POLARIS MINE

DECOMMISSIONING AND RECLAMATION PROGRESS REPORT

2nd QUARTER 2003

FOR THE

NUNAVUT WATER BOARD & INDIAN AND NORTHERN AFFAIRS CANADA

POLARIS MINE

DECOMMISSIONING AND RECLAMATION ACTIVITIES

QUARTERLY REPORTING – 2nd QUARTER 2003

SUBMITTED TO

THE NUNAVUT WATER BOARD

AND TO THE

DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS CANADA

Date Submitted: August 28, 2003

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1. EXECUTIVE SUMMARY IN INUKTITUT

Refer to Appendix A for an executive summary of plans, reports and studies conducted under this licence during the period April 1, 2003 to June 30, 2003 that has been translated into Inuktitut.

2. INTRODUCTION

This is the second formal Decommissioning and Reclamation report submitted in relation to the Polaris Mine's Decommissioning and Reclamation Plan ('Closure Plan') and in compliance of the new Water Licence NWB1POL0311 issued on April 24, 2003 with and effective date of March 1, 2003.

The Polaris Closure Plan dated March 2001 received its initial conditional approved April 15, 2002. The Closure Plan was jointly conditionally approved by the Nunavut Water Board ('NWB') and the Department of Indian and Northern Affairs Canada ('INAC'). The Closure Plan has subsequently received further approvals. The approvals contain reporting requirements and this document has been prepared to consolidate all of the reporting requirements into one document. This report is being submitted to both NWB and INAC on a quarterly basis with an annual report completed by March 31st of the subsequent year.

3. STATUS OF AUTHORIZATIONS AND/OR APPROVALS

As of June 30, 2003, the status of project approvals were as follows:

1. Closure Plan
    a. The terrestrial portions of the Closure Plan were approved as of April 2002
    b. The approval of the proposal for decommissioning the Frustration Lake Freshwater System was outstanding. Under review by the NWB and INAC.
    c. The approval for the decommissioning of Garrow Lake dam by the NWB, INAC and DFO was outstanding.
    d. The application for the decommissioning of the marine dock and adjacent shoreline by the NWB, INAC and DFO was outstanding.
2. Polaris Water Licence Application
    a. Polaris Mine received it's new Water Licence NWB1POL0311 issued in April 2003 and effective as of March 1, 2003.
3. NIRB Screening of the Project
    a. The NIRB screening report for the project was reviewed by the Ministers of DFO and Indian Affairs and Northern Development ('DIAND'). On June 13th, 2003 the Ministers issued a letter stating that they were in agreement with the NIRB screening report and no further reviews of the project were required.
4. Application for an Authorization under the Fisheries Act to decommission Garrow Lake dam and to decommission the marine dock was submitted to DFO in October 2001. Approval of the application was pending at the end of the period.
5. Melt Water Disposal Authorization

a. On March 30th, 2003 Teck Cominco applied for authorization to dispose of site melt water by pumping it into the underground mine workings. On June 5, 2003 the NWB and INAC jointly approved Teck Cominco's request.

6. Landfill Operating Protocols
   a. On May 29, 2003 the NWB granted approval for the Landfill Operating Protocols submitted by Teck Cominco.

4. UNAUTHORIZED DISCHARGES AND SUMMARY OF FOLLOW UP ACTIONS

There were no unauthorized discharges of water or effluent during the 2nd Quarter of 2003.

5. PROGRESS REPORT OF STUDIES / PLANS REQUESTED

There were no reports requested by the NWB related to Polaris's Water Licence during the 2nd Quarter of 2003.

