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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

December 18, 2003

*By Email and Regular Mail*

File #: NWB1POL0311/TR/2A(7);2(C);1A(15 )

Mr. John Knapp  
Site Manager  
Teck Cominco Ltd., Polaris Operations  
P.O. Box 188  
Resolute Bay, NU  
X0A 0E0

**Subject:**

**Dock Plan and Section Drawings 2(C),  
Operation Landfill Cover Design Drawings and Specifications 2A(7),  
Garrow Lake Dam Decommissioning Drawings and Specifications 1A(15)**

Dear Mr. Knapp,

The Nunavut Water Board ("NWB") and the Department of Indian Affairs and Northern Development ("DIAND") have reviewed the above-cited submissions. In addition to an internal review of the submissions conducted by NWB and DIAND staff and their consultants, comments were also received from Environment Canada and Fisheries and Oceans Canada ("DFO"). The review was further developed through a visit, between September 8 -10, 2003, by NWB and DIAND representatives who went to Polaris Mine to examine reclamation activities. All reviews conducted by interested parties concerning the submissions are available on the NWB's FTP site at:

<ftp.nunavut.ca/nwb/NWB1%20MINING%20or%20BULK%20SAMPLING/NWB1POL0311%20Polaris/Technical%20Reviews>

The NWB and DIAND jointly approve the submissions with the following terms and conditions:

**A: Dock Plan and Section Drawings**

1. The Licensee shall present Canadian Hydrological Service's Benchmarks 1, 2 and 3 on the plans.
2. The Licensee shall clarify what survey controls will be used to help define the reclaimed 17.5H:1V slope given that the present benchmarks are associated with structures to be removed through decommissioning.

3. The Licensee shall ensure that the final beach slope conforms to the actual Lower Low Water Level and Higher High Water Level.
4. The Licensee shall clarify why, in Drawing 02-102, there is a slope of 10H:1V from the front face of the piles up to the LLWL, which is a modification of the original Westmar plan.
5. The Licensee shall provide greater detail concerning the decommissioning of the temporary dock, including clarification as to whether they intend to cut sheet piles at either the Lower Low Water Level or at “ground level” as discussed in the decommissioning plan.
6. The Licensee shall clarify how it intends to avoid sedimentation during dock and shoreline decommissioning activities.
7. The Licensee shall clarify what it intends to do with larger rip rap boulders that may require removal in order to meet the decommissioning objective of leaving the shoreline with beach materials having a median grain size of 10 mm.
8. That TCL, in accordance with the *Fisheries Act*, Section 36(3), shall not deposit, nor permit the deposit of any fuel, chemicals, wastes or sediment into any water body that is deleterious to fish or their habitat.
9. The Licensee shall ensure that any material used to restore the existing beach area be clean and free of fines.
10. The Licensee shall submit a plan that characterizes the situation and provides mitigative options that will permanently encapsulate the soils below the final beach slope.
11. The Licensee with respect to Part A, Item 1, 2, 4,5,6,7, and 10(above), shall submit to the Board for review, the supplemental information within the next quarterly report as required in Part B, Item 3 of water licence NWB1POL0311.

**B: Operational Landfill Cover Design Drawings and Specifications**

This approval takes into consideration the fact that much of the work on the reclamation of the Operational Landfill was already completed before the review’s deadline had elapsed. With this in mind, the following terms and conditions are still applicable:

1. The Licensee shall submit to the Board and DIAND, the as-built drawings of the Operation Landfill, signed by its designer, 90 days after the final modifications have taken place, as required in Part F, Item 4 of Licence NWB1POL03011.
2. The Licensee shall submit an update including an implementation schedule to the Board as part of the quarterly report required in Part B, Item 3 of License NWB1POL0322.

**C: Garrow Lake Dam Decommissioning Drawings and Specifications**

1. The Licensee shall submit to the Board for review an implementation schedule for decommissioning work at the dam. The schedule shall be submitted as part of the quarterly report required in Part B, Item 3 of the water licence.

2. The Licensee shall ensure that all work on the dam be completed before the spring 2004 freshet. If the Licensee is unable to complete that work before the freshet, then it shall submit a request to modify this aspect of the reclamation plan 60 days in advance of implementing any work, as outlined in Part F, Item 2 of Licence NWB1POL03011. The request shall include mitigation measures to deal with possible impacts to the Garrow Lake watershed, including sedimentation and contamination concerns from blasting materials.
3. The Licensee shall provide details concerning how it intends to decommission disturbed areas downstream of the dam.
4. The Licensee shall ensure compliance with DFO requirements that a maximum pressure of 100 kPa and monitoring peak pressure in Garrow Lake be adhered to.
5. The Licensee shall ensure that the shell material to be placed on the breached structure to be free of ice and snow. The material placement specifications should specify a minimum number of passes of a specified piece of machinery or be “as directed by Engineer”.
6. The Licensee shall ensure that the site access roads are presented in the General Location Plan, as well as in their decommissioned state in the Plan View of Decommissioned Dam Footprint.
7. The Licensee in accordance with the *Fisheries Act*, Section 36(3), shall not deposit, nor permit the deposit of any fuel, chemicals, wastes or sediment into any water body that is deleterious to fish or their habitat.
8. The Licensee shall submit to the Board an update on the type of materials to be used for the proposed cofferdam
9. The Licensee shall ensure that construction materials for the cofferdam are clean and free of fines.
10. The Licensee shall ensure that all sumps are backfilled and remediated prior to removal of the cofferdam.
11. The Licensee shall ensure any stockpiled material is located at least 30 m from the high water mark and located in such a manner as to prevent the contents from entering any waterbody.
12. The Licensee shall with respect to Part C, Items 1, 4, 6 and 9(above), submit to the Board for review, the supplemental information within the next quarterly report as required under Part B, Item 3 of NWB1POL03011.

The Licensee is reminded that the drawings and specifications for the Little Red Dog quarry cover are to be submitted to the Board, 60 days prior to commencement of the works, as required in Part F, Item 2 of Licence NWB1POL03011, to ensure a proper review.

Due to regulatory concerns about the decommissioning of the Garrow Lake wavebreak structure, that issue will be addressed by DIAND and the NWB by way of a separate cover.

If you have any questions or require any additional information, please do not hesitate to contact the undersigned at your convenience.

Sincerely,

***Original signed by:***

Dionne Filiatrault  
Executive Director  
Nunavut Water Board

***Original signed by:***

Carl McLean  
Manager, Land Administration  
Indian and Northern Affairs Canada

c.c. Polaris Distribution List