POLARIS MINE

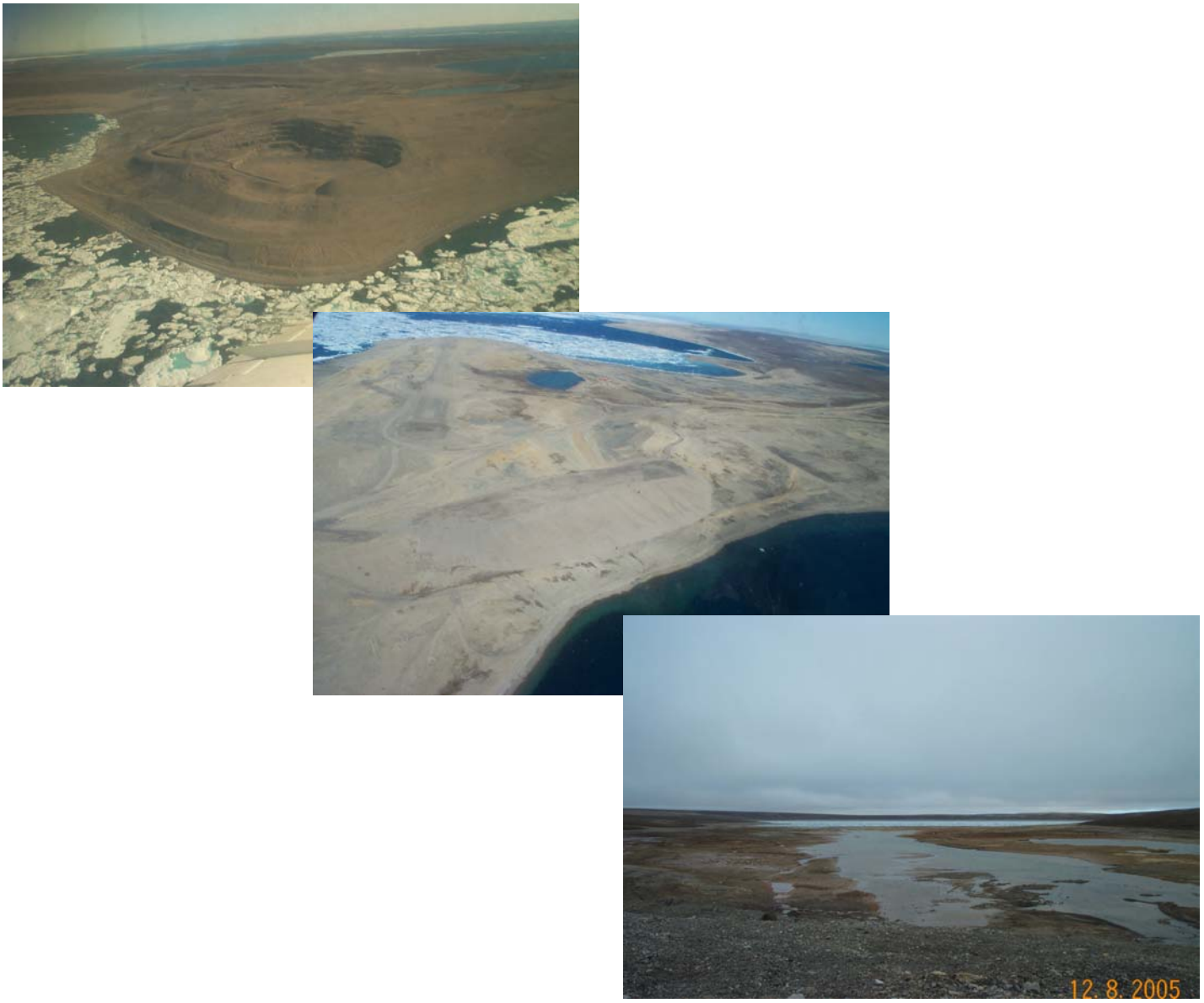
2005 4TH QUARTER & 2005 ANNUAL REPORT

FOR THE

NUNAVUT WATER BOARD

AND

INDIAN AND NORTHERN AFFAIRS CANADA



February 15, 2006

Nunavut Water Board
Box 119
Gjoa Haven, NU
X0B 0J0
Attention: Phyllis Beaulieu, Manager of Licensing

