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Environmental Protection Operations Directorate (EPOD)  
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EC file: 6100 000 009  
NWB file: 2AM-LUP0914

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Via e-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

Attention: Phyllis Beaulieu

**RE: Licence 2AM-LUP0914 – Renewal Application, Lupin Mines Incorporated,  
Lupin Gold Mine Project.**

Environment Canada (EC) has conducted an initial review of the Type “A” Water Licence 2AM-LUP0914 Renewal Application submitted by Lupin Mines Incorporated (the Proponent), for the Lupin Gold Mine Project (the Project), in response to the Nunavut Water Board’s (NWB) correspondence dated May 16, 2014. EC’s comments are included below. EC’s specialist advice is provided pursuant to the *Canadian Environmental Protection Act 1999*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Comments on the Application

1. In response to the question (Question #13 of the Application for Water Licence Renewal) to provide the estimated quantity(/ies) of water to be used from each source, the Proponent states that the source of water and quantity would be Contwoyto Lake only, 4,657 m<sup>3</sup>/day (1,700,000 m<sup>3</sup>/yr). Furthermore, the proponent provides the following breakdown, again a response to the question, to “Provide the estimated quantities to be used for each purpose (camp, drilling, etc.):”

Camp: 260m<sup>3</sup>/day; and  
Mining / Milling: 4,397 m<sup>3</sup>/day

It is understood that the Project is under Care and Maintenance. If this is correct, why is there a water allocation for mining? It has been suggested that these numbers are production levels; however EC notes that the level of intended water withdrawal does not match the level of activity. EC suggests that the water withdrawal should be scaled back to the level of activity being licenced.

2. The licence term requested is for 10 years, and rather than continuing to reclaim the site to full closure, the Proponent is holding the property in Care and Maintenance. The 2013 Care and Maintenance Plan indicates some expectation of a return to production, but that possibility is quite remote and would involve significant work to

re-commission the tailings disposal system, the mill, the camp, and probably even some of the equipment, some of which is approximately 30 years old.

For project components which would not foreseeably be recommissioned in the event of a return to production, EC encourages ongoing reclamation efforts and reporting of such closure activities.

3. If the Proponent is contemplating changes to activities or operations at the site which are outside the scope of approved Care and Maintenance or exploration, detailed plans should be submitted to the NWB for approval, prior to initiating any activity in support of mine production.
4. The March 2013 Water Quality Monitoring Plan and Quality Assurance/Quality Control Plan contains a description of the current sampling program. The annual report should include a full report of the required monitoring done each year.

#### Comments Related to Migratory Birds and Species at Risk

5. Paragraph 6(a) of the *Migratory Birds Regulations* states that no one shall disturb or destroy the nests or eggs of migratory birds. The best mitigation measure to ensure compliance is to conduct activities with a risk of disturbing or destroying nests or eggs outside of the migratory bird nesting season. High risk activities include disturbance of large amounts of habitat during the nesting season or conducting activities in areas with large concentrations of nesting birds. If an active nest is found, the area should be avoided until nesting is completed (i.e. the young have left the vicinity of the nest).

In the southern Arctic region of the Northwest Territories and Nunavut (Figure 1), migratory birds may be found nesting from mid-May until mid-August.



Figure 1. Boreal, Northern and Southern Arctic Ecozones within the Northwest Territories and Nunavut.

The following setback distances are recommended to minimize disturbance to nests for different bird groups nesting in tundra habitat (see footnotes for adjustments to setbacks for sensitive species and species at risk):

<b>Migratory Bird Species Group</b>	<b>Pedestrians /ATVs (m)</b>	<b>Roads / Construction / Industrial Activities (m)</b>
Songbirds	30	100
Shorebirds	50 <sup>a</sup>	100 <sup>a</sup>
Terns/Gulls	200 <sup>b</sup>	300 <sup>b</sup>
Ducks	100	150
Geese	300	500
Swans/Loons/Cranes	500	750

<sup>a</sup> If project activities are within the breeding ranges of American Golden Plover or Ruddy Turnstone, these setbacks should be increased to 150 m for Pedestrians/ATVs and 300 m for Roads/Construction/Industrial Activities respectively. If project activities are within the breeding ranges of Black-bellied Plover, Whimbrel or Red Knot (a Species at Risk), these setbacks should be increased to 300m for Pedestrians/ATVs and 500m for Roads/Construction/Industrial Activities. If field crew are trained in the identification of these species then these higher setbacks need only apply to these more sensitive species, and lower setbacks can be used for the remaining shorebird species. In areas where several species are nesting in proximity, setbacks for the most sensitive species should be used if they are present.

<sup>b</sup> If project activities are in proximity to breeding colonies of Ross's Gull (SAR) or Ivory Gull (SAR) these setbacks should be increased to 500m Pedestrians/ATVs and 750m for Roads/Construction/Industrial Activities.

