



NUNAVUT WATER BOARD

WATER LICENCE NO: 2AM-LUP2032

**REASONS FOR DECISION
INCLUDING RECORD OF PROCEEDINGS**

NUNAVUT WATER BOARD

In the Matter of:

Applicant: Lupin Mines Incorporated

Subject: Application for Renewed and Amended Type “A”
Water Licence 2AM-LUP2032

Date: February 28, 2020

Precedence: Where there is any inconsistency or conflict between the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)*, the Agreement prevails to the extent of the inconsistency or conflict. Where there is any inconsistency or conflict between the *NWNSRTA* and any other act of Parliament, except the *Nunavut Land Claims Agreement Act*, the *NWNSRTA* prevails to the extent of the inconsistency or conflict.

RECORD OF PROCEEDINGS

Applicant:	Lupin Mines Incorporated
Address:	#1204 - 700 West Pender Street Vancouver, BC V6C 1G8
Purpose:	Application for Renewal and Amendment of Type "A" Water Licence 2AM-LUP1520 to authorize the use of Water and the deposit of Waste in support of a Mining undertaking
Complete Application Received on:	February 5, 2019
Application Received from:	Lupin Mines Incorporated
Dates of the Public Hearing:	January 15-16, 2020
Date the Public Hearing Record Closed:	January 16, 2020



ATTENDEES:

NWB Representatives:

Nunavut Water Board (P11 Panel Members):	Chairman	L. Toomasie
	Member	A. Hansen-Main
	Member	A. Ningark

Nunavut Water Board Staff:	Executive Director	S. Autut
	Director Technical Services	K. Kharatyan
	Director of Board Administration and Communications	B. Kogvik
	Technical Advisor	D. Donald
	Licensing Manager	R. Dwyer
	Legal Counsel, Meadows Law	T. Meadows

Interpreters:		B. Kogvik
		J. Otokiak

Court Reporter:	Dicta Court Reporting Inc.	J. Albert
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Sound Technician:	PIDO Productions	N. Poitras
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Applicant:

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	Chief Development Officer, Mandalay Resources	B. Labatte
	Legal Counsel, Lawson Lundell	C. Kowbel
	Consultant, LMI	D. Hohnstein
	Principal, Golder	K. Bocking



Project Manager, Water Resources, Stantec	S. Wilkins
Senior Geotechnical Engineer, Stantec	A. Tong
Senior Hydrogeologist, Stantec	J. McKinley
VP Projects, Nahanni Construction	K. Ruptash

Parties:

Crown-Indigenous Relations and Northern Affairs Canada (CIRNA or CIRNAC)	Manager of Water Resources	G. Okonkwo
	Land Administrator, Major Projects	N. Noah
	Director Resource Management (via teleconference)	S. Dewar
	VP Director of Mining, Arcadis	G. Wiatzka

Environment and Climate Change Canada	Senior Environmental Coordinator	E. Walker
	Lead – Water Quality Expert Support	A. Wilson
	Climate Services (via teleconference)	E. Watson

Department of Justice	Legal Counsel to Federal Parties (via teleconference)	D. Kohlenberg
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Written Record of Submissions: Available from the Board’s public registry using the following links:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-LUP2032%20LMI/>

Hearing Record (including Hearing Transcript): <ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-LUP2032%20LMI/2%20ADMIN/4%20HEARINGS/2%20HEARING/2019%20Amendment%20Renewal/>



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ABBREVIATIONS

In this decision, the following abbreviations are used:

Short Form	Full Name
CIRNA or CIRNAC	Crown Indigenous Relations and Northern Affairs Canada
DIO	Designated Inuit Organization
ECCC	Environment and Climate Change Canada
GN	Government of Nunavut
KIA	Kitikmeot Inuit Association
LMI	Lupin Mines Incorporated, the Applicant or Licensee
NIRB	Nunavut Impact Review Board
NPC	Nunavut Planning Commission
<i>Nunavut Agreement</i>	<i>Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada</i>
<i>NUPPAA</i>	<i>Nunavut Planning and Project Assessment Act</i>
<i>NWNSRTA</i>	<i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i>
NWB	Nunavut Water Board
PHC	Pre-Hearing Conference
PH	Public Hearing
RIO	Regional Inuit Association
TM	Technical Meeting

REASONS FOR DECISION

Executive Summary

This decision is in relation to an application before the Nunavut Water Board (NWB or Board), filed by Lupin Mines Incorporated (the Applicant, Licensee or LMI), for the 12-year renewal and amendment of existing Type “A” Water Licence No: 2AM-LUP1520 (the Renewal and Amendment Application or Application). The complete Renewal and Amendment Application was received by the NWB on February 5, 2019 and sought authorization to use Water and deposit Waste for a Mining undertaking at the Lupin Mine, a former gold mine located approximately 285 kilometres southeast of Kugluktuk, in the Kitikmeot Region of Nunavut. The Lupin Mine has been under care and maintenance since 2005, and the Applicant has made a decision to proceed with plans for the full reclamation and closure of the Lupin Mine site.

The NWB reviewed and facilitated the review process for the Renewal and Amendment Application including a completeness check, a technical review period, an in-person technical meeting and pre-hearing conference held in Kugluktuk on June 6 and 7, 2019, and



an in-person Public Hearing held in Kugluktuk on January 15 and 16, 2020. Throughout the NWB's licensing process for the Application, several written and oral commenting opportunities were provided to interested persons and interveners, including community members, and members of the public.

In accordance with the information provided with the Application, technical reviews conducted by the NWB and interveners, comments and written submissions filed with the NWB, and information provided during the Public Hearing to the three-member Panel (Lupin Panel, P11), duly appointed by the full Board to consider the Application, the NWB has decided the following:

- To grant LMI's request for a renewed and amended Type "A" water licence for a term of twelve (12) years, to be issued as Water Licence No: 2AM-LUP2032;
- The renewed and amended Water Licence No: 2AM-LUP2032 (the Licence) authorizes LMI to use Water and deposit Waste in order to undertake the Final Closure and Reclamation of the Lupin Mine, in accordance with the terms and conditions outlined in this Decision and the attached renewed and amended Licence;
- The Licence requires LMI to provide to the Board for approval, a Post Closure Monitoring Plan within one year of the Minister's approval of the Licence;
- The following key changes were incorporated into the Licence:
 - The Licence has been revised to reflect that the Lupin Mine Project (Project) is entering the final closure and reclamation stage, and will not be returning to active mining during the term of the Licence.;
 - The Licence term of 12 years allows for approximately 2 years of planned closure activities and approximately 10 years of post closure monitoring, with the expectation that the Post Closure Monitoring Plan will propose continued monitoring past the expiry of the Licence term if necessary;
 - The Final Closure and Reclamation Plan submitted to the Board for approval in support of the Renewal and Amendment Application has been approved by the Board with the issuance of the Licence;
 - Specific conditions have been included in the Licence, requiring that relevant plans be updated to address concerns raised either by interveners and/or the NWB during the licensing process for the Renewal and Amendment Application;
 - The Licence authorizes LMI to backfill the underground mine workings with waste rock and other suitable materials;
 - The Licence authorizes the construction and operation of a new non-hazardous demolition waste Landfill Facility;
 - The Licence authorizes the operation of a Landfarm Facility for the treatment of hydrocarbon contaminated soil;



- Changes have been made to the Monitoring Program associated with the Project to include monitoring of seepage from the future Waste Rock Dome and Tailings Containment Area (TCA);
- The Licence reflects changes in water use permitted under the Licence and includes thresholds for water use linked to the Care and Maintenance Phase, active Closure Phase, and the Post Closure Phase of the Project;
- Changes have been included to allow for the reduction in security held by the Minister to reflect progressive reclamation and closure activities completed by the Licensee, in accordance with the completion of milestones and reclamation and closure activities, as set out in Part C and the tables in Schedule C of the Licence.

In addition to the items referenced above, this decision addresses the issues identified during the Board's consideration of the Renewal and Amendment Application, and provides the basis or rationale for inclusion of specific terms and conditions in the Licence.

SECTION I **FILE BACKGROUND AND REGULATORY HISTORY**

Current Application

The application before the Board, filed by Lupin Mines Incorporated (Applicant, Licensee or LMI) on February 5, 2019, is for the renewal and amendment of Licence No: 2AM-LUP1520 (the Renewal and Amendment Application or Application). The Renewal and Amendment Application was initially filed with the NWB on July 27, 2018, with all documentation necessary to complete the application received by the Board on February 5, 2019. The scope of the Application, as submitted, and later slightly modified, included the following:

- Twelve (12) year renewal of Licence No: 2AM-LUP1520 to allow for continued Water use and Waste deposit in support of a Mining undertaking, including the Final Closure and Reclamation of the Lupine Mine site.
- Phased reduction in security held under the amended and renewed licence (the Licence) to reflect the Licensee's completion of progressive reclamation and closure activities and the associated reductions in environmental liability.
- Proposed changes/amendments to overall terms and conditions in the Licence to address plans for the Final Closure and Reclamation of the Project.
- Amendment to terms and conditions pertaining to Water use requirements in the Licence to establish appropriate thresholds for an Active Closure Phase followed by a Post Closure Monitoring Phase.
- Proposed changes/amendments to overall terms and conditions in the Licence related to waste disposal to allow for the consolidation and permanent burial of Potentially



Acid Generating/ Metal Leaching (PAG/ML) waste rock into a dome structure on the surface (referred to in the Licence as the Waste Rock Dome).

- Changes to the Licence to allow for permanent disposal of hydrocarbon-contaminated soils in the underground mine workings.
- Amendment to licence terms and conditions to allow for the construction of a non-hazardous demolition waste landfill.
- Flexibility in terms and conditions of the Licence to allow for the development of a long-term Post Closure Monitoring Plan.

The following documents were received from Lupin Mines Incorporated in support of the application to renew and amend Licence No: 2AM-LUP1520:

- Completed and signed water licence Renewal Application Form;
- Amendment Application Executive Summary – English;
- Amendment Application Executive Summary – Inuinnaqtun;
- Amendment Application Executive Summary – Inuktitut;
- List of Supplemental Documents to the Application, including:
 - Fig 01, Location Plan, dated January 25, 2018;
 - Fig 02, Summarized Project History, dated January 25, 2018;
 - Fig 03, General Arrangement Plan – Current Conditions, dated January 25, 2018;
 - Fig 04, Mine and Mill Site Area – Current Conditions, dated January 25, 2018;
 - Fig 05, Tailings Containment Area Approximate 2017 Work Areas, dated January 30, 2018;
 - Fig 06, Underground Mine Working Plan, January 25, 2018;
 - Fig 07, Location of Borrow Pits and Quarries, dated January 25, 2018;
 - Fig 08, Monitoring Program Station, dated July 26, 2018;
 - Fig 09, Historical TCA Water Discharge to the Environment, dated January 25, 2018;
 - Fig 10, Mine and Mill Site Area – Post Closure, dated March 15, 2018;
 - Fig 11, Tailings Containment Area – Post Closure, dated July 26, 2018;
 - Fig 12, Post-Closure Monitoring Program Stations, dated March 28, 2018;
 - Fig 13, Kinross 2006 West Zone Crown Pillar Stopes Underground Disposal Plan, dated March 8, 2018;
- Final Closure and Reclamation Plan, Ver.0, dated July 2018;



- FCRP Expanded West Zone Underground Disposal Plan, dated March 8, 2018;
- FCRP Executive Summary – Inuinnaqtun;
- FCRP Executive Summary – Inuktitut;
- TABLE B - Licence Compliance Assessment and Status Report, July 2018;
- Appendix B Type A Water Licence and Land Lease Condition Concordance, dated July 2018; and
- 5_G Reclaim_Cost_Estimate, dated July 27, 2018.

In addition to the above-mentioned submission(s), the NWB received several documents or submissions related to the Application from the Licensee and interested parties throughout the licensing process, as indicated in Appendix D, and which can be accessed on the NWB's FTP site using the link provided below.

Copies of all submissions received for the Application as well as documents related to the file are available on the NWB's Public Registry and the FTP site at the following link

ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-LUP2032%20LMI/1%20APPLICATION/2019%20Renewal_Amendment/

History of the Lupin Mine

The Lupin Mine (the Project) is located on the western shore of Contwoyto Lake, Nunavut, approximately 285 kilometres southeast of Kugluktuk and about 400 kilometres northeast of Yellowknife. The Project is situated in a zone of continuous permafrost and can be accessed by an on-site gravel airstrip, the Tibbit-to-Contwoyto Winter Road, and Contwoyto Lake using float-equipped aircrafts.

The Project is currently owned and managed by Lupin Mines Incorporated (LMI), a wholly-owned, indirect subsidiary of Mandalay Resources Corp. Previously LMI was a wholly-owned, indirect subsidiary of Elgin Mining Inc. (Elgin or EMI) that is in turn a wholly owned subsidiary of Mandalay Resources Corp. Elgin Mining Inc. (EMI or Elgin) purchased LMI from MMG Resources Ltd. in 2011. In 2014, Elgin became a wholly owned subsidiary of Mandalay Resources Corp.

Previous to Elgin Mining Inc.'s purchase of the Lupin Mine in 2011, the Project had changed ownership several times over the years. Former owners of the Project included the original owner, the Canadian Nickel Company Ltd (a subsidiary of Inco Limited, who discovered the site in the 1960 and initiated exploration activities). Echo Bay Mines Limited (EBML), which obtained an option on the property in 1979, and commenced the initial underground



exploration program, which was followed in 1980 by EBML's decision to develop and construct the mine. EBML became Kinross Gold Corporation (KGC) in 2003 through a merger, and in 2006 sold the Lupin Mine to Wolfden Resources Incorporated (WRI). WRI was acquired by Zinifex Canada Inc. in 2007, which in turn merged with Oxiana Limited in 2008 to become OZ Minerals Canada Resources Inc (OZ Minerals). MMG Resources Ltd. then acquired a significant portion of the assets owned by OZ Minerals that included the Lupin Mine.

Despite multiple changes in ownership of the Project throughout the latter stages of its existence, the Project operated for a period commencing in 1983, with operations ceasing in 2005. From 1983-2005 there were several temporary suspensions of operations during the periods of January 1998 – April 2000 and again in August 2003 – March 2004. The Project resumed Operations in March 2004 – February 2005 before going into a Care and Maintenance state in 2005, which has continued through to the present. In January 2019, LMI provided notice to Environment and Climate Change Canada under the *Metal and Diamond Mines Effluent Regulations*,¹ that LMI will be seeking Recognized Closed Mine status for the Lupin Mine.

Licensing Overview

Both the Northwest Territories Water Board (NWTWB) and the Nunavut Water Board (NWB) have issued Licences to the Project in the past. Prior to the establishment of Nunavut as a separate territory and the Nunavut Water Board's assumption of jurisdiction over the management of freshwater in the Nunavut Settlement Area (NSA) in 1996, the NWTWB was responsible for issuing water licences relevant to undertakings in the Northwest Territories (including what is now Nunavut), including the licences issued to the Project.

The initial exploration and mining licences for the Project were issued by the Northwest Territories Water Board. Information related to those licences are historical and available through the Northwest Territories regulatory bodies.

The following is an overview of the licences and amendments issued by the NWB to the Project:

Licence No: NWB1LUP0008 – Issued to Kinross Gold Corporation on July 1, 2000 and expired on June 30, 2008. The Licence allowed for the use of 1,700,000 cubic metres/year of water and the deposit of waste in support of a Mining and Milling Undertaking and associated activities.

¹ SOR/2002-222



- December 20, 2001 – The Licence terms and conditions related to Security (Part B of the licence) were amended.
- April 13, 2007 – The Licence was assigned from Kinross Gold Corporation to Lupin Mines Inc. (a wholly owned subsidiary of Wolfden Resources Inc.).
- October 15, 2008 – An emergency amendment was issued to the Licence to extend the expiry from June 30, 2008 to March 31, 2009.

Licence No: 2AM-LUP0914 – Issued on February 25, 2009 and expired on March 31, 2014. The Licence allowed for the use of up to 1,700,000 cubic metres of water per year and the deposit of waste in support of a Mining and Milling undertaking.

- May 25, 2009 – An amendment related to groundwater monitoring was granted for the Licence.
- August 20, 2014 – An emergency amendment was granted (as the Licence had expired) allowing for the discharge of effluent from the Sewage Lakes Disposal Facilities.

Licence No: 2AM-LUP1520 – Issued on May 11, 2015, and expires on May 10, 2020. The existing licence allows for the use of up to 5,000 cubic metres of water per year during the Care and Maintenance Phase, 500,000 cubic metres of water per year during the Transition Phase (if the mine were to ramp up activities in preparation for a return to active operations, and the deposit of waste in support of a Mining undertaking).

- March 28, 2017 – An amendment related to security, and reclamation and closure planning, granted for the existing licence.
- April 18, 2018 – An amendment related to security granted for the existing licence.
- December 21, 2018 – An amendment related to security granted for the existing licence.

Regulatory and Procedural History of the Amendment and Renewal Application

Pre-Licensing Regulatory History

The Nunavut Planning Commission (NPC)

With respect to the Amendment and Renewal Application, the following pre-licensing requirements have been completed. On February 1, 2019, the Nunavut Planning Commission (NPC) issued their determination that the Project falls outside of an area with an applicable Land Use Plan, and therefore does not require a conformity assessment by the



NPC.² In addition, NPC determined that the Amendment and Renewal Application was exempt from screening by the Nunavut Impact Review Board (NIRB) because the Application does not involve changes to the general scope of the previously assessed project activities, and the exceptions noted in Article 12, Section 12.4.3 (a) and (b) of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (the *Nunavut Agreement*) do not apply.

The Nunavut Impact Review Board (NIRB)

The original project proposal for the Lupin Mine (NIRB File No.: 99WR053) was referred to the Nunavut Impact Review Board (NIRB) from the NWB on July 12, 1999, and was screened by the NIRB in accordance with Part 4, Article 12 of the *Nunavut Agreement* (referenced at the time as the “Nunavut Land Claims Agreement” or *NLCA*). On November 16, 1999, the NIRB issued a screening decision under Article 12, Section 12.4.4(a) of the *NLCA* (now *Nunavut Agreement*) to the NWB, which indicated that the proposed project had been assessed by the NIRB and should be allowed to proceed to the permitting stage, subject to the NIRB’s recommended project-specific terms and conditions.³

On February 28, 2008, the NIRB received an application for the renewal of the Type “A” Water Licence associated with the Lupin Mine Project. The NIRB assessed the renewal application and determined that the application was exempt from the requirement for further screening pursuant to Article 12, Section 12.4.3 of the *NLCA*. On May 6, 2008, the NIRB reissued the NIRB’s original November 1999 screening decision report, noting that the terms and conditions in the NIRB’s original screening decision report continue to apply to the Lupin Mine Project.

On May 16, 2014, the NWB referred LMI’s renewal and amendment application for Type “A” Water Licence No: 2AM-LUP0914 to the NIRB for their determination as to whether the application warranted additional assessment. On June 9, 2014, the NIRB issued correspondence indicating that:

After completing a review of the information provided in support of the current application, the NIRB is of the understanding that the proposed renewal does not change the general scope of the original project activities, and the exceptions noted in NLCA 12.4.3(a) and (b) do not apply. Therefore, this application is exempt from the requirement for screening pursuant to Section 12.4.3 of the NLCA and the activities therein remain subject to the terms and conditions

² Correspondence from P. Scholz, Nunavut Planning Commission to K. Lewis, LMI, R. Dwyer, NWB, N. Lear, NIRB, T. Bolt and M. Angohitok, KIA, and T. McCaie, CIRNA, Re: NPC File #148938 (Lupin Mine – Closure and Reclamation), dated February 1, 2019.

