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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

January 9, 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. The study does not provide sufficient information to meet the licence requirements.

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.

As is indicated in the above licence conditions the study should have identified or investigated suitable alternatives or options. The intent of the request by the Board was not to obtain a review of current practices at Eureka with recommended improvements to the current systems.

Water Use

As the Board indicated in General Considerations for the licence (pg.1) The Board 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 justification is provided for the existing system. The 'diversion method' injects large amounts of suspended solids into Station Creek, which eventually enters Slidre Fiord. This practice *may* be in violation of the *Fisheries Act*, if Slidre Fiord is considered fish bearing waters. 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

In the report three options for improved wastewater treatment (i.e, increase lagoon capacity, and two RBC alternatives) are identified. Also, options for improving the current system (adding a cell, sludge removal, and increased retention time) are identified. However, nowhere in the report are the proposed alternatives subject to any clear evaluation. The preferred option for improving effluent quality should be identified and criteria provided.

As the Board indicated in the licence (pg. 2), the current sewage treatment system is inadequate and requires improvement to the decant system for example. A single large 'slug' of raw sewage effluent is discharged in a matter of hours. Modifications to the system should consider a decant mechanism which allows for the discharge of effluent over a period of days during the open water season.

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.

The revised plan should be submitted to the Board within sixty (60) days of receiving notification of the Board decision. 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
J. DeGroot, DFO
P. Pachalek, EP-EC