



October 1st, 2012

Mr. Grigor Hope
Project Officer
Community Government Services
Baffin Region, Government of Nunavut
P.O. Box 379
Pond Inlet, NU X0A 0S0

**Re: OTT-00019054-A0 – Geothermal Modeling for the Abandonment and
Restoration of Existing Sewage Lagoons – Arctic Bay**

Dear Mr. Hope:

Please find attached the Arctic Bay Sewage Lagoon Decommissioning Report dated April 2008 and the Geothermal Analysis for abandoned sewage lagoons for Arctic Bay prepared by Naviq Consulting Inc.

The objective of thermal modeling was to assess the long term (50 years impact) of climate warming and the potential depths of active layer within the capping soil. The modeling looked at two cases, one representing the presently known site conditions, i.e. the depth of thawed soil is equal to the seasonal active layer and the second case a worse case scenario where a 10 m talik was assumed under the lagoon at the time of abandonment and capping.

The modeling results indicate that the long term climate warming of the surface active layer progresses from an initial depth of approximately one metre to a depth of approximately 1.3 metres after 50 years. Therefore, it is concluded that the long term climate warming will not impact the depth of permafrost to a point where the abandonment and restoration of the existing sewage lagoons in Arctic Bay is affected.

It is our understanding that the abandonment and restoration of the existing sewage lagoons has been completed by the contractor and as-built drawings are forthcoming.

Should you have any questions or require additional information please do not hesitate to contact the undersigned.

Sincerely,

Stephen A. Douglas.
Senior Designer
Infrastructure Services

Steven L. Burden, P. Eng.
Manager Municipal
Infrastructure Services

Enc. Geothermal Analysis prepared by Naviq Consulting Inc.