Indian and Northern Affairs Canada
P.O. Box 100
Iqaluit, Nunavut
X0A 0H0
Attention: Spencer Dewar, Manager, Lands Administration

Dear Phyllis and Spencer;

Re: Polaris Mine Water Licence NWB1POL0311 – 2005 4th Quarter and Annual Water Licence and Decommissioning and Reclamation Plan Reports

Please find attached the Polaris Mine 2005 4th Quarter and 2005 Annual Reports as required under Polaris's Water Licence and Decommissioning and Reclamation Plan (DRP). I have attached paper copies of this report to this letter in addition to an electronic copy of the report files.

Section 2.3 of the attached report discusses the application of the Metal Mining Effluent Regulations to the Polaris Mine which are mirrored in the Water Licence requirements. As of the end of 2005, the Polaris Mine is no long subject to the Metal Mining Effluent Regulations. Teck Cominco had requested updating of the sites monitoring requirements in a submission dated June 14th, 2005. In the June 14th submission we indicated that updating of the water quality and biological monitoring programs should be delayed until after submission of the Environmental Effects Monitoring (EEM) Interpretive Report so that all relevant data would be available to make an informed decision. Appendix 3 of the attached report contains a copy of the EEM Interpretive Report. Now that the results of this study have been

submitted, Teck Cominco will be making a submission within the next few months to alter the effluent and water quality monitoring program for the site.

If you have any questions regarding this report, please do not hesitate to contact me.

Yours truly,

Bruce J. Donald
Reclamation Manager
Environment and Corporate Affairs
Teck Cominco Limited

DISTRIBUTION LIST

1. Nunavut Water Board - 2 copies
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   Nunavut Water Board
   P.O. Box 119
   Gjoa Haven, NU X0B 1J0

2. Indian and Northern Affairs Canada – 1 copy
   Manager, Land Administration
   Department of Indian Affairs and Northern Development
   Box 100
   Iqaluit, NU X0A 0H0

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   - Vancouver Office – Walter Kuit
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APPENDICES

1. INTRODUCTION

The Polaris Mine ceased operation in September of 2002. Immediately upon mine closure, reclamation activities commenced in accordance with the Decommissioning and Reclamation Plan (DRP) approved by the Nunavut Water Board and Indian and Northern Affairs Canada. The DRP as well as the Water Licence requires reporting of work and monitoring activities on both a quarterly and an annual basis. This document includes both the 2005 4th Quarter and the 2005 Annual Report for the Polaris Mine site.

An executive summary of this report translated into Inuktitut is included as Appendix 1.

2. 2005, 4th QUARTER REPORT

2.1. Reclamation Activities

During the entire 4th Quarter of 2005, the Polaris Mine remained unoccupied by personnel. No reclamation activities were undertaken.

2.2. Site Monitoring

During the entire 4th Quarter of 2005, the Polaris Mine remained unoccupied by personnel and no monitoring events occurred as all surface waters were frozen.

Despite there being no surface water flows to sample, the Metal Mining Effluent Regulations (MMER) requires the submission of a monitoring report. This report is included in Appendix 2.

2.3. Environmental Effects Monitoring

The MMER is applicable to a metal mine while it is operating, and for a three year period after production ceases and after written notification is received by Environment Canada. In the case of the Polaris Mine, notice was received by Environment Canada on December 16, 2002. As required in the MMER, during the three year period, an Environmental Effects Monitoring (EEM) Study must be conducted that includes both the effluent and water quality monitoring studies set out in Part 1 of the MMER as well as the biological monitoring studies set out in Part 2 of the MMER. Polaris has now completed both the water quality monitoring studies as well as the biological monitoring studies. The final EEM study was completed and submitted to Environment Canada in December 2005 and is currently under review by them. Part H of the water licence also requires that the EEM studies be conducted and reported. The results of the EEM study are scientific verification that the effluent from Garrow Lake is not having a significant effect on the receiving environment. Teck Cominco requests that the Water Board review this important study when considering future monitoring requirements at the site. A copy of the Interpretive Report of the Environmental Effects Monitoring Study is included in Appendix 3.

