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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

draft

March 1, 2001 NWB4EUR9904

Dave Law
Chief Atmospheric Monitoring Division
123 Main Street, Suite 150
Winnipeg, Manitoba R3C 4W2
Fax: 204-984-2072

Re: Submission of Studies

Dear Mr. Law,

The Nunavut Water Board has reviewed the "*Study of the Wastewater and Water Supply systems at the Eureka Weather Station, February 2000*" prepared by Daniel W. Smith and Michael Nahir for Atmospheric Services, Environment Canada in support of Part C, Item 6 and Part D, Item 8 of the above water licence.

Part C, Item 6 of the water licence states that:

> *The Licensee shall [] submit to the Board for approval a study identifying suitable alternatives for collecting enough fresh water to support the weather station for a year*.

Part D, Item 8 of the water licence states that:

> *The Licensee shall [] submit to the Board for approval a study to investigate suitable options for sewage treatment and discharge.*

Water Use

As indicated in General Considerations for the licence (pg.1), the Broad agreed with the Nunavut Impact Review Board that the current method of supplying water to the reservoir through diversion is inadequate. No alternatives to the current method of diversion are proposed although it is clearly indicated that the current system is the "only realistic option." If as stated in your cover letter (April 10, 2000) that the "stream diversion [ ] is the only realistic option", steps need to be taken to minimize the potential for elevated TSS during diversion and degradation of the region between station Creek and the reservoir.

I would like to clarify that the issue of water treatment and distribution is not a requirement of the two studies and is the mandate of public health, not the NWB.

Wastewater Disposal

The discharge from the sewage lagoon is within allowable limits for samples taken at the beginning of discharge on the same day. Concerns remain that a single large 'slug' of raw sewage effluent is discharged in a matter of hours. The Board agrees with Environment Canada's proposal to develop a wastewater, water quality and runoff sampling program (cover letter dated April 10, 2000). In order to obtain a more accurate representation of the discharge, EC should consider a decant mechanism which allows for the discharge of effluent over a period of days during the open water season with sampling at the beginning, middle and end of the discharge. Compliance with the effluent discharge limits can then be confirmed. Compliance is defined as per the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (1992) Section 4.3. Based on the results obtained, options for improved an improved treatment system can be explored further.

Total Silver

Since the closure of the photographic darkroom has eliminated the source for the discharge of silver the Surveillance Network Program at Station EUR-3 no longer requires monitoring for Silver. With respect to the regulated requirement for monitoring of Total Silver as required in the licence, an application for amendment should be filed with the Board to have the parameter removed.

In conclusion, the Board approves the document as presented pending results from a more detailed and representative sampling program and appropriate mitigation measures are imposed for stream diversion.

Should you require clarification or additional information please do not hesitate to contact me at the above or via email at dionne@polarnet.ca

Sincerely,

Dionne Filiatrault, P. Eng.
Technical Advisor

cc. B. Goalen, EC
R. Beavers, DIAND
P. Smith, DIAND
P. Lavallee, DIAND
J. DeGroot, DFO
P. Pacholek, EP-EC