



Environment Canada
Environnement Canada

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Our File: 4703 003 006
NWB File: 2AM-LUP0008

via e-mail Licensing@nunavutwaterboard.org

**Re: 2AM-LUP0008 - Type A Water Licence Renewal- Public Written Hearing
Lupin Mines Inc. - OZ Minerals (Zinifex Canada Inc.)**

On behalf of Environment Canada (EC), I have reviewed the information for the above-mentioned water licence renewal application for the purpose of the Nunavut Water Board Public Written Hearing. The following specialist advice has been provided pursuant to EC's mandated responsibilities under the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Care and Maintenance Plan

It is stated in the *Information Package for the Water License Renewal for Lupin NWBLUP0008 and ULU NWBULU0008* (Information Package), section 2.7, page 55, that "approximately 250,000 square meters of exposed tailings remain to be covered." Exposed dry tailings have the potential to be wind blown into the surrounding environment and deposited into water bodies, affecting water quality and wildlife. Lupin Mines Inc. (LMI) stated in the prehearing teleconference that the amount of tailings is less than initially indicated in the Information Package and that an interim monitoring plan and operating procedures for Care and Maintenance would be developed to manage exposed tailings. Special consideration should be given in the development of the interim monitoring plan and operating procedures to ensure the safety of migratory bird species and other wildlife species frequenting the tailings area. EC looks forward to reviewing this written proposal from LMI.

Closure and Reclamation

EC requests an updated Closure and Reclamation (C&R) Plan be submitted to the board for review. Specific attention should be paid to the following concerns:

The current plan indicates that if LMI is unable to sell accommodation facilities, "the units would be evacuated of all salvageable items and potential contamination prior to burning" (pg 19). As discussed in the Pre-hearing Conference held on November 17, 2008, EC would prefer to see accommodation units disposed of either underground or in approved landfill facilities. LMI indicated that this could be accommodated. EC requests that this change be made in the updated C&R Plan.

It is also stated in the existing plan that, "fuel rich material may be ignited prior to disposal in a separate, isolated area" (pg 20). EC recommends that contaminated soils are remediated using landfarming or bioremediation, unless in an emergency or spill situation. EC has a number of

documents available that reference design, operation, monitoring, sampling and analytical methods decommissioning and closure for cold climate landfarming/bioremediation facilities. Please contact this office if you would like a copy of those documents.

EC also recommends that the proponent follow environmental site assessment steps as established by the following standards:

- **Canadian Council of Ministers of the Environment (CCME) *Canada-Wide Standard for Petroleum Hydrocarbons in Soil (CWS-PHC)* (CCME, 2001);**
- **Canadian Standards Association (CSA) *Environmental Site Assessment Standards Z768-01 (2001) and Z769-00 (2000)*, for Phase 1 and Phase 2; and,**
- ***Subsurface Assessment Handbook for Contaminated Sites* (CCME, 1994).**

As these documents are updated periodically, please consult the CCME and CSA for the most recent versions.

EC requests that additional information be provided in the revised C&R Plan with respect to the removal of culverts. It is stated in the current plan that, "the removal of culverts and the backsloping of the opening would ensure that minimal erosion takes place and proper drainage is achieved" (pg 21). However, it is unclear on the methods that will be used to remove the culverts, the locations of the culverts and mitigation measures that will be used to prevent erosion and sedimentation of the stream banks. EC requests that this information be provided in the updated C&R plan.

With respect to the removal of the breakwater and causeway (as requested by DFO), EC requests that updated action and mitigation plans be provided to the board for review, if changes are made to the current reclamation plan. An effective removal plan and mitigation plan is essential to ensure that sedimentation, erosion and disturbance to the littoral zone are minimized.

Other Reminders

In addition, EC would like to take this opportunity to remind LMI of the new regulations for *Storage Tank System for Petroleum and Allied Petroleum Products* which came into force on June 12, 2008. These regulations apply to all outside aboveground, underground and partially buried storage tank systems containing petroleum and allied petroleum products, except above-ground storage tank systems that have a capacity of 2,500 L or less and that are connected to a heating appliance or emergency generator. Further information on these regulations can be found at www.ec.gc.ca/st-rs.

In the INAC 2007 Inspection Report it was identified that fuels were being stored without secondary containment. EC would like to remind LMI that the use of secondary containment with an impervious liner, such as self-supporting insta-berms, for storage of all barreled fuel is recommended.

In Appendix I of the *Lupin Spill Contingency Plan, Telephone Listings & Communications*, the Environment Canada Emergency Spill Contact Information should be updated to the following:

Curtis Didham, Enforcement Officer

Cell: 867-222-1925

Office: 867-975-4644

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Please do not hesitate to contact me at 867-975-4631 or by email at carrie.spavor@ec.gc.ca (after January 6th) or Anne Wilson at (867) 669-4735 / email anne.wilson@ec.gc.ca with any questions or comments regarding the foregoing.

Yours truly,

Original signed by

Carrie Spavor
Environmental Assessment Coordinator
Environmental Assessment - North,
Environmental Protection Operations

cc: Carey Ogilvie (Head, EA-North, Environment Canada, Yellowknife, NT)
Anne Wilson (Water Pollution Specialist, EC Yellowknife, NT)