The Closure Plan requires submission of the following plans and/or reports:

1. Certified landfill cover design specifications and plans – the design work was completed at the end of the quarter but not submitted.
2. Certified design drawings and specifications for Garrow Lake Dam Decommissioning – the design work were complete at the end of the quarter but not submitted.
3. Certified specifications and design drawings for Sealing Mine Entrances – were commissioned but not complete at the end of the period.
4. Certified specifications and design drawings for Decommissioning the marine dock and adjacent shoreline – design work complete at the end of the period but not submitted.
5. Submission of Overall Schedule for the Closure Plan – Included in the March 2001 Closure Plan and an update of the schedule is attached in Appendix B of this report.

6. DECOMMISSIONING AND RECLAMATION PROGRESS REPORT

Manpower levels increased substantially during the period as the return of daylight and warmer weather permitted more outside activities. Manpower at began the period at 39 and increase steadily and by the end of the reporting period there were 126 people on site.

6.1. Earthworks

6.1.1. Dock and Shoreline

- Removal of the ship loader was completed.
- Glycol freeze pipes in dock cells 1 & 2 have been drained and removed.
- Glycol freeze pipes in dock cells 3 & 4 have been drained but the pipes remain in place.
- Excavation of clean fill above high tide level was initiated during the period in cells 1 & 2 (after removal of overlying metals contaminated fill).

6.1.2. Garrow Lake Dam

- Siphons were installed at the dam in preparation for siphoning water from Garrow Lake. There was no discharge from the lake during the period.

6.1.3. Operational Landfill

- Drilling and blasting of cover cap material in the New Quarry was undertaken during the period.
- Hauling and placing of the initial lifts of the cap material were underway at the end of the period.

6.1.4. Little Red Dog Quarry Landfill

- Refuse placement continued during the period. Refer to Section 12.1 of this report for additional information.
- Began construction of first lift of fill in LRD.

6.1.5. Exploration Waste Stockpile

- Prior to closure of the mine, Operations initiated the removal of the waste rock stockpile adjacent to the Exploration Portal. The waste pile contains metal sulphides.
- During the period delineation sampling was underway to define remaining sulphide contamination to be targeted for remediation.

6.2. Building Demolition

6.2.1. Mill / Offices / Warehouse Facilities on the Barge

- Shutdown operation of the primary powerhouse located on the barge and relocated electrical generating services to the Cat building adjacent to the barge.
- Completed bypassing of other services from the barge to facilitate demolition.
- Removal of interior structure and equipment was completed during the period.
- Removal of siding from the barge was completed during the period.
- Removal of the superstructure of the barge was partially complete at the end of the period.
- Completed draining fuel and glycol from the barge facilities.
- Cleaning of the hull fuel tanks was in progress at the end of the period.
- The contractor estimates that 75% of the barge has been demolished by the end of the period.
- Water run off diversion ditches were established and/or upgraded during the period. Melt water disposal into the mine was initiated.

6.2.2. Product Storage Building

- Approximately 60% of the siding accessible by equipment has been removed.
- Foundations have been exposed.
- Bin walls have been removed.
- Loadout pockets have been removed.
- The contractor estimates that 35% of the building demolition has been completed at the end of the period.

6.2.3. Thickener Building

- Attempts at removal of the earthen foundation indicated that additional thaw time required.
- Foundation removal is estimated to be 50% complete.

6.2.4. CRF Building

- Removed concrete floor slab.
- Remediation of hydrocarbon contaminated soils was completed.
- Demolition work in the area is now complete.

- General site grading of the area remains to be completed.

6.2.5. Accommodations Building

- No demolition as in active use.

6.2.6. Other Buildings / Structures

- Nothing to report.

6.3. Contaminated Soil Remediation

6.3.1. Marine Dock and Adjacent Foreshore

- Environmental sampling for glycol and metals contamination in the dock area was conducted during the period. No evidence of glycol contamination was found. Metals contamination was further delineated in preparation for excavation and disposal.
- Removal of metals contaminated soils in the dock area was completed during the period.
- In June, unexpected hydrocarbons (diesel fuel) were discovered in the dock cells 1 & 2. Delineation of the extent of contamination was underway at month end.

