Lupin Mines Incorporated

August 12, 2015

Thomas Kabloona Chairperson Nunavut Water Board P.O. Box 119 Gjoa Haven, NU, XOA 1J0

Re: 2AM-LUP1520 – Lupin Mine Project – Lupin Mines Incorporated (LMI) – Renewal and Amendment Application – Additional Comments on Issue of Quantum of Security

Dear Mr. Kabloona:

Lupin Mines Incorporated ("LMI") submits that the \$25.5 million security required by the Nunavut Water Board (the "Board") in the Type A Water Licence as recommended by the Board on May 11, 2015 (the "Licence") is and continues to be an appropriate and conservative estimate of the current outstanding reclamation liability at the Lupin Mine, in compliance with the Mine Site Reclamation Policy for Nunavut (2002):

the total financial security for final reclamation required at any time during the life of the mine should be equal to the total outstanding reclamation liability for land and water combined (calculated at the beginning of the work year, to be sufficient to cover the highest liability over that time period).

We respectfully object to the reconsideration of the amount of security. While the form of security may be determined by either the Board or the Minister, it is clear that the Board has the exclusive jurisdiction to determine the amount in accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and *Nunavut Waters Regulations*. This division is also plainly stated in the Mine Site Reclamation Policy for Nunavut (2002): "For water licences, the Nunavut Water Board determines the amount of security, while the Minister of DIAND determines the form."

We submit the Minister's jurisdiction is limited to the decision to approve or disapprove a water licence. It is not an appeal of the quantum for security. In *CanZinco Ltd. v. Canada (Minister of Indian Affairs and Northern Development)*, [2005] 1 FCR 454, 2004 FC 1264 (CanLII), the Minister took the position before the Federal Court of Canada that the Board, and not the Minister, has the jurisdiction to determine the amount of security to be provided by a licensee because the amount of security required was a question of financial viability, estimated cost of work and risk assessment, all fact-based questions that were better suited to the Board's consideration. As submitted by the Minister in that case, it would be inconsistent with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*'s objects and the Board's jurisdiction

for the Minister to set the amount of security when the question could be decided by the Board, a tribunal having conservation, waste management and water usage experience.

The preparation of the Licence was preceded by a public hearing, a technical meeting, and written submissions. AANDC had the opportunity to be heard, to present evidence and did participate in the process. The process was thorough and fair. The Board's decision on the quantum of security and its reasons of May 2015 articulated its assessment of the factual issues relating to the amount of security. The Board carefully weighed the evidence and did not recommend an increase. In our respectful submission the Board's original ruling is correct.

We submit that AANDC's submission of August 4, 2015 was not responsive to the Board request for further submissions on, "ONLY the issue of the amount of security to be fixed under the proposed Licence" and that those submissions should "consider and reflect the full context of the proposed Licence", including the fact that the Licence is (a) limited to a five year term; and (b) water use and waste deposit authorized under the proposed Licence is restricted to care and maintenance and a ramp up phase. Notably, the Licence does not authorize a return to full operations and provides that an amendment application, with an updated reclamation and closure plan and quantum of security estimate, would be required before the mine could return to full operations. AANDC failed to provide new submissions pertaining to security in the context of the specific licence issued. Rather, AANDC has re-packaged and re-argued its original position which was already considered by the Board.

We submit that the ARCADIS Canada Inc. Letter Regarding the Quantum of Security for the Lupin Mine (July 30, 2015), failed to consider much of the evidence presented by LMI during the public hearings (including transcripts) and was authored by an individual that did not attend the public hearings and, accordingly, no weight should be given to them. In order to ensure that AANDC understands the information that has been presented to the Board to date, we have responded to each of the statements in AANDC's August 4, 2015 submission in the attached materials.