³ NIRB Screening Decision Report, November 16, 1999, in respect of NIRB Application No: NIRB 99WR053, NWB Water Licence No: NWB1LUP, Water Licence Renewal – Lupin Mines.



recommended in the original November 16, 1999 Screening Decision Report (enclosed).⁴

Consequently, based on the NPC's determination on February 1, 2019 and the NIRB's assessment of the previous renewal and amendment application in 2014, the NWB has concluded that the conformity and environmental assessment requirements applicable to the Amendment and Renewal Application under ss. 38 and 39 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWSRTA) have been met, and the Renewal and Amendment Application proceeded to being processed by the NWB.

Key Steps in the NWB's Procedural History for the Amendment and Renewal Application

The following summarizes key steps in the procedural history of the NWB's processing of the Renewal and Amendment Application. This listing is not, however exhaustive, and more complete details can be found on the NWB's FTP site at the links referred to above and in Appendix D of this decision. A list of submissions and correspondence provided in relation to the Board's consideration of the Renewal and Amendment Application is provided in Appendix D: List of Submissions and Correspondence, and all documentation listed in Appendix D has been placed on the NWB's public registry and is available from the NWB's FTP site at the link below.

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-LUP2032%20LMI/>

July 27, 2018	NWB received an initial Type "A" Water Licence Application for the Amendment and Renewal of Licence No: 2AM-LUP1520 for the Lupin Mine Project from LMI.
February 1, 2019	NWB received the NPC Conformity Determination, indicating that the project is situated outside the area of an approved land use plan, and that a review of the project by the NIRB is not required.
February 5, 2019	NWB received summaries of the Amendment and Renewal Application translated into Inuktitut and Inuinnaqtun, as well as a Compliance Assessment and Status Report from LMI.

⁴ Correspondence from R. Barry, Nunavut Impact Review Board to T. Kabloona, Chairperson, NWB, NIRB File No.: 99WR053, NWB file No: 2AM-LUP0914, dated June 9, 2014 at p. 3.



February 6, 2019	NWB issued correspondence requesting interested parties conduct a completeness review of the Application and provide information requests (IRs) to the Applicant.
March 4, 2019	CIRNA responded to the completeness review, indicating they had a number of Information Requests for the Applicant.
March 19, 2019	LMI responded to the Information Request by CIRNA.
March 25, 2019	CIRNA confirmed that the level of information provided is adequate to complete full technical review of the Application.
March 29, 2019	NWB issued a “Notice of Application” for the Application, and indicated the commencement of the NWB’s 30 day technical review period.
April 30, 2019	NWB received technical review comments from CIRNA and ECCC, and requested that the Applicant provide responses.
May 17, 2019	NWB received and distributed LMI’s responses to CIRNA’s and ECCC’s technical review comments.
May 23, 2019	NWB distributed the draft Agenda and correspondence, confirming the dates (June 6 and 7, 2019) and location (Kugluktuk) for an in person Technical Meeting and Pre-Hearing Conference (TM/PHC).
May 29, 2019	NWB received confirmation of participation and presentation documents from the Applicant, CIRNA, and ECCC.
May 31, 2019	NWB provided the final Agenda for the TM/PHC.
June 6-7, 2019	NWB hosted the TM/PHC in the closest community of Kugluktuk, Nunavut.
June 18, 2019	NWB issues the Pre-Hearing Conference Decision Report, outlining commitments made by the Applicant.



November 8, 2019	NWB issues Notice of the in-person Public Hearing to take place in Kugluktuk, Nunavut in the week of January 13, 2020 (January 15 and 16, 2020).
November 15, 2019	The Applicant provided final materials as outlined in the list of commitments from the Technical Meeting.
December 13, 2019	NWB received final submissions from ECCC.
December 6 and 18, 2019	NWB received final submissions from CIRNA.
January 3, 2020	NWB received Applicant's response to interveners final submissions.
January 7, 2020	NWB hosted a conference call to discuss CIRNA and LMI's work regarding release of security to reflect progressive reclamation and closure activities.
January 10, 2020	NWB received copies of Public Hearing presentations from parties.
January 15-16, 2020	NWB hosted an in-person Public Hearing in the closest community, Kugluktuk, Nunavut.
January 16, 2020	The Board directs that the Public Hearing Record in respect of LMI's Amendment and Renewal Application be closed at the conclusion of the Public Hearing and remits the Application to the Panel for decision-making.

NWB Timeline for Processing the Application

As set out under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWNSRTA), s. 55.2, the NWB is required to process applications in relation to Type "A" Water Licences within nine (9) months from the receipt of a complete application. However, as expressly noted in the NWNSRTA, s. 55.31⁵ this nine-month time period does

⁵ As stated in s. 55.31:

If the Board is cooperating and coordinating with the Nunavut Planning Commission...or with the Nunavut Impact Review Board...the time limit referred to in section 55.2 does not begin to run until



not commence until the Nunavut Planning Commission's conformity determination and (if required) the Nunavut Impact Review Board's assessment have been completed and the Board considers an application to be complete and provides public notice of the application. In addition, under s. 55.4 of the *NWNSRTA*, when the Board requires an applicant to provide information or additional studies to advance the Board's processing of their application, the time taken by the applicant to provide the additional information is not included in the calculation of the nine-month time limit under s. 55.2.

Applying these provisions to determine the timeline for the NWB's processing of the Amendment and Renewal Application, the Board notes the following:

- As set out in the key procedural steps outlined above, although LMI initially submitted a preliminary version of the Amendment and Renewal Application to the Board on July 27, 2018, all materials required by the NWB to consider the Amendment and Renewal Application to be complete were not submitted until February 5, 2019;
- The final NPC determination (and confirmation that additional assessment by the NIRB was not required) was received from the NPC on February 1, 2019;
- From February 5, 2019 – March 25, 2019 there were Information Requests (IRs) received from CIRNA before the Renewal and Amendment Application would be considered to be complete;
- Reflecting the IR period, Notice of the Renewal and Amendment Application, as required under s. 55(1) of the *NWNSRTA*, was not provided until March 29, 2019; and
- Between the conclusion of the in-person Technical Meeting and Pre-Hearing Conference in Kugluktuk on June 7, 2019, and the submission on November 15, 2019 of additional information from LMI to meet the commitments provided during the Technical Meeting (a period exceeding 5 months) the NWB was awaiting the submission of additional information from the Applicant. Consequently, as set out in s. 55.4 of the *NWNSRTA*, the NWB has not included this five-month period in the calculation of the nine-month timeline applicable to the Board's consideration of the Amendment and Renewal Application.

Considering these factors, the Board has determined that, when the five-month period of "waiting time" is excluded from the calculation of the NWB's timeline for consideration of the completed Amendment and Renewal Application and issuance of these Reasons for Decision, the NWB has taken approximately six (6) months to process the Amendment and Renewal Application. Consequently, the NWB has concluded that the NWB's decision-making has been completed and provided to the Minister of Northern Affairs within the nine-

the Nunavut Planning Commission, Nunavut Impact Review Board...has completed its screening or review of the project.



month timeline for processing the Amendment and Renewal Application mandated under s. 55.2 of the NWNSRTA.

SECTION II **SUMMARY OF FINAL SUBMISSIONS OF THE PARTIES**

In addition to participating in the Public Hearing, the following parties provided final written submissions to the NWB in respect of the renewal and amendment application (Renewal and Amendment Application or Application) filed by Lupin Mines Incorporated (LMI, the Applicant or the Licensee) for Type “A” Water Licence No: 2AM-LUP1520: Crown-Indigenous Relations and Northern Affairs Canada (CIRNA or CIRNAC) filed submissions on December 6 and 18, 2019; Environment and Climate Change Canada (ECCC) filed submissions on December 13, 2019; and Lupin Mines Incorporated (LMI or the Applicant) filed submissions on January 3, 2020.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNA or CIRNAC)

The participation of Crown-Indigenous Relations and Northern Affairs Canada (CIRNA)⁶ in water licensing processes in Nunavut is informed by their mandate under the following Acts and associated regulations:

- *Department of Crown-Indigenous Relations and Northern Affairs Act*;⁷
- *the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Agreement)*;
- *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)*;⁸
- *Territorial Lands Act*;⁹ and
- *Arctic Waters Pollution Prevention Act*.¹⁰

CIRNA administers Crown land and resources, and enforces regulatory permits affecting land and water resources in Nunavut. Almost the entire footprint of the Lupin Mine is on Crown land.

CIRNA participated fully in the review process for the Renewal and Amendment Application, and identified several issues and concerns with respect to the Application and licensing requirements. While CIRNA has indicated that some of the issues and concerns identified during the technical review of the Application have been addressed, CIRNA

⁶ Previously known as Indigenous and Northern Affairs Canada (INAC).

⁷ S.C. 2019, c. 29.

⁸ S.C. 2002, c. 10.

⁹ R.S.C. 1985, c. T-7.

¹⁰ R.S.C. 1985, c. A-12.



indicated that some issues and concerns remain unresolved in the final written submission and during the Public Hearing.

In their final written submission, CIRNA emphasized that going into the Public Hearing, topics CIRNA considered largely unresolved and warranting discussion included the following:

- Tailings and waste rock management;
- The monitoring program;
- Closure and reclamation planning; and
- The reclamation security cost estimate.

Tailings and waste rock management

During the technical review, CIRNA requested additional information on plans for the permanent disposal of tailings at the Tailings Containment Area (TCA), and disposal of potentially acid generating and metal leaching (PAG/ML) waste rock in the Waste Rock Dome. This resulted in a number of related commitments as outlined in the Pre-Hearing Conference (PHC) Decision Report.

CIRNA's technical review comments identified uncertainty associated with the waste rock distribution across the property, including in mill areas, roads, dams and the airstrip. Commitment #3 from the PHC Decision Report committed LMI to providing a summary of historical data for this waste rock. LMI presented a Technical Memo completed by Stantec, dated August 14, 2019,¹¹ which reviewed the results of 2005 acid-base accounting studies, and estimated the volume of waste rock in dams based on an air photo. As detailed in their submission letter from December 6, 2019,¹² CIRNA noted their concern that "*historical construction data available with more accurate waste rock volumes was available but not reviewed.*" On this basis, the August 2019 Technical Memo provided by LMI was considered insufficient by CIRNA, and CIRNA further requested that LMI thoroughly review all historical data available, including the *Closure Plan for Tailing Containment Area*, dated January 2005,¹³ and further provide a more accurate account of the acid rock drainage (ARD) potential at site.

¹¹ Stantec Technical Memo; from S. Wilkins, to K. Lewis; 2AM-LUP1520 Technical Meeting Commitment Number 3 and 4 Responses – Waste Rock Information from Lupin Mine Tailings Containment Area; August 14, 2019.

¹² Crown-Indigenous Relations and Northern Affairs (CIRNA), Re: 2AM-LUP1520 – Review of documentation from Lupin Mines Inc. (LMI) in response to commitments made at the technical meeting – Lupin Mine Property – Kitikmeot Region, Nunavut, dated December 6, 2019.

¹³ Holubec Consulting Inc. for the Kinross Gold Corporation, Lupin Operation; Closure Plan for Tailings Containment Area, January 2005.



With respect to Commitment #4 of the PHC Decision Report, geochemical modelling and pathway analysis for ARD potential, CIRNA noted this commitment was dependent on the conclusions drawn in Commitment #3, the review of ARD potential distributed across the site. As mentioned above, the Technical Memo dated August 14, 2019,¹⁴ did not satisfy CIRNA and they disagreed with LMI's conclusion that the information provided in Commitment #3 justified omitting the geochemical modelling and pathway analysis for ARD potential. CIRNA further requested that additional documentation and/or discussions be presented to support the claim that there is no need for any additional ARD geochemical and pathway modelling.

LMI resolved this issue by committing to include TCA seepage monitoring in the Post Closure Monitoring Plan, which LMI proposed to submit within 1 year following the approval of a renewed and amended water licence. CIRNA considered this sufficient to mitigate the unknown ARD potential on site and considered this issue resolved based on LMI's commitment.¹⁵

In CIRNA's technical review comments, it was requested that LMI provide details on the proposed waste rock excavation and consolidation into the Waste Rock Dome. Commitment #5 of the PHC Decision Report required LMI to provide preliminary designs for the proposed Waste Rock Dome, including typical cross sections, and information on seepage, topography, geochemistry and storm water drainage. In their response, LMI provided a Technical Memo dated October 15, 2019,¹⁶ that provided only conceptual plans for the proposed Waste Rock Dome, but did not provide the preliminary design details requested. CIRNA further recommended that LMI provide design cross sections, design details/specification on proposed drainage systems, and cover stabilization measures for the proposed dome.

On January 10, 2020, (and filed as Exhibit #8 during the Public Hearing¹⁷) LMI provided a Technical Memo that provided supporting information to the conceptual designs of the Waste Rock Dome, including a more detailed cross-section. The supporting information was further evaluated by CIRNA, and the resolution of the issue was provided in Exhibit #13¹⁸

¹⁴ Stantec Technical Memo; from S. Wilkins, to K. Lewis; 2AM-LUP1520 Technical Meeting Commitment Number 3 and 4 Responses – Waste Rock Information from Lupin Mine Tailings Containment Area; August 14, 2019.

¹⁵ Lupin Mines Incorporated, Exhibit #13, NWB Public Hearing, File No. 2AM-LUP1520, Summary of Additional Commitments and Issue Resolution, (English) filed on January 15, 2020.

¹⁶ Golder Technical Memo; From K. Bocking to K. Lewis; Conceptual Design for the Waste Rock "Dome" at Lupin Mine; October 15, 2019.

¹⁷ Lupin Mines Incorporated, Exhibit #8, NWB Public Hearing, File No. 2AM-LUP1520, Golder Technical Memo; From K. Bocking to K. Lewis; dated January 10, 2020, Reference: Supporting Information to the Conceptual Design for the Waste Rock "Dome" (English) filed on January 15, 2020.

¹⁸ Lupin Mines Incorporated, Exhibit #13, NWB Public Hearing, File No. 2AM-LUP1520, Summary of Additional Commitments and Issue Resolution, (English) filed on January 15, 2020.



filed by LMI during the Public Hearing. In respect of this issue, as summarized in Exhibit #13, LMI committed to providing, within 60 days of the issuance of an amended and renewed water licence, additional details on the Waste Rock Dome, including additional cross sections, surface slopes, erosion control measures, and typical locations of conceptual water features. Specifically, LMI committed to providing a north-south preliminary design level cross section, including these same additional drainage and erosion control features.

To assess the potential impact on water from the proposed Waste Rock Dome, commitment #7 of the PHC Decision Report required LMI to provide a geochemical source term and load model for seepage from the Waste Rock Dome. CIRNA considered the documentation provided by LMI to be a seepage model rather than a source term model. However, subsequently CIRNA indicated they were satisfied with LMI's response, provided that seepage samples are collected as part of the post closure monitoring program, and that associated source term and load model modeling will be updated periodically, as committed to by LMI.¹⁹ On this basis, this issue was consider resolved.

With respect to the Tailings Containment Area (TCA), CIRNA emphasized that due to the known ARD potential of tailings at the mine site they had concerns about the potential for exposed tailings to occur outside the TCA. Commitment #8 of the PHC Decision Report required LMI to provide a decision tree/matrix explaining how tailings will be handled, as tailings would be exposed when water levels in the TCA are lowered. In response, LMI provided a Stantec Technical Memo dated October 15, 2019,²⁰ that stated exposed tailings would be covered in place, however CIRNA was not initially satisfied with the information provided, and emphasized that no amount of tailings should remain outside of the defined containment cells at closure. CIRNA stated that, "*Placement of 1m esker cover on any exposed tailings within the dewatered former pond areas, will not be effective in reducing ARD/ML from these tailings and result in impacted seepage from these areas.*"²¹ CIRNA further recommended that LMI provide additional details on their adaptive management decision matrix and clearly outline how any exposed tailings would be managed.

LMI provided a Technical Memo dated January 9, 2020 (also filed as Exhibit #6 during the Public Hearing),²² in response to this issue, which provided additional supporting

¹⁹ Lupin Mines Incorporated, Exhibit #13, NWB Public Hearing, File No. 2AM-LUP1520, Summary of Additional Commitments and Issue Resolution, (English) filed January 15, 2020.

²⁰ Stantec Technical Memo; From A. Tong to K. Lewis; 2AM-LUP1520 Technical Meeting Commitment Number 11 Response – Geophysical Survey Lupin Mine Tailings Containment Area Dams; October 15, 2019.

²¹ CIRNA Final Submission for the Renewal and Amendment Application of Lupin Mines Inc.'s Water Licence 2AM-LUP1520, December 18, 2019.

²² Lupin Mines Incorporated, Exhibit #6, NWB Public Hearing, File No. 2AM-LUP1520, Stantec Technical Memo; From A. Tong to K. Lewis; 2AM-LUP1520 Reference: Supporting Information to the Contingency Containments Management Decision Matrix; January 9, 2020 (English) filed on January 15, 2020



information. LMI also emphasized that LMI's contingency to cover all exposed tailings in place was reasonable because relocation of exposed tailings is not considered appropriate due to the associated environmental and operational health and safety risks, as set out in the decision matrix. In the documentation filed as Exhibit #13 during the Public Hearing²³, LMI further committed to providing a Technical Memo within 60 days of the Minister's approval of an amended and renewed water licence, that includes further rationale supporting in-situ cover as a contingency measure, preliminary detailed designs, typical cross-sections, and long-term erosion control measures. This issue was confirmed to be resolved at the Public Hearing by CIRNA as follows:

... CIRNAC's review of the matrix at the time found it inappropriate for field determination. A revised decision matrix was provided, and by which LMI appeared to confirm -- we had a discussion yesterday about it, and they confirmed to us that it [exposed tailings] would be left in place and covered, and so we -- what we really just wanted with that was for LMI to provide, like, a further explanation of how the tailings will be managed or how they plan to manage it, and with the covered -- with their confirmation that it will be covered in -- on site, left on site and covered and their agreement, the commitment to -- within 60 days of licence approval, to provide, you know, further documents, it resolves this issue. We think that issue has been resolved.²⁴

The Monitoring Program

CIRNA emphasized the need for an updated monitoring plan to include long term post closure monitoring and incorporate the findings of the Human Health Ecological Risk Assessment (HHERA)²⁵ submitted to the Board on October 15, 2019, under commitment #1 of the PHC Decision Report. To address this, commitment #14 of the PHC Decision Report required LMI to develop and submit to the Board a Post Closure Monitoring Plan, 1 year following the approval of the Licence, that included ample opportunity for discussion with all stakeholders. At the Public hearing this was confirmed by CIRNA and this issue was considered resolved.

The Human Health Ecological Risk Assessment provided at the time did not include cover the tailings containment area until we suggest to give clarity on the objectives of the Human Health Ecological Risk Assessment. It was to evaluate potential risk to human health and the environment from the contamination associated with the historical operation of the site as a gold mine in order to derive site-

²³ Lupin Mines Incorporated, Exhibit #13, NWB Public Hearing, File No. 2AM-LUP1520, Summary of Additional Commitments and Issue Resolution, (English) filed January 15, 2020.

²⁴ G. Okonkwo, CIRNA, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, pp. 124-125, lines 15-26 and 1-3.

²⁵ From Golder Associated Ltd. to K. Lewis, LMI, Human Health and Ecological Risk Assessment, Lupin Mine, Nunavut, October 2019.



specific target levels for any potential risks identified and to use a site-specific target levels to define areas requiring remediation or risk management.