6.3.2. Fuel Bladder Storage Area

- Conducted extensive hydrocarbon delineation activities to better define boundaries of the known hydrocarbon contamination.
- The hydrocarbon contaminated soils were excavated and placed underground in the mine in accordance with the Closure Plan.
- Excavation of hydrocarbon contaminated soils was almost complete at the end of the period. Only minor quantities of soil remain to be excavated.
- Approximately 12,000 cu. m. were excavated close to originally forecast volumes.

6.3.3. Marine Foreshore – June 2002 Oil Spill

- Removal of residual hydrocarbon contaminated soils on the foreshore from the June 2002 oil spill was completed.
- Contaminated soils were placed underground in the mine.

6.4. General Site Cleanup

- Removing materials / containers from the general barge and Product Storage building in preparation for soils excavation.

6.5. Other Site Activities

- Approximately 50,000 liters of glycol and waste fuels have been incinerated to-date through the incinerator installed at the site.
- Setting up #1 & 2 foldaways as temporary shop facilities as the permanent shop located in the barge is being prepared for demolition.

7. UPDATE OF DECOMMISSIONING AND RECLAMATION SCHEDULE

Appendix B contains an updated decommissioning schedule current as of June 30, 2003. The source of the data for the schedule is primarily from our demolition contactor. There are some revisions to the near term portions of the schedule due to more detailed planning. The project is still forecast to be completed by the end of September of 2004.

8. UPDATE OF ESTIMATED MINE DECOMMISSIONING, RECLAMATION AND MONITORING COSTS

Appendix C contains the detailed estimate of Mine Closure Costs updated as of June 30, 2003 in accordance with Part B, Item 3 or Part G, Item 21 and forecasts of cost to the end of 2011.

In summary, total Mine Closure Costs to June 30, 2003 were $24,539,792. Estimated cost to complete decommissioning, reclamation and monitoring through to 2011 have increased to $53,860,906.

9. PUBLIC CONSULTATION / PARTICIPATION

No public consultation occurred during the period.

10. SUMMARY OF WORK DONE IN RESPONSE TO INSPECTION/COMPLIANCE REPORTS

There was not work required to be done in response to inspection/compliance reports.

11. FRESHWATER WATER USE

Freshwater use from Frustration Lake for all uses during the 2nd Quarter of 2003 was:

April 2003	15,855 cu. M.
May 2003	9,521 cu. M.
June 2003	3,712 cu. M.
Total 2nd Quarter	29,088 cu. M.
Total 1st Quarter	56,927 cu. M.
Total June 30 YTD	86,015 cu. M.

12. Physical Monitoring of Site

12.1. Placement of Demolition Debris into Landfills

The approval letter for Landfill protocols requires us to report with record of materials (preferably in digital form). Refer to Appendix D for a listing of demolition debris transported to LRD pit during the quarter and a drawing of disposal locations and a photographic log of the work during the period.

12.2. Placement of Metals / Hydrocarbon Contaminated Wastes Underground in the Mine

Excavation of contaminated soils in the Bladder Spill area identified in the Closure Plan was the focus of earth work activity in April and May. During the period approximately 13, 300 cu. m. of hydrocarbon contaminated soils were disposed of in the mine. The mine workings were coated with water prior to disposal of the hydrocarbon materials. In June, excavation of metals contaminated soils from the surface of the dock area was initiated. Approximately 15,200 cu. m. of metals contaminated soils were disposed of in the mine during the period. The volumes reported are approximate as they are based on truck counts. As remediation of areas

is completed, the areas will be surveyed to provide accurate volumes. Appendix E contains a series of drawings of the each mine level where materials have been placed. These drawings are dated August 22, 2003 and so indicate more recent data than the end of the period. The drawings also indicate the locations that other material types are stored in the mine workings such as tailings lines (refer to 960 Level drawing) which the Closure Plan specified would be disposed of in the mine.

