

Phyllis Beaulieu

From: Dionne Filiatrault [exec@nunavutwaterboard.org]
Sent: Friday, January 18, 2008 8:51 PM
To: 'Phyllis Beaulieu'
Cc: 'Ben Kogvik'
Subject: FW: Executive summary and geothermal analysis results
Attachments: BGC Thermal Memo lua V5.pdf; Executive Summary.pdf; Executive Summary.doc

Phyllis and Ben:

I think you were looking for this for the binders. Is shold be posted to the ftp site and provided to Ben for translation.

Regards,
Dionne

Dionne Filiatrault, P. Eng.,
Executive Director
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0
Tel: 867-360-6338 ext 27
Fax: 867-360-6369
email: exec@nunavutwaterboard.org

From: Holger Hartmaier [mailto:hhartmaier@bgcengineering.ca]
Sent: Thursday, January 17, 2008 12:08 PM
To: Dionne Filiatrault; David Hohnstein
Cc: Jack Seto; Lukas Arenson
Subject: Executive summary and geothermal analysis results

As requested, attached is an executive summary (Word and pdf) for our intervention review of the final submissions.

Also, I have attached a pdf version of the results of the geothermal analysis carried out by BGC on the lagoon. The results confirm that the berm configuration is suitable for the proposed operating conditions, however there are a few issues that must be addressed:

- BGC estimated an active layer of 3-4 m in the berm (compared to 2-3 by AMEC). This means that the GCL has to act as the primary form of containment during the summer.
- BGC applied a global warming factor into the model. Although the model predicts that the berm foundation will remain colder than -2 degrees C over the 30 year design life, permafrost containment may be impacted if the lagoon operates for more than 30 years.
- The sewage contents are predicted to freeze as they are placed in the winter and not fully thaw in the summer. This may cause problems related to sewage management.
- It is critical that thermistors be installed immediately as a licence requirement so that freeze-back of the berm foundation is confirmed prior to filling the lagoon.

I will be forwarding original signed and stamped hardcopies of the geothermal analysis under separate cover.

Regards,

BGC ENGINEERING INC.
per:

Holger Hartmaier, M. Eng., P. Eng.
Senior Geotechnical Engineer

BGC ENGINEERING INC.

Suite 200 - 1121 Center St. NW

Calgary, AB, Canada, T2E 7K6

Telephone: (403) 250-5185 ext. 113

Facsimile: (403) 250-5330

www.bgcengineering.ca

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