The Board should dismiss AANDC's request to keep the water licensing process open until after November 2015 when they intend to produce an updated reclamation estimate. There are no new circumstances which would justify re-opening the evidence before the Board to permit AANDC to prepare evidence it could have submitted during the normal course of procedure. Administrative fairness requires the process to be concluded after the procedures and hearing process was followed, with the exception of unusual and limited circumstances which engage the Board's jurisdiction to reconsider an issue. AANDC's proposal would undermine the fairness and efficacy of the Board's process and is directly contrary to the Board's direction with respect to the scope of its reconsideration of the quantum of the security.

LMI's temporary limited scope Type A Water Licence will expire on August 19, 2015. The continued delay of the Licence is serious and is causing significant challenges to LMI's ongoing efforts to ensure compliance with regulatory requirements. The current regulatory uncertainty has caused significant financial harm to LMI and is hindering the project's potential contribution to economic development in the North and in the Kitikmeot region.

As such, LMI requests the Board to provide the Licence to the Minister as soon as possible, on the same terms and conditions proposed on May 11, 2015, and to decline AANDC's request to increase the amount of reclamation security reflected in the Licence. Should you have any questions or concerns regarding these submissions, please contact myself at pdowney@elginmining.com.

Yours truly,

Patrick Downey

President

Attachment A – Responses to ARCADIS Canada Inc. Letter Regarding the Quantum of Security (July 30, 2015)

AANDC Submission	LMI Response
ARCADIS Response to Item 1	With respect to the issue of progressive reclamation, ARCADIS is incorrect that no reclamation work has been undertaken at the site for the last several years. There is evidence that reclamation work has been undertaken in the following documents on the NWB Public Registry:
	 Page 4 of the 2013 Annual Report submitted to the NWB and distributed to AANDC stations that progressive reclamation activities during 2013 consisted of backhauling 51 mega bags of waste from the site. Pages 3-4 of the 2014 Annual Report submitted to the NWB and distributed to AANDC provides a detailed list of the progressive reclamation activities undertaken during 2014, including removal and decommissioning of several tanks and piping. As well the photographs shown by LMI during the hearing provides evidence of the work that has been done to date. As an example, in recent years a hazardous waste area has been created and waste has been collated within that area.
	With respect for the potential for changing site conditions, as acknowledged by ARCADIS, annual monitoring (including detailed site wide inspections by a professional geotechnical engineer) is required under the Water Licence. It is not appropriate to apply a contingency amount in the estimate on the assumption that the monitoring is not carried out and that there are potential serious failings of facilities at site, when there is clear evidence on the record to the contrary. LMI has filed annual geotechnical inspections and has undertaken the recommended repairs and maintenance in a timely way. As an example, the maintenance work recommended in the October 2014 Sewage Pond Dam Geotechnical Inspection and the Addendum Memo 2014 Lupin Fuel Tank Farm Inspection will be completed during the summer 2015 field season as recommended. Geotechnical inspections of the tailings and sewage treatment area carried out since 1997 are available on the NWB public registry. ¹
	With respect to the issue of unit rates, ARCADIS asserts that LMI has not provided any backup or rationale for the unit rates used in their latest reclamation cost estimate. This is not accurate. The rates were prepared by professional engineers and contractors with relevant Northern experience. They were specifically developed using a work breakdown structure format (WBF) for each relevant area. This is an accepted method for developing comprehensive estimates. Man hours and equipment rates were built into each WBF to develop a comprehensive unit rate. That rate was then checked against relevant rates from other projects or studies in remote Northern locations. In certain areas (such as tailings cover) there were actual rates available as this work had been completed in previous years. These actual rates were utilized with applicable inflation factors. This approach is all clearly stated within the RECLAIM estimate and accompanying documents. The ARCADIS consultant (Randy Knapp, P.Eng) stated during the hearings that LMI's estimate in general was well done.

 $^{1}\underline{\text{ftp://ftp.nwb-oen.ca/1}\%20PRUC\%20PUBLIC\%20REGISTRY/2\%20MINING\%20MILLING/2A/2AM\%20-}\underline{\%20Mining/2AM-}$

<u>LUP1520%20LMI/3%20TECH/4%20WASTE%20DISP%20%28D%29%20%28E%29/D%206%28g%29%20Annual%20Geotechnical%20Inspection.</u>

This approach is consistent with the Mine Site Reclamation Policy for Nunavut (INAC, 2002):

"estimates of reclamation costs, for the purposes of financial security, should be based on the cost of having the necessary reclamation work done by a thirdparty contractor if the operator defaults. The estimates should also include contingency factors appropriate to the particular work to be undertaken."