What we would like to say about this because we -- LMI's response had noted that ecological risk assessments of the tailings management area was completed in 2004 and resubmitted as part of the 2014 licence renewal. LMI also noted their commitment to provision of a post-closure monitoring plan following discussions with stakeholders one year after issuance of the licence. CIRNAC has no outstanding issues in this regard.²⁶

Closure and Reclamation Planning

During the information request and technical review stages of the NWB's processing of the Application, CIRNA requested that LMI provide a Human Health Ecological Risk Assessment (HHERA) report, which was to be completed following the 2019 summer field work and study. The HHERA report provided by LMI, generated two follow-up requests from CIRNA: 1) the development of a long-term Post Closure Monitoring Plan, including specifying duration and frequency of monitoring after closure of the mine; and 2) requesting that LMI include the Tailings Containment Area (TCA) in the Post Closure Monitoring Plan.

LMI resolved this issue by committing to the development of a long-term Post Closure Monitoring Plan, to be submitted to the Board for approval one (1) year following the approval of the amended and renewed water licence. LMI also committed to include the TCA in the proposed post closure monitoring program (which LMI had explained was omitted from the HHERA report because the TCA had previously been assessed in the Closure Plan for Tailings Containment Area, dated January 2005²⁷).

During CIRNA's technical review of the Renewal and Amendment Application, CIRNA also requested a conceptual plan for TCA dam and embankment stabilization, and information regarding where associated rip rap would be sourced from. In response to Commitment #6 from the PHC Decision Report, LMI provided a report completed by Stantec, dated November 14, 2019,²⁸ that included only limited information and conceptual details, but omitted the necessary geotechnical details of engineered structures such as dams and embankments. CIRNA further recommended that LMI provide more specific information

²⁶ G. Okonkwo, CIRNA, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 125, lines 7-26.

²⁷ I. Holubec Consulting Inc.; Kinross Gold Corporation, Lupin Operation, Closure Plan for Tailings Containment Area, January 2005.

²⁸ Stantec; from A. Tong to K. Lewis, Technical Memorandum, 2AM-LUP Technical Meeting Commitment Number 6 Response – Geotechnical Review on the Long-Term Stability of TCA Dams, dated November 14, 2019.



on the location and design details where embankment stabilization work would be carried out and engineering design details.

To resolve this issue, LMI provided a Technical Memo on January 10, 2020, (filed as Exhibit #7 during the Public Hearing),²⁹ that included the details and cross sections for Dam K and Dam M, and identified the locations where geotechnical stabilization would occur. Furthermore, in Exhibit #13 of the Public Hearing,³⁰ LMI specifically committed 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 10th 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.³¹

Discussions took place between CIRNA and LMI during the Public Hearing to confirm the details of this resolution. Ultimately, it was confirmed during the Public Hearing that additional information would be provided 60 days following the Minister's approval of the amended and renewed water licence. As summarized by CIRNA, during the Public Hearing:

We've gone through a series of iterations with LMI, in terms of asking for clarifications and getting the stability analysis and so on, and we still said, and as late as last night, that we'd like to have a few more details, a little more detail on the slopes, but in general, I think we're all in agreement that the 'K' and the 'M' dams are the ones that need resloping to ensure stability.

We're looking at -- you know, at the kind of features. What we would like to do is have enough detail on each of the elements that are required to be done that we can understand the long-term implications of these elements operating in a northern climate, and

²⁹ Lupin Mines Incorporated, Exhibit #7, NWB Public Hearing, File No. 2AM-LUP1520 Technical Memo From A. Tong to K. Lewis, dated January 10, 2020, Reference: Supporting Information for the Dam Stability and Cover Design (English) filed on January 15, 2020.

³⁰ Lupin Mines Incorporated, Exhibit #13, NWB Public Hearing, File No. 2AM-LUP1520, Summary of Additional Commitments and Issue Resolution, (English) filed January 15, 2020.

³¹ Lupin Mines Incorporated, Exhibit #13, NWB Public Hearing, File No. 2AM-LUP1520, Summary of Additional Commitments and Issue Resolution, (English) filed January 15, 2020.



LMI has made commitments to providing those additional details to us, at least at the preliminary level, and then in the final engineering, whether it's the dome or whether it's the dams, in the final engineering drawings, there'll be, of course, the other opportunities to review those. Again, the main issue was long-term stability, that we're looking at, and both from an overall point of view and from an erosion point of view.³²

So my conclusion on this piece, yeah, so we are comfortable with LMI providing additional details within 60 days of licence approval...³³

The Board has captured the details of this commitment in Part E, Item 26, of the amended and renewed water licence.

Security Requirements Under the Licence

In both the information request and technical comment stages of the NWB's consideration of the Application, CIRNA requested more detail on the reclamation cost estimate; in response, LMI made Commitment #2 of the PHC Decision Report. At the Technical Meeting, CIRNA and LMI agreed to jointly submit a framework that would govern the release of security posted under the amended and renewed water licence to reflect LMI's progressive reclamation and closure activities completed during the term of the licence (Commitment #9), however leading into the Public Hearing CIRNA indicated that CIRNA and LMI were "...still working to define how a framework could be defined while still respecting the Minister's discretion."³⁴ As a result of CIRNA's focus on the discussions to come to agreement with LMI about an approach to the release of security, CIRNA indicated they had been unable to develop their own security estimate or framework for security release. CIRNA considered the information provided by LMI to support LMI's updated reclamation security estimate to be incomplete, and CIRNA was unable to complete an "effective review of the estimate"³⁵ in advance of the Public Hearing. Due to these uncertainties CIRNA did not create their own cost estimate prior to the Public Hearing, and emphasized that they still considered the original cost estimate of reclamation security from 2016,³⁶ as subsequently reduced by the Board (and approved by the Minister) under Amendment No. 3 to the existing Water Licence No: 2AM-LUP1520 to be valid.

³² G. Wiatzka, CIRNA, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 127, lines 2-23.

³³ G. Okankwo, CIRNA, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 128, lines 6-8.

³⁴ Crown-Indigenous Relations and Northern Affairs (CIRNA), Final Submission for the Renewal and Amendment Application of Lupin Mines Inc.'s Water Licence 2AM-LUP1520, December 18, 2019.

³⁵ Crown-Indigenous Relations and Northern Affairs (CIRNA), Final Submission for the Renewal and Amendment Application of Lupin Mines Inc.'s Water Licence 2AM-LUP1520, December 18, 2019.

³⁶ Knight Piésold Ltd. consulting, prepared for Nunavut Water Board, Third Party Technical Review of Reclamation Security Estimates for the Lupin Gold Mine, Nunavut; December 6, 2016.



Consequently, CIRNA recommended to the Board that the security, in the amount of \$26,107,303, currently held under Part C, Item 1 of the existing water licence, should remain in place until further information demonstrating a reduction in environmental liability is provided by LMI.

CIRNA also restated their points from their December 6, 2019 written submission,³⁷ and identified the following as items being reviewed by CIRNA:

- I. Almost 40% of capital cost is “Contractor indirects”. Mobilization is ~80% of Indirect Cost, and is based on a series of Lump Sum (LS) items with no backup. Out of the total security held (approximately \$23.3 million) about 16.5million (~71%) is either LS or indirect costs with limited backup. Clarity is required from LMI to provide additional description of the basis of the estimate.*
- II. LMI proposed Final Closure Plan (CP) estimate does not include for rip –rap armouring of the outer slopes of the dams. This is inconsistent with the approved 2005 Tailings Management Area (TMA) Closure Plan works.*
- III. LMI latest estimate provides for \$999,674 for TMA closure. Review of prior estimates shows LMI values of \$3.9 (2014) and \$2.1 (2017) million. The accepted Knight Piesold 2016 estimate was \$4.9million for the TMA.*

At the Public Hearing, CIRNA and LMI continued their discussions surrounding security, and were able to come to agreement on the framework that should govern the release of security as reclamation and closure activities are completed by LMI, but CIRNA expressly noted that CIRNA had not been able to review and consider whether the updated amounts for reclamation security put forward by LMI were reasonable. The framework to govern the progressive release of security under an amended and renewed licence was submitted to the Board for consideration as Public Hearing Exhibits #26³⁸ and #27.³⁹ These Exhibits identified milestones and specified various reclamation and closure activities associated with specific components LMI has planned to complete the reclamation and closure of the Lupin Mine. Upon completion of the work specified under each milestone, the associated security

³⁷ Crown-Indigenous Relations and Northern Affairs (CIRNA), Re: 2AM-LUP1520 – Review of documentation from Lupin Mines Inc. (LMI) in response to commitments made at the technical meeting – Lupin Mine Property - Kitikmeot Region, Nunavut, December 6, 2019.

³⁸ Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada , Exhibit #26, NWB Public Hearing, File No: 2AM-LUP1520, „Security Framework Milestones for Draft Water Licence Framework; (English) filed on January 16, 2020.

³⁹ Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada , NWB Public Hearing, File No: 2AM-LUP1520, Exhibit #27, Joint Submission of Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada regarding Security Reduction Framework; (English) filed on January 16, 2020.



would be eligible for release. At the Public Hearing CIRNA restated their key positions with respect to the release of financial security.

The reclamation policy is for release of security to happen only upon completion of reclamation work in terms of milestones, validation through a stamp by an engineer certified to practice in Nunavut, or sometimes a letter of confirmation by mine-site inspectors, and a reduction of any and all environmental liability to the Crown...⁴⁰

With respect to the total amount of security that CIRNA recommended be held under Part C of the amended and renewed licence, CIRNA strongly emphasized their position to maintain the amount of security currently held under Water Licence No: 2AM-LUP1520, as reduced under Amendment No. 3. In their closing statements, CIRNA stated:

... I just want to restate what CIRNAC's position is on what we hold currently. Our position is that we want to retain the entire \$26.1 million in security and only reduce the security based on the context of the framework elements, and I stated that yesterday, and so that is you do the work, you validate the work, as a demonstration of, our -- our inspectors would acknowledge -- be on site, acknowledge that, and there's an evidence there's a reduction in environmental liability, and then, you know, we can talk about a release.⁴¹

As described in more detail in the discussion of the part of the Licence applicable to security in Section VII, (Part C and Schedule C) of these Reasons for Decision, the Board respects that LMI and CIRNA have reached agreement on the general milestones and specific reclamation and closure activities that should be completed by LMI before the Minister would authorize the release of security under the Licence. However, the Board also notes that although LMI had ascribed specific reclamation security amounts to the milestones and specific reclamation and security activities included in the frameworks provided in Exhibits #26 and #27, CIRNA was not able to verify that the amounts included were acceptable to the Ministry. CIRNA also emphasized that it was their opinion that the amount of security (approximately \$26.1 million) currently held under the existing water licence should be maintained under a renewed and amended licence until LMI provides additional information to support the release of security.

Consequently, the NWB has amended Part C of the existing licence to reflect LMI and CIRNA's agreement in respect of the approach to the release of security under the Licence to reflect the milestones and specific reclamation and closure activities provided in the

⁴⁰ G. Okonkwo, CIRNA, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 131, lines 9-15.

⁴¹ G. Okonkwo, CIRNA, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 257, lines 13-23.



framework outlined in Exhibits #26 and #27. These provisions are included in the Licence under Part C and Schedule C, which outlines each milestone and specific reclamation and closure activities as defined and agreed to by CIRNA and LMI. The Licence also includes terms and conditions under Part C, to clarify the procedure for security release. However, since the specific amount of security to be held under the Licence was not agreed upon, values attributed to each milestone have not been included in the Licence, and it is the Board's expectation that the amount of security to be released at the completion of the general milestones or specific reclamation and closure activities will be determined and released at the Minister's discretion.

Environment and Climate Change Canada (ECCC)

Environment and Climate Change Canada's (ECCC) participation in the NWB's water licensing process reflects the exercise of their jurisdiction under the *Department of the Environment Act*,⁴² the *Canadian Environmental Protection Act, 1999*,⁴³ *Fisheries Act*,⁴⁴ *Migratory Birds Convention Act, 1994*⁴⁵ and *Species at Risk Act*.⁴⁶

In their final written submission, ECCC commented on the following topics:

- Thermal modeling results from the climate change modeling, along with recommendations to consider the results for all emission scenarios during the development of contingency plans for post closure;
- The approach for the Tailings Containment Area (TCA) closure and monitoring;
- Monitoring of the perimeter dam's stability and seepage;
- The criteria, duration and timing of the plans for post closure monitoring; and
- Recommendations for the draft water licence related to the *Metal and Diamond Mining Effluent Regulations (MDMER)*⁴⁷ and Recognized Closed Mine status.

Climate Change Modeling

ECCC noted that the high greenhouse gas emissions scenario was not included in LMI's end of century thermal modeling as the modeling results were only provided for a low and average greenhouse gases emission scenario, because LMI considered the low and average to be more realistic. To address this issue, ECCC recommended that LMI also consider an

⁴² R.S.C. 1985, c. E-10.

⁴³ S.C. 1999, c. 33.

⁴⁴ R.S.C. 1985, c. F-14.

⁴⁵ S.C. 1994, c. 22.

⁴⁶ S.C. 2002, c. 29.

⁴⁷ SOR/2002-222.



equally plausible high emission scenario in the development of applicable contingency plans for the final closure and reclamation of the Lupin Mine site.

At the Public Hearing, ECCC confirmed that this issue was resolved as follows.

ECC[C] considers this comment resolved based on responses and clarifications received from the Proponent. ECC[C] does continue to recommend the Proponent consider all emission scenarios in their modelling from all mine components.⁴⁸

The NWB has addressed this issue under Part B, Item 19, of the Licence.

Tailings Closure Approach and Monitoring

ECCC provided comments on LMI's proposed post closure monitoring program for the Tailings Containment Area (TCA) and noted that the monitoring initially proposed consisted of only visual inspections, and would, therefore, not pick up any changes below the cover surface. Following the Technical Meeting, ECCC recommended that LMI conduct an evaluation of the tailings areas, with 1m test pits, during the closure phase in order to obtain updated data on the performance of the tailings cover design. To fulfill Commitment #10 of the PHC Decision Report LMI conducted field investigations in the summer of 2019 and excavated two test pits in the TCA cover to visually evaluate its performance. The report submitted to the Board on Oct.15, 2019,⁴⁹ concluded that the cover appeared to be functioning properly.

On this basis, ECCC considered the request for field investigations to be resolved, and further recommended that TCA monitoring should be included in the Post Closure Monitoring Plan that LMI proposes to submit one year following the Minister's approval of the Licence.

Perimeter Dams

During the technical review stage of the Application, ECCC provided comments on the stability and potential for seepage from the TCA perimeter dams, and requested that a survey of the frozen core dams be conducted, with the resulting information being provided to the Board. In response LMI provided Commitment #11 in the PHC Decision Report. Subsequently, LMI provided a Technical Memorandum dated October 15, 2019,⁵⁰ that

⁴⁸ E. Walker, ECCC, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 239, lines 4-8.

⁴⁹ Stantec Technical Memo; from A. Tong to K. Lewis, 2AM-LUP1520 Technical Meeting Commitment Number 10 Response – Cover Data from Lupin Mine Tailings Containment Area; October 15, 2019.

⁵⁰ Stantec Technical Memo; from A. Tong to K. Lewis, 2AM-LUP1520 Technical Meeting Commitment Number 11 Response – Geophysical Survey Lupin Mine Tailings Containment Area Dams; October 15, 2019.



presented the results of a one-time geophysical survey conducted on 2 dams in August of 2019, and confirmed that the frozen core and dams at the mine site were geophysically stable. ECCC considered this item resolved, and further recommended that dam stability monitoring be included in the Post Closure Monitoring Plan and that dam stability monitoring be undertaken for the full duration of the monitoring period at the site.

Duration of Permanent Monitoring and Timing Clarification

ECCC provided comments on LMI's initial plan for a five year post closure monitoring period and emphasized the need for sufficient monitoring to confirm the establishment of stable conditions before the monitoring program ends, and ECCC indicated that it would likely take longer to more than five years of monitoring to establish site stability. ECCC noted the approach outlined in the Interim Closure and Reclamation Plan (ICRP), dated October 2017,⁵¹ was more appropriate. The approach in the ICRP presented a longer-term monitoring process that included post closure monitoring activities separated into two phases; "Phase 1 – Annual Monitoring (years 1 through 10) and Phase 2 – Decreasing Frequency with monitoring during years 12, 15, 21 and 24 for a total of 14 years of monitoring over a 25 year period." ECCC also noted that thresholds can be identified that may allow LMI to reduce frequency of monitoring during the post closure period, including thresholds for water quality and tailings cover performance that may trigger reduced monitoring. ECCC also noted that monitoring of the TCA cover and water quality should continue until LMI can demonstrate stable conditions.

LMI committed to submitting, within one year of approval of the Licence, a Post Closure Monitoring Plan that will incorporate all review comments, ongoing fieldwork, and plan for a sufficient duration to ensure environmental stability. At the Public Hearing, ECCC confirmed this commitment and noted that they considered this issue to be resolved.

And to finish the recommendation, that monitoring of the TCA cover and water quality be done over a period that is sufficient to demonstrate physical and chemical stability and acceptable quality for the long term, and in their response, LMI has agreed to those recommendations.⁵²

Reflecting these discussions, the Board has incorporated in Part J, Item 13 of the Licence the requirement for LMI to develop a long-term Post Closure Monitoring Plan, to be submitted to the Board one year following the Minister's approval of the Licence.

⁵¹ Lupin Mines Incorporated (LMI), Interim Closure and Restoration Plan, Lupin Mine Site, Nunavut Canada; October 2017.

⁵² A. Wilson, ECCC, NWB Public Hearing, File No. 3AM-IQA1626, Transcript, January 16, 2020, Volume 3, p. 242 lines 17-22.



Waste Rock, Tailings, and Acid Rock Drainage/Metal Leaching

ECCC provided comments on LMI's conceptual design of the consolidation and covering of the waste rock into the Waste Rock Dome. A Human Health and Ecological Risk Assessment (HHERA) was completed to evaluate potential effects associated with seepage from the Waste Rock Dome, but did not include assessment of the TCA (which had previously been assessed⁵³). ECCC noted that Monitoring of the TCA should be included in the Post Closure Monitoring Plan to confirm predicted contaminant loads and duration of peak runoff/seepage concentrations as well as to identify the need for any adaptive remedial measures. Specifically, ECCC recommended that LMI should sample visible flows originating from the Waste Rock Dome and the TCA, identify seepage quality thresholds that would require remedial actions, and sample receiving lakes adjacent to the Waste Rock Dome, including East Lake, Boot Lake, and Lower Sewage Lake, prior to Waste Rock Dome construction.

At the Public Hearing, LMI agreed to these recommendation and as stated below, ECCC indicated that this issue was resolved.

ECCC recommends that the adjacent lakes, East, Boot, and Lower Sewage, be sampled prior to construction of the waste rock dome and that periodic monitoring be continued for a full suite of metals and for pH in order to confirm predicted seepage quality and behaviour and that the monitoring of water quality of visible seeps or flows exiting from the waste rock pile be done and that thresholds be identified for seepage quality in monitored flows or seeps that would indicate the need for remedial measures. In their response, LMI has agreed to do this, and long-term monitoring will be discussed in the plan to be submitted.⁵⁴

Asbestos Disposal

During the technical review stage of the Application, ECCC provided comments on LMI's plans to permanently dispose of asbestos-containing materials on site by burying this material in landfills, and suggested LMI consider disposal of asbestos-containing materials in the underground mine workings. LMI confirmed that they were open to further discussions with ECCC about the potential for underground disposal, and resolved this issue

⁵³ I. Holubec Consulting Inc.; Kinross Gold Corporation, Lupin Operation, Closure Plan for Tailings Containment Area, January 2005.

