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4 October 2010

EC file: 4703 001 094  
NWB file: 2BE-DBY1014

Ida Porter  
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*Via email: [iporter@nunavutwaterboard.org](mailto:iporter@nunavutwaterboard.org)*

**RE: 2BE-DBY1014 Spill Contingency Plan**

Environment Canada (EC) has reviewed the above-mentioned spill contingency plan submitted to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Indicator Minerals Inc. has submitted a Spill Contingency Plan to the NWB as a requirement of Part H, Item 1 of water license 2BE-DBY1014. This Plan encompasses all of Indicator Minerals Inc.'s present camps and active remote sites in Canada. Specifically, it is applicable to the Stellar Camp, located on the Darby Project, the base location for all exploration activities on the property.

EC is pleased that a well-written spill contingency plan was provided to the NWB for this water license and provides the following comments for the NWB's consideration:

- EC recommends that the proponent include the provision that drip pans be used when refuelling equipment on site in order to help prevent spills from occurring.
- Refuelling shall not take place below the high water mark of any water body and shall be done in such a manner to prevent hydrocarbons from entering any water body frequented by fish.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Comments previously submitted on behalf of EC by C. Spavor on 9 November 2009 would still apply to this project (see attached). Please do not hesitate to contact the undersigned with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at [Paula.C.Smith@ec.gc.ca](mailto:Paula.C.Smith@ec.gc.ca).

Yours truly,



Paula C. Smith  
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, Yellowknife, NT)  
Ron Bujold (Environmental Assessment Technician, EPO, Yellowknife, NT)



**Environment Environnement  
Canada Canada**

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November 9, 2009

Our file: 4703 001 094  
NWB file: 2BE-DBY0509

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*Via email at: [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)*

**Re: NWB 2BE-DBY- Indicator Minerals Inc. – Darby Project- Renewal- Type “B” Water License**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Indicator Minerals Inc. (Indicator) is applying to renew their water licence to continue mineral exploration of the Darby property in Committee Bay, NU. Indicator is currently evaluating the potential for economic diamondiferous kimberlites in this area. Project activities will include prospecting, geological mapping, ground geophysical surveys, diamond drilling and rock and soil sampling. The project is proposed to occur from May 2010 to September 2014, with drilling operations expected to occur from May to September. Field crews will be operating from the seasonal Stellar Camp established in 2006. The camp is comprised of 18 tents including kitchen, dry, first aid, office, core logging shack and sleeping tents.

Based on the information presented at this time, EC has no real concerns with the re-issuance of this water license. Comments and recommendations submitted for the project on July 25, 2005 in response to the NWB New Type B Water License, would apply to this water license application (see attached). Further, Environment Canada provides the following comments and recommendations for the Board's consideration:

**Camp**

- The proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes or sediment into any water body. According to the Fisheries Act, Section 36(3), the deposition of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
- In the Waste Treatment and Disposal document completed by Indicator, it is stated that sewage (camp latrine waste), “will be collected in self-contained toilet systems and then burned in the camp incinerator.” Sewage has high moisture content and low heat content that will increase operating costs dramatically and lead to poor incinerator performance. It

is unlikely that the sewage will be completely combusted and could lead to the release of pathogens into the environment. The high moisture materials can leak from the incinerator hearth and lead to equipment damage and present health hazards to workers. Any emissions from sewage incineration must be reported to the National Pollutant Release Inventory (NPRI), under the authority of the Canadian Environmental Protection Act, 1999 (CEPA 1999). <http://www.ec.gc.ca/npri>

EC recommends that sewage should not be burned in batch incinerators that are typically used in the north. Sewage should only be burned in incineration equipment designed for this type of waste. If Indicator decides to pursue sewage incineration, it should provide the Board with the design specifications of the incinerator and a letter from the manufacturer stating that this equipment is suitable for burning this type of waste.

EC has developed a Technical Document for Batch Waste Incineration, and is available at the following web link:

<http://www.ec.gc.ca/drgd-wrmd/default.asp?lang=En&n=82401EC7-1>

The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting.

#### **Fuel storage/Spill Contingency Plan**

- All fuel caches shall be located above the high water mark of any waterbody and in such a manner as to prevent the contents from entering any water body frequented by fish. EC recommends the use of secondary containment, such as self-supporting insta-berms, for storage of all barreled fuel rather than relying on natural depressions to contain spills.
- Drip pans, or other similar preventative measures, shall be used when refueling equipment on site.
- Please note section 2.0 page 4 of the Spill Contingency Plan should be updated to include camp facilities. Additionally, in section 5.4, page 6, the 24 hr emergency line for Environment Canada should be removed as this number is no longer in service.

#### **Wildlife and Species at Risk**

- Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. If active nests are encountered during project activities, the nesting area should be avoided until nesting is complete (i.e., the young have left the vicinity of the nest).
- Environment Canada 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.
- 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.
- In order to reduce aircraft disturbance to migratory birds, Environment Canada recommends the following:
  - Fly at times when few birds are present (e.g., early spring, late fall, winter).
  - If flights cannot be scheduled when few birds are present, plan flight paths that minimize flights over habitat likely to have birds and maintain a minimum flight altitude of 650 m (2100 feet).

- Minimize flights during periods when birds are particularly sensitive to disturbance such as migration, nesting, and moulting.
- Plan flight paths to avoid known concentrations of birds (e.g., bird colonies, moulting areas) by a lateral distance of at least 1.5 km. If avoidance is not possible, maintain a minimum flight altitude of 1100 m (3500 feet) over areas where birds are known to concentrate.
- Avoid the seaward side of seabird colonies and areas used by flocks of migrating waterfowl by 3 km.
- Avoid excessive hovering or circling over areas likely to have birds.
- Inform pilots of these recommendations and areas known to have birds.
- The following comments are pursuant to the Species at Risk Act (SARA), which came into full effect on June 1, 2004. Section 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, Environment Canada 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.

Table 1. Terrestrial Species at Risk with potential to be located in the project area.

Terrestrial Species at Risk <sup>1</sup>	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility <sup>2</sup>
Peregrine Falcon ( <i>anatum-tundrius</i> complex <sup>4</sup> )	Special Concern	Schedule 1 ( <i>anatum</i> ) Schedule 3 ( <i>tundrius</i> )	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Polar Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

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

<sup>2</sup> Environment Canada (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* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was listed by COSEWIC as Special Concern.

Impacts could be disturbance and attraction to operations.

Environment Canada recommends:

- Species at Risk that could be encountered or affected by the project should be identified and any potential adverse effects of the project to the species, its habitat, and/or its residence noted. All direct, indirect, and cumulative effects should be considered.

Refer to species status reports and other information on the Species at Risk registry at [www.sararegistry.gc.ca](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.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at [carrie.spavor@ec.gc.ca](mailto:carrie.spavor@ec.gc.ca).

Yours truly,

*Original signed by*

Carrie Spavor  
Environmental Assessment Coordinator

c.c: Carey Ogilvie (Head, Environmental Assessment-North, EPO, Yellowknife, NT)  
Ron Bujold (Environmental Assessment Technician, EPO, Yellowknife, NT)