Please see also the excerpts from the transcripts below, where Patrick Downey of LMI gave direct evidence on the matter of unit rates:

TYPE 'A' WATER LICENCE NO. 2AM-LUP0914, RENEWAL-AMENDMENT APPLICATION Vol. 1, February 4, 2015 at pp. 59-60, ll. 14-26 and 1-7:

In regards to the financial security, we have submitted a detailed cost estimate. We base this on third-party contractor quotes and engineering studies and engineering reviews. The contractor went to site twice. He went through the data that we provided him in terms of site reclamation, requirements, tailings cover, removal of equipment, he went into the mill, was able to see all of the mill, was able to see what was already stored in -- in sea cans to be shipped off site. All parties contributing to this estimate have full and free access to the site to verify and develop their unit costs and quantities. This contractor actually went out for quotes to do this work. They reflect that or he updated the rates or reviewed the rates that was within an historical estimate. The mob. and demob. costs are based on actual quotes and additional input from the contractor and consultants. Our quantities of (sic) updated to accurately -- accurately reflect the engineering studies.

Costs were further addressed at pages 62 and 91-92, when Patrick Downey confirmed quotes were from Carter Construction and Delta Engineering and were based on the two separate visits examining the work and the reports LMI gave them.

ARCADIS Response to Item 1.1

With respect to the issue of fuel inventories, LMI is undertaking a detailed fuel drum inventory during August 2015 and will be reporting the results to AANDC and the NWB shortly under separate cover.

Regardless, the potential reclamation liability relating to fuel in drums on site is very low, as per the following exchange during the public hearings:

MS. COSTELLO: Thank you. Thank you Mr. Chair. The issue of the volume -- Karen Costello for Aboriginal Affairs. The issue of how much is -- is stored is insignificant. What the issue is, is the preparation for a spill and any issues that might be related to -- to satisfying the -- the commitments of the licence. MR. DOWNEY: Patrick Downey, LMI, Mr. Chairman. I'd like to clarify that these tanks are stored within secondary containment or are doubled-walled tanks, per the code.

As such, there is no reasonable risk of a spill and the drums are being managed in full compliance with the regulations. During AANDC's recent July 2015 inspection, there was no concern that fuel drums were not being managed in compliance.

There is no policy that requires AANDC to assume that fuel on this or any other site is unusable in reclamation estimates. As confirmed during the licencing process, the approach to fuel in the LMI estimate reflects standard professional practice under the RECLAIM model and has been applied at other mine sites in the North and Nunavut. There is no reasonable basis for concern that the fuel at site is unusable or that it may be