⁵⁴ A. Wilson, ECCC, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, pp. 243-244, lines 23-26 and 1-9.



by confirming that they will be following appropriate guidelines for the disposal of asbestos containing materials.⁵⁵

Draft Water Licence Framework Submitted by LMI

ECCC provided comments on the proposed draft Water Licence Framework provided by LMI and filed with the Board for consideration on November 15, 2019.⁵⁶ Specifically, ECCC commented on effluent discharge quality limits and the definition of “Recognized Closed Mine” included in the draft Water Licence Framework. ECCC specifically noted the following two points:

1. Proposed effluent quality limits are equal to or less than the current [*Metal and Diamond Mining Effluent Regulations*⁵⁷] (*MDMER*) discharge limits will be changing as of June 1, 2021. At that time, new *MDMER* limits will be added for arsenic, cyanide, and un-ionized ammonia. Until LMI meets the requirements to become a Recognized Closed Mine under Section 32(2) of the *MDMER*, which takes at least 3 years to reach, there may be effluent discharges that could be subject to these new limits.
2. With respect to the definition of “Recognized Closed Mine” in Schedule A: Definitions of the draft Water Licence Framework, LMI references the definition adopted under Section 1 of the predecessor regulations to the *MDMER*, the *Metal Mining Effluent Regulations*. This definition was repealed in June 2018 and it is more appropriate to refer to a “Recognized Closed Mine” as meeting the conditions of Section 32 of the *MDMER*.⁵⁸

ECCC noted that any effluent discharged from the TCA will be subject to the *MDMER* until Recognized Closed Mine status is attained, and that when the closed mine status is attained any seepage or discharges from the site must then comply with the general deleterious substances provisions of the *Fisheries Act*. This understanding was confirmed by LMI in their final written submission,⁵⁹ and this issue was considered by ECCC to be resolved.

⁵⁵ Lupin Mines Incorporated (LMI), 2019 Application for Water Licence Renewal/Amendment, and Final Closure and Reclamation Plan, Technical Comment Responses; May 17, 2019.

⁵⁶ Golder Technical Memorandum, from K. Bocking to K. Lewis; RE: Draft Water Licence Framework Rev0; November 15, 2019.

⁵⁷ SOR/2002-222.

⁵⁸ Environment and Climate Change Canada (ECCC), Lupin Mine Type A Water License Permit Application, Final written submission by Environment and Climate Change Canada; December 16, 2019.

⁵⁹ Lupin Mines Incorporated (LMI), 2018 Application for Water Licence Renewal/Amendment, and Final Closure and Reclamation Plan, Final Submission for Public Hearing, January 3, 2020.



Lupin Mines Incorporated

Lupin Mines Incorporated (LMI), fully participated in all stages of the licencing process for the file including providing the application materials, additional information and responses to the requests of the Board and interveners, and participating in person during the NWB's Technical Meeting and Pre-Hearing Conference and Public Hearing. In their final written submission, LMI responded to final comments made by intervening parties, including technical issues related to tailings and waste rock management, the monitoring program, closure and reclamation planning, climate change modeling, potential for Acid Rock Drainage/Metal Leaching (ARD/ML), asbestos disposal, and filing a draft Water Licence Framework that identifies LMI's requested amendments to the existing Water Licence No: 2AM-LUP1520 for the review of parties and consideration by the Board.

Security Requirements Under the Licence

In their final written submission, LMI emphasized their position on financial security stating that:

- *Consideration should be given to alternate or innovative forms of security, such as mine reclamation trusts, provided they meet certain criteria that protect the governments interests and objectives;*
- *Mining operators should be credited for approved progressive reclamation, and the value of financial security required should be adjusted in a timely fashion;*
- *As reclamation work is performed, the environmental liability is reduced, and the financial security required may decrease proportionately;*
- *Credit for progressive reclamation works should be made in a timely fashion in accordance with authorities set out in the applicable legislation;*
- *As reclamation work is successfully completed and environmental liability is reduced, the amount of financial assurance required will be proportionately reduced and the surplus refunded.*

During the technical review of the Application, LMI developed an updated reclamation security estimate and proposed a framework for security release, LMI submitted this information in fulfillment of Commitment #9 of the PHC Decision Report.⁶⁰ LMI requested that the milestones outlined in the framework for security release be incorporated into the Licence, and that once the specific reclamation and closure activities included in each general milestone have been completed, the Licence should include a mechanism for CIRNA to release the security related to that milestone/activity.

⁶⁰ Golder Technical Memorandum, from K. Bocking to K. Lewis; RE: Draft Water Licence Framework Rev0; November 15, 2019.



Discussion amongst the parties during the Public Hearing largely focused on security.⁶¹ On the first day of the Public Hearing, LMI submitted, as Exhibit #15,⁶² a framework for security release that included a list of general milestones and associated specific reclamation and closure activities that would be considered as triggers to support the progressive release of security by the Minister. The approach in Exhibit #15 was subsequently discussed with all parties. On the second day of the Public Hearing, LMI and CIRNA jointly resubmitted a slightly updated framework for security release as Exhibit #27⁶³, and included a draft of the associated conditions proposed to be included in Part C of the Licence as Exhibit #26.⁶⁴ As noted previously in the summary of CIRNA's submissions in this Section, although LMI and CIRNA came to agreement on the framework for security release, they did not agree on the total security amount that should be held under an amended and renewed licence. In brief, LMI suggested that the total security that should be required under an amended and renewed licence should be reduced to \$23,490,049. LMI indicated this reduced security was based on their contractor estimates of operational costs for reclamation.

However, in response, CIRNA expressed its opinion that the total security amount under the existing Licence No: 2AM-LUP1520 should remain unchanged at this stage, and that LMI should continue to post security in the amount of \$26,107,303 under an amended and renewed licence.

LMI's position was that their estimate was more accurate because actual costs of operations were included by the contractor, and also indicated that, recognizing the increased level of certainty regarding reclamation costs because the updated estimate is based on actual costs and has benefitted from the Phase 2 assessment of the environmental condition of the site, that the 5% of indirect costs for contingency is also appropriate. CIRNA held the firm position that the current total security amount should remain unchanged from the existing Licence, but may be progressively released upon LMI meeting the general milestones set out in the agreed security reduction framework. CIRNA also countered LMI's 5% contingency rate, identifying a need for greater contingency amounts to account for "unknowns" associated with the project plans. As stated during the Public Hearing:

⁶¹ For example throughout the technical component of the Public Hearing, the term "Security" is referenced a total of 115 times. See NWB Public Hearing, File No. 2AM-LUP1520, Transcripts, Volume 1, January 15, 2020 and Volume 3, January 16, 2020.

⁶² Lupin Mines Incorporated, Exhibit #15, NWB Public Hearing, File No. 2AM-LUP1520, Security Framework Milestones for Draft Water Licence Framework, (English) filed on January 15, 2020.

⁶³ Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada, NWB Public Hearing, File No: 2AM-LUP1520, Exhibit #27, Joint Submission of Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada regarding Security Reduction Framework; (English) filed on January 16, 2020.

⁶⁴ Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada, Exhibit #26, NWB Public Hearing, File No: 2AM-LUP1520, Security Framework Milestones for Draft Water Licence Framework; (English) filed on January 16, 2020.



We cannot say we agree with the estimate that's been done by LMI, and then even if -- even if an estimate is done, what CIRNAC's position is at this point is CIRNAC feels the Crown is undersecured with the site, and so at this time, our position will be that we hold the full security that we hold currently, and any release -- because there are a lot of uncertainties. There are a lot of details we don't know, and so our position is that we hold the security we hold fully, and any release that will be done on the security will be done based on the elements of the framework, the release framework they we're putting forward.⁶⁵

CIRNA outlined some of the “unknowns” that could affect actual costs of reclamation, and strongly emphasized the need to maintain the current total security amount required under the existing licence, as follows:

So, for example, just in the discussions earlier in responses to meeting this -- being -- having a stable site, water quality objectives being met. It was stated that if you don't -- if they're not met, you may have to treat again.

We don't know what the performance measure will be when the actual closure works are done and complete. If they're done and complete, then the performance measurement -- and the performance measure's met, then there'll be no more questions, but if they're not met, you know, what are the implications of that beyond Year 2. What is the capacity in your current water management system to contain infer -- contain the material? Do you have to put -- do you have to go back and do one more campaign of water treatment? Do you have to go back and do two more campaigns of water treatment? Those are still unknowns at this point in time.

We don't know how much, and I don't think -- correct me, I can't remember, but I don't think we have a cost element for covering potentially exposed tailings, so that's not in the current estimate, I don't believe, so correct me if I'm wrong on that one, but those are the kind of -- that's not a contingency on the elements that we're talking about that we agree in terms of the framework and that we've agreed in terms of the milestones, but there are still unknowns with the site in executing the work. There are still risks associated with that, and my understanding is that those risks are something that the Crown wants to be protected against..⁶⁶

Although CIRNA was of the opinion that the starting point for reclamation security should remain at the currently held \$26.1 million, in their closing statements LMI re-emphasized

⁶⁵ G. Okonkwo, CIRNA; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 129, lines 9-21.

⁶⁶ G. Okonkwo, CIRNA; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 129, lines 9-21.



their position that the financial security to be held under an amended and renewed licence should be \$23.4 million.

...LMI has provided a robust estimate with the further detail added by the agreed milestones document with CIRNAC that has been prepared by a third-party expert, Mr. Ken Bocking of Golder, with us here today. This evidence supports our request for the overall security under the licence to be set at 23.4 million, based on current site conditions and reflecting current outstanding liability.⁶⁷

The abundance of information provided by LMI gives reassurance that they are committed to the short-term reclamation of the site and long-term monitoring required to ensure stable conditions have developed. However, the Board is not convinced that all unknowns/contingencies as identified by CIRNA have completely been accounted for in LMI's reduced security estimate. The Board notes that the 5% contingency proposed by LMI is much lower than the industry standard, and the Board does not agree that it is sufficient to ensure that LMI can respond fully to unforeseen circumstances being encountered during active reclamation and closure activities. Consequently, the Board has decided that it is appropriate for LMI to maintain the currently held financial security of \$26,107,303 under Part C, Item 1 of the Licence, in order to ensure current and future protection of the environment.

SECTION III **SUBMISSIONS BY OTHER INTERVENING PARTIES OR MEMBERS OF THE PUBLIC**

There were no written submissions provided to the NWB by any other intervening party or members of the public in advance of the Public Hearing. On the evening of January 15, 2020, a Community Session was conducted and, as summarized in the table that follows, several issues were raised by the community members in attendance. The full transcript of comments from the Community Session on January 15, 2020 and during the technical sessions of the Public Hearing on January 15 and 16, 2020 is available at the following location:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-LUP2032%20LMI/2%20ADMIN/4%20HEARINGS/2%20HEARING/2019%20Amendment%20Renewal/Public%20Hearing%20Transcripts/>

TABLE 1: KEY ISSUES RAISED BY COMMUNITY MEMBERS DURING THE PUBLIC HEARING, INCLUDING THE COMMUNITY SESSION

⁶⁷ B. Labatte, Mandalay Resources/LMI; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, pp. 284-285, lines 22-26 and 1-3.



Topic	Issues/Concerns/Comments
Chemicals Management	The land on which the mine is located was part of the land I grew up on as a boy, and so I would like to see that all of the dangerous chemicals that are present at the site now are removed from the site.
Monitoring	What kind of monitoring will happen after the mine site is closed?
Post-closure Requirements	Once LMI has closed the mine site do they just go away, or is there something more they need to do?
Reporting	People have reported seeing animals dying near the tailings ponds, but it seems the community or the Hunters and Trappers Organization has not received reports about these deaths. I wonder why there are no reports of the animals that seem to have died after exposure to tailings.
Tailings	Having worked at the Lupin Mine for 7 years underground, I have witnessed some dangerous chemicals going into the tailings ponds and am concerned about the effects of the tailings in the ponds on the health of wildlife and people nearby.
Tailings	I am most concerned about how the tailings will be managed in the long-term because that is the biggest concern at gold mines because of the use of chemicals to extract the gold and the effects of those chemicals on the lands.

The Board recognizes that the residents of Kugluktuk and members of the public who may travel and use the land and water and/or harvest wildlife and fish in the areas surrounding the Lupin Mine have a significant interest in being kept informed regarding the reclamation and closure activities taking place at the site. As identified in a question to ECCC during the Public Hearing, the community is very interested in the monitoring that will be conducted at the site after closure: “If the mine site's completed, is there going to be any monitoring after it's done for a couple years, or it's been closed, and that's it, or I'm just wondering if it's going to be monitoring after it's completed, the mine site?”⁶⁸

Consequently, the Board has included additional terms and conditions in Parts B and J of the Licence. These additional terms and conditions require LMI to consult with members of the

⁶⁸ R. Kaiyogana, Kugluktuk, NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 247, lines 15-19.



community and community organizations in Kugluktuk to: convey updated information regarding reclamation and closure activities being undertaken by LMI; and also to ensure that LMI's development of the long-term Post Closure Monitoring Plan reflects the significant interest of the community in the monitoring conducted at the site once reclamation and closure is complete.

SECTION IV **JURISDICTION OF THE NWB**

Under Article 13 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (the *Nunavut Agreement*) and Division 2 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*⁶⁹ (NWNSRTA) the NWB has the jurisdiction to issue a licence, amend a licence (including a renewal) or, in certain circumstances, cancel a licence. In exercising the Board's statutory functions under the *Nunavut Agreement* and the statutory regime governing the Board (under the NWNSRTA and the *Nunavut Waters Regulations*), the NWB must be guided by the following objects:

*... to provide for the conservation and utilization of waters in Nunavut, except in a national park, in a manner that will provide the optimum benefit from those waters for the residents of Nunavut in particular and Canadians in general.*⁷⁰

In setting the terms and conditions of any licence, the NWB is guided by these objects and the NWB's statutory duty to make *all* reasonable efforts to minimize *any* adverse effects on aquatic ecosystems. Reading several of the Articles of the *Nunavut Agreement* together,⁷¹ the NWB relies on the broad definition of "ecosystemic" found in Article 12, Section 12.1.1. of the *Nunavut Agreement*, requiring not only the Nunavut Impact Review Board, but also the NWB to ensure that all components of the ecosystem, such as fish and fish habitat, are protected within the parameters of s. 71 of the NWNSRTA.

As with any application considered by the NWB, the burden of proof for this Renewal and Amendment Application rests with the Applicant, LMI, to demonstrate that the request for a renewed water licence should be granted and that the amendments proposed by LMI should be granted. In addition, the NWB Rules of Practice state: "[a]ny party offering evidence before the NWB shall have the burden of introducing sufficient and appropriate evidence to support its position."⁷²

⁶⁹ Sections 42-81 of the NWNSRTA.

⁷⁰ See s. 35 of the NWNSRTA.

⁷¹ This approach is consistent with the direction provided in Article 2, section 2.9.1 of the NLCA.

⁷² Section 23.1 of the Nunavut Water Board "Rules of Practice and Procedure for Public Hearing" (May 11, 2005).



SECTION IV

REQUIREMENTS OF THE NWNSRTA, NWR AND NUNAVUT AGREEMENT

Objects of the NWB and its Relationship to other regulatory bodies

As established under Articles 10-13 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (the *Nunavut Agreement*) prior to the NWB's consideration of the Amendment and Renewal Application, LMI was required to meet the pre-licensing requirements of the Nunavut Planning Commission (land use planning) and the Nunavut Impact Review Board (impact assessment).

Land Use Planning

As noted in the previous sections of these Reasons for Decision providing the regulatory and procedural history of the Application, on **February 1, 2019** the Nunavut Planning Commission (NPC) issued their determination that the Project falls outside of an area with an applicable Land Use Plan, and therefore does not require a conformity assessment by the NPC.⁷³

Impact Assessment

In NPC's February 1, 2019 correspondence, the NPC also determined that the Amendment and Renewal Application was exempt from screening by the Nunavut Impact Review Board (NIRB) because the Application does not involve changes to the general scope of the previously assessed project activities, and the exceptions noted in Article 12, Section 12.4.3 (a) and (b) of the *Nunavut Agreement* do not apply.

Inuit Water Rights

As indicated to the NWB during the Technical Meeting and Pre-hearing Conference,⁷⁴ the Kitikmeot Inuit Association confirmed that there are no outstanding water compensation issues regarding the Lupin Mine under s. 63 of the *NWNSRTA* that must be addressed before the Board could consider the Renewal and Amendment Application.

⁷³ Correspondence from P. Scholz, Nunavut Planning Commission to K. Lewis, LMI, R. Dwyer, NWB, N. Lear, NIRB, T. Bolt and M. Angohitok, KIA, and T. McCaie, CIRNA, Re: NPC File #148938 (Lupin Mine – Closure and Reclamation), dated February 1, 2019.

⁷⁴ 2AM-LUP1520; Pre-Hearing Conference Decision Report Regarding an Application for the Amendment and Renewal of Type "A" Water Licence No: 2AM-LUP1520, June 18, 2019.



SECTION VI **DECISION TO ISSUE**

During the Board's consideration of the application filed by LMI to amend and renew Type "A" Water Licence No: 2AM-LUP1520 (the Application or Amendment and Renewal Application), the Board has considered:

- the Application materials filed by LMI;
- responses to information requests and supporting documents filed in response to commitments;
- technical review comments;
- final written submissions,
- presentation materials; and
- information and evidence provided at the in-person Technical Meeting, Pre-Hearing Conference and Public Hearing held in respect of the Application in Kugluktuk, Nunavut.

Based on the information and materials provided during the Board's consideration of the Application, and for the reasons that follow, the NWB's duly appointed Lupin Panel, P11, has, by Motion Number: 2019-22-P11-05:decided to issue an amended and renewed Type "A" Water Licence No: 2AM-LUP2032 to the Applicant, subject to the terms and conditions described further in these Reasons for Decision.⁷⁵ It is the Board's view that the renewed and amended Water Licence No: 2AM-LUP2032 (the Licence) contains 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 and long-term Post Closure Monitoring to be undertaken by LMI at the Lupin Mine site.

These activities continue to be associated with use of water and deposit of waste associated with the reclamation, closure and post closure monitoring of a Mining Undertaking as defined under Schedule 1 of the *Nunavut Waters Regulations*. The recommended amendments to the Licence reflect that LMI has applied for the Lupin Mine to become a permanently closed mine and that terms and conditions associated with returning the mine to full operating status are no longer required. By way of Motion No.: 2019-22-P11-06 the Panel authorized the release of these Reasons for Decision and the amended and renewed Water Licence No: 2AM-LUP2032, containing the terms and conditions considered by the Panel to be necessary to protect the environment, conserve freshwater resources, and provide appropriate safeguards in respect of the use of water in accordance with the Application.

⁷⁵ The licence will be issued under separate cover as 2AM-LUP2032 subject to the approval of the Minister under s. 56 of the *NWNSTRA*.



Conditions for Issuance of a Licence

As set out under sections 57, 58, 60, 63 the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and as specifically discussed below there are a number of conditions that must be met before the Board can consider issuing a water licence.

Financial Responsibility of the Applicant

As required by s. 57(b) of the *NWNSRTA*, the NWB may not issue a licence, including a renewal of an existing licence, unless the Board is satisfied that:

- (b) the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for
 - (i) the completion of the appurtenant undertaking,
 - (ii) such measures as may be required in mitigation of any adverse impact, and
 - (iii) the satisfactory maintenance and restoration of the site in the event of any future closing or abandonment of that undertaking.

Since the Board considered the renewal of the previous licence in 2014-2015, LMI has decided that it is no longer feasible to maintain the Lupin Mine in a condition of temporary care and maintenance, with the possibility of returning the mine to active operating status following a period of "ramping up". Recognizing that during the term of the amended and renewed licence (2020-2032), LMI will be taking steps to permanently close the Lupin Mine site, the NWB has not required assurance that LMI would have the financial capacity to return the Lupin Mine to active operations. Rather, in considering the financial capacity of the Applicant, the NWB has considered the following:

- the financial capacity of the Applicant to restore the Lupin Mine site and complete the reclamation and closure activities proposed by the LMI in the Amendment and Renewal Application and as LMI committed to during the NWB's consideration of the Application;
- the financial capacity of the Applicant to undertake measures to adequately monitor for impacts following the completion of the planned reclamation and closure activities, and
- the financial capacity of the Applicant to implement measures to mitigate any adverse impacts.