For further information on how to protect migratory birds and their nests and eggs when planning or carrying out project activities, consult EC's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" at: [www.ec.gc.ca/paom-itmb/](http://www.ec.gc.ca/paom-itmb/)

6. EC recommends that food, domestic wastes, and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) be made inaccessible to wildlife at all times. Such items can attract predators of migratory birds such as foxes, ravens, gulls, and bears. Although these animals may initially be attracted to the novel food sources, they often will also eat eggs and young birds in the area. These predators can have significant negative effects on the local bird populations.
7. Section 5.1 of the *Migratory Birds Convention Act* prohibits persons from depositing substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area.
8. In Sections 2.3 and 3.3 of the 2013 Care and Maintenance Plan the proponent discusses wildlife mitigation measures. In order to reduce aircraft disturbance to migratory birds, EC recommends the following, subject to pilot discretion regarding safety:

- Fly at times when few birds are present (e.g., early spring, late fall, winter) and minimize flights during particularly sensitive periods (i.e. during migration, nesting, and moulting).
  - If flights cannot be scheduled when few birds are present, plan flight paths that minimize flights over habitat known or likely to have birds and maintain a minimum flight altitude of 650 metres (2,100 feet).
  - Avoid known concentrations of birds (e.g., bird colonies, moulting areas) by a lateral distance of at least 1.5 kilometres. If avoidance is not possible, maintain a minimum flight altitude of 1,100 metres (3,500 feet) over these areas.
  - Avoid areas used by flocks of migrating waterfowl by 3 kilometres.
  - Avoid excessive hovering or circling over areas known or likely to have birds.
  - Inform pilots of these recommendations and of areas known to have birds.
9. The following comments are pursuant to the *Species at Risk Act* (SARA), which came into full effect on June 1, 2004. Subsection 79(2) of SARA, states that during an assessment of effects of a project, the adverse effects of the project on listed wildlife species and its critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This Section applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, EC suggests that species on other Schedules of SARA and under consideration for listing on SARA, including those designated as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), be considered during an environmental assessment in a similar manner. The Table below lists species that may be encountered in the project area that have been assessed by COSEWIC as well as their current listing on Schedule 1 of SARA (and designation if different from that of COSEWIC). Project impacts could include species disturbance, attraction to operations and destruction of habitat.

Terrestrial Species at Risk <sup>1</sup>	COSEWIC Designation	Schedule of SARA	Government Organization with Lead Management Responsibility <sup>2</sup>
Grizzly Bear	Special Concern	Pending	Government of the Nunavut (GN)
Wolverine (Western population)	Special Concern	No status	GN
Peregrine Falcon	Special Concern ( <i>anatum-tundrius</i> complex <sup>3</sup> )	Schedule 1	GN
Short-eared Owl	Special Concern	Schedule 1	GN
Eskimo Curlew	Endangered	Schedule 1	EC

<sup>1</sup> The Department of Fisheries and Oceans has responsibility for aquatic species.

<sup>2</sup> EC has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the

responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.

<sup>3</sup> The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern, and was added to Schedule 1 of SARA in July 2012.

- For any Species at Risk that could be encountered or affected by the project, the proponent should note any potential adverse effects of the project to the species, its habitat, and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk registry at <http://www.sararegistry.gc.ca> for information on specific species.
- If Species at Risk are encountered or affected, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species, its habitat and/or its residence.
- Monitoring should be undertaken by the proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.
- For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.
- Mitigation and monitoring measures must be taken in a way that is consistent with applicable recovery strategies and action/management plans.

10. Eskimo Curlew is designated as Endangered and listed on Schedule 1 of the *Species at Risk Act*. Eskimo Curlew could potentially occur within the project area. However, there have been no reliable sightings of Eskimo Curlew since 1998 and the National Recovery Team for this species has determined that recovery is not feasible at this time. It is EC's view that, in light of its current status, there is no need for further action with respect to Eskimo Curlew. An appropriate mitigation and monitoring plan will be developed with the proponent if it is established that this species does occur in the area.

11. The Canadian Wildlife Service (CWS) of EC is interested in observations of birds, especially observations of birds identified as Species at Risk or of species occurring outside their known ranges. Proponents are encouraged to submit their observations to eBird Canada (<http://ebird.org/content/canada>). Observations submitted to eBird are immediately available to anyone interested in birds in the north. Observations can also be sent to the NWT/NU Bird Checklist program:

NWT/NU Bird Checklist Survey  
Canadian Wildlife Service, Environment Canada  
5019 - 52 Street, 4th Floor  
P.O. Box 2310  
Yellowknife NT, X1A 2P7  
Phone: 867.669.4771  
Email: [NWTChecklist@ec.gc.ca](mailto:NWTChecklist@ec.gc.ca)

Please contact CWS for blank checklist forms.

12. All mitigation measures identified by the proponent, and the additional measures suggested herein, should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field. EC recommends that all field operations staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice / training on how to implement these measures.
13. Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds and Species at Risk, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act*, *Migratory Birds Regulations*, and the *Species at Risk Act*. The proponent must ensure they remain in compliance during all phases and in all undertakings related to the Project.

EC's Preference for Type of Hearing

14. Concerning the NWB request that interested parties provide comments on the type of Technical Meeting/Pre-Hearing Conference and Public Hearing to be held for the application, EC requests a written ("paper") hearing for both events.

For further clarification on any aspect of this submission, please contact Michael I. Mohammed at (867)-975-4637 or [michael.mohammed@ec.gc.ca](mailto:michael.mohammed@ec.gc.ca).

Sincerely,



Michael Mohammed  
Senior Environmental Assessment Coordinator

cc: Carey Ogilvie, Head Environmental Assessment North (NT & NU), PNR-EPOD  
EC Internal Distribution