rendered unusable in the near term. As set out during the hearings LMI gave evidence that the fuel is indeed in good usable condition and regularly tested. During 2014-2015, Lupin fuel was used by AANDC's contractors during their reclamation of the Contowoyto Weather Station and they also confirmed it was in good usable condition. LMI is aware that the fuel at that station had not been tested for many years (the fuel had been there since at least the 1980s and stored in single walled drums rather than an engineered facility to current regulatory standards, as is the case with the Lupin fuel) and so it was not in a condition appropriate for use. This is not the case at Lupin and so it is unreasonable to include this assumption in the ARCADIS estimate. There is also no reasonable basis for concern that the fuel currently at site would not be available to the Crown in the event this was necessary. As confirmed during the public hearing, there is no current security interest over the fuel and there are no potential third party claims or other parties with first rights over the fuel. The Board fully considered these facts and included a requirement that LMI provide reconfirmation of quality and quantity of fuel as part of a new RECLAIM estimate to be submitted to the Board by September 30, 2017. As part of the monitoring process, LMI does and will continue to provide updates when requested as to the amount of fuel in tanks at site. LMI is currently on site and using the fuel which remains in good condition for power generation and the surface fleet. During the 2015 field season we will take samples and provide confirmation of this to AANDC. AANDC contractors have recently requested to use Lupin fuel again in 2015 for reclamation projects in the Kitikmeot region. In summary, there is a significant volume of evidence that the fuel on site is in good quality, and there is no reasonable basis to believe that this will change during the next two years (when the Board will revisit the issue of quantum of security). ARCADIS Response to For clarity, the LMI estimate does not assume that PHC impacted soils will be treated Item 1.2 via landfarm. This was clearly stated within the RECLAIM estimate. LMI's estimate includes a higher contingency in this area, which may be reduced in future should the landfarm effectively treat soil and this strategy be carried forward to final closure. As stated in LMI's January 21, 2015, "However, the landfarm is not intended to remediate all future volumes of material. it should be noted that the IARP states that options for the treatment of fuel laden sand include treatment by volatilization and bioremediation (i.e. landfarming) or burial (i.e. consolidate and cover, underground disposal) upon final closure." ARCADIS Response to LMI anticipates it will make future applications to the Board to reduce the security Item 1.3 below \$25.5 once it obtains further evidence which would support such an application. As per the Federal Sustainable Development Act, "precautionary principle" means "the principle that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." LMI's estimate reflects a precautionary approach, providing a higher contingency on items where additional research may be required and a lower contingency on items where there is objective evidence that this approach is appropriate. **ARCADIS** Response See above response at ARCADIS Response to Item 1. Item 1.4 ARCADIS Response to The evidence that LMI has provided to the Board and to AANDC to date is sufficient to Item 2.1 show that no additional increased contingency should be included within the

reclamation security estimate to address this item. There is very little uncertainty with respect to the issue of windblown tailings. The Inspector has flagged this as a concern, and LMI has attempted to work to resolve these concerns. Nonetheless, the evidence provided to AANDC and to the NWB is that there are no "windblown tailings". As stated in evidence during the public hearing, the materials the Inspector has flagged as "windblown tailings" are a light sandy colour, not red. Tailings from the Lupin Mine are a distinctive red colour.² This is also shown in photos in evidence (see LMI Public Hearing Presentation). Based on wind patterns at the Lupin Mine site area, the areas flagged by the Inspector are not in an area where the wind would ever blow tailings. As per the memo from SRK Consulting dated October 29, 2014, LMI has analyzed the soil sample collected by AANDC at Dam 6 of the Lupin Mines Tailings Containment Area (TCA), which the Inspector alleged provided evidence that airborne arsenic and metal contamination continues to spread into the environment and that windblown tails were being deposited outside of the TCA.3 SRK concluded that, "The analytical results of the sample collected by AANDC in 2012 represent arsenic and metal concentrations consistent with the background soil concentrations specific to the site. The result of this single soil sample does not indicate that further remedial efforts are warranted; it does not document the occurrence of ongoing windblown tailings being spread into the environment."4 While LMI is of the view that this evidence is sufficient to prove that tailings are not escaping the TCA, as stated during the hearings LMI has nonetheless committed to carrying out a soil sampling program in a grid pattern in the area of Dam 6. This work is described in the above-noted SRK memo and will be carried out during the 2015 field season (despite the regulatory challenges that have been presented by the delays in the issuance of the renewed Type A Water Licence) and reported to AANDC in due course. It is LMI's hope that the results of these studies will finally put this issue to rest. ARCADIS Response to As per the approved closure plan, at closure no water will be retained behind dams at Item 2.2 the TCA. As acknowledged by ARCADIS, the issues related to the monitoring of porewater are not material to the current quantum of security. ARCADIS Response to See slide 34, LMI Public Hearing Presentation for a photo of the lined hazardous waste, Item 2.3 oil and lubricant storage area. It was noted during the hearings that that several containers in the photo are not full and plans are to consolidate quantities within full containers. As noted above, the complete hazardous waste inventory will be provided to AANDC and the Board under separate cover. LMI has also made arrangements for a least two backhauls of hazardous waste this month and as additional opportunity arise LMI will continue to backhaul as much hazardous waste as possible. As set out in the public hearing transcripts, this issue was also canvassed during the public hearings. ARCADIS Response to The Licence terms and conditions have properly set monitoring at an appropriate level Item 2.5 with full knowledge of the planned attendance at site.