As indicated by LMI during the Community Session part of the Public Hearing, LMI currently has: "...over \$20 million of cash to support our two operating mines and the work that we're talking about here today."⁷⁶ LMI also highlighted that a local remediation contractor, Nahanni Construction has been retained to complete the active reclamation and

⁷⁶ B. Labatte, Mandalay Resources/Lupin Mines Incorporated, NWB Public Hearing, File No: 2AM-LUP1520, Transcript, January 15, 2020, Volume 2, p. 193, lines 24-26.



closure activities for 2020-2022, and that the updated total reclamation security estimate of \$23.4 million, filed with the Board in November 2019, is based on the actual cost estimates provided by Nahanni Construction for the work required to be carried out under the Final Reclamation and Closure Plan (FCRP).⁷⁷

During the Public Hearing both CIRNA and the Board questioned LMI regarding why LMI had reduced the contingency amount included within the 2018 version of the reclamation cost estimate and the updated reclamation cost estimate submitted by LMI in November 2019. LMI responded, via a response from their reclamation contractor, Nahanni Construction, who explained the drop from a 10% amount for contingencies in the 2018 reclamation cost estimate to a 5% amount for contingencies as included in the November 2019 reclamation cost estimate provided by LMI as follows:

[Question:] The contingency included within the 2018 version of estimate, cost estimate, was 10 percent. Now it's 5 percent. I am just wondering whether this is related to new methodology and the contractor doing the work, or company thinks that there are less unknowns now?⁷⁸

[Answer:] ...We feel that through some rigorous analysis of the site, combined with contractor expertise, that we have narrowed the scope and defined the scope a lot, you know, a lot more detailed than we had previously.⁷⁹

Following the questioning of LMI by CIRNA and NWB as to what activities would be considered included within the contingency amount set aside by LMI under the November 2019 update of the reclamation cost estimate, the NWB staff sought clarification from CIRNA as to whether LMI's responses had changed CIRNA's position that the total security that should be posted under the amended and renewed licence should remain at the current amount of approximately \$26.1 million. CIRNA provided confirmation that their position remained unchanged, as follows:

[Question:] One question to Crown-Indigenous Relations and Northern Affairs. After this additional explanation and clarification, whether your position is still that – ... [the] security amount included within the current licence be ... the same.⁸⁰

⁷⁷ K. Lewis, Lupin Mines Incorporate; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, at pp. 252-255.

⁷⁸ K. Kharatyan, NWB, NWB Public Hearing, File No: 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 265, lines 15-19.

⁷⁹ K. Ruptash, Nahanni Construction/Lupin Mines Incorporated, NWB Public Hearing, File No: 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 265, lines 21 – 23.

⁸⁰ K. Kharatyan, NWB, NWB Public Hearing, File No: 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 267, lines 19-24.



[Answer:] It's still our position that it remains at ... 26.1 [million dollars]⁸¹.

On this basis, the Board has considered whether LMI had demonstrated to the Board that LMI has the financial capacity to maintain the current security amount of **\$26,107,303 (\$26.1 million)** as currently required under Part C, Item 1 of the existing water licence. In assessing LMI's financial capacity to post adequate security under the Licence, the Board also notes that LMI currently has \$26.1 million in security posted under the existing water licence, and no parties identified concerns that LMI would be unable to maintain this amount of security under a renewed and amended licence.

When assessing the Applicant's financial capacity, the Board also acknowledges that over the five-year term of the existing licence, LMI has completed progressive reclamation works that have resulted in the NWB amending the existing licence to reduce the amount of security required (most recently under Amendment No: 3 to Water Licence No: 2AM-LUP1520) by approximately \$8 million. As discussed in detail below, in assessing the capacity of LMI to meet the security requirements under an amended and renewed licence, the Board has also considered that, for the first time in a Type "A" water licence, the Board has agreed to include a mechanism to guide the release of security to reflect a Licensee's completion of milestones and reclamation and closure activities that reduce the outstanding environmental liabilities at the site. As a result of the reclamation and closure activities proposed to be completed by LMI in 2020-2022, it is anticipated that in the first two years of the term of the Licence there may be several requests by LMI to the Minister to authorize releases of the security fixed by the Board under the Licence, in accordance with the framework agreed to by CIRNA and LMI, and incorporated by the Board into Part C and Schedule C of the Licence.

Staged Release of Security

During the Public Hearing, LMI summarized the respective positions of LMI and CIRNA with respect to agreement about the approach and milestones associated with the Minister's future consideration of the release of security to reflect the completion of specified reclamation and closure activities as follows:

...the milestones document is the document that we proposed to add a Schedule C, and the line items in that milestone documents, all those line items, as a process, have been agreed to between CIRNAC and LMI.

The only outstanding issue is that total number at the end. CIRNAC wants that total number [total security to be posted under the

⁸¹G. Okonkwo, CIRNA, NWB Public Hearing, File No: 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, p. 268, lines 3-4.



Licence] to be something different than Lupin Mine[s] does at this point, and, of course, Lupin Mine[s] believes it's given ample evidence for the number that it's recommending as to the total to the Board, so we would recognize that one total at the bottom of that is something that's still outstanding between CIRNAC and Lupin, but everything above it is agreed.⁸²

On this basis, it was clear to the Board that CIRNA and LMI have agreed that the Board should include a mechanism for the security fixed by the Board under an amended and renewed licence to be released by the Minister i.e. “stepped down” without a formal amendment to the Licence. The Board has, in recent decisions,⁸³ allowed for “stepped up” security in the context of increasing reclamation liability over the term of a Type “A” Water Licence. Consequently, the Board and CIRNA are developing experience with the notion of how security can be increased over the term of a licence to reflect phases of construction and operation. Although conceptually, there is no reason why this same approach cannot apply to situations of active reclamation and closure where an applicant’s actions will reduce outstanding environmental liabilities, the Board is mindful of the respective roles of the Board⁸⁴ and the Minister in relation to the fixing of security by the Board and the refund of security by the Minister.⁸⁵

On the basis of both LMI’s financial capacity under the current water licence, and recognizing that the Board has incorporated a mechanism for release of security to reflect the completion of specified reclamation and closure activities and/or general milestones in the Licence, the Board has concluded that the Applicant is able to meet the financial responsibilities required by s. 57(b) of the *NWNSRTA*. Consequently, the Board has determined that LMI has sufficient financial capacity to meet the requirements under an amended and renewed licence. The Board also notes that, as is typical for most Type “A” water licences, if information provided to the Board over the term of the Licence indicates that additional security is required to ensure that the financial security fixed under the Licence remains sufficient to cover the estimated reclamation liability for the site, consistent

⁸² C. Kowbel, Lupin Mines Incorporated; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 16, 2020, Volume 3, at p. 274, lines 8-21.

⁸³ Nunavut Water Board, Water Licence No: 2AM-BRP1831, Reasons for Decision, Including Record of Proceedings, Sabina Gold and Silver Corp., September 21, 2018 at pp. 50-58; and Nunavut Water Board, Water Licence Nos: 2AM-DOH1335 and 2AM-BOS1835 Reasons for Decision, Including Record of Proceedings, TMAC Resources Inc., December 7, 2018 at pp. 77-84.

⁸⁴ The Board is empowered under s. 76(1) of the *NWNSRTA* to establish terms or conditions relating to the furnishing or maintenance of security

⁸⁵ The discretion to release security remains with the Minister under his/her jurisdiction to refund security under s. 76(5) of the *NWNSRTA*.



with the approach outlined in the *Mine Site Reclamation Policy for Nunavut, 2002*,⁸⁶ the Board may, upon notice, revisit the security amount fixed by the Board under the Licence.

Compensation of Existing or Other Users

The *NWNSRTA* requires that prior to issuing a licence, the NWB must also be satisfied that compensation of existing or other water users affected by the Application has been or will be paid.⁸⁷ To ensure that all parties with the potential to bring a water compensation claim had been notified of their rights to seek compensation if they consider themselves to be adversely affected by the Applicant's proposed use of water and/or deposit of waste under the *NWNSRTA*, on November 8, 2019, the NWB issued a Notice of Public Hearing. The Notice of Public Hearing included an invitation to parties with potential water user compensation issues to advise the NWB at least 10 days before the Public Hearing (January 5, 2020). The NWB did not receive any representations or requests for compensation by the deadline or at the Public Hearing.

Issuance of a Licence

As stated above and pursuant to s. 42(1) of the *NWNSRTA*, the NWB has decided to issue Water Licence No: 2AM-LUP2032 (the Licence) subject to the terms and conditions set out in the Licence and discussed in these Reasons for Decision. In issuing the Licence, the NWB is satisfied that the Application contained the required information and is in the proper form having regard to the requirements of the *NWNSRTA*⁸⁸ and associated regulations.⁸⁹

Assumptions

As noted during the Public Hearing, the final design and implementation of a post closure monitoring program is dependent on the completion of reclamation and closure activities and implementation of LMI's Final Closure and Reclamation Plan. Consequently, the NWB has provided LMI with one year following the approval of the Licence by the Minister to conduct the necessary consultations with the community and interveners and prepare a long-term Post Closure Monitoring Plan for the Board's approval.

However, LMI is advised that the Post Closure Monitoring Plan should reflect the Board's approach that when faced with choices regarding monitoring requirements such as standards, parameters and monitoring frequency, the NWB adopts the requirements that are best-suited

⁸⁶ *Mine Site Reclamation Policy for Nunavut, 2002*, Minister of Indian Affairs and Northern Development, (Ottawa: Minister of Public Works and Government Services Canada, 2002) available on-line: http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/recpolnuna_1100100036043_eng.pdf.

⁸⁷ See ss. 58-60 of the *NWNSRTA*.

⁸⁸ See s. 48 of the *NWNSRTA*.

⁸⁹ *Nunavut Waters Regulations*, SOR/2013-69, April 18, 2013.



to ensure the site does not pose a risk of harm to the environment and that the Applicant continues to meet its ongoing environmental protection obligations.

Applications in Relation to the Licences

Overall, the NWB is satisfied that the requirements of s. 48 of the *NWNSRTA* have been met. The Amendment and Renewal Application filed by LMI complied with the NWB's Rules, was accompanied by the fees required by regulation, including the application fee and water use fees. In addition, LMI has provided the necessary application and supplementary information required to evaluate whether the Licence should be granted and to assess whether the amendments to the existing licence as requested by the Applicant are reasonable and consistent with the objects of the Board as established under the *Nunavut Agreement* and the *NWNSRTA*.

Application to Amend or Application for Future Modifications

The Board's amendments to Part C and Schedule C of the Licence, recognize the agreement of LMI and CIRNA, that the Licence should include a mechanism that would facilitate the Minister releasing, in whole or in part, the security under the Licence, upon receipt of the required evidence to confirm completion. The release of security under Part C and Schedule C reflects the progressive reclamation and closure activities completed by the Applicant over the term of the Licence. In the amendments to Part C of the Licence, the Board has clarified that LMI's request for the release of security triggered by the completion of the specified reclamation and closure activities and/or meeting of general milestones will not constitute an amendment to the Licence.

With the exception of changes to security associated with the Minister's release of security as set out in the amended Part C of the Licence, LMI is reminded that all other amendments and modifications under the Licence must comply with all requirements of the Nunavut Agreement, including the impact assessment requirements of Article 12⁹⁰ and the *NWNSRTA*⁹¹ where applicable.

Assignment of a Licence

In future, should LMI wish to assign the Licence, the Board highlights that a water licence is only assignable if the requirements of s. 44 of the *NWNSRTA* have been met and the Board authorizes the assignment. As noted in that section:

A sale or other disposition by a licensee of any right, title or interest in an appurtenant undertaking constitutes, subject to the

⁹⁰ See Article 12, Clause 12.4.3 (b) of the NLCA.

⁹¹ See s. 43 of the *NWNSRTA*.



authorization of the Board, an assignment of the licence to the person to whom the sale or other disposition is made.

All necessary forms for filing an application for assignment can be obtained from the NWB Licensing Department.

Cancellation or Expiry of the Licence

As s. 46 of the *NWNSRTA* states: “[t]he expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence.” As such, a former licensee remains responsible for the obligations imposed under the Licence, but when a licence expires, a former licensee’s rights to use water or deposit waste under that Licence do NOT continue.

With respect to cancellation of a licence, as established by the NWB’s authority under s. 43(1)(c)(iii) of the *NWNSRTA*, the NWB may, on application by a licensee, or on its own motion, cancel a licence at any time when the NWB considers the cancellation to be in the public interest. For the NWB to consider cancellation of a licence, the NWB requires evidence from the licensee and CIRNAC’s inspector establishing that an undertaking has been abandoned, fully reclaimed and there are no outstanding obligations under the licence.

Term of Licence

Section 45 of the *NWNSRTA* provides that the term of a licence or any renewal shall not exceed twenty-five years. LMI initially requested a term of 7 years (ending in 2026) to allow for a period of approximately two years of active reclamation and closure activities followed by 5 years of post-closure monitoring. However, LMI subsequently determined that a longer 12-year term to reflect a 10 year post closure monitoring period was more appropriate.⁹² During the Public Hearing, LMI outlined the justification for the longer term sought as follows:

...initially, the application included a request for a seven-year licence; however, following the technical meetings and the pre-hearing conference report decision, LMI has since confirmed -- LMI has since confirmed a request for a licence term of 12 years to coincide with full closure activities, ...this number here should have been changed to the first 10 years of post-closure monitoring, and that 12-year term allows for the time required for submission for an application for renewal of that licence and the time needed to review the application and go through the licence renewal process.⁹³

⁹² Golder Technical Memorandum, from K. Bocking to K. Lewis; RE: Draft Water Licence Framework Rev0; November 15, 2019.

⁹³ D. Hohnstein, Lupin Mines Incorporated; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p.52, lines 11-22.



CIRNA and ECCC did not object to the grant of the longer term, although ECCC questioned LMI regarding whether LMI could provide assurance that up to 25 years of post-closure monitoring could be conducted even though the post-closure monitoring period under the Licence is projected to be 10 years. The exchange between ECCC and LMI on this point was as follows:

[Question:] would the security amount maintain the funding available to do 25 years of monitoring as was laid out in the ICRP so that that would be available in the final version?⁹⁴

[Answer:] The cost model has been set up and has an allowance for a total of ten sampling episodes spread out over a 25-year period.⁹⁵

The Board has determined that it is appropriate to grant the longer 12-year term of the Licence to ensure that a water licence is in place to govern at least a 10-year period of post closure monitoring. LMI is reminded that if the period of post closure monitoring does extend to 25 years (which is typical of the period of post-closure monitoring recommended by CIRNA), LMI should submit a complete renewal application to the NWB at least one full year before the Licence expires.

SECTION VII **WATER LICENCE NO: 2AM-LUP2032 TERMS AND CONDITIONS**

The Licence does not take effect until approval of the Minister is given or deemed to have been given pursuant to s. 56 of the NWNSRTA.⁹⁶ As indicated in Section VI, the Lupin Panel (P11) has decided to issue a renewed and amended Type “A” Water Licence No. 2AM-LUP2032, subject to the conditions contained in the attached Licence. To provide context and clarity, the NWB has provided a discussion and comments about specific terms and conditions in the Licence in the section that follows. The NWB has not, however, provided specific comments for those terms and conditions that are clear in their wording and intent on the face of the Licence.

⁹⁴ A. Wilson, Environment and Climate Change Canada; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 92, lines 12-16.

⁹⁵ K. Bocking, Lupin Mines Incorporated; NWB Public Hearing, File No. 2AM-LUP1520, Transcript, January 15, 2020, Volume 1, p. 92, lines 22-24.

⁹⁶ Section 56 of the *NWNSRTA* states:

The issuance, amendment, renewal and cancellation of a type A licence, and if a public hearing is held, a Type B licence are subject to the approval of the Minister.

Under s. 56(2.2) if the Minister does not issue a decision within 45 days of receiving the Licence from the Board, (or within 90 days if the Minister has extended the decision-making period by an additional 45 days) the Minister is deemed to have approved the Licence.



Part A: Scope, Definitions and Enforcement

Scope

The Licence is for a Mining undertaking as classified under Schedule 1, Item 2 of the *Nunavut Waters Regulations*.⁹⁷ The general scope of the Licence includes the following activities and/or facilities that involve Water use and/or impact Waters and/or may result in the deposit of Waste:

- Use of Water in accordance with thresholds established for each of the respective phases of the Project;
- Consolidation and burial of Potentially Acid Generating/Metal Leaching (PAG/ML) waste rock in a dome-like structure;
- Construction of a non-hazardous waste landfill to dispose of demolition materials;
- Deposit of waste rock and hydrocarbon contaminated soils into underground works;
- Deposit and treatment of Sewage into the Sewage Disposal Facilities;
- Deposit of asbestos-containing materials on site;
- Discharge of treated Effluent from the Tailing Containment Area (TCA);
- Cover and proper containment of the TCA;
- Discharge of Effluent from Sewage Disposal Facilities;
- The implementation of the required Monitoring Program;
- Decommissioning and reclamation of site facilities and infrastructure, including:
 - Underground Mine Workings
 - Mining and Milling structures
 - Water Supply Facility
 - Mine site camp facilities
 - Tailings Containment Area
 - Tailings Line and associated facilities
 - Sewage Disposal Facilities
 - Landfill and Landfarm
 - Breakwater and Causeway
 - Fuel Storage Facilities
 - Mine site roads
 - Mine site airstrip

⁹⁷ SOR/2013-69.



Definitions

Most of the definitions that were included in Water Licence No: 2AM-LUP1520 have been retained under the Licence. However, the NWB has either added or updated some of the definitions to reflect or emphasize the current scope of activities included under the Licence and the transition of the former Lupin Mine from temporary care and maintenance into the final closure phase. For example, notable changes were made to the definition section for terms such as Recognized Close Mine, Care and Maintenance Phase, Backfill Closure Criteria, Closure Objectives, and Reclamation.

Enforcement and Compliance

For the purpose of ensuring compliance with the Licence, an Inspector designated by the Minister may inspect or examine works, waters or waste and exercise other powers according to the *NWNSRTA*.⁹⁸ The *NWNSRTA* also includes provisions authorizing the NWB to require a licensee to furnish and maintain security and prescribing serious penalties for breach of the Licence.⁹⁹ Investigations or inspections to support enforcement and compliance are carried out by persons designated and empowered to do so by the Minister.¹⁰⁰

The Board recognizes that there will be several changes to the regulatory process under the Federal legislation and regulation such as the *Fisheries Act* and the *Metal and Diamond Mining Effluent Regulations* and the Licence continues to state that “Compliance with the terms and conditions of this Licence does not absolve the licensee from responsibility for compliance with all applicable legislation, guidelines and directives.”

Part B: General Conditions

Water Use Fees

Subject to the applicable regulations, the Licensee is required to remit fees for the right to the use of waters under this Licence. Fees for the right to the use of waters must be calculated and paid on an annual basis in advance and in accordance with s. 12 of the *Nunavut Waters Regulations*. The Licensee is responsible to conduct the appropriate water use fee calculations for all waters in, on or under Crown lands that have been authorized for use under the Licence for the upcoming year and remit the required water use fees in advance. In addition, upon providing notice of moving from the active Closure and Reclamation Phase to the Post Closure Monitoring Phase, an adjustment in the Water use fees will be required

⁹⁸ Sections 85-94 of the *NWNSRTA*.

⁹⁹ Section 90 of the *NWNSRTA*.

