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**NWB5QIK**

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April 23, 2002

Rita Becker  
Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0E 1J0

Sent by email to:

[rbecker@polarnet.ca](mailto:rbecker@polarnet.ca)

## **Intervention for Public Hearing on Fox-5 DEW Line Clean-Up Water Licence Application**

Dear Ms. Becker,

Indian and Northern Affairs Canada (INAC) has reviewed the proposed project plan and water licence application submitted to the Nunavut Water Board (NWB) by Defence Construction Canada (DCC) with respect to the clean up of the Fox-5 DEW Line site situated on Broughton Island. We are pleased to present the following intervention for the public hearing scheduled to take place on May 8, 2002 in Qikiqtarjuaq.

As determined by the pre-hearing teleconference on April 18, 2002, the main issue of public concern with the project is the potential impact the location of the proposed landfill will have on the community of Qikiqtarjuaq's proposed secondary water supply lake.

INAC's first questions are therefore addressed to the community of Qikiqtarjuaq and the Government of Nunavut (GN) as represented by Community Government and Transportation (CG&T). We would like to know how feasible is their proposal to use the lake downslope of the proposed landfill site as a community water supply.

- Has CG&T done any studies to determine if the water in the lake is potable?
- Have tests been done on the lake sediments to determine if there is any historical contamination from the DEW line site?
- Can the lake support the draw-down caused by community use? Is there sufficient annual recharge?
- Can the lake be accessed in a reasonable and cost-effective manner?
- What studies or funding has been placed aside to assess this project?

INAC would like to confirm that the lake in question has the potential to be a water supply lake for the community. Until these questions are answered, is it not premature to either permit, refuse, or place conditions upon the creation of the landfill?

Assuming that the proposed secondary water lake will indeed be the community's reserve water supply, INAC offers the following comments on the proposed project.

The landfill appears to be well engineered and properly designed. The combination of a membrane and permafrost encapsulation should prevent any leachate from escaping the landfill. Combine this with a topographic high that minimizes runoff and approximately 1 km before reaching the nearest stream, the impacts of this landfill should be minimal. The same conclusions were obtained by the environmental assessment of the project, which states that the impacts were "not significant due to the design criteria for landfill development, landfill closure and monitoring."

Therefore, INAC does not believe that there are any technical or environmental reasons that would require that the proponent change the location of the proposed landfill.

However, we do acknowledge the potential risk, no matter how improbable, that leachate may affect this lake. Although the mitigation measures (i.e. a secured landfill) will likely prevent any contamination to the water, the proponent will still be required to show that no leachate is produced by the landfill.

INAC recommends that the monitoring of the landfill be carried out at least once per month during periods of flow. This monitoring should occur for as long as the community continues to use the lake downslope as a source of drinking water. This implies that the term of the licence should be at least 10 years, and likely renewed afterward. This monitoring will serve to demonstrate to the community that their drinking water remains uncontaminated from the landfill.

Suggested parameters to be monitored include standard parameters of any landfill, as well as parameters for other contaminants normally found within TIER II soils. This includes:

pH	Lead
Conductivity	Magnesium
Arsenic	Mercury
Cadmium	Nickel
Chromium	Oil and Grease
Cobalt	Polychlorinate Biphenyls (PCBs)
Copper	Total Suspended Solids
Iron	

In addition to the proponent's proposed use of monitoring wells, INAC recommends that an additional sampling station be located in the stream that drains to the water lake of concern, downslope from the landfill site.

Finally, the proponent should prepare a contingency plan in case leachate is detected. This contingency plan should be acted upon immediately should any problems be discovered.

If you have any concerns or questions, please feel free to contact me.

Sincerely,

***Original Signed By: Michael Roy***

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