² Link to public registry - transcript

³ Link to public registry

⁴ Link to public registry

	the renewed Water Licence, I recommended by our profess will continue to be carried ou maintenance work that would only be carried out if the projection.	atory challenges presented by the delay LMI has carried out the necessary more sional engineers has been carried out in at in this way in the future. It is also not do be recommended by our geotechnical ponent intended to recommence product wished to imminently reclaim the sidesure purposes.	nitoring. The work a a timely way and oted that much of the I engineers would ction (as we intend to	
ARCADIS Response to Item 2.6	As per the evidence presented by LMI during the hearings, LMI intends to use the tailings and waste rock areas in future and so it is not appropriate to complete reclamation of these facilities at present. As agreed, LMI will conduct seeps analysis. In its estimate, LMI took the maximum estimated amount for closure of these facilities from previous studies and added a 20% contingency.			
ARCADIS Response to Item 3.1	LMI applied a 20% contingency to this item. As acknowledged by AANDC, in future as characterization work is completed it is anticipated that LMI will be able to provide evidence to the NWB to reduce the 20% contingency on this item in future. There is no policy which requires AANDC to maintain a contingency of 25% despite existing research and pricing.			
ARCADIS Response to Item 3.2	As confirmed in LMI's final submission, the estimate was based on actual previous asbestos studies/reports (a table excerpted from the report was included in our January 21, 2015 submission). Potential specific costs relating to asbestos abatement was included in LMI's cost estimate. This issue was also addressed during the public hearing, as evidenced by the transcripts.			
ARCADIS Response to Item 5a	See above response at ARCADIS Response to Item 1.			
ARCADIS Response to Item 5b	the assessment on the approp of contingency to be applied hearing. As confirmed in the Reclaim	o account for uncertainties in the estimate quantum of security. The issue rewas the subject of much discussion by 7.0 User Manual (March 2014), a 25% are at a very basic level of engineering	egarding the amount experts at the	
	Table 2. Selection of Approp Estimate Type	Description Description	Accuracy or appropriate contingency	
	Detailed or Project Control	Based upon detailed engineering take- offs and written quotes	+/- 5 %	
	Definitive or construction	Engineering mostly complete, some written quotes	+/-10 %	
	drawing phase			
	Preliminary or budget level	Little detailed engineering and costs based upon verbal quotes	+/- 15 %	
	Preliminary or budget	Little detailed engineering and costs	+/- 15 % +/- 20 % +/- 25 %	

Accordingly, it is appropriate to reduce contingency amounts where there is reduced uncertainty based on evidence. Given that the Lupin Mine is fully constructed, there is little uncertainty remaining with respect to estimates. Design and engineering has been completed and approved and significant work has been carried out on the areas of greatest risk. This is a mature site with several approved studies and closure plans. The LMI estimating team used a Risk and Probability Method to apply contingency levels in areas such as soil treatment and remediation where there are some unknowns. It considered every line item within the estimate in particular items that could "require further study, monitoring and analysis". For such items, a high level of contingency (20%) was used. LMI did not use a blanket 10% contingency as assumed by ARCADIS. Taken together with the additional \$1.4 million available in the bond amount of \$25.5 million, LMI's contingency on these items is very conservative.

This is well above accepted norms for a fully constructed mine, which has an approved Abandonment and Reclamation plan in place and an approved tailings closure plan, with physical cover of the majority of deposited tailings already completed. This approach is consistent with and acceptable under RECLAIM. As a result, LMI's estimate was much higher than usual standard RECLAIM estimate. If LMI had applied a standard contingency amount for a fully constructed mine then this contingency should be in the range of $\pm 5\%$ to reflect that there remains little uncertainty with respect to estimates.

