



May 5, 2026

Mr. Richard Dwyer
Manager of Licensing,
Nunavut Water Board
Delivered electronically to: richard.dwyer@nwb-oen.ca

Re: 2AM-LUP2032 – Lupin Discharge Amendment Response

Dear Mr. Dwyer,

Lupin Mines Incorporated (LMI), a wholly owned, indirect subsidiary of Alkane Resources Incorporated (Alkane) is pleased to present the following submission in response to comments received from regulatory agencies regarding the discharge variance request for Pond 2 at the Lupin Mine, originally submitted on December 17, 2025. This report detailed rationale for an early discharge request, with the goal of completing necessary works to align with closure planning in 2026, while providing assurance of environmental protection to the receiving environment.

At the recommendation of the Department of Fisheries and Oceans (DFO), LMI and SLR Consulting (SLR) have completed a Request for Review (RFR), outlining monitoring and mitigative measures that will be followed to ensure the protection of fish and fish habitat during the restricted early discharge period prior to July 15. The RFR requests that the discharge period begins on June 15 to allow for ice-free conditions and the implementation of monitoring measures in the receiving environment. LMI requests that the NWB considers the responses to the comments below with this new June 15 discharge date request in mind, rather than the May date requested in the original submission. The RFR has been submitted directly to DFO on May 05, 20206 and is also included in this submission.

The table below details LMI's responses to comments and recommendations from reviewers.

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Table 1. LMI Response to Discharge Variance Request Review Comments

REVIEWER	ITEM #	SUBJECT	COMMENT	RECOMMENDATION	LMI RESPONSE
CIRNAC	1	Effluent Limits (Part E, Item 6)	Licensee cited baseline limits but not stricter limits applicable since June 2021 (e.g., As 0.30/0.60 mg/L; CN 0.50/1.00; NH3 (un-ionized) 0.50/1.00) until Recognized Closed Mine.	Explicitly incorporate all Part E, Item 6 limits into the discharge plan and demonstrate compliance prior to and during discharge.	<i>LMI acknowledges that Part E, Item 6 was not included in the discharge monitoring plan. Given that the Lupin Mine has received Recognized Closed Mine status per Feb. 21, 2022, ECCC letter, these limits do not apply.</i>
CIRNAC	2	Un-ionized Ammonia Monitoring	Monitoring program omits un-ionized ammonia, which requires calculation based on total ammonia, pH, and temperature.	Include un-ionized ammonia monitoring/calculations and report results at LUP-10 and applicable downstream stations.	<i>Given that the Lupin Mine has received Recognized Closed Mine status per Feb. 21, 2022, ECCC letter, there is no requirement to incorporate un-ionized ammonia monitoring based on total ammonia, pH, and temperature into the monitoring program.</i>
CIRNAC	3	MDMER Applicability	Submission does not acknowledge Metal and Diamond Mining Effluent Regulations applicability prior to Recognized Closed Mine, as noted in NWB ROD.	Confirm MDMER applicability and demonstrate how compliance will be verified during early discharge.	<i>As stated above, the MDMER does not apply as the Lupin Mine has received Recognized Closed Mine status per Feb. 21, 2022, ECCC letter.</i>



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CIRNAC	4	Early-season pH and Treatment Readiness	2025 pH data showed ~4 early-season; soda ash treatment was required in September to meet licence criteria.	Provide lab-verified pre-discharge pH meeting licence criteria and confirm on-site treatment capacity (soda ash inventory and dosing plan).	<i>The dosing plan for soda ash treatment will vary, dependent of on-site conditions at the time of dosing. Pre-discharge water quality monitoring results will be provided as per permit requirements. Permit conditions do not require supplying soda ash inventory and dosing plan prior to discharge; provided compliant lab results are provided for required water quality parameters as outlined in Part E, Item 5.</i>
CIRNAC	5	Fish Timing and Flow Ramping	Early freshet discharge may overlap fish migration; Part G, Item 11 restricts instream activity during migration unless otherwise approved by NWB and DFO.	Coordinate with DFO; implement stepwise flow ramping and adaptive reduction procedures to mitigate potential effects.	<i>A DFO Request for Review (RFR) has been completed. The RFR requests a June 15 discharge date, and outlines monitoring and mitigative measures to protect fish and fish habitat.</i>



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CIRNAC	6	Erosion and Sediment Control (ESC) Documentation	Outfall armoring/energy dissipation and inspection details referenced but supporting documentation not attached.	Submit detailed ESC designs (armoring, riprap sizing) and weekly inspection schedules consistent with Schedule G reporting.	<p><i>Part G, Item 5 of the Licence requires the Licensee to implement sediment and erosion control (ESC) measures prior to and during construction activities, as well as during reclamation and closure, to prevent the entry of sediment into water. These control measures must be inspected daily for signs of erosion, maintained as required, and managed to ensure sediment does not enter receiving waters.</i></p> <p><i>LMI commits to implementing and adhering to this monitoring and inspection schedule for the duration of the discharge period. Records of this monitoring will be documented and submitted as part of the 2026 Annual Report.</i></p> <p><i>LMI does not consider the discharge to warrant submission of a separate, detailed ESC design, as this is not a requirement of the Licence and has not been required or submitted for previous discharges of comparable water volumes. A TCA Erosion and Sediment Control Plan was submitted to the NWB in October 2025.</i></p>
CIRNAC	7	Tailings Exposure Readiness & Adaptive Management	Early drawdown exposes tailings sooner; adaptive management commitments in NWB ROD (cover contingency, cross-sections, erosion control, Dam K/M details)	Provide technical design memos/drawings for tailings cover and Dam K/M work prior to discharge.	<p><i>Exposed tailings cannot be covered prior to compliance discharge. LMI will provide as-built reports for tailing cover and work completed on the TCA prior to discharge.</i></p> <p><i>There are no works currently planned at K Dam.</i></p>