The monitoring requirements under the MMER are rigorous in order to aid in interpreting the results of the EEM studies. The monitoring required under the MMER are designed to be standardized all across Canada so that a statistical analysis of water quality data could be related to the resulting environmental effects (or lack of effects) as documented in all of the EEM studies. Now that Polaris's final EEM study has been completed, the original intent of the rigorous sampling requirements has been satisfied and the necessity of continuing monitoring at this level of rigour is not scientifically justified. Teck Cominco will be submitting a request in the near future for substantial changes to its water quality monitoring program supported by a review of the data and

studies completed to date. The request will be to reduce on-going water quality and biological monitoring requirements to a much more practical level. This would reduce both the current excessive monitoring costs, and reduce the potential risks to that sampling personnel are exposed to due to the frequency of sampling and harsh weather conditions at this remote site.

It is important to note that subsequent to December 16, 2005; now that the Polaris Mine has completed the three year period since closure, it is now deemed to be a "recognized closed mine" and so is no longer regulated under the Metal Mining Effluent Regulations.

3. 2005 ANNUAL REPORT

Part B, Section 6 of the Water Licence requires that an Annual Report be filed that includes the following topics.

3.1. Unauthorized Discharges

The Polaris Mine had no unauthorized discharges to report.

3.2. Progress Report of Studies and Plans

Progress on reports and/or revision of any studies or plans requested by the Board is listed below:

- Teck Cominco submitted a request on June 14th, 2005 for modifications to the monitoring plans that were originally set out in the Decommissioning and Reclamation Plan. This was to recognize that the site had completed the decommissioning phase and that site monitoring should now be updated to reflect current conditions. There were a large number of house keeping changes requested to delete items that were no longer applicable. However, Teck Cominco requested that changes to the Garrow Lake and Garrow Lake effluent water quality monitoring program be delayed until 2006 to allow for the completion of the MMER water quality sampling program and submission of the final EEM study. On July 18, 2005 the Environmental Protection Branch of Environment Canada submitted a response to Teck Cominco's request. The response agreed with most items in the request and disagreed with some other items. Of note was their agreement that review of the water quality program be delayed until after completion of the MMER program.
- Submission of the very comprehensive 2004 Annual Report was made in September 2005 which included the final reporting of the reclamation activities and of the water quality monitoring program results that occurred during 2004. A number of requested studies and as-built drawings remained outstanding when the report was submitted. The submission of the report clearly identified which materials were absent and at the end of 2005, work on completing these deficiencies was in progress. The missing reports are planned to be submitted within the next eight weeks.

3.3. Executive Summary of Report Translated into Inuktitut

Included in Appendix 1 is an executive summary of both the 2005 4th Quarter Report and the 2005 Annual Report translated into Inuktitut.

3.4. Summary of Closure and/or Reclamation Work Undertaken

A summary of any closure and reclamation work undertaken during the year and an outline of work anticipated for the next year is outlined below:

- During June, July and early August; a small crew consisting of 3 to 4 people was stationed on site to conduct maintenance to the temporary site camp and remaining equipment after being used by the reclamation contractor from 2002 to 2004. In addition to carrying out

routine site monitoring activities, crews were assigned to clean up litter around the site. Approximately 50% of the required clean up was completed.

- During 2006 it is planned to undertake the final re-contouring of a slope in the new quarry and the slope by the former tank farm and storage pad areas that were identified in the 2004 fall inspection by INAC and Water Board inspectors. Additionally, the 2005 annual geotechnical inspection identified two areas where runoff from the site is eroding the drainage channels which will be stabilized this coming summer. While personnel are on site, the routine site monitoring will continue as well as the clean up of litter.