12.3. Thermistors Data

12.3.1. Garrow Dam

Garrow Lake dam has three sets of thermistors that are recorded on a monthly basis. This will continue until Garrow Lake has been lowered to its original elevation. This data is reported in Appendix F.

12.3.2. Operational Landfill

The Operational Landfill currently has four thermistors in operation and actively monitored. The Closure Plan indicates that a minimum of three will be maintained to confirm that freezing of the landfill has occurred.
Refer to Appendix F for Data

12.3.3. Little Red Dog Quarry Landfill

Heavy metal pipes have been installed in the pit bottom and will remain in place during the filling of Little Red Dog Quarry. Once placing of the debris is complete and the pipes are extended to their final elevation, thermistor strings will not be installed in the pipes. No thermistor readings will be available until that time as indicated in the approved monitoring plans.

13. GARROW LAKE STRATIGRAPHIC MONITORING

There was no monitoring of Garrow Lake required in the 2nd Quarter of 2003.

14. SUMMARY OF EFFLUENT MONITORING AND EFFLUENT CHARACTERIZATION

Appendix G contains the effluent monitoring results as required in Part H in the form set out in Schedule 6 of the Metal Mining Effluent Regulations.

15. OTHER DETAILS RELATED TO WATER USE OR WASTE DISPOSAL REQUESTED

Melt water was disposed of in the underground workings during June. The disposal location is shown on the 980 Level drawing enclosed in Appendix E.

APPENDIX A

EXECUTIVE SUMMARY IN INUKTITUT

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   - ᐲᔭᕐᑕᐅᓂᖓ ᑐᓚᑕᕐᕕᐅᑉ ᐅᓕᖕᒪᑎᓗᒍ ᓯᔭᖕᒪᓄ ᑎᑭᐅᒪᔪᖅ ᐱᒋᐊᕐᑕᐅᓚᐅᑐᖅ.
   - ᓱᓪᓗᐃᑦ ᖁᐊᓇᑯᑎᖃᑐᑦ ᑐᓚᑕᕐᕕᒥ ᐃᒪᐃᔭᑕᐅᓚᐅᑐᑦ ᐲᔭᕐᑕᐅᓗᑎᒃᓗ.

- ᐃᑯᑦᓂᓕᖅ ᖃᓄᐃᓇᓂᔪᓐᓇ ᓄᑦᑎᒃ ᑐᐊᕐᑦᕿᕕᐊᓂᑦᑎᒋᑎᒃ ᐱᑎᐊᓯᒪᓕᒐᓕᖅ. ᑐᐊᕐᑦᕿᑦᑕᐅᔪᖅ ᐊᑐᑕᐅᓂᐊᑦᑐᖅ ᖃᖓᓂᓂᑦᓂᕐᔪᓂᓂ ᒪᓕᐅᔪᖅ ᒪᑦᔨᑯᖏᐊᕐᔪᖅ. ᐅᓯᖃᑦᑦᓂᖅ ᑐᐊᕐᑎᒃ ᒪᑦᔨᑯᓄᑦ ᐱᑎᐊᓯᒪᓕᒐᓕᖅ.
- ᐃᓕᓴᓂᑦ ᐱᕆᑦᑕᐅᓂᑯᐃᑦ ᐃᓕᖅᓴᓕᐊᓚᓯᒪᕆᑦᒧᖃᑕᐅᓕᐅᑐᑦ ᐊᐅᕐᑐᖅ ᖃᑎᑯᓕᖅᓴᖅ.
- ᐊᑐᑕᐅᖓᓂᖅ ᐅᕆᖅ ᐱᑎᐊᓕᓴᖅᓗᓂᒃ ᐃᓯᑦᖁᓴᓂᑎᑐᖅ ᐋᕆᑦᑕᐅᓕᐅᑐᖅ ᐊᒪᓕᓕ ᓄᓇᐅᕐᑦ ᐊᑕᓇᖃᑕᐅᓕᓂᓕ ᐅᕆᖅᑎᒥ ᓯᐅᓇᑐᑦᖃᓂᖅ.

