Hearing Presentation on January 10, 2020, it identified the following two issues as outstanding on Slide 13:

- 1. Long term stability of cover and dams;
- 2. Management of tailing exposed when water levels are lowered; and
- 3. Insufficient information for security estimation

What follows provides a summary of the discussions and commitments which have since resolved those issues.

# **CIRNAC Hearing Presentation Regarding Commitment 1**

**Background:** CIRNAC and LMI had bilateral discussions on January 7, 2020 as well as a call with Board staff, and CIRNAC confirmed that their outstanding issues with respect to Commitments 3 and 4 were resolved with LMI's confirmations respecting monitoring. This will be addressed in the Monitoring Plan which will be submitted within 1 year following the issuance of the amended Water Licence.

Status: Resolved.

### **CIRNAC Hearing Presentation Regarding Commitment 2 and 9**

**Background:** This matter was further discussed between CIRNAC and LMI on January 14, 2020. LMI provided more information responsive to CIRNAC's request on January 7, 2020 and added the additional information discussed on January 14, 2020. The updated wording is as filed with the attached.

Status: Resolved.

#### **CIRNAC Hearing Presentation Regarding Commitments 3 and 4**

**Background**: CIRNAC and LMI had bilateral discussions on January 7, 2020 as well as a call with Board staff, and CIRNAC confirmed that their outstanding issues with respect to Commitments 3 and 4 were resolved with LMI's confirmations respecting monitoring. This will be addressed in the Monitoring Plan which will be submitted within 1 year following the issuance of the amended Water Licence.

Status: Resolved.

# **CIRNAC Hearing Presentation Concluding Comment 1 (Commitment 5 and 7)**

**Background:** The mine site dome cross section provided on January 10<sup>th</sup> in response to the request for more information to support Commitment 5 and 7, which was to provide a preliminary design level explanation of the waste rock storage "dome". LMI provided the cross sections in a memo provided on January 10<sup>th</sup>, 2020 and a follow up discussion was held with

CIRNAC on January 14<sup>th</sup> 2020 where CIRNAC indicated that the preliminary design and cross sections meets the intent of Commitment 5.

**Commitment**: LMI commits to provide additional details on the cross section to identify conceptual water features and their slopes along with notes on erosion control features and typical locations where they would be installed. LMI additionally commits to provide a north-south preliminary design level cross section, including these same additional drainage and erosion control concepts. Both of these items will be provided to CIRNAC within 60 days of the issuance of an amended Water Licence.

**Status**: CIRNAC confirms that this commitment resolves their outstanding concern respecting Commitment 5 and 7, and CIRNAC Hearing Presentation Concluding Comment 1 is now considered resolved.

# **CIRNAC Hearing Presentation Concluding Comment 1 (Commitment 6)**

**Background**: Following Lupin Mine Incorporated's response to Commitment 6, which was to provide geotechnical details of Tailings Containment Area (TCA) engineered structures to ensure long term stability and erosion control, a geotechnical stability review was performed concluding that Dam M and Dam K require re-sloping for final closure. During a call with CIRNAC on January 7<sup>th</sup>, 2020, CIRNAC requested additional re-sloping details to be presented in the form of two cross sections. LMI provided the cross sections in a memo provided on January 10<sup>th</sup>, 2020 and a follow up discussion was held with CIRNAC on January 14<sup>th</sup> 2020.

**Commitment**: LMI commits to provide additional details on the Dam K and the Dam M cross sections, more specifically: a zoomed in image that more clearly identifies the materials used for the re-sloping, the distance that the re-sloping materials will extend from the crest of Dam M and Dam K, and through a break line and with minimums and maximums noted, the distances to the closure water levels from each of these two re-sloped structures. In addition, LMI commits to provide a perpendicular (longitudinal cross section) to supplement the typical outflow structure details provided in the January 10<sup>th</sup> memo. The longitudinal cross section, one for Cell 5 and one for Cell 3, will provide invert elevations from the cover to the ponds along with a design note to clarify the storm return period that will be used for the detailed design features. Both of these items will be provided to CIRNAC within 60 days of the issuance of an amended Water Licence.

**Status**: CIRNAC confirms that this commitment resolves their outstanding concern regarding Commitment 6, and CIRNAC Hearing Presentation Concluding Comment 1 is now considered resolved.

## **CIRNAC Hearing Presentation Concluding Comment 2 (Commitment 8)**

**Background**: Following the submission of the Commitment 8 decision matrix on how potential contaminants would be managed once the water levels have been achieved, a call was held with CIRNAC on January 7<sup>th</sup>, 2020 where CIRNAC requested additional details. The details on the decision matrix steps and the scientific backing for the cover in place were provided by LMI to CIRNAC. This matter was further discussed between CIRNAC and LMI on January 14, 2020.

**Commitment:** Based on the decision matrix steps and scientific backing considerations provided to CIRNAC, LMI has determined that that all exposed tailings will be covered in place. Relocation is not considered appropriate due to the listed environmental and operational health and safety risks set out in the decision matrix steps.

LMI commits to provide additional information to CIRNAC to provide further rationale to support its view that the in-situ cover is effective and robust including preliminary details and typical sections on how the cover will be constructed on newly exposed tailings to ensure it is stable and protected against long term erosion. This information will be in the form of a memorandum and will be provided to CIRNAC within 60 days of the issuance of an amended Water Licence.

*Status*: CIRNAC confirms that this commitment resolves their outstanding concern regarding Commitment 8, and CIRNAC Hearing Presentation Concluding Comment 2 is now considered resolved.