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Submitted Via E-Mail
Our File: 2BB-MRY0710
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Was: NWB2MRY0406
Your File: _____
CIDM # 187997

December 10, 2007

Derek Chubb
VP Sustainable Development
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Toronto, ON M5H 1T1
Email: Derek.chubb@baffinland.com

RE: Water License Inspection of Mary River Project July 14th, 2007

The Water Resources Officer (WRO) appreciates the assistance and cooperation provided by Mr. Derek Chubb who accompanied the Inspector during the inspection of the site.

The following report is based on observations made at the time of the inspections at the Mary River Project. A review of the terms and conditions of the water license was conducted following the Inspection.

Immediately following the inspection a Water Use Inspection Form outlining the concerns of the inspector was signed off by the parties with the Inspector.

Part A: Scope, Definitions and Enforcement

No issues were found with respect to the location of the camp as it relates to the information contained within the current license.

It is noted that the current license was issued on February 20th, 2007 and is a renewal of license NWB2MRY0406, issued originally on June 11, 2004. The Licensee submitted a request to renew and amend the license on October 6, 2006. The license expired on December 31, 2006. The Licensee is reminded that the use of water or deposit of waste without a current Water License is an offence under the Nunavut Waters and Nunavut Surface Rights Tribunals Act.

It is noted that the Camp was inspection on July 14th, 2007. Subsequent to the inspection an amendment to the existing type B license was approved by the Nunavut Water Board that modified the type of license from a BE (Exploration- Mining and Milling) to a BB (Bulk Sampling) type. This change along with an additional set of terms and conditions came into effect on July 16th, 2007. The enclosed inspection report will reference where necessary any changes to the requirements for compliance as they relate to specific issues within the report.

The license remains a Type "B" license.

Part B: General Conditions

The issues of water use fees and security were not included within the context of this inspection.

A review of the Nunavut Water Board FTP – Public Registry was conducted during the writing of this report. An annual report for the 2006 annum, completed by KNIGHT PIÉSOLD LTD was located.



This report is a requirement under the terms and conditions of the Water License. The annual report must include but should not be limited to those items listed in Section 2 (i) through (ix) of this Part. (Section 5, i-xvi under 2BB-MRY0710)

Upon review of the report it was noted that the report on file was deficient in the following;

- No mention of what the licensee is doing with the waste/ returned drill water and cuttings is included in the report. Given the total water used for drilling (9,415 Cubic meters) this is of substantial concern for the inspector.
- GPS coordinates and photographic records are not included in the body of the report.
- Specific information regarding the approved waste disposal site to where all hazardous waste, waste oil and non-combustible wastes generated on site are backhauled is not included.

The proponent is reminded that an annual report is required to be filed by March 31st 2008 for the year ending December 31st 2007. The annual report **must** include but not be limited to those items listed in Section 5 (i) through (Xvi) inclusive, of this part as well as any information required by the Inspector.

Failure to file a complete report as outlined in the license is a violation of the Act and will subject the licensee to the enforcement measures and penalties provided for under the Act.

The licensee is reminded that it is the responsibility of the licensee to ensure that any documentation submitted by the licensee to the Nunavut Water Board is acknowledged by the Manager of Licensing.

During the period of inspection the Inspector noted that flow meters had not been installed on the intake lines.

It was also noted during the inspection that Paints, solvents and other hazardous materials were stored without the proper secondary containment. This practice must be addressed by the period of the next inspection.

A review of the Nunavut Water Board FTP site was able to locate the required Site Water Management Plan which, as per section 3 of this Part was to have been submitted October 20th, 2007. An approval of the plan was not located on the FTP site and the Inspector seeks clarification from the Nunavut Water Board regarding the completeness of the plan and the acceptance of the plan by the Board.

Part C: Conditions Applying To Water Use

At the time of the inspection the licensee was allocated the use of 475 Cubic meters of water per day for all purposes.

The Licensee is reminded to ensure that the intake hoses are equipped with a screen to prevent the entrapment of fish. Samples of the potable source were collected at the time of the inspection however after three attempts to land a helicopter at the drilling site were aborted because of high winds; no samples of the drilling return were collected. It should be noted that a sump was noted down hill of the drills and that a flow of water was noted below the sump area and above the Mary River. It is unclear if this flow terminated in the river or if it was an above ground flow that terminated prior to the river.

Analytical results received by the inspector did not contain any results in excess of the Canadian Council of Ministers of the Environment (CCME) guidelines for drinking water;

An inspection of the intake system was conducted, a filter system and UV system were both present and in working order.



Part D: Conditions Applying to Waste Disposal

During the inspection of the camp the following items were noted and brought to the attention of Mr. Chubb during the period of inspection.

As per section 4 of this Part;

Unless otherwise approved by the Board, the Licensee shall not practice open burning or on-site land filling of domestic waste..

