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May 15, 2009

Dave Hohnstein
A/Director Technical Services
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0A 1J0

**Re: Response to NWB's May 5, 2009 letter regarding Teck Cominco's
Security for the Polaris Mine Site (Water Licence 1AR-POL0311)**

Please be advised that Indian and Northern Affairs has completed a review of 1AR-POL0311 water licence security for the Polaris mine site which is located in the Qikiqtani region in Nunavut. All associated documents related to this license posted on your ftp site under 1BR-POL were included in my review (see attached Technical Review Memo). In addition, INAC staff conducted a site visit in August 2008. An inspection report as well as an assessment of the remaining liabilities was prepared and is attached to this correspondence.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4738 or by email at Andrea.Cull@inac.gc.ca.

Yours truly,

Original Signed By

Andrea Cull
Water Management Specialist



Technical Review Memo

To: Dave Hohnstein - A/Director Technical Services, Nunavut Water Board

From: Andrea Cull – Water Management Specialist, Indian & Northern Affairs Canada

Re: Response to NWB's May 5, 2009 letter regarding Teck Cominco's Security for the Polaris Mine Site (Water Licence 1AR-POL0311)

General - Water licence Number 1AR-POL0311

The following documents form part of this review:

- June 14, 2005 Teck Cominco submitted: Polaris Mine Decommissioning and Reclamation – Response to letter of Direction Dated Feb 28, 2005
- June 24, 2008 Teck Cominco submitted: Request for Reduction of Water Quality Monitoring Requirements and Reduction of Reclamation Security
- November 6, 2008 BGC Engineering Inc. submitted: INAC Polaris Site Visit (August 24, 2008) and Inspection Report
- February 10, 2009 Teck Cominco submitted: Polaris Mine 2004 Revised Annual Report
- February 12, 2009 Teck Cominco submitted: 2008 Post –Reclamation Monitoring Report, 4th Quarter and Annual Report
- March 5, 2009 Teck Cominco submitted a letter to the NWB and INAC: “Re: Polaris Mine – Request for Reduction of Reclamation Security (Water Licence NWB1POL0311)”
- April 17, 2009 BGC Engineering Inc. submitted: INAC Review of Outstanding Items and Assessment of Crown's Remaining Liability
- April 24, 2009 NWB submitted a letter to Teck Cominco: Submission of Reduction in Security Request



- May 5, 2009 NWB submitted a letter/request to INAC: "Re: Security Posted by Teck Cominco for Water Licence 1AR-POL0311" requesting comment from INAC by May 15, 2009

In response to the NWB May 5, 2009 letter to Kevin Buck, INAC regarding confirmation of the amount of security held by the Minister I can confirm that it is currently \$18 million dollars.

As is referenced in the May 5, 2009 correspondence, Teck Cominco was required as per Part B, Item 2 of the license, dated March 1, 2003, to submit progressive amounts of security with the last instalment due on December 31, 2004. The total amount of security was to be \$33.7 million dollars. However the instalments referred to in parts b) and c) of Item 2 state that the amounts are subject to Items 3 and 4 of Part 2 of the license. Item 3 basically required Teck to submit quarterly expenditure reports detailing reclamation work completed each year with an amount of adjustment credit requested in relation to the original 2002 remediation cost estimate. Item 4 states that the Board may modify the amount and schedule of the security upon submission of any party among other things. There is no indication from a search on the NWB ftp site that any modification to the amount of security required was approved by the Board. Therefore there is technically a contravention of the current water license in regard to this section.

Recently INAC contacted Teck and enquired as to why the total security amount of \$33.7 million dollars had not been provided. The response can be summarized as follows,

- Teck applied for a new Water License for Polaris in October, 2002
- The mine was closed in September, 2002 – reclamation activities started
- Mine Site Reclamation Policy for Nunavut in place July, 2002 – identifies that financial security should not be less than total reclamation liability of a site – the policy recognized there should be a transition period given that security varied widely for existing mines and most had little or no security
- Therefore the NWB decided to phase in security requirements in the new license – full amount of \$33.7 million to be provided by December, 2004
- Mine was already in reclamation phase and was scheduled for completion in the fall of 2004 (as per Table 2.1 in approved Closure Plan)
- It was understood by the Board at the time that if work progressed as planned the reclamation work would be completed and outstanding



reclamation liabilities would be eliminated before the full amount of security was due

- Reclamation work at site proceeded on schedule and was complete by September, 2004
- INAC (and NWB) site inspection in Sept, 2004 – Report concluded that this was the final inspection for the abandonment and reclamation work at Polaris and that remaining work, in addition to post closure monitoring requirements, were cosmetic in nature involving minor slope flattening and contouring
- Thus the outstanding liabilities were, in reality, a fraction of the amount of security already submitted \$18 million – at the end of the year – December, 2004 the last instalment of security required (\$12 million) was not submitted
- Teck was in error in not pursuing formal approval from the Board that the additional security was not required and, in fact, that the majority of security already provided should be released
- It did not become an issue as all parties were aware that the major reclamation activities had been completed in a thorough manner and that the remaining activities consisted of post closure monitoring and minor earthwork (maintenance)

In conclusion it appears that all parties were aware that the full amount of security required had not been submitted and that Teck should have sought NWB approval for this. Based on INAC's recent site visit and assessment of remaining liabilities related to the Polaris mine (reports prepared by BCG Engineering on behalf of INAC in 2008 and 2009 - attached) it can also be concluded that financial security requirements are less than that which is currently held by the Minister. Thus, although Teck has technically contravened Part B, Item 2 of the Water License by not providing the full \$33.7 million dollars it seems moot to consider that Teck should provide this amount at this point in time.