2. **ᐃᒡᓕᓂᒃ ᓯᕿᑎᓚᓂᖅ**
   - **ᐃ. ᓯᖃᓕᑎᓚᐊᖏᑦ/ᑎᑎᕿᐊᖏᑦ/ᓯᑦᓕᐊᖅᖁᖏᑦ ᐅᒥᐊᖅᓱᕿᒥᑐᑦ**
     - ᐃᓱᒪᑦᔨᑎᖁᐊᖏᓐᓄ ᐅᒥᐊᖅᓱᕆᐅᑦ ᖃᒥᑕᐅᓕᐅᑐᖅ ᐊᒪᓕᓗ ᓴᓇᓚᑕᓂᒃ ᐃᒡᓗᑦ ᓴᓂᐊᓂᖅᓄᑦᑐᑦ ᒪᓕᐅᔪᖅ ᐊᑐᕕᑦᑕᐅᓕᓂᑦᑐᑦ.
     - ᐃᔪᑎᓂᓂᖅ ᐃᓕᓴᐊᓂᒃ ᐅᒥᐊᖅᓱᕆᐅᑦ ᐱᕆᓚᓕᐅᑐᖅ. ᐊᒪᓕᓗ ᐱᕆᓚᓕᐅᒥᔪᑦ ᐱᕆᐃᓂᖅ ᐊᑭᓇᖅᓄᒃ ᐅᒥᐊᖅᓱᕆᐅᑦ.
     - ᓴᓗᒪᑦᓴᐃᓂᖅ ᐅᑦᓯᐊᓗᖅᐅᑎᐊᓗᓂᒃ ᐅᒥᐊᖅᓱᑦᒥ ᓯᓚ ᑲᔪᓯᔪᖅ.
     - ᐃᒪᖅ 75>ᓴᓗᐊᒥᒃ ᐅᒥᐊᖅᓱᖅ ᓯᑭᑎᑕᐅᓯᒪᓕᓕᑐᖅ.
   - **ᐱ. ᓴᐃᕆᐳᓴᐋᔨᐃᓂᖅ ᓯᑦᓗᐊᖅ**
     - 35>ᓴᓗᐊᒥᒃ ᐃᓗ ᐱᐅᓚᓯᒪᓕᓕᑐᖅ.
   - **ᑎ. ᑭᓂᑦᑐᕆᑦᕃᐊᒃ ᐃᒡᓗ**
     - ᓀᐸᓗᐊᐸᓗᖓᓂ ᐃᒡᓗᑦ ᑐᖓᕃᐊᖓ ᐱᐅᓚᓯᒪᓕᓕᑐᖅ. ᑕᐃᓀᓕ ᐃᒡᓗ ᐃᔪᑎᑦᑕᐅᓯᒪᓕᓕᑐᖅ.
   - **ᑭ. ᐃᒡᓗ ᓴᒪᓐᑎᒥ ᓴᓀᒪᕐᖅ ᓴᐃᕆᐳᓴᐋᔨᐃᓂᐅᔪᒪᓕᑦᑕᐅᕐᐳᓴᖅ**
     - ᐃᔪᑎᑦᑕᐅᓂᖓᖅ ᐱᐅᓚᑐᖅ.