Additionally, as per section 9 of this Part;

Unless otherwise approved by the Board the Licensee shall dispose of all toilet wastes through incineration, chemical or composting toilets for any camp with a design population over 300 and less than 2,000 person days per year, and less than 5,000 person days per year for the life of the camp. Any remaining residue generated through the course of the operation shall be backhauled and disposed of in an approved waste disposal site.

During the period of Inspection, July 14, 2007 the inspector however noted the following;

- o Open burning of combustible wastes – Photographed and documented
- o Open burning of Human wastes – Photographed and documented
- o Consolidation and stockpiling of human wastes – eventually had to be buried as per direction of Inspector because of the threat to human health.

A new incinerator was found on site during the period of inspection however it was not in use and was only just being calibrated. It is unclear how long the licensee was in the practice of open burning garbage and human wastes in barrels. It is noted that the Licensee in the 2006 annual report states the following;

“Latrine toilets were used at the Mary River camp in 2006, and all sewage was contained in drums and incinerated prior to treatment with lime then covered with native material to maintain the natural contours of the land. Amendment 1 (Part D, Item 5) required that commercial incineration toilet systems be used at full camp capacity, however, operational difficulties were encountered with the propane-fired incineration toilet and as a result use of the latrine toilets continued throughout the season.”

Pp2 –Waste Disposal Activities

Given the above the Inspector seeks clarification from the Nunavut Water Board regarding the licensee’s practice of open burning the Human wastes and then land filling the waste. Was an amendment application or notification of modification, as required by Section 4 of Part B submitted by the Licensee with respect to this practice? Additionally, it is noted that the locations of any trenches or Latrine pits (land filling) of the human wastes is not noted in the annual report.

The licensee is cautioned that they are to **incinerate** all combustible waste in an approved incinerator that will meet or exceed the Canada-wide Standards for Dioxins and Furans and the Canada-wide Standard for Mercury Emissions. Continued operations in this manner and in contravention of the terms and conditions of the current license will be treated as a continuing violation of the Act and will subject the licensee to the enforcement measures and penalties provided for under the Act.

As per Section 7 of this Part;

Unless otherwise approved by the Board, the Licensee shall contain all greywater in a sump located at a distance of at least thirty (30) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created.

It was noted during the period of inspection that a large lagoon sized area had been excavated adjacent to the camp. It is unclear to the inspector if the new excavation was covered under the existing license at the time. When questioned regarding the construction of this sump and an additional Sewage Lagoon located 150 meters south and west of the camp the Inspector was informed that this was to be covered under the



new license which was still in the application stage at that time. The licensee is cautioned that all modifications to the Operations of the camp must be approved by the Nunavut Water Board prior to their construction. A review of the Nunavut water Board FTP site could not located any approval for this work to have been completed prior to the issuance of the new license. Again the licensee is cautioned that continued operations outside the existing terms and conditions of the issued license will result in enforcement actions being undertaken by the inspector and the Department of Indian and Northern Affairs on behalf of the Nunavut Water Board.

The Licensee is reminded to include in the 2007 annual report due on March 31st 2008 a list of hazardous materials shipped out of the camp, and the location of the NWB approved treatment facility, as per section 10 of this Part, to which they were sent. All of the foregoing is required information to be included in the annual report. Shipping and receiving invoices are not required so long as records are available for inspection during the 2008 inspection season.

During the review of the Nunavut Water Board FTP site correspondence between the Hamlet of Pond Inlet and Baffinland Iron Miners Corp was noted. A review of the documents to ensure compliance with Section 2 of this Part was inconclusive and the Licensee is asked to provide the appropriate approvals from the Hamlet of Pond Inlet as soon as possible. Additionally, a Design and Operations report consistent with the requirements of Section 3 of this Part was noted. Missing is an approval document from the Nunavut Water Board accepting and approving the completeness of this report. The Nunavut Water Board is asked to provide clarity on this matter.

Part E: Conditions For Camps and Access Infrastructures

No issues were noted in the Mary River Camp however the Inspector could not make it to Milne Inlet nor Steensby Inlet and these two sites still require inspection.

Part F: Conditions Applying To Drilling Operations

As noted, an inspection was not completed at the Mary River Drilling site as high winds prevented the helicopter from landing at the site. It was noted that there was present a flow of water (over land flow) below the drill sumps and traveling down hill toward Mary River. It is unclear if this ground water flow originated in the sump area.

The licensee is reminded to submit, as per Section 3 (a to e) of the is Part, in the 2007 Annual Report the results of the Geochemical analysis of the Drill core currently being generated by the drill program to determine the constituent elements of the core which may be present and may impact water.

Part G: Conditions Applying To Contingency Planning

A review of the Water Board FTP site located a 2006 Spill Response Plan which as per Section 1 of this Part is to be on site and available for use within 30 days of the issuance of the current license. The Inspector was not able to locate an approval document from the Nunavut Water Board and is unable to determine if the submitted plan is complete or has been approved by the Board.