¹⁰⁰ Section 85-88 of the *NWNSRTA*.



to be submitted. These fees must be submitted to the NWB's Manager of Licensing and made payable to the Receiver General for Canada.

Reports and/or Plans Filed with the NWB

Lupin Mines Incorporated has filed, with the NWB, a Final Closure and Reclamation Plan, dated July 2018, that has been approved by the Board. While this plan has been approved, a review with applicable updates of this plan or other management plans should be considered annually.

Community Consultation Requirements

Recognizing the significant interest of community members and organizations in the community of Kugluktuk regarding the status of reclamation and closure activities conducted at the Lupin Mine site, as well as the importance of the monitoring results being communicated to the community, the Board has added a new term and condition under Part B, Item 20. This term and condition requires community consultation during the development of the Post Closure Monitoring Plan required under the Licence, and also requires annual consultation with the community members and organizations during the implementation of the Final Closure and Reclamation Plan.

Part C: Conditions Applying to Security

Requirement of Security

The *NWNSRTA* allows the Board to require the Licensee to furnish and maintain security with the Minister in a form determined by the regulations or satisfactory to the Minister. Specifically, subsection 76(1) of the *NWNSRTA* states:

The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions and in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.

Further, as referred to previously in the discussion included under the subheading **Error! Reference source not found.**, the Board may not issue a Licence unless the Board is satisfied regarding the financial responsibility of the Applicant, including reviewing any costs associated with the closing or abandonment of the undertaking.¹⁰¹

¹⁰¹ Subsection 57(b) of the *NWNSRTA*.



In addition, the *Nunavut Waters Regulations*¹⁰² impose the following limits on the Board's jurisdiction to fix the amount of security:

10. (1) For the purposes of subsection 76(1) of the Act, the Board may fix the amount of security required to be furnished by an applicant for a licence, a licensee or a prospective assignee in an amount not exceeding the aggregate of
(a) the costs of the abandonment of the undertaking;
(b) the costs of the restoration of the site of the undertaking;
(c) the costs of any ongoing measures that may remain to be taken after the abandonment of the undertaking; and
(d) the compensation that a person, including the designated Inuit organization, who is adversely affected by the use of waters or deposit of waste may be entitled to under section 13 of the Act.

The Board's Jurisdiction over Land and Water Security

In accordance with its duties and authority under the *Nunavut Agreement*, the *NWNSRTA*, and *Nunavut Waters Regulations* the Board has a broad and widely recognized mandate to assess and order both land and water related security, to ensure that the overall reclamation of the licensed undertaking is secured.¹⁰³

As a result of its statutory authority and obligations, the Board has established a practical and holistic approach to the assessment of the security required to be held by the applicants under a water licence. In respect of this Amendment and Renewal Application, LMI and CIRNA raised no issue with the Board's approach to assessing security on the basis of ensuring the total reclamation security for required reclamation and closure activities on both land and water is sufficient to reclaim all sites affected and impacts created by the licensed undertaking.

Staged Release of Security

As noted above, s. 76(1) of the *NWNSRTA* gives the Board the authority to establish terms or conditions relating to the furnishing or maintaining of security. As always, the Board's authority must be exercised in light of its objects, stipulated under s. 35 of the *NWNSRTA*.¹⁰⁴ In addition, the amount of security that the Board should require under the Licence is guided

¹⁰² SOR/2013-69.

¹⁰³ Nunavut Water Board, Reasons for Decision for 2AM-DOH0713, September 19, 2007 at p. 25.

¹⁰⁴ Section 35 of the *NWNSRTA* states:

The objects of the Board are to provide for the conservation and utilization of waters in Nunavut, except in a national park, in a manner that will provide the optimum benefit from those waters or the residents of Nunavut in particular and Canadians in general.



by s. 10(1) of the *Nunavut Waters Regulations*, SOR/2013-69 (the *Regulations*) and should reflect the costs set out in s. 10(1)(a)-(d):

10 (1) For the purposes of subsection 76(1) of the Act, the Board may fix the amount of security required to be furnished by an applicant for a licence, a licensee or a prospective assignee in an amount not exceeding the aggregate of (

- (a) the costs of the abandonment of the undertaking;*
- (b) the costs of the restoration of the site of the undertaking;*
- (c) the costs of any ongoing measures that may remain to be taken after the abandonment of the undertaking; and*
- (d) the compensation that a person, including the designated Inuit organization, who is adversely affected by the use of waters or deposit of waste may be entitled to under section 13 of the Act.*

As canvassed in the Board’s previous discussions¹⁰⁵ that allowed for security to be increased over the term of a licence to reflect increases to the costs outlined in s. 10(1) of Regulations, the Board has developed a “staged approach” to security to recognize that projects are being constructed in stages and that the environmental liability associated with a given undertaking may change dramatically over the term of a licence. The Board’s development of a staged approach to increasing the amount of security over the course of a licence was initially requested in joint submissions of the land and resource owners, (CIRNA and the Regional Inuit Associations) at the urging of applicants and existing licensees seeking amendments to water licences to reflect phased development of mining projects. The Board’s previous decisions on this point reflect the agreement on this approach by all these parties. In many cases, the Board adopted the parties’ definitions of the phases of development that trigger an increase in security as proposed jointly by the applicant and landowners, because the Board acknowledged these parties have the expertise and detailed knowledge necessary to identify where progression to a specific stage will result in an increase to environmental/reclamation liability.

Similarly, in the course of the Board’s consideration of this Application, culminating in the submissions and exhibits filed jointly during the Public Hearing, LMI and CIRNA came to agreement about the approach and milestones that could be incorporated into the Licence to guide the Minister’s future consideration of the release of security.¹⁰⁶ However, the parties

¹⁰⁵See Nunavut Water Board, Water Licence No.: 2AM-MRY1325 – Amendment No. 1, Baffinland Iron Mines Corporation, Reasons for Decision Including Record of Proceedings, July 31, 2015 at pp. 55-56; Nunavut Water Board, Water Licence No: 2AM-BRP1831, Reasons for Decision, Including Record of Proceedings, Sabina Gold and Silver Corp., September 21, 2018 at pp. 50-58; and Nunavut Water Board, Water Licence Nos: 2AM-DOH1335 and 2AM-BOS1835 Reasons for Decision, Including Record of Proceedings, TMAC Resources Inc., December 7, 2018 at pp. 77-84..

¹⁰⁶ Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada , Exhibit #26, NWB Public Hearing, File No: 2AM-LUP1520, ,Security Framework Milestones for Draft Water Licence



were unable to reach agreement with respect to the specific dollar values that should be ascribed to individual milestones, and differed in the amount of security that should be required under the Licence upon issuance. Consequently, the Board has incorporated the parties' agreed upon general milestones, identified reclamation and closure activities, and evidence the Licensee must provide to the Minister to demonstrate the completion of the specified activities to request a refund of security into Schedule C of the Licence. Recognizing that the parties had not reached consensus on the specific amounts attributed to various milestones or reclamation and closure activities, the Board has not included dollar values into the Schedule C of the Licence.

In addition, in Exhibit #27, the parties had jointly recommended various terms and conditions be included in Part C of the Licence to establish the process for the release of security to reflect LMI's completion of progressive reclamation and closure activities that reduce the environmental liability at the site. Although the Board did review and consider the parties' agreement with respect to the wording of these provisions, the Board has not generally adopted the parties' suggestions. Instead, the Board has developed wording that is more consistent with prior approaches to staged security and also that more fully reflects the Board's jurisdiction to fix security as established under s. 76(1) of the *NWNSRTA* and s. 10 of the *Regulations* and the Minister's jurisdiction to refund security under s. 76(5) of the *NWNSRTA*. Specifically, the process set out in Part C, Items 3-6 of the Licence allows for LMI to request and the Minister to consider LMI's request to release the security required to be posted under the Licence in stages to reflect progressive reclamation and closure activities set out in Schedule C of the Licence that are completed by LMI, but does not fetter the Minister's discretion to consider whether it is appropriate to release security in any given circumstance.

In addition, the Board has clarified in Part C, Item 8 that if security is reduced following the process for staged releases of security as set out in Part C, Items 3-6 of the Licence and Schedule C, these changes to the amount of security held under the Licence would not be considered to be an amendment to the Licence. However, Part C, Item 8 also makes it clear that any other type of request from LMI or the Minister to amend the amount of security would be processed by the Board as an amendment to the Licence.

Although the Board notes that the release of security process established under the Licence is unique in that it allows for a potential reduction of security over the term of the Licence, the Board is confident that the implementation of the terms and conditions of Part C and Schedule C of the Licence will provide sufficient flexibility and incentive to LMI to take

Framework; (English) filed on January 16, 2020 and Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada, NWB Public Hearing, File No: 2AM-LUP1520, Exhibit #27, Joint Submission of Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada regarding Security Reduction Framework; (English) filed on January 16, 2020.



immediate steps to reduce the environmental liability at the site and will provide the Minister with the evidence needed to verify that releases of security are warranted. The Board is grateful to LMI and CIRNA for their work together to provide joint submissions to the Board regarding the approach, and the Board is confident the new terms and conditions in Part C and the framework adopted in Schedule C will allow the security posted under the Licence at any given time to fully reflect the costs outlined in s. 10(1) of the *Regulations*.

Review of the Amount of Security

As noted above, the amount of security that is permissible to be required under the Licence is limited by s. 10(1) of the *Regulations* and should not exceed the costs set out in s. 10(1)(a)-(d).

As noted in the discussion of LMI's submissions on security in Section II of this decision, LMI indicated that the revision to the updated reclamation security provided in November 2019 reflects modifications to LMI's closure plans under the Final Closure and Reclamation Plan provided to the Board with this Application and contractor estimates of operational costs for reclamation. On this basis, LMI suggested that the total security that should be required under an amended and renewed licence should be reduced from the current amount of \$26,107,303 to \$23,490,049.

In contrast, as summarized in Section II of this decision, when reviewing CIRNA's submission on security, CIRNA expressed the opinion throughout the Board's consideration of the Application that the total security amount under the existing Licence No: 2AM-LUP1520 should remain unchanged at this stage. CIRNA reiterated at the Public Hearing that, based on the concerns of CIRNA with issues such as revised unit rates that are unique to LMI's contractors, the reduced contingency being applied by LMI and issues such as adjustments that may be required to LMI's plans if exposed tailings are unexpectedly encountered outside of the TCA, that CIRNA would not agree that the security should be reduced as requested by LMI under the Licence. CIRNA stated clearly that LMI should continue to post security in the amount of \$26,107,303 under an amended and renewed licence.

The Board is well aware that CIRNA and LMI have differed in substantive and significant ways with respect to the amount of security that should be fixed by the Board over the course of the Board's licensing of this undertaking. Reflecting these differences, the amount of security required under the existing Water Licence No: 2AM-LUP1520 has been amended three times in the 5 year term of the Licence, and the Board retained a third party consultant to provide assistance to the Board to review widely diverging reclamation cost estimates provided by the parties during the term of the previous licence. With this context in mind, the Board acknowledges that there may be some baseline assumptions to issues such as unit



rates that continue to result in significant differences between the estimates provided by LMI and the estimates provided by CIRNA.

At this point in the process, the Board does not view it as necessary for the Board to weigh in again with respect to preferred approaches and assumptions. The Board's decision in support of Amendment No. 1 to Water Licence No: 2AM-LUP1520¹⁰⁷ provides a summary of the Board's findings with respect to key assumptions affecting the amount of security, and the parties are encouraged to consider the guidance provided by the Board when updating and refining all future reclamation security estimates.

The Board recognizes that CIRNA did not provide an updated reclamation security cost estimate to the Board during the Board's consideration of the Application, and simply indicated that the existing security should be maintained until such time as a release of security is requested by LMI. Although CIRNA did not provide their own updated reclamation security cost estimate, nonetheless, the Board shares some the concerns CIRNA raised during the Board's consideration of the Application. Specifically, the Board has concerns that the significantly reduced contingency amount under LMI's revised reclamation security cost estimate provided in November 2019 and the reliance on a specific contractor's rates for unit rates, may result in an underestimation of the security required to meet all the costs outlined in s. 10 of the *Regulations*, if there are unexpected circumstances encountered during LMI's reclamation and closure activities. As reclamation and closure activities are completed by LMI, the Board expects that uncertainty regarding site conditions and associated reclamation liability will be greatly reduced and the Board expects that LMI and CIRNA will be able to refine and update their reclamation security cost estimates to reflect the reduced uncertainty.

However, until such time as more is established about site conditions and the implementation of the Final Closure and Reclamation Plan is underway, based on the representations made to the NWB, the NWB's noted concerns, and recognizing that the Lupin Mine is transitioning to the final closure stage of the mine life, the NWB has accepted CIRNA's submissions that, to ensure there is adequate security in place under the Licence, the amount of security previously held under Licence No: 2AM-LUP1520 should be brought forward into Part C, Item 1 of the Licence. Consequently, the Board has fixed the security required to be held under the Licence under Part C, Item 1 to remain at **\$26,107,303**. This security amount reflects the amount the Board estimates is required to cover current mine reclamation

¹⁰⁷ Nunavut Water Board, Correspondence to the Honourable Carolyn Bennett, Minister of Indigenous and Northern Affairs, Regarding: Licence No. 2AM-LUP1520 – Nunavut Water Board (NWB) Decision Regarding Request of Indigenous and Northern Affairs Canada (INAC) under Part C, Item 3 of the Licence to Amend the Amount of Security Held under the Licence, March 28, 2017 (Amendment No. 1 to Water Licence No: 2M-LUP1520).



liability, account for any unknowns associated with the reclamation of the site, and to conduct the post-closure monitoring.

Form of Security

Pursuant to s. 76(3) of the *NWNSRTA* and as described in s. 10(3) of *Regulations*:

10(3) Security must be in the form of

- (a) a promissory note guaranteed by a bank listed in Schedule I or II to the *Bank Act* and made payable to the Receiver General;
- (b) a certified cheque drawn on a bank listed in Schedule I or II to the *Bank Act* and made payable to the Receiver General;
- (c) a performance bond approved by the Treasury Board for the purposes of paragraph (c) of the definition “security deposit” in section 2 of the *Government Contracts Regulations*;
- (d) an irrevocable letter of credit from a bank listed in Schedule I or II to the *Bank Act*; or
- (e) a cash payment.

Consequently, the Board does not prescribe the form of security held under Part C, Item 1 of the Licence, as the *Regulations* and the discretion of the Minister govern the form of security. The Board does however note, for the benefit of the Minister, that during the Board’s consideration of the Application LMI requested that the Minister consider: “...*alternate or innovative forms of security, such as mine reclamation trusts, provided they meet certain criteria that protect the governments interests and objectives.*”¹⁰⁸

Part D: Conditions Applying to Water Use

The majority of fresh Water used by the Project for potable and other purposes will be obtained from Contwoyto Lake, and the water from this source is currently collected by the transmission water line. The Applicant has also indicated that water for industrial purposes such as dust suppression, will be obtained from small nearby/proximal sources with a water truck to minimize the amount of travel the water truck will be required to undertake. Part D, Items 1 has been updated to account for this change.

In the Application, LMI requested that the water use volume during active Closure and Reclamation be increased to 250,025 cubic metres per year, then reduced to 5,000 cubic

¹⁰⁸ Lupin Mines Incorporated (LMI), 2018 Application for Water Licence Renewal/Amendment, and Final Closure and Reclamation Plan, Final Submission for Public Hearing, January 3, 2020.



metres per year during the Post Closure Phase. Part D, Items 2 and 3, cover this transition in water use between operational phases.

Part E: Conditions Applying to Waste Disposal and Management

Under the current Licence, the Licensee is allowed to dispose of a wide variety of waste generated by the Project, including treated sewage effluent, tailings and effluent from the tailings containment area, waste rock, etc. The Licence allows for similar types of Waste to be deposited, but takes into account that the site is now progressing into the final closure phase of the site and that permanent disposal of wastes on site will be taking place. The Licensee has indicated that a non-hazardous demolition waste landfill will be constructed in the footprint of the Upper Sewage Lake after it has been dewatered, petroleum hydrocarbon contaminated soils will be treated in the current landfarm and/or placed underground in mine workings, and asbestos-containing materials will be buried in the Landfill in accordance with applicable regulations.

Many of the conditions from the previous Licence No: 2AM-LUP1520 have been carried forward into the Licence, while others have been updated or added, most notably the following:

- Part E, Item 6, has been added to account for the additional effluent quality requirements of the *Metal Mining and Diamond Mining Effluent Regulations*,¹⁰⁹ coming into force after July of 2021, for any discharges associated with the project site.
- Part E, Item 25, was added and requests LMI to provide design details about the Waste Rock Dome within sixty (60) days following the Minister's approval of the Licence,.
- Part E, Item 26, was added and requests LMI to provide additional geotechnical details on TCA Dam K and Dam M cross sections, so as to ensure long term stability within sixty (60) days following the Minister's approval of the Licence;
- Part E, Item 27, was added and requests LMI to provide rationale and detailed designs of cover construction for tailings that becomes exposed, to ensure environmental stability and protection against long term erosion within sixty (60) days following the Minister's approval of the Licence.

Part F: Conditions Applying to Modifications

Pursuant to Article 12, section 12.4.3¹¹⁰ of the *Nunavut Agreement*, a proposed modification submitted under the Licence may require a screening determination by the NIRB. Prior to

¹⁰⁹ SOR/2002-222.

¹¹⁰ Article 12, Clause 12.4.3 of the *Nunavut Agreement* states:



the undertaking of any proposed modification, it is the responsibility of the Licensee, Lupin Mines Incorporated, to notify and consult the NIRB to ensure that Article 12 (impact assessment requirements) are met prior to submission of any modification request to the NWB for consideration.

In addition, the Licensee is required to seek permission from the NWB to carry out any modifications being contemplated and specifies that all modifications must be consistent in with the terms and conditions of the Licence; otherwise, these activities cannot be carried out as modifications under the terms and conditions of the Licence.

Part G: Conditions Applying to Construction and Operation

Generic terms and conditions were included in the Licence that apply to the construction activities that have already been included within the scope of the Licence. Conditions have been included, under Part G of the Licence, requiring the submission of for-construction drawings to the Board for review within sixty (60) days prior to construction of any facility. Conditions applying to construction activities have also been included to ensure that only materials free of acid-generating and metal-leaching properties are used for construction, and the requirements for submission of as-built drawings within ninety (90) days following construction of the facility have also been included in the Licence. In addition, a condition has been added to require the implementation of the principals of adaptive management in construction, operation, and reclamation.

Part H: Conditions Applying to Emergency Response and Spill Contingency Planning

In accordance with the terms and conditions of the Licence, LMI is required to submit an updated version of the Spill Contingency Plan (SCP or Plan) in accordance with Part H of the Licence, specifically including a complete inventory of fuel and chemicals stored on site, within ninety (90) days following the Minister's approval of the Licence. The Board has previously approved the Plan under Part H in the Licence. However, the Licensee is required to update the Plan to address relevant comments and recommendations from Interveners and/or the Board.

Part I: Conditions Applying to Abandonment, Reclamation and Closure Planning

Any component or activity of a project proposal that has been permitted to proceed in accordance with these provisions shall be exempt from the requirements for screening by NIRB unless

- (a) Such component or activity was not part of the original proposal [i.e. not part of the original scope of the project]; or
- (b) Its inclusion would significantly modify the project.



Part I of the Licence include conditions related to the final closure and reclamation of the site. LMI submitted a Final Closure and Reclamation Plan (FCRP), dated July 2018, with their initial Application submission. The July 2018 version of the FCRP has been approved by the Board with the issuance of this Licence. While the Board has approved this version of the Plan, the Licensee is required to update the FCRP, within ninety (90) days following approval of the Licence by the Minister, to reflect relevant comments and recommendations provided by the NWB and intervening parties during the review of the Application.

