



## **ECHO BAY MINES LTD.**

March 4, 2002

Our File: NWB1LUP0008-Inspections01  
Your File: Water Register  
NWB1LUP0008

Water Resources Officer  
INAC, Nunavut District Office  
P.O. Box 100  
Iqaluit, NU  
X0A 0H0

Dear Sir:

**RE: Echo Bay Mines Ltd., Lupin Gold Mine, Contwoyto Lake, NU.; Water Licence  
NWB1LUP0008;  
Water Licence Inspection Reports - July 8, 2001 and August 11, 2001.**

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This letter is to acknowledge the receipt of the inspection reports for inspections carried out on July 8, 2001 and on August 11, 2001. The inspections were carried out on these respective dates, however the actual cover letters to the reports were dated November 16, 2001 and postmarked January 25, 2002. They were received on site at Lupin the week of February 7<sup>th</sup>.

It was also noted that the cover letters were issued under Water Licence "N7L2-0925 (expired)" rather the recently (July 2000) renewed Nunavut Licence NWB1LUP0008. This could cause some confusion in cross-referencing the correspondence at a later time.

During both inspections, site personnel assisted in the visit and were acknowledge in the reports. The mine operations were commended in several areas for the proactive work and diligence in environmental practices during daily operations of the water, sewage and tailings containment areas.

In addition to the above, I would like to take this opportunity to comment on and clarify some of the issues within the respective Inspection Reports.

### **July 8, 2001 - Inspection Report/Cover letter**

**Water Supply** - There were no concerns under this heading with the exception of the "Certificate of Analysis" or laboratory results that were attached to the Inspection Report has the Sample I.D. recorded as 'raw water 925-01' and the sample type recorded as 'sewage'. This should be changed for future reference as it is freshwater from Contwoyto Lake.

**Waste Disposal** - This section lists four “unacceptable” conditions with regards to 1) Decant structure, 2) Dams and dykes, 3) Erosion and 4) Seepages. The comments section provides some explanation, however the reference to the seepage and the dams and dykes appear to be with regard to the internal TCA dyke referred to as Mdam. This is an internal component of the TCA and an operational concern with regard to the segregation of components. The licence, as it reads does not apply to internal dykes and means of operational control.

The decant structure (for the sewage lakes system) was damaged during late spring when the remaining ice flow in the second sewage pond was pushed across the lake damaging the gate valve. Repairs have been completed. As well, the erosion at the same control structure (which was caused by a seam failure in the culvert) has been properly addressed through excavation and repair.

In the cover letter, the Inspector refers to the tailings line dump ponds which contained accumulated water from the spring melt. The water within these ponds was handled appropriately and pumped to the TCA as has been the practice at Lupin. We will however keep in mind, that given prior sampling, alternate means of handling the water are available.

**Sewage disposal** - It should be noted that any issues regarding the decant structure of the Sewage Lakes Disposal System that were raised during the previous inspection were handled appropriately prior to the winter 2000. The current concern with the damaged control gate and the leakage and subsequent erosion of the downstream slope around the culvert were issues that developed following initial discharge in 2001.

The discussion of analytical results should be limited to whether or not the licence parameters have been satisfied. There is however a comparison made of the results with the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life*. If there is a need to have these comparisons made as part of the Licence Inspection, an explanation along with the results would be helpful. Otherwise these comparisons should be left out of the scope of Licence Inspection.

The inspection report also included a reference to the Microtox® test that was carried out on the effluent sample, however these results were not included with the report.

#### **August 11, 2001 - Inspection Report/Cover letter**

**Waste Disposal** - again, during this inspection there were noted “unacceptable” conditions with respect to the waste disposal facilities at Lupin. These were with regard to 1) Decant Structure 2) Dams, Dykes 3) Erosion and 4) Seepages. There is no mention of the decant structure or the erosion within the comments section of the report so it is assume that the reference is with regard to the sewage lakes system as in the previous inspection.

Although it is not explicitly explained in the inspection report, the “unacceptable” attribute to the Dams and dykes as well as the Seepage section appears to be with respect to the noted “pooled” water between Dam4 and the parallel coffer dam. This water is always present during the spring/summer prior to pumping the contents over Dam4 to Cell No.4. This annual pumping is done in conjunction with the TCA annual geotechnical inspection which allows the engineer to inspect as close as possible, the foundation of the dam. The coffer dam was used during the construction of Dam4 to prevent inflow of water from the adjacent lake.

The water level within the coffer dam area generally remains at an elevation well below that of the water in Cell No.4. On occasion, after the water has been pumped out, water has been seen entering the area from the ground alongside the coffer dam. This water has been sampled in the past and found to be similar in chemical makeup to that of the adjacent lake. There is however some slight contamination from the holding area itself which, by the nature of its location, accumulates some drifting snow and minor tailings from the upstream side of Dam4. This is a probable cause of the lower pH noted during the inspection.

Within the cover letter of the report there is reference to the water quality within the coffer dam area as well as that of “Laurie Lake” (assumed to be the adjacent lake). The results were noted in the Inspection Report cover letter, however the results for the “Laurie Lake” sample (which were apparently inconclusive) were not included in the report. It should be noted at this time, and corrected if possible, that the adjacent water body to the coffer dam is connected to “Long Lake” and is not identified on any maps as Laurie Lake. Our apologies for the misinformation.

**Sewage disposal** - during the August inspection , it was again noted that the discharge culvert was in need of repairs. This repair work was completed in September. For greater detail please see the 2001 Annual Report submitted to the NWB. There was also a water sample obtained at the time of inspection and submitted for analysis with results reported. The report identifies a pH of 5.3, below the licence specified pH of 6-9.5. A monthly sample was obtained by EBM staff on August 13, 2001 and submitted to the lab in Edmonton for analysis. This sample had a pH of 5.96. All samples obtained prior to and after August 13, 2001 indicated pH at or above 6.0. The discharge was shut down for the year on August 17, 2001 after receiving the results from the Edmonton lab.

The results of the water sample obtained during the inspection were discussed within the cover letter with the pH identified as the only item of concern with regard to the Licence. Again, the results are compared with the “*Canadian Water Quality Guidelines...*” as were the results from the coffer dam sample at the TCA. Once again, I have a concern as to why these comparisons are being made when the issue at hand is ‘Licence Compliance’. As well, the reference to the Microtox® test performed by Environment Canada is also included in this report. Results of the Env. Can. tests are included with this report.

It should be noted that within the Microtox® report submitted, Environment Canada has inserted a caveat which states that the report is "...intended as a preliminary screening tool and cannot be used for any other purpose". It also states that "This data is provided on the condition that it not be used in any report that is intended for public or official use." I would think that this inspection report falls into the category of one of those uses.


I appreciate the time taken to review this letter identifying some of the concerns and clarifications needed. A further explanation is requested as to the significance of the data comparison with the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life* and the impact it might have on the Licensee's compliance.

Should you have any questions or comments regarding any of the above, please feel free to contact the undersigned at (780) 890-8794, Lupin.

Yours truly,



D. Hohnstein  
Environmental Coordinator, Lupin

cc      Nunavut Water Board, Gjoa Haven      
         B. Danyluk  
         H. Ducasse