3.5. Update of Reclamation and Monitoring Costs

An update of reclamation and monitoring costs is presented in Appendix 4. Costs for 2005 were $407,900 which is higher than the original monitoring forecast. The 2005 costs were high due to:

- During the final weeks of reclamation activities and demobilizing from the site, the reclamation contractor made extensive use of the temporary camp facilities, ATV's, and three pieces of heavy equipment that were left for the post-reclamation site maintenance. During this time period, little or no maintenance was done. To ensure safe, reliable operation of the camp, facilities and equipment, substantial maintenance work was undertaken during the summer.
- All efforts were focused on major demolition of buildings right up until the final stage of site reclamation activities. Less attention was given to the final site cleanup of small pieces of debris and litter. In 2005, crews were assigned to methodically go over the site looking for and collecting the litter. It is estimated that approximately 50% of the clean up was complete at the end of the summer. As a result of this work, additional personnel were on site that otherwise would not have been required.
- Monitoring costs were higher than anticipated due to the requirements of complying with the Water Licence and MMER water quality monitoring program. Environmental scientists had to make several trips to the site from southern Canada, in addition to having technical staff residing on site for 2 ½ months during the summer to comply with the rigorous sampling and quality control requirements of the water monitoring program. Local residents are able to collect simple water samples, but a number of the sampling events required additional sampling skills.

The 2005 cost review in Appendix 4 is not compared against the previously forecast post-reclamation monitoring costs. The original cost estimates were developed at the start of the project and are several years old. Now that there is one year's experience in monitoring the site after completion of reclamation activities, the monitoring and site maintenance cost forecast has been updated and is presented in Appendix 4. The primary purpose of providing the budget is to assist in assessing financial security requirements for the site, and for this reason some internal costs that Teck Cominco incurs but the government wouldn't (if they were managing the site) are excluded from the forecast.

In forecasting costs forward from 2005, there are several items that vary from year to year and some areas where there is still significant uncertainty as to the level of monitoring that will be required. They are as follows:

- Costs for 2006 will continue at a substantial level as there is additional site clean up required and a few outstanding reclamation requirements are yet to be addressed (e.g. re-sloping activities). To be conservative, it is assumed that monitoring requirements will not change in 2006 but now that the MMER requirements are gone, it is anticipated that approval to simplify the water quality program will be obtained this spring.

- Subsequent to 2006 that there should not be any significant site maintenance work required and it is assumed that monitoring requirements will be reduced. If monitoring requirements are made technically simpler, then local Resolute residents can conduct the majority of the monitoring providing local employment and substantially reducing costs.
- Both the Water Licence and Land Leases expire in 2011. In preparation for this, final wrap up studies may be considered in 2010, but at a minimum, comprehensive reviews of the site data will be undertaken in 2011.

3.6. Public Consultation and Participation

- No public consultations were conducted as the site is basically dormant other than for monitoring.
- At least one Inuit resident from Resolute assists with the routine sampling at the site or is part of the team working on reclamation activities on site. In addition to providing local employment, the local knowledge for the safety of workers on site is invaluable. An additional benefit is that this ensures there is someone who lives in the nearest community that is aware of site activity and site conditions.

3.7. Work Conducted in Response to Inspection or Compliance Reports

A brief summary of work done to address concerns or deficiencies listed in inspection/or compliance reports were as follows:

- 2005 site activities included clean up of debris that will continue in subsequent years during summer monitoring events. This was noted in the 2004 fall site inspection report.
- In 2005 a survey of the tank farm pad and adjacent storage pad was undertaken to quantify the amount of recontouring work that is planned for 2006. Overly steep slopes were noted in the 2004 fall inspection report.

3.8. Effluent and water Quality Studies Conducted

3.8.1. Quantities of Fresh Water Pumped From Frustration Lake

The water licence requires the monthly and annual quantities (in cubic metres) of water pumped from Frustration Lake to be reported.

- No water was pumped as the site's freshwater system was demolished and reclaimed in 2004.

3.8.2. Garrow Lake Water Column Monitoring

During 2005, the Water Licence required three monitoring events (at mid-winter, at maximum ice thickness, and at maximum ice melt) in two separate locations of the Garrow Lake water column stratigraphy. The mid-winter monitoring event was not conducted as charter aircraft will not fly to this isolated, abandoned site in the dark. The maximum ice thickness and maximum melt monitoring events took place as required and were reported in the 2nd and 3rd Quarter monitoring reports.

