



FSC Architects & Engineers

Our File: 2002-1000

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Phyllis Beaulieu
Acting Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

RE: NWB3IGL9803 – Hamlet of Igloolik Water Licence

Dear Phyllis:

This letter is written in response to the comments and requests made by Environment Canada regarding Igloolik's Water Licence Application in their March 13, 2003 letter (file # 4782 027) to the Nunavut Water Board.

- Environment Canada would like to note that as Ferguson Simek Clark (FSC) used a modified water use estimate calculation to determine sewage generation rates, which assumed a population of below 2,000 (based on the fact that Igloolik has no plans to develop a piped system), future sewage generation rates may be higher than projected as Igloolik's population projection is 2,754.

According to "*The population of Nunavut and Nunavut's CSDs (Census Subdivisions), 1981 to 2001*" the 2001 population for Igloolik was 1,286. Nunavut Bureau of Statistics' March 2000 release "*Nunavut: Community Population Projections*" show that Igloolik's population is not expected to reach 2000 until the year 2017.

Environment Canada requires the following information in order to facilitate the review of this document:

- FSC has identified that Alberta's Environmental Protection Guidelines have been used to define the area of the wetland and its expected effluent quality. Environment Canada requests further clarification as to why these guidelines were used rather than the Canadian Council of Ministers of the Environment (CCME) guidelines.

The Alberta guidelines are an engineering model to determine the size of a wetland needed for an expected effluent quality. They were developed by Alberta Environment to guide the use of wetlands for sewage treatment in that province. There are no equivalent CCME guidelines, or NWB guidelines.



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- In Section 5.2 of the FSC report entitled "Igloolik Sewage Lagoon", the height of the exterior berms reported in Options 1, 2, 3, and 4 are different in the main tables as opposed to the footnotes. Environment Canada requests clarification as to the height of the exterior berms.

Referring to Option 1, "Exterior berms are to be 99 m high, 4.4 m wide at the top with 3:1 slopes", 99 m is the elevation in relation to a chosen datum point of 100 m. This applies to the tables for the other options as well.

- Information regarding the depth of the wastewater lagoons, the freeboard design, and the location of the discharge points.

The FSC report is a planning document. We understand that design may be completed in 2003/04. When awarded, it is expected that the designer will follow engineering codes of practice and all NWB requirements.

I hope the foregoing provides the clarification you require.

Yours truly,
FSC Architects & Engineers

A handwritten signature in black ink, appearing to be 'Ron Kent', written in a cursive style.

Ron Kent, P. Eng.
Head, Environment Department.