Part J: Conditions Applying to Monitoring

With respect to the monitoring requirements, the Licensee and intervening parties have agreed to continue with the existing motoring program developed under the previous Water Licence No: 2AM-LUP1520 for the duration of the active Closure and Reclamation Phase. The Board has also included terms and conditions that require LMI to develop a long-term Post Closure Monitoring Plan, to be submitted to the Board one year following the Minister's approval of the Licence, as per Part J, Item 13, of the Licence. Schedule J, Item 2, outlines some of the requirements of this plan, but does not contain an exhaustive list, and the Licensee should also refer to comments and recommendations provided by the Board and intervening parties about post closure monitoring requirements during the review of the Application.

The Licensee previously provided a QA/QC plan that was approved by the Board under the previous licence. However, the Licensee should also include updates to the QA/QC Plan with the submission of the Post Closure Monitoring Plan one year from the approval of the Licence.

Updates were also made to Schedule J, Item 3, Table 1 Monitoring Program Requirements, to include monitoring of seepage from the Waste Rock Dome, the TCA, and Lakes adjacent to the site including East Lake, Boot Lake, and Lower Sewage Lake.



APPENDIX A: Agendas for Public Hearing Including Community Session



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

AGENDA

PUBLIC HEARING

TYPE “A” LICENCE NO. 2AM-LUP1520, RENEWAL AND AMENDMENT
APPLICATION

January 15, 2020, 9:00 a.m. – 5:00 p.m., MT, Kugluktuk Community Hall

January 16, 2020, 9:00 a.m. – 5:00 p.m., MT, Kugluktuk Community Hall

-
1. Opening Prayer
 2. Opening Remarks by the Chairperson, which shall include the purpose of the Hearing and the scope of matters which will be considered by the Board
 3. Introduction of the Board Members and staff
 4. Identification and introduction of the Parties
 5. Introduction of the Elders and their role in the Hearing
 6. Introduction and identification of the persons, associations, agencies, etc., who have not submitted interventions but who have expressed a desire to speak at the Hearing
 7. Identification of any Motions or any objections
 8. Presentation by the Applicant
 9. Questioning of the Applicant by Parties respecting the Applicant’s presentation
 10. Questioning by the Board staff and Panel Members
 11. Presentation by Interveners
 12. Questioning of Interveners by Parties
 13. Questioning by the Board staff and Panel Members



14. Presentation by any other persons, associations, agencies, etc. who have advised the Chairperson that they wish to speak
15. Questioning of other persons, associations, agencies, etc. by Parties
16. Questions by the Board staff and Panel Members
17. Upon completion of presentations by all Parties, the Board will give the Applicant the opportunity to reply. Then all Parties will have the opportunity to make final closing statements taking into account matters raised at the Hearing
18. Closing remarks by the Chairperson; and
19. Closing Prayer



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

AGENDA

COMMUNITY SESSION

TYPE “A” LICENCE NO. 2AM-LUP1520, RENEWAL AND AMENDMENT
APPLICATION

January 15, 2020, 7:00 p.m. – 10:00 p.m., MT, Kugluktuk Community Hall

-
1. Opening Prayer
 2. Opening Remarks by the Chair
 3. Introductions of the Board Members and Staff
 4. Purpose and Scope of the Evening Session
 5. Presentation by the Nunavut Water Board (NWB) – Type “A” water licensing process for the Application (15 minutes)
 6. Questions and/or comments from community members and other participants
 7. Presentation by the Applicant on the Application before the Board for the Renewal and Amendment to the Type “A” Water Licence 2AM-LUP1520 (20 Minutes)
 8. Question and/or comments from community members and other participants
 9. Presentation from each intervening party pertaining to its mandate and role(s) in the water licensing process as well as an overview of their findings during their technical review (15 Minutes/Intervener).
 10. Questions and/or comments from community members and other participants
 11. Closing Remarks
 12. Closing Prayer



APPENDIX B: Exhibit List

Exhibits filed during the Nunavut Water Board Public Hearing held in Kugluktuk, Nunavut, January 15 and 16, 2020

Application to Amend and Renew Water Licence No: 2AM-LUP1520

Exhibit	Exhibit Description	Date	From
1	Hard Copy PowerPoint Presentation Lupin Mine Application for Renewal and Amendment of Licence 2AM-LUP1520 Mandalay Resources <i>(English and Inuinnaqtun)</i>	January 15, 2020	Lupin Mines Incorporated
2	Hard Copy Executive Summary Lupin Mine Final Closure and Reclamation Plan <i>(English)</i>	January 15, 2020	Lupin Mines Incorporated
3	Hard Copy Executive Summary Lupin Mine Final Closure and Reclamation Plan <i>(Inuktitut)</i>	January 15, 2020	Lupin Mines Incorporated
4	Hard Copy Executive Summary Lupin Mine Final Closure and Reclamation Plan <i>(Inuinnaqtun)</i>	January 15, 2020	Lupin Mines Incorporated
5	Hard Copy Executive Summary Lupin Mine Final Closure and Reclamation Plan <i>(French)</i>	January 15, 2020	Lupin Mines Incorporated
6	Hard Copy Technical Memo From: Alvin Tong (Stantec Consulting) To: Karyn Lewis (Lupin Mine Incorporated) Dated: January 9, 2020	January 15, 2020	Lupin Mines Incorporated



Exhibit	Exhibit Description	Date	From
	Reference: Supporting Information to the Contingency Contaminants Management Decision Matrix (English)		
7	Hard Copy Technical Memo From: Alvin Tong (Stantec Consulting) To: Karyn Lewis (Lupin Mine Incorporated) Dated: January 10, 2020 Reference: Supporting Information for the Dam Stability and Cover Design (English)	January 15, 2020	Lupin Mines Incorporated
8	Hard Copy Technical Memo From: Ken Bocking (Golder Associates) To: Karyn Lewis (Lupin Mine Incorporated) Dated: January 10, 2020 Reference: Supporting Information to the Conceptual Design for the Waste Rock “Dome” at Lupin Mine (English)	January 15, 2020	Lupin Mines Incorporated
9	Hard Copy Resumé of Ken Bocking, Golder Associates (English)	January 15, 2020	Lupin Mines Incorporated
10	Hard Copy Resumé of Jim McKinley, Stantec (English)	January 15, 2020	Lupin Mines Incorporated
11	Hard Copy Resumé of Alvin Tong, Stantec (English)	January 15, 2020	Lupin Mines Incorporated



Exhibit	Exhibit Description	Date	From
12	Electronic Copy ONLY Resumé of Sara Wilkins, Stantec	January 15, 2020	Lupin Mines Incorporated
13	Electronic Copy ONLY Summary of Additional Commitments and Issue Resolution Dated: January 15, 2020 (English)	January 15, 2020	Lupin Mines Incorporated
14	Electronic Copy ONLY Updated Lupin Mine Remediation Schedule January 2020 Dated: January 13, 2020 (English)	January 15, 2020	Lupin Mines Incorporated
15	Electronic Copy ONLY Security Framework Milestones for Draft Water Licence Framework (English)	January 15, 2020	Lupin Mines Incorporated
16	Hard Copy PowerPoint Presentation Crown-Indigenous Relations and Northern Affairs Canada Lupin Mine Inc. Renewal/Amendment Application for Water Licence 2AM-LUP1520 for Lupin Mine Project (English/Inuinnaqtun)	January 15, 2020	Crown-Indigenous Relations and Northern Affairs Canada
17	Hard Copy Executive Summary Crown-Indigenous Relations and Northern Affairs Canada (English)	January 15, 2020	Crown-Indigenous Relations and Northern Affairs Canada



Exhibit	Exhibit Description	Date	From
18	Hard Copy Executive Summary Crown-Indigenous Relations and Northern Affairs Canada <i>(Inuinnaqtun)</i>	January 15, 2020	Crown- Indigenous Relations and Northern Affairs Canada
19	Hard Copy Executive Summary Crown-Indigenous Relations and Northern Affairs Canada <i>(French)</i>	January 15, 2020	Crown- Indigenous Relations and Northern Affairs Canada
20	Hard Copy PowerPoint Presentation Mandalay Resources (Community Session) <i>(English)</i>	January 15, 2020	Lupin Mines Incorporated
21	Hard Copy PowerPoint Presentation Lupin Mine Presentation to the Nunavut Water Board by Environment and Climate Change Canada (Community Session) <i>(English/Inuinnaqtun)</i>	January 15, 2020	Environment and Climate Change Canada
22	Hard Copy PowerPoint Presentation Lupin Mine Presentation to the Nunavut Water Board by Environment and Climate Change Canada (Technical Comments) <i>(English/Inuinnaqtun)</i>	January 16, 2020	Environment and Climate Change Canada



Exhibit	Exhibit Description	Date	From
23	Hard Copy Executive Summary Final Written Submission to the Nunavut Water Board Lupin Mine Incorporated – Lupin Mine Project <i>(English/French)</i>	January 16, 2020	Environment and Climate Change Canada
24	Hard Copy Executive Summary Final Written Submission to the Nunavut Water Board Lupin Mine Incorporated – Lupin Mine Project <i>(Inuinnaqtun)</i>	January 16, 2020	Environment and Climate Change Canada
25	Electronic Copy ONLY Updated Reclamation Security Estimate (NOTE: mathematical error in Exhibit 15 corrected) <i>(English)</i>	January 16, 2020	Lupin Mines Incorporated
26	Electronic Copy ONLY Updated Security Reduction Schedule Dated: January 16, 2020 <i>(English)</i>	January 16, 2020	Lupin Mines Incorporated
27	Electronic Copy ONLY Joint Submission Security Reduction Schedule <i>(English)</i>	January 16, 2020	Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada



APPENDIX C: List of Acronyms

Short Form	Full Name
CIRNA or CIRNAC	Crown Indigenous Relations and Northern Affairs Canada
DIO	Designated Inuit Organization
ECCC	Environment and Climate Change Canada
GN	Government of Nunavut
KIA	Kitikmeot Inuit Association
LMI	Lupin Mines Incorporated, the Applicant
NIRB	Nunavut Impact Review Board
NPC	Nunavut Planning Commission
NWNSRTA	Nunavut Waters and Nunavut Surface Rights Tribunal Act
NWB	Nunavut Water Board
PHC	Pre-Hearing Conference
PH	Public Hearing
RIO	Regional Inuit Association
TM	Technical Meeting



APPENDIX D: List of Submissions and Correspondence

Application:

Cover letter and initial submission of Renewal/Amendment Type A Water Licence Application and Final Closure and Reclamation Plan for Lupin Mines Incorporated (LMI), Lupin Mine (NWB File No. 2AM-LUP1520), submitted **July 27, 2018**, dated October 4, 2017.

Application Submissions:

1. Submitted, **July 27, 2018**, by LMI, RE: . Lupin Mines Incorporated - July 2018 Application For Amendment; Box 9 and 23 List of Supplemental Documents to the Application.
2. Submitted, **July 27, 2018**, by LMI, RE: Licence No. 2AM-LUP1520 Amendment Application Executive Summary – English.
3. Submitted, **July 27, 2018**, by LMI, RE: Fig 01, Location Plan, dated January 25, 2018.
4. Submitted, **July 27, 2018**, by LMI, RE: Fig 02, Summarized Project History, dated January 25, 2018.
5. Submitted, **July 27, 2018**, by LMI, RE: Fig 03, General Arrangement Plan – Current Conditions, dated January 25, 2018.
6. Submitted, **July 27, 2018**, by LMI, RE: Fig 04, Mine and Mill Site Area – Current Conditions, dated January 25, 2018.
7. Submitted, **July 27, 2018**, by LMI, RE: Fig 05, Tailings Containment Area Approximate 2017 Work Areas, dated January 30, 2018.
8. Submitted, **July 27, 2018**, by LMI, RE: Fig 06, Underground Mine Working Plan, January 25, 2018.
9. Submitted, **July 27, 2018**, by LMI, RE: Fig 07, Location of Borrow Pits and Quarries, dated January 25, 2018.
10. Submitted, **July 27, 2018**, by LMI, RE: Fig 08, Monitoring Program Station, dated July 26, 2018.
11. Submitted, **July 27, 2018**, by LMI, RE: Fig 09, Historical TCA Water Discharge to the Environment, dated January 25, 2018.
12. Submitted, **July 27, 2018**, by LMI, RE: Fig 10, Mine and Mill Site Area – Post Closure, dated March 15, 2018.
13. Submitted, **July 27, 2018**, by LMI, RE: Fig 11, Tailings Containment Area – Post Closure, dated July 26.



14. Submitted, **July 27, 2018**, by LMI, RE: Fig 12, Post-Closure Monitoring Program Stations, dated March 28, 2018.
15. Submitted, **July 27, 2018**, by LMI, RE: Fig 13, Kinross 2006 West Zone Crown Pillar Stopes Underground Disposal Plan, dated March 8, 2018.
16. Submitted, **July 27, 2018**, by LMI, RE: FCRP Expanded West Zone Underground Disposal Plan, dated March 8, 2018.
17. Submitted, **July 27, 2018**, by LMI, RE: Final Closure and Reclamation Plan, Ver.0, dated July 2018.
18. Submitted, **July 27, 2018**, by LMI, RE: Appendix B Type A Water Licence and Land Lease Condition Concordance, dated July 2018.
19. Submitted, **July 27, 2018**, by LMI, RE: 5_G Reclaim_Cost_Estimate, dated July 27, 2018.
20. Submitted, **February 5, 2019**, by LMI, RE: Licence No. 2AM-LUP1520 Amendment Application Executive Summary – Inuinnaqtun.
21. Submitted, **February 5, 2019**, by LMI, RE: Licence No. 2AM-LUP1520 Amendment Application Executive Summary – Inuktitut.
22. Submitted, **February 5, 2019**, by LMI, RE: FCRP Executive Summary – Inuinnaqtun.
23. Submitted, **February 5, 2019**, by LMI, RE: FCRP Executive Summary – Inuktitut.
24. Submitted **February 5, 2019**, by LMI, RE: TABLE B - Licence Compliance Assessment and Status Report, July 2018.
25. Submitted **February 6, 2019**, by LMI, RE: TABLE B - Licence Compliance Assessment and Status Report, July 2018.

File Submissions & Correspondence:

1. Letter to Karyn Lewis, LMI, RE: Licence No. 2AM-LUP1520; Amendment and Renewal Application by Lupin Mines Incorporated; Lupin Mine Project, from, Richard Dwyer, Nunavut Water Board (NWB), dated **February 6, 2019**.
2. Cover E-mail: To Karyn Lewis, LMI & Lupin Distribution List, RE: 2AM-LUP1520 Completeness Check, from Richard Dwyer, NWB, dated **February 6, 2019**.
3. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Completeness Check, From Richard Dwyer, NWB, Dated **March 1, 2019**
4. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Completeness Check, From Richard Dwyer, NWB, Dated **March 4, 2019**



5. Letter to Karyn Lewis, LMI, RE: Type 'A' Water Licence 2AM-LUP1520; Application for Amendment and Renewal; Lupin Mines Incorporated; Lupin Mine Project. , from, Richard Dwyer, NWB, dated **March 29, 2019**.
6. Email to Karyn Lewis, LMI, RE:2AM-LUP1520 Notice of Application and Commencement of Technical Review Lupin Mines Incorporated, From Richard Dwyer, NWB, Dated **March 29, 2019**
7. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Notice of Application and Commencement of Technical Review Lupin Mines Incorporated, From Richard Dwyer, NWB, Dated **May 3, 2019**
8. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Notice of Application and Commencement of Technical Review Lupin Mines Incorporated, From Richard Dwyer, NWB, Dated **May 6, 2019**
9. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Application for Amendment and Renewal; Lupin Mines Incorporated; Lupin Mine Project; Technical Meeting and Pre-Hearing Conference Draft Agenda, From Richard Dwyer, NWB, Dated **May 23, 2019**
10. Letter to Karyn Lewis, LMI, RE: Type "A" Water Licence 2AM-LUP1520; Application for Amendment and Renewal; Lupin Mines Incorporated; Lupin Mine Project; Technical Meeting and Pre-Hearing Conference Draft Agenda, From Richard Dwyer, NWB, Dated **May 23, 2019**
11. Submitted **May 27, 2019** by LMI, RE: Environment and Climate Change Canada – Executive Summary for 2AM-LUP1520 – Lupin Mines Incorporated – Lupin Mine Project – Water Type A Licence Amendment and Renewal Technical Meeting
12. Submitted **May 27, 2019** by LMI, RE: Environment and Climate Change Canada's Presentation to the Nunavut Water Board Respecting the Lupin Mine Type "A" water Licence Amendment and Renewal
13. Email to Richard Dwyer, NWB, RE: Lupin, From Ian Parsons, AADNC/AADNC, Dated **May 29, 2019**
14. Email to Richard Dwyer, NWB, RE: 2AM-LUP1520 LMI Presentation Submission for the TM/PHC, From David Hohnstein, LMI, Dated **May 29, 2019**
15. Submitted **May 29, 2019** by LMI, RE: Application for Renewal and Amendment of Licence 2AM-LUP1520 Final Closure and Reclamation Plan NWB Technical Meeting June 6, 2019 Kugluktuk, Nunavut
16. Submitted **May 30, 2019** by LMI, RE: Avatinga and Hila Aadlanguqtiliqtuqlu Kaanatami – Aulapkaiyini Naittuq uumunnga 2AM-LUP1520 – Lupin-mi Uyarakhiurvinga Havakvinganit – Lupin-mi Uyarakhiurvinga Havauhikhaq – Imanga Imaittuunguyuq A Laisinga Aadlangurninnga Nutaanguffaarninngalu Qanuriliurutingilluuniit Katimaniq



17. Submitted **May 30, 2019** by LMI, RE: Avatiliqiyit Hila Aallannguqpalliyumilu Kanatami (ECCC) Takupkaqtittiyait talvunga Nunavunmi Imaliqiyit Katimayit Mighaagut taamna Lupin Uyataghiuqviat Type “A” Imaqmut Laisiutaanut Ihuaqhautit Nutaannguqtiqtauyullu
18. Submitted **May 30, 2019** by LMI, RE: Community Session Presentation Type “A” Water Licence Application Renewal and Amendment 2AM-LUP1520 by Lupin Mine Inc.
19. Submitted **May 31, 2019** by NWB, RE: FINAL AGENDA TECHNICAL MEETING AND PRE-HEARING CONFERENCE LUPIN MINE PROJECT WATER LICENCE
20. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Technical Meeting Final Agenda, From Richard Dwyer, NWB, Dated **May 31, 2019**
21. Letter to Karyn Lewis, LMI, RE: Type “A” Water Licence 2AM-LUP1520; Application for Amendment and Renewal; Lupin Mines Incorporated; Lupin Mine Project; Technical Meeting and Pre-Hearing Conference Final Agenda, From Richard Dwyer, NWB, Dated **May 31, 2019**
22. Submitted **June 6, 2019** by LMI, RE: Environnement et Changement climatique Canada – Sommaire pour le permis 2AM-LUP1520 – Lupin Mines Incorporated – Projet de la mine Lupin – Réunion technique sur la modification et le renouvellement du permis d’utilisation des eaux de type A
23. Submitted **June 4 2019** by LMI, RE: Nunavut Water Board (NWB) Technical Meeting and Pre-Hearing Conference Kugluktuk, Nunavut June 6-7, 2019
24. Submitted **June 4, 2019** by LMI RE: Nunavut Water Board (NWB) Technical Meeting and Pre-Hearing Conference Kugluktuk, Nunavut June 6-7, 2019
25. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Technical Meeting & Pre-Hearing Conference Presentations, From Richard Dwyer, NWB, Dated **June 4, 2019**
26. Submitted **June 6, 2019** by LMI, RE: LUPIN MINE - APPLICATION FOR RENEWAL AND AMENDMENT OF LICENCE 2AM-LUP1520 FINAL CLOSURE AND RECLAMATION PLAN LUPIN UYARAKHIUQVIK – TUKHIRAUT NUTANGURUTMUN IHUAQHIGIARUTOLU LAISA 2AM-LUP1520 KINGULLIQ UMIKNIA HALUMARTIQNIALU PARNAUT
27. Submitted **June 12, 2019** by LMI, RE: Technical Meeting 2AM-LUP1520 LUPIN MINES INCORPORATED KUGLUKTUK, Nunavut June 6, 2019 Registration Form Day One
28. Email to Karyn Lewis, LMI, RE: 2AM-LUP1520 Pre-Hearing Decision Lupin Mines Incorporated, From Richard Dwyer, NWB, Dated **June 18, 2019**
29. Letter to Lupin Mine Distribution List, RE: Pre-Hearing Conference Decision Report Regarding an Application for the Amendment and Renewal of Type “A” Water Licence No: 2AM-LUP1520, From Stephanie Autut, NWB, Dated **June 18, 2018**