For the past two years, under the requirements of the 2003 Water Licence, data has been collected from two monitoring stations at Garrow Lake. There have been a total of four monitoring events from both of these two monitoring locations. Figures 1 through 4 in Appendix 5, compare the zinc concentrations for each depth below surface of the lake sampled, at both monitoring stations. It should be noted that while zinc is being discussed, confirmation of lake stability would also be indicated by graphing other metals, water density, oxygen content, temperature, or conductivity.

Figure 1 – January 2004 Monitoring Event

Zinc concentrations between the two monitoring stations are almost identical with only minor variations at the 9 and 10 metre depth where a slight difference in

sampling depths can influence the results as the zinc concentrations rise and fall rapidly within this general depth of the lake. Also the 40m depth sample from 262-3 had a bit higher zinc concentration. At this location of the lake, 40m is very near the bottom of the lake and if the person sampling is not very careful, the bottom of the lake is disturbed and results in some zinc containing sediments to be suspended in the water column.

Figure 2 – May 2004 Monitoring Event

The results are very similar to the January 2004 results except that sampling at Station 262-3A was not conducted as deep as the lake is shallower in this area (It is difficult to sample in exactly the same location and lake depths change sharply in this area).

Figure 3 – May 2005 Monitoring Event

The monitoring results were almost identical between the two monitoring stations. At this sampling event, at the 9 and 10 metre depth, results from the 262-3 indicated slightly higher zinc concentrations than at 262-3A. Again, this is believed to be from sampling at a slightly different depth between the two stations.

Figure 4 – August 2005 Monitoring Event

This sampling event is different from the previous three events in that it was done during the ice free period. In August the lake is nearing the end of its annual discharge cycle where fresh melt and surface runoff waters have been added to the top of the lake. This is evident through the lowering of the zinc concentrations in the 0 to 3 metre depths of the lake. While not visible on the graph, Station 262-3 does have a sample result at the 0m depth which has essentially the identical zinc concentration as the 363-2A station 0m depth sample.

Below 3 meters in depth, the results between the two monitoring stations are also almost identical and are very similar to the May 2005 sampling results. Again there are slight variations in zinc concentrations near depths of the lake where zinc concentrations are changing, which is likely the result of sampling at slightly different depths between the two monitoring stations.

Reviewing the data from these four monitoring events, it is apparent that no new data or different understanding of the lake is gained by sampling the lake at two different monitoring stations rather than from just one station. To reduce lab costs and to make is more manageable to complete the sampling event in one day (reduced charter costs and labour costs), we will be requesting that only one monitoring station be sampled in the future.

To obtain trends of changes in zinc concentrations in the water column since active deposition of tailings into the lake ceased at the end of summer in 2004, Figure 5 displays zinc concentrations compared to depth at Station 262-3. The colours of the lines in the graph have been set so that each colour represents a different year. This aids in visualizing the trends for zinc concentration in the water column over time. There are two obvious conclusions resulting from this graph:

a) Each of the four years has two sampling events, and the results within each year are very similar to each other.
b) There is a definite trend to reducing zinc concentrations year by year during this four year period. The trend is especially clear below the 12 metre depth.

3.8.3. Garrow Lake Effluent and Receiving Waters Monitoring

Reports summarizing the effluent monitoring results as required in Part H of the Water Licence and the MMER are included in Appendix 6 as follows:

- The Annual water quality monitoring results from the Final Discharge Point of Garrow Lake are presented. Water quality was compliant throughout the period of the year when effluent was discharging.
- A report summarizing the results of effluent characterization, sub-lethal toxicity testing, and water quality monitoring are presented. There was no acute toxicity in either the Rainbow trout or the Daphnia tests. Two sublethal toxicity tests were conducted during the year. There were no effects observed in the Topsmelt Survival and Growth Test at the highest concentrations tested. Sublethal effects were observed for the echinoid and algal species in both tests. This is explained in Appendix F of the Annual MMER and EEM reports that are included in Appendix 6.

3.9. Details of Water Use or Waste Disposal Requested by the Board

- No details of water use have been requested by the board.
- Waste disposal was restricted to collection of site litter that has been stockpiled for future disposal in LRD Quarry Landfill.

APPENDIX 1

Executive Summary

Translated into Inuktitut