     - ᐅᑦᓯᐊᓗᒥ ᑯᐃᐊᐅᑦᔪᓀᐅᑐᖅ ᓴᓗᒪᑦᓴᑕᐅᓯᒪᓕᓕᑐᖅ ᐃᒡᓗᑦ ᓴᓂᐊᓂᖅ.
   - **ᑭ. ᐊᐳᑦᓴᓚᐅᕐᔪᑦ ᐃᒡᓗᐃᑦ**
     - ᓯᑭᑎᑕᐅᖏᑐᑦ ᐊᑐᑦᑕᐅᒪᑕ ᓯᓚ.
   - **ᒥ. ᐊᓯᖏᑦ ᐃᒡᓗᐃᑦ/ᓯᓀᑯᑦᖁᐃᖅᑦ**
     - ᐊᓯᖏᓂᒃ ᐃᔪᑎᑦᓯᒪᔪᓂ ᐅᓂᒃᓴᑕᖏᓐᓄᑦᑐᖅ.
3. **ᓄᓀᖓ ᓯᕿᑦᓯᒪᔭᑦ ᓴᓗᒪᓴᑦᑕᐅᓂᖓ**
   - **ᐃ. ᑐᓕᒃᑕᖅᐃᒃ ᓯᐅᔭᖓᓗ**
     - ᖃᐅᔨᓴᑦᑕᐅᓕᐅᑐᖅ ᐅᑦᑯᓴᐅᑎᒧᑦ ᐃᓕᓴᖓᓂᑦ ᓯᕿᓯᒪᔪᑦᑕᖃᒪᖓᑦ ᓀᓂᓯᖏᓐᓇᑎᒃᓗ.
     - ᑐᓕᒃᑕᖅᐃᒥ ᓯᕿᓀᑐᐃ ᓴᐃᕆᐳᐃᑦ ᐊᑕᖏᑦᕿᓗᒃᓴᓕᑦ ᐃᕿᓴᖏᑦᑕᐅᓯᒪᓕᓕᑐᖅ.
     - ᑐᓕᑦᑕᖅᐃᒥ ᐱᐅᐃᓇᑎᒃ ᓀᓂᓯᓕᐅᑐᑦ ᐅᑦᓯᐊᓇᐃᓂᕐᔪᓀᓂᑦ ᓯᕿᓯᒪᔪᑦᑎᒃ ᒪᓴᒪᐅᓕᓯᒪᔪᑦᑎᒃ ᓴᐃᕆᐳᐃᑦ ᓄᑎᖏᓂᑦ ᑎᑎᒪᐅᓕᓯᒪᔪᑦᑎᒃ.
4. **ᐊᓯᖏᓂᒃ ᐅᐅᖅᓯᐅᖅᐃᒥ ᓴᓇᒪᓴᐃᓂᑦ**
   - ᐱᐅᐃᔪᑦ ᑭᓯᕿᓇᐅᑦᓂᒃ ᐅᒥᐊᖅᓱᕆᓇᒥᑦ ᐊᒪᓕᓗ ᓴᐃᕆᐳᓴᖅᓴᖅᑕᖃᓂᖅᑦᒥᑦ ᐅᐸᓇᖏᓐᓇᐅᕐᓂᒃ ᐱᐅᐃᓂᐊᒪᑕ ᓯᕿᑎᓯᒪᔪᑦᑎᒃ ᓴᓂᐊᓂᖅᓄᑦᑐᒃ.