30. Submitted **June 27, 2019** by LMI, RE: Nunavumi Immaliqiyit Katimayit (NWB) Nutauniqhanik Katimajutauyuq Naalaktititinagit Katimaqyuaqniqmik Kugluktumi, Nunavumi June 6-mit 7-mut 2019-mi
31. Submitted **June 27, 2019** by LMI, RE: SOMMAIRE (French Summary)
32. Submitted **June 27, 2019** by LMI, RE: AULAPKAIYINI NAITTUQ (Inuinnaqtun Summary)
33. Letter to Karyn Lewis, RE: 2AM-LUP1520 Technical Meeting Commitment Number 3 and 4 Responses – Waste Rock Information from Lupin Mine Tailings Containment Area, From Sara Wilkins, Stantec Consulting Ltd (SCL) and Jim Mckinley, SCL, Submitted **August 15, 2019** Dated **August 14, 2019**
34. E-mail to NWB, RE: Lupin Licence Framework (joint security licence framework submission extension request), from Ian Parsons, CIRNA, dated **August 15, 2019**.
35. E-mail to NWB, RE: Lupin Licence Framework (joint security licence framework submission extension request LMI confirmation), from Karyn Lewis, LMI, dated **August 15, 2019**.
36. Letter to Richard Dwyer, NWB, RE: Response to Lupin Mine Type A Water Licence Commitments (2AM-LUP1520), from Karyn Lewis, LMI, dated **October 15, 2019**.
37. Submitted **October 15, 2019**, by LMI, RE: Human Health and Ecological Risk Assessment (Golder Report) dated October 2019.
38. Submitted **October 15, 2019**, by LMI, RE: Conceptual Design for the Waste Rock “Dome” at Lupin Mine (Golder Technical Memo) dated October 15, 2019.
39. Submitted **October 15, 2019**, by LMI, RE: 2AM-LUP Technical Meeting Commitment Number 8 Response – Lupin Mine TCA Exposed Contaminants at Closure Water Levels, (Stantec Technical Memo), dated October 15, 2019.
40. Submitted **October 15, 2019**, by LMI, RE: 2AM-LUP1520 Technical Meeting Commitment Number 10 Response – Cover Data from Lupin Mine Tailings Containment Area (Stantec Technical Memo) dated October 15, 2019.
41. Submitted **October 15, 2019**, by LMI, RE: 2AM-LUP1520 Technical Meeting Commitment Number 11 Response – Geophysical Survey Lupin Mine Tailings Containment Area Dams (Stantec Technical Memo) dated October 15, 2019.
42. Submitted **October 15, 2019**, by LMI, RE: 2AM-LUP Technical Meeting Commitment Number 13 Response – Lupin Mine Tailings Containment Area Dams Thermal Modelling Results (Stantec Technical Memo) dated October 15, 2019.
43. E-mail to Karyn Lewis, Lupin Distribution List, RE: 2AM-LUP1520 amendment renewal Lupin Mine Inc. commitments, from Richard Dwyer, NWB, dated **October 16, 2019**.



44. Submitted **November 4, 2019**, by LMI, RE: Updated Security Estimate Reclamin Model (Golder Technical Memo) dated November 1, 2019.
45. E-mail to Karyn Lewis, Lupin Distribution List: RE: 2AM-LUP1520 LMI Commitment No. 2 Response, from Richard Dwyer, LMI, dated **November 6, 2019**.
46. Notice of Public Hearing to be held in Kugluktuk, Nunavut in the week of January 13, 2020 (January 15 and 16, 2020) published by the NWB, dated **November 8, 2019**.
47. Letter to Karyn Lewis, LMI, RE: Type “A” Water Licence 2AM-LUP1520 Renewal and Amendment Application, Lupin Mines Incorporated; Lupin Mine Project; Update on Public Hearing, from Richard Dwyer, NWB, dated **November 8, 2019**.
48. E-mail to Karyn Lewis, Lupin Distribution List, RE: 2AM-LUP1520 Lupin Mines Incorporated Water Licence Renewal Amendment Application Update on Public Hearing, from Richard Dwyer, NWB, dated **November 8, 2019**.
49. E-mail to NWB, RE: 2AM-LUP1520 LMI PHC Commitment Responses, from Matthew Deitcher, Golder (Consultant for LMI), dated **November 15, 2019**.
50. Submitted **November 15, 2019**, by LMI, RE: 2AM-LUP Technical Meeting Commitment Number 6 Response – Geotechnical Review on the Long-Term Stability of TCA Dams (Stantec Technical Memo) dated November 14, 2019.
51. Submitted **November 15, 2019**, by LMI, RE: 2AM-LUP Technical Meeting Commitment Number 12 Response – Risk Assessment on Two Dams in the Lupin Tailings Containment Area, dated November 13, 2019.
52. Submitted **November 15, 2019**, by LMI, RE: Draft Water Licence Framework Rev0, dated November 15, 2019.
53. Submitted **November 15, 2019**, by LMI, RE: Draft Water Licence Framework Rev0 Attachment A: Draft Water Licence Framework Rev0 Clean Version, dated November 15, 2019.
54. Submitted **November 15, 2019**, by LMI, RE: Draft Water Licence Framework Rev0 Attachment B: Draft Water Licence Framework Rev0 Track Change, dated November 15, 2019.
55. Submitted **November 15, 2019**, by LMI, RE: Draft Water Licence Framework Rev0 Attachment C: Schedule C – Conditions Applying to Security
56. E-mail to Matthew Deitcher, Golder (Consultant to LMI), Lupin Distribution List, RE: 2AM-LUP1520 LMI PHC Commitment Responses, from Kayla Carter, NWB, dated **November 18, 2019**.
57. E-mail to Richard Dwyer, NWB, RE: Extension request for CIRNA comments on 2AM-LUP commitment responses, from Sarah Forte, CIRNA, dated **December 3, 2019**.



58. E-mail to Sarah Forte, Ian Parson, Godwin Okonkwo, CIRNA, RE: Extension request for CIRNA comments on 2AM-LUP commitment responses (extension granted) from Richard Dwyer, NWB, dated **December 3, 2019**.
59. Letter to Richard Dwyer, NWB, RE: 2AM-LUP1520 – Review of documentation from Lupin Mines Inc. (LMI) in response to commitments made at the technical meeting – Lupin Mine Property – Kitikmeot Region, Nunavut, from Ian Parson, CIRNA, dated **December 6, 2019**.
60. Submitted **December 13, 2019**, by ECCC, RE: Lupin Mine Type A Water License Permit Application Final written submission by Environment and Climate Change Canada.
61. Submitted **December 18, 2019**, by CIRNA, RE: Final Submission for the Renewal and Amendment Application of Lupin Mines Inc.’s Water Licence 2AM-LUP1520 Crown-Indigenous Relations and Northern Affairs Canada.
62. E-mail to Karyn Lewis, LMI, Lupin Distribution List, RE: 2AM-LUP1520 Lupin Mines Incorporated Water Licence Renewal Amendment Application Update on Public Hearing, from Richard Dwyer, NWB, dated **December 18, 2019**.
63. Submitted **January 3, 2020**, by LMI, RE: LMI Final Submission (2AM-LUP1520)
64. E-mail to Karyn Lewis, LMI, Lupin Distribution List, RE: 2AM-LUP1520 final submission, from Richard Dwyer, NWB, dated **January 3, 2020**.
65. Submitted **January 7, 2020**, by ECCC, RE: Uvuuna: 2AM-LUP1520 – Lupin Mine Timiuyuq – Lupin Mine – Qanurininga A Immaqmiq Aturiami Laiyuq (Final Written Submission in Inuinnaqtun)
66. Submitted **January 7, 2020**, by ECCC, RE: Executive Summary (English, French, Inuinnaqtun)
67. Letter to Nunavut Water Board, RE: Meteorological Service of Canada (MSC) at Environment and Climate Change Canada (ECCC) owns and operates the Automatic Weather Station (AWS) located at Lupin Mine, from Claudie Carpenter, ECCC, submitted **January 7, 2020** dated December 30, 2019.
68. Letter to Karyn Lewis, LMI, RE: Type “A” Water Licence 2AM-LUP1520 Renewal and Amendment Application, Lupin Mines Incorporated; Lupin Mine Project; Public Hearing Draft Agenda, from Richard Dwyer, NWB, dated **January 8, 2020**.
69. E-mail to Karyn Lewis, LMI, Lupin Distribution List, RE: 2AM-LUP1520 Public Hearing Draft Agenda, from Richard Dwyer, NWB, dated **January 8, 2020**.
70. Submitted **January 9, 2020**, by NWB, RE: Community Session Presentation Type “A” Water Licence Application Renewal and Amendment 2AM-LUP1520 by Lupin Mine Inc.



71. Submitted **January 10, 2020**, by Mandalay Resources, RE: Mandalay Resources Community Presentation.
72. Submitted **January 10, 2020**, by LMI, RE: Supporting Information To The Conceptual Design For The Waste Rock “Dome” At Lupin Mine (Golder Technical Memo).
73. Submitted **January 10, 2020**, by LMI, RE: Supporting Information to the Contingency Contaminants Management Decision Matrix (Stantec Memo).
74. Submitted **January 10, 2020**, by LMI, RE: Supporting Information for the Dam Stability and Cover Design (Stantec Memo).
75. Submitted **January 10, 2020**, by CIRNA, RE: Lupin Mine Inc. Renewal/Amendment Application for Water Licence 2AM-LUP1520 for Lupin Mine Project Nunavut Water Board Public Hearing Kugluktuk, January 15-16, 2020.
76. Submitted **January 10, 2020**, by CIRNA, RE: Executive Summary Final Submission for the Renewal and Amendment Application of Lupin Mines Inc.’s Water Licence 2AM-LUP1520.
77. E-mail to NWB, RE: CIRNA Public Hearing Attendees, from Godwin Okonkwo, CIRNA, dated **January 10, 2020**.
78. Submitted **January 10, 2020**, by ECCC, RE: Lupin Mine Presentation to the Nunavut Water Board by Environment and Climate Change Canada 2AM-LUP1520 -Public Hearing/InuknikNaalaktitivik January 15 to 16, 2020 Kugluktuk, NU/ Quqluqtumi, Nunavumi (Final Presentation).
79. Submitted January 10, 2020, by ECCC, RE: Lupin Mine Presentation to the Nunavut Water Board by Environment and Climate Change Canada 2AM-LUP1520 -Public Hearing/InuknikNaalaktitivik January 15 to 16, 2020 Kugluktuk, NU/ Quqluqtumi, Nunavumi (Community Presentation).
80. Submitted **January 10, 2020**, by LMI, RE: LUPIN MINE - APPLICATION FOR RENEWAL AND AMENDMENT OF LICENCE 2AM-LUP1520 FINAL CLOSURE AND RECLAMATION PLAN.
81. Submitted **January 10, 2020**, by LMI, RE: Executive Summary (English, French, Inuktitut, Inuinnaqtun).
82. E-mail to Karyn Lewis, LMI, Lupin Distribution List, RE: 2AM-LUP1520 Public Hearing Presentations, from Richard Dwyer, dated **January 10, 2020**.
83. E-mail to Richard Dwyer, NWB, RE: ECCC Public Hearing Attendees, from Eva Walker, ECCC, dated **January 13, 2020**.
84. Letter to Karyn Lewis, LMI, RE: Type “A” Water Licence 2AM-LUP1520 Renewal and Amendment Application, Lupin Mines Incorporated; Lupin Mine Project; Public Hearing Final Agenda, from Richard Dwyer, NWB, dated **January 13, 2020**.



85. E-mail to Karyn Lewis, LMI, Lupin Distribution List, RE: 2AM-LUP1520 Public Hearing Final Agenda, from Richard Dwyer, NWB, dated **January 13, 2020**.
86. Submitted **January 15, 2020**, by LMI, RE: Summary of Additional Commitments and Issue Resolution.
87. Submitted **January 15, 2020**, by LMI, RE: Lupin Mine Remediation Schedule.
88. Submitted **January 15, 2020**, by LMI, CIRNA, RE: Security Framework Milestones for Draft Water Licence Framework.
89. Submitted **January 15, 2020**, by LMI, RE: Reclaim7 FCRP Update
90. Submitted **January 16, 2020**, by LMI, CIRNA, RE: Joint Submission of Lupin Mines Incorporated and Crown-Indigenous Relations and Northern Affairs Canada regarding Security Reduction Framework.
91. Submitted **January 16, 2020**, by LMI, CIRNA, RE: Security Framework Milestones for Draft Water Licence Framework.

APPENDIX E: Sign-in Sheets - List of Participants at the Public Hearing

PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
Registration Form Day One

No.	First Name	Last Name	Organization/ Address	Phone	Fax	E-mail
1.	ANNE	WILSON	ELCC	867-765-8480	-	anne.wilson2@canada.ca
2.	Eva	Walker	ELCC	867-444-0436	-	eva.walker@canada.ca
3.	Gerd	WIATZKA	ARCADIS	647 292 5146	-	Gerd.Wiatzka@arcadis.com
4.	Nash	Nash	CIRNAC	867-222-5540	-	nash-nash@canada.ca
5.	Godwin	OKONKWO	CIRNAC	867-222-1668	-	godwin.okonkwo@canada.ca
6.	Karen	Lewis	Lupin Mine	779 386 7340	-	K.Lewis@mandalynresources.ca
7.	Sara	Wilkins	Stantec	403 807 7786	-	Sara.wilkins@stantec.com
8.	Ken	Bocking	Golder	905 334 3942	-	kbocking@golder.com
9.	Bruce	CHOKAK				BRUCE CHOKAK @ FACEBOOK.COM
10.	Betty	Kiyogaa	Kugluktuk			
11.	John	Himiak				
12.	Donna	→				
13.	Rosemarie	Nash	414			
14.	Jim	McKinley	Stantec	403 808 8359		jim.mckinley@stantec.com
15.	GORDON	WILSON				
16.	Agnes	Allen				
17.	Bruce	Hikhaithok				
18.	Lena	Hikhaithok				
19.	Carl	Atatahak				
20.	Diana	(B)				
21.	BRANK	INAKOAK				
22.	Bjorn	Angivana				
23.	Lisa					
24.	JAC	LIANA	M'DOUGHER			



PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020

Registration Form Day One

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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
Registration Form Day One

No.	First Name	Last Name	Organization/ Address	Phone	Fax	E-mail
49.	Chouhel	Kouhel	LMI	778 899 6762		chouhel@laurson.com
50.	Blabette	Labat	LMI	647 278 8854		b.labat@laurson.com
51.	Deve Hobstein		LMI	780 906 8273		(780) 906 8273
52.	Alvin	Tong	Stantec	604 630 5838		alvin.tong@stantec.com
53.	Agnes	Allen	elder			
54.	Walter	Taktogen	"			
55.	Walter	Taktogen	Kugluktuk	867 982 2320		
56.						
57.	Helen	Hunahda				
58.	Walter		Kugluktuk			
59.	Glen		"			
60.	Ida	Okheera	Kugluktuk			
61.	Allen	Alsona	Kugluktuk	867-982 5680		
62.	CHARLIE	WAWANIK	KUGLUKTUK	982 33 93		
63.	JOHN	AVI	ICLI	111		
64.	Jayke	Palongayak	elder	582-3944 - cell 982-8119		
65.	Robert	Aniuvana	univimuk Rd.			
66.	Peter	Kakolau	Kugluktuk	982-2546		
67.	Gordon	Riff	Kugluktuk			
68.	Anne	Riff	"			
69.	Margie	Pikengang	305			
70.	Derin	Kallak	Kugluktuk	867-447-7416		
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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
Registration Form Day Two

No.	First Name	Last Name	Organization/ Address	Phone	Fax	E-mail
1.	Eva	Walker	ECCC	867 444-0436	-	eva.walker@canada.ca
2.	John	Itimiak				
3.	Godwin	Okonkwo	CIRNAC	867 222 1668		godwin.okonkwo@canada.ca
4.	Noah	Noah	CIRNAC	✓		
5.	Gerard	Wiatzka	Arcadis	✓		
6.	Betty Kippagani	Kugluktuk				
7.	Rose Wignall	Ulu				
8.	Sara Wilkins	Wilkins	Stantec	403 807 7786	-	sara.wilkins@stantec.com
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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
Registration Form Day Two

No.	First Name	Last Name	Organization/ Address	Phone	Fax	E-mail
49.	Jim	McKintley	Stantec	403-608-8385		jim.mckintley@stantec.com
50.	Alvin	Tong	↓	↓		↓
51.	Ken	Bockings	Golder	905-334-3942		kbockings@golder.com
52.	Anne	Riffi	Kugluktuk	—		—
53.	Dan	Wickham	—	—		—
54.	Dave	Hohnsbein	LMT	780-906-8273		
55.	Belinda	Labart	LMT	647-278-8519		b.labart@mandalaycorp.ca
56.	Karen	Leung	LMT	773-386-7340		karen@mandalaycorp.ca
57.	Jayko	Kellogg	Kugluktuk			
58.	Bennett	Baker				
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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
Registration Form Community Session

No.	First Name	Last Name	Organization/ Address	Phone	Fax	E-mail
1.	Agnes	Allen				
2.	Janet Nance					
3.	Alvin	Tong	Stantec	604 630 8333		alvin-tong@stantec.com
4.	Marjorie	Hausigat	Kugluktuk			
5.	Colin	"	"			
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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
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PUBLIC HEARING LUPIN MINE
Kugluktuk, Nunavut January 15 – 26, 2020
Registration Form Community Session

No.	First Name	Last Name	Organization/ Address	Phone	Fax	E-mail
49.	Leann	Naluyok	160 Kakayak			
50.	Robert	Angirama				
51.	VIETON					
52.	Dolores	MIPANOWAK	Kugluktuk			
53.	Anna W	ECCC				
54.	Evu Walker	ECCC				
55.	Boh	Himiak				
56.	Ken	Bocking	Goldor	905 394 3742		kbocking@golder.com
57.	Veronica	Himeak	236 Kakayak	none	none	donis-veronica@hotmail.com
58.	Allen	Kellogg				
59.	Doris	Kallak	209 Wiggins St	1867-447-7446		
60.	Willie	Pagum	121 Spring St			
61.	Scott		115			
62.	John		2975 Add St			
63.	Tony	Kunguk	14 NATEIK ST	Box 103 Xob 080		
64.	DEDEGALAK	ENOK	Kug	2575		
65.	Richard	Kaiyocana	Kug			
66.	Dave	Hohnstein	LMI			
67.	Godwin	Okonkwo	CIRNAC			
68.	Noah	Noah	CIRNAC			
69.	Gerd	Wiatka	Arcaadis			
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