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			should be confirmed as complete/ready.		
CIRNAC	8	Community Communication Requirements	Early discharge changes typical timing and requires community notification under Part B, Item 20.	Provide plain-language communications (Inuinnaqtun/Inuktitut/English) to community of Kugluktuk prior to approval.	<i>A plain language summary has been translated to Inuktitut and is included in this submission. LMI has been unable to secure translation services to Inuinnaqtun.</i>
CIRNAC	9	Date Inconsistency	Submission inconsistently references May 2025 and May 1, 2026 as proposed discharge start date.	Correct proposed discharge year throughout submission to prevent administrative error.	<i>DFO Request for Review (RFR) has been completed. The RFR requests a June 15 discharge date, and outlines monitoring and mitigative measures to protect fish and fish habitat.</i>
CIRNAC	10	Licensing fees.	Confirm that licensing fees have been paid.		<i>LMI confirms that all licensing fees have been paid.</i>
ECCC	1	MDMER Applicability	The Proponent is proposing to increase discharge volumes to fully empty Pond 2 within a given year. ECCC notes that the Proponent received Recognized closed mine (RCM) status in February 2022. While the discharge limits under the current water licence are consistent with the Metal and Diamond Mining Effluent Regulations (MDMER)		<i>LMI thanks ECCC for providing this letter, confirming Closed Mine Status and confirming the applicability of the MDMER limits.</i>

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			limits in place prior to the 2021 updated limits, mines with RCM status are no longer subject to MDMER effluent limits and are instead subject to the general prohibition of the Fisheries Act. Please refer to ECCC's letter issued to the Proponent on February 21, 2022, which outlines regulatory requirements applicable to effluent discharges following confirmation of RCM status.		
DFO	1	Fish Bearing Capacity and Impacts during Spawning	The Lupin Discharge Variance Request for Water Licence (file number: 2AM-LUP2032) discusses the discharge of Pond 2 effluent. Impacts to fish and fish habitat can occur during discharge activities through loss of riparian habitat due to excess water levels, erosion and sedimentation, disturbance to fish and fish habitat during	In order to comply with the Fisheries Act, it is recommended that the Proponent follow DFO's protective measures for fish and fish habitat and standard codes of practice which can be found on DFO's website (https://www.dfo-mpo.gc.ca/pnw-ppe/measure-mesures-eng.html and https://www.dfo-mpo.gc.ca/pnw-ppe/practice-practique-eng.html).	<i>A DFO Request for Review (RFR) has been completed. The RFR requests a June 15 discharge date, and outlines monitoring and mitigative measures to protect fish and fish habitat during the restricted activity timing window.</i>



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			sensitive life stages, and increased water velocities.		
DFO	2			Recommendation: Proponents are also asked to respect the NU in-water works restricted activity timing windows (Projects Near Water - Nunavut Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (dfo-mpo.gc.ca) to protect fish during spawning and incubation periods when spawning fish, eggs and fry are vulnerable to disturbance or sediment	<i>A DFO Request for Review (RFR) has been completed. The RFR requests a June 15 discharge date, and outlines monitoring and mitigative measures to protect fish and fish habitat during the restricted activity timing window.</i>
DFO	3			Recommendation: Based on the information that was submitted, DFO recommends the proponent to complete and submit a request for review form (https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-004-eng.html) as the application meets the criteria for a site-specific review, as described on DFO's website (<a 415="" 579="" 880="" 898"="" data-label="Text" href="https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-</td> <td><i>LMI has retained the services of a consulting firm specializing in fisheries and aquatic environments to ensure that protection measures during restricted activity timing windows are managed appropriately. Further to discussions with DFO, LMI intends to submit a project Request for Review as recommended.</i></td> </tr> </tbody> </table> </div> <div data-bbox="> <p>LUPIN MINES INCORPORATED.</p> 	

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				demande-d-examen-003-eng.html).	
DFO	4			Recommendation: It is also the proponent's Duty to Notify DFO if they have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption, or the destruction of fish habitat. Such notification should be directed to DFO.ARCEMTriage-TriageGEARC.MPO@dfo-mpo.gc.ca	<i>LMI acknowledges this requirement and contact information.</i>

LMI looks forward to continued discussions with the Nunavut Water Board and other regulatory agencies regarding this discharge variance request, to achieve closure objectives.

Should you have any questions or additional comments, please do not hesitate to reach out to me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Felix Mensah-Yeboah'.

Felix Mensah-Yeboah

Director, Mine Closure and Asset Management
Alkane Resources Inc.

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Cc:

Kellie Leedham, Max Brownhill; Falkirk Environmental Consultants
Jon Melnyk; JDS Energy and Mining Inc.

Attachments:

- MDMER - ECCC Letter to LUPIN - Recognized Closed Mine status 2022-02-21
- Alkane_LUP2032_Discharge Variance Plain Language Summary_Inuktituk.docx
- 052026_Lupin Mine Closure Project_RfR

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