The licensee is reminded that it is the responsibility of the licensee to ensure that any documentation submitted by the licensee to the Nunavut Water Board is acknowledged by the Manager of Licensing.

If the plan is not completed or approved by the Board, the Licensee is directed to provide, as an addendum to the 2007 Annual report due on March 31st 2008, a revised and up to date copy of the Spill Response plan which must include the items outlines in Section 1 (i through xii).



During the same review and in accordance with a review for compliance with Section 3 of this Part a report from Knight Piesold dated April 14th, 2007 was reviewed. This report notes that it is written in response to Section 3 of this Part with requires the licensee to provide, within 90 days of the issuance of the current license a report, to be approved by the Nunavut Water Board, which is appropriately qualified by an engineer registered in Nunavut and which clearly details that the requirements of the CCME guidance document "Aboveground Storage Tank Systems for Petroleum and Allied Petroleum Products (2003)" have been met by the Licensee. It should be noted that this report, if submitted in April of 2007 was submitted 3 months before the current license was even issued.

The Fuel Storage Review document concludes, based on the fact that the barrels used for fuel storage at the Mary River camp do not hold in excess of 230 L the Licensee is not required to meet the terms and conditions of the guidance document. The inspector does not question this somewhat simplistic conclusion however because the scope of the report did not and does not include fuel storage at either the Milne inlet or Steenby Camps the Inspector is forced to conclude the report is incomplete.

The Licensee is directed to within 30 days of receipt of this report submit for approval to the Nunavut Water Board and the Inspector a report that includes among other things any and all fuel storage at any camp in a fixed location. This revised report must include any and all closed containers, receptacles or bladders currently in use by the licensee.

Additionally, as noted previously for other plans and submitted reports the review of the Nunavut Water Board FTP site did not locate an acceptance or approval for the above noted plan which again appears to have been written and submitted three months in advance of the issuing of the current license.

The Licensee is reminded that as per Section 6 (iii) of this Part the Licensee is required to submit a detailed report on each spill occurrence no later than 30 days following the initial event.

Part G: Conditions Applying To Abandonment And Restoration

It was noted that during the period of inspection that a clean-up of the historic waste metals including drums and machinery was on-going.

The Inspector strongly encourages the licensee to document and provide reports on any and all proactive reclamation activities undertaken by the licensee over the last year.

Part H: Conditions Applying To Monitoring Programs

As per Section 1 of this Part the Licensee is required to measure and record in cubic meters the daily quantities of water utilized for Camp operations and all purposes.

As per Section 2 of this Part the Licensee is required to adhere to the monitoring and reporting requirements contained within section 3 of Part B and Section 3 of Part F.

The Licensee is reminded that failure to comply with the terms and conditions of the issued water license constitutes an offence under the Nunavut Water and Nunavut Surface Rights Tribunals Act.

The Licensee is also required as per section 6 to provide accurate measurements of all waste hauled off site and the location, including the NWB approved location for Hazardous waste treatment.

All this information shall be included in the 2007 annual report.



Non-Compliance:

During the inspection a number of items were noted as violations of the Act and required remedial actions to be undertaken. It is noted that on August 15th an e-mail from Mr. Chubb detailing the efforts of the Licensee to address items noted during the Inspection was received.

- Open burning of garbage is to cease – Verbal direction provided on July 14th, 2007
- Stockpiling and Open Burning of Human Waste to cease- Verbal Direction in July 14th, 2007
- Location of the NWB approved treatment facility where hazardous wastes generated or marshalled on site are to be shipped- to be included in annual report.
- Installation of metering system to accurately record water use.
- Submission of a revised report on the conformity of the licensee to the CCME's "Aboveground Storage Tank Systems for Petroleum and Allied Petroleum Products 2003" within 30 days of receipt of this report.
- A detailed report, including GPS coordinates and photographs, on the disposal of drill cuttings and wastes associated with drilling at the Mary River Drill site. This report is required within 30 days of receipt of this report.
- Installation of required secondary containment as outlined during the inspection
- Installation of meters on intake systems for properly and accurately recording water use volumes.
- Provide locations and quantities of all human wastes buried as per the terms of this and previous licenses. This is to be provided as an addendum to the 2007 annual report.
- Provide documentation of the approved modification or amendment from the Nunavut Water Board permitting the licensee to burn in 45 gallon drums human waste and then deposit it in a land fill location within 30 days of receipt of this report.
- Provide documentation of the approved modification or amendment from the Nunavut Water Board permitting the construction of the sump and sewage lagoon prior to the issuance of the current license within 30 days of receipt of this report.

Andrew Keim
Inspector's Name

Inspector's Signature

Attached under separate cover;
Photos taken during Inspection of July 14th, 2007

Cc:
Peter Kusugak – Manager Field Operations Section- Indian and Northern Affairs Canada
Phyllis Beaulieu – Manager licensing – Nunavut Water Board