



Indian and Northern  
Affairs Canada



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August 28, 2006

Sarah Gagné, EIT  
Technical Advisor  
Nunavut Water Board  
PO Box 119  
Gjoa Haven NU X0B 1J0

**RE: NOTICE OF MODIFICATION TO SEWAGE LAGOON - LICENCE NO.  
1BR-EKA0607 (FOX-C EKALUGAD FJORD)**

Dear Ms. Gagné:

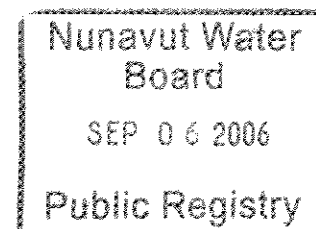
We would like to notify you of a planned modification to the sewage lagoon design for Licence No. 1BR-EKA0607. Justification for the changes and further details are provided in the attached letter and drawing.

Please let me know if you have any questions or concerns.

Natalie Plato  
Director, Contaminated Sites

Encl: Letter from UMA Regarding Sewage Lagoon  
Drawing 413759-C17 Sewage Lagoon

cc: Brad Thompson, PWGSC  
Mark Yetman, INAC



UMA Engineering Ltd.  
1702 7 102 Avenue  
Edmonton, Alberta T5S 1K3  
• 780-497-3842 • 780-497-3842 • 780-497-3842

August 24, 2006

File Name: 2977-328-00

VIA FACSIMILE: (780) 497-3842

Brad Thompson  
Public Works and Government Services Canada  
Telus Plaza North  
5<sup>th</sup> Floor, 10025 Jasper Avenue  
Edmonton, AB T5J 1S6

Dear Mr. Thompson:

**Re: Sewage Lagoon Construction**

Due to difficult ground conditions at the FOX-C DEW Line Clean-up site, the sewage lagoon cannot be constructed as designed. Factors affecting construction include a high water table, permafrost and low-strength soils.

In order to facilitate construction of the sewage lagoon, we propose the following revisions:

- relocate the lagoon to a flatter location;
- raise the floor of the lagoon such that it varies approximately 1 m on average below existing ground level, to reduce the amount of disturbance to permafrost;
- increase the height of the perimeter berms to maintain adequate storage;
- add a groundwater suppression system on the backslope of the lagoon to mitigate hydrostatic pressure and groundwater seepage in the facility;
- delete the centre berm (due to low strength soils) and revise the facility to operate as a single cell; and
- delete the HDPE liner, as the fine grained soils encountered at the lagoon location should provide adequate containment.

We feel that the above will provide a timely and economical solution to the difficult conditions encountered at the site, and will allow the facility to be reclaimed with a minimum of waste.

Please note that the sewage lagoon will be located outside of setbacks stated in the Water License and the facility will comply with all the terms and conditions of the Water License.

Enclosed are revised construction drawings showing the proposed design changes.

Please contact us should you have any questions or concerns.

Sincerely,

**UMA Engineering Ltd.**

  
Rudy Schmidtke, M.Sc., P.Eng.  
Regional Manager, Earth & Environmental  
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