In contrast, the estimate presented by AANDC's expert applied blanket percentages without detailed analysis, and as a result double counted uncertainty on many items. The $\pm 25\%$ contingency applied by AANDC is only appropriate for an early stage project, not yet built with unknown quantities and site conditions, i.e. where there remains a higher level of uncertainties with respect to estimates.

After taking into account all of the evidence, the Board was satisfied that in general a 10% contingency is appropriate and accepted LMI's suggestion to maintain security at \$25.5m which effectively added 9% contingency to the total. As such the Board applied a standard well above the normal contingency considered adequate for a project of this nature under the RECLAIM model. In going above the minimum, the Board makes more than adequate provision for any residual uncertainties.

A multi-million dollar reclamation estimate requires the ability to assess quantities, complete material take-offs, assess time and schedules for such work and estimate labour requirement skills and labour rates. During the hearing, AANDC's reclamation estimate expert, Mr. Randy Knapp, P.Eng. of SENES Consultants, stated that he had not visited site since 2002 and did not attend the site for the purpose of preparing his 2014 RECLAIM estimate. Therefore, the models and assumptions applied by AANDC's expert were based on a desktop review. He indicated during the public hearing that he had "guessed" at quantities, and agreed that some of his estimates did appear "excessive". (see transcripts)

ARCADIS Response to Item 5c

As per the evidence provided during the hearings, LMI did convert its estimate to RECLAIM.

ARCADIS Response to Item 5d

All of the details flagged in ARCADIS estimate were provided. While LMI appreciates that ARCADIS may carry out the reclamation tasks differently, LMI is of the view that it has presented a reasonable estimate based on the approved site closure plans and actual quotes for work. It is not consistent with the *Nunavut Waters Regulations* to present an estimate in excess of reasonable costs and require the proponent to bond to this amount.

ARCADIS Response to	See above response at ARCADIS Response to Item 1.
Item 5e	see above response at the response to tent 1.
ARCADIS Response to Item 5f	As per the Closure Plan for Tailings Containment Area (I Holubec Consulting Inc., January 2005), • "Upon closure of the TCA, the surface water balance will be close to the pre-TCA conditions. Surface water input from the individual tailings cells will be small because of their small areas and it will flow out through bedrock-controlled channels. All perimeter dams will have been breached, so that all tailings buttress berms will be above water." • "The stability and seepage condition of these dams will diminish if the permafrost thaws over time. For this reason, and for the fact that dams would require inspection and maintenance in perpetuity, Lupin has selected not to have any dams after closure of the site." As per the approved Lupin Mine Interim Abandonment and Restoration Plan (MMG Canada, March 2010) ⁵ : • "Once the reclamation and closure activities have been substantially completed, the frequency and type of monitoring will be reduced and will focus on assessing the performance of the reclamation measures. As the site will be abandoned after the final demolition phase, periodic site visits will be scheduled for these assessments. This closure phase of monitoring is anticipated to last for 5 years after site abandonment." (see page 49). ARCADIS's assumption that there would be a post closure monitoring period of 100 years is not supportable on the evidence before the Board.
ARCADIS Response to Item 5g	ARCADIS has provided no details of the "assessment work" they contend would be required. AANDC has not provided any evidence for their position that would not be able to reclaim the site based on the plans that have been provided to date.
ARCADIS Response to Item 5h	The "costs internal to AANDC" are included in the suggested \$900,000 line item included by ARCADIS referenced above (which LMI opposes for the reasons set out in this and previous submissions). This is not an item that should be included in the engineering line item in any event as this would mean this item is double counted within ARCADIS's own estimate. Further, there is no allowance for such additional costs within RECLAIM or the Mine Site Reclamation Policy for Nunavut (2002), which states that the estimate is to be based on a third party contractor doing the work.
ARCADIS Response to Item 5i	See above response at ARCADIS Response to Item 1.

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⁵ Available on NWB public registry at following link: ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-LUP1520%20LMI/3%20TECH/10%20A%20and%20R%20%28I%29/2009