Current Security Assessment Provided by INAC for NWB Consideration

INAC's recommendation for remaining site liability is primarily based on a report prepared on our behalf by BCG Engineering (April 17, 2009 - INAC Review of



Outstanding Items and Assessment of Crown's Remaining Liability). This report is attached and forms part of our overall assessment. Please note the following,

- Total outstanding liability assessed at \$3,856,500 dollars (see report for details)
- \$1 million dollars recommended to be held for outstanding documentation to be submitted in accordance with water license requirements. Prior to this review Teck and the NWB were provided with a draft copy of the assessment report. All documentation referred to as part of this liability was confirmed to have been submitted or was provided by Teck Cominco prior to the March 5, 2009 security reduction request.(including 2004 revised Annual Report and 2008 Quarterly Reports and Annual Report - attached). Thus this amount can be subtracted from \$3,856, 500 dollars leaving a total of \$2,856,500 dollars
- \$835,000 dollars to be held for mobilization of new equipment to site from Resolute Bay – Although Teck maintains that there is usable equipment on site (see Teck's March 5, 2009 request for security reduction) and suggests that \$50,000 dollars for possible repairs would be adequate, there is the possibility that new equipment would be required. INAC therefore suggests that \$250,000 dollars would be adequate under this section. Subtract \$585,000 dollars from \$2,856,500 dollars = \$2,271,500 dollars.
- \$40,000 dollars for demobilization of existing camp and removal of old and new equipment after completion of outstanding site reclamation maintenance activities – Teck suggests that this amount could be as high as \$408,000 dollars. INAC supports this amount; therefore \$368,000 dollars should be added under this section bringing the total to \$2,271,500 plus \$368,000 = 2,639,500 dollars.
- \$250,000 dollars for remediation of areas identified in 2008 site visit by INAC – this amount is included in the \$2,639,500 dollar estimate
- \$731,500 dollars for ongoing post closure monitoring for 2009 – 2011. Teck suggests in the March 5, 2009 security reduction request to the NWB that this amount should be adjusted to \$815,500 dollars based on inflation and a refined estimate. INAC concurs with this adjustment. It should be pointed out however that there is no guarantee that post closure monitoring will end at the current license expiration date in 2011. Further to this, upon expiration of the current water license, site conditions and overall monitoring results and reports prepared by Teck will be evaluated by parties. It is possible that post closure monitoring could extend beyond 2011. Therefore it would be prudent to include a minimum of an additional \$815,500 dollars for post closure monitoring at



this time. Please note that \$731,500 dollars is included in the total of \$2,639,500 dollar amount previously stated so an additional amount of security under this section (taking into account Teck's revised estimate) is required. The total estimate would be \$2,639,500 plus adjustment of \$84,000 plus additional \$815,500 for post closure monitoring beyond 2011 (if required) = 3,539,000 dollars.

- \$1,000,000 dollars should be held for a report detailing the long term stability of the subsidence zone – this amount can include Teck's estimate of \$87,000 (March 5, 2009 security reduction request) for fencing if necessary. INAC is of the opinion that this amount is adequate for the preparation of this type of report and any follow-up work that may be required. – this is included in the estimate of \$3,539,000 dollars

Therefore INAC's estimate for site financial security to be considered by the Board is \$3,539,000 dollars. INAC respectfully recognizes the Board's authority pursuant to Section 76 of the Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act) to set security in an amount that is deemed appropriate for this former mine site including any considerations for compensation noted in that section (compensation assessment not part of this review). In addition as Teck addresses item left as part of post closure activities further reductions in the amount of security can be requested by Teck i.e., camp demobilization, etc.

Current Post Closure Monitoring Requirements – Part H of #1AR-POL0311

INAC has also reviewed correspondence sent to both NWB and INAC, dated June 14, 2005 from Teck – “Re – Polaris Mine Decommissioning and Reclamation – Response Letter to Direction dated February 28, 2005” (this was requested by both INAC and NWB). An attachment to this correspondence entitled, “Polaris Mine Post – Reclamation Monitoring Plan” was also reviewed. Teck provides a proposal for a revised monitoring program at the former mine in this Plan. The proposed program is not in accordance with the requirements listed in Part H of the current license. In addition a search of the records has revealed that it appears that no approval was provided to Teck to alter the monitoring required at the site. The monitoring includes both geotechnical and water quality requirements.

The Board should advise Teck as part of this review that any alteration to the monitoring at this site requires an amendment to the current license. As such Teck should formally apply for an amendment. Any alteration to the current monitoring requirements must consider a comprehensive rationale to be provided by the proponent. Such a rationale must provide scientific justification for any



proposed changes and would normally be prepared by a person(s) with expertise in geotechnical engineering (with mine closure experience), hydrology, both water quality and quantity, waste disposal (long term fate of landfills, mine tailings and waste degradation including hydro geological considerations) and site specific environmental risk assessment.

It is expected that, at this time, Teck would fulfill all monitoring requirements and reporting requirements at the site unless a formal amendment has been approved by the NWB.

For the Board's information INAC plans to visit the site once again this summer to confirm that outstanding items identified in the 2008 Site Visit Report prepared by BGC have been completed. Any reports generated as a result of this will be forwarded to the Board.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4738 or by email at Andrea.Cull@ainc-ianc.gc.ca

Yours truly,

Original Signed By

Andrea Cull

Water Management Specialist

Cc: Kevin Buck – Water Resources Manager, INAC
Bernie MacIsaac – Director of Operations, INAC
Dionne Filiatrault – Executive Director, NWB