ᖃᓄᐃᓂᒃ ᐊᑐᓯᒪᓕᒪᖏᑕ ᖃᓇᐃᑐᓂᐊᓂᖏᓐᓇᓇ ᐅᑎᑎᓇᓯᓂᒪᑦ

ᐊᖏᑕᐅᓯᒪᓕᐅᑐᑦ ᐊᑐᑕᐅᓂᐊᖃᓯᑎᐅᓇᑎᒃ $47,500,00ᖏᒍᓕᐅᑐᖅ. ᐃᓯᐊᓇ ᔪᓂ 2003 ᐊᑐᓯᒪᓕᓕᑐᒍᑦ $24,540,000ᒥᒃ ᐊᒪᓕ ᐱᐅᓚᓯᒪᓕᓕᒡᑕ ᓂᓚᐅᑦᑕ $53,861,000ᒥᒃ ᐊᑐᓂᐊᖃᓯᑎᔪᑦ.

ᐊᐅᕐᓕᖅ ᖃᒥᑦᔨᓕᓗᒪ ᐃᓕᓴᖓᓇᓕᓯᓂᖅ ᐃᓕᐊᓂᓕᖅᓂᒃ/ᐱᖅᑎᓂᒃ ᒪᓕᓕᔨᑎᑦᑕᐅᔪᓂᒃ ᒪᐅᐳᐅᓂᐊᖅᓄᑦᑐᒃ

ᐃᓕᒥᐊᑎᑎᒃ ᑎᒥᑐᖅ ᒪᓕᓕᖁᐅᐸᑦ ᐊᐃᐸᓚᓕᖓᓇᖅ ᐅᓂᒃᓕᓂᐊᖅᔨᔪᖅ ᐊᐅᖅᔨᐊᑎᑦᑎᓕᓕᒃ ᒪᓕᓕᔨᑎᑦᑕᐅᔪᓂᒃ ᐱᐸᓚᓕᐅᑐᑦᑎᒃ ᐱᐅᐃᓂᐊᒪᑕ ᐊᐅᖅᔨᐊᑎᑦᑎᓕᓕᒃ ᐊᑐᓯᒪᓕᓕᑐᒍᑦ ᖃᒥᑦᔨᓕᓗᒪ ᓴᐅᒪᐃᓂᐊᓂᖅᓄᑦᑐᖅ ᐃᓕᒥᐊᑎᑎᒃ ᐱᐅᓚᓯᒪᓕᓕᑐᖅ ᐊᐅᖅᔨᐊᑎᑦᑎᓕᓕᒃ ᐊᑐᓯᒪᓕᓕᑐᒍᑦ ᐱᐅᓚᓯᒪᓕᓕᑐᖅ.

ᐊᑭᑎᐊ ᑕᐅᑭᓕᒪ ᖃᐅᐸᐅᓕᑦᑕᐅᓂᖓ

ᖃᐅᐸᐅᓕᑦᑕᐅᓕᐅᑐᒪᓕᑦ ᑕᓕᖅ ᑭᐊᑭ ᐅᑭᓗᓂᑦ ᑯᖓ ᑭᖓᒪᓕᐅᑐᒪᓕᑦ ᑕᑭᓂ ᐊᐅᕐᓕᓚᖓᓂ ᐅᓂᒃᓕᓂᐊᖅᓄᑦᑐᖅ.

APPENDIX B

UPDATE OF

DECOMMISSIONING AND RECLAMATION SCHEDULE

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF JUNE 30, 2003

ACTIVITY	Prior To Period	2nd Qtr. 2003			3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CONTRACTOR MOBILIZATION																			
Pre-mobilization Planning / Order Materials/Equip																			
Ship to Site with Contractor Equipment																			
Offload Ship																			
Setup Warehousing/Laydown Area																			
SETUP TEMPORARY FACILITIES																			
DECOMMISSIONING UNDERGROUND																			
Remove / Salvage Mine Equipment & Crusher																			
Remove Refrigeration Plant																			
Remove Surface Ventilation Fans																			
Seal Mine Openings																			
MILL / BARGE DEMOLITION																			
Initial Cleanup of Barge by Teck Cominco																			
Removal of Barge Services																			
Transfer fuel to Tank Farm & Clean Hull																			
Remove hazardous Materials / Wastes																			
Remove / Salvage Process Equipment																			
Demolish Internal Equipment																			
Demolish Structure																			
Remove Hydrocarbon/Metals Contaminated Soils																			
Regrade Area Surounding Barge																			
PRODUCT STORAGE BUILDING DEMOLITION																			
Cleanup of Building / Remove Liquids from Equip.																			
Demolish Exterior Conveyors																			
Demolish Reclaim Conveyors																			
Remove Cladding from Building																			
Demolish Structure																			
Demolish Foundations																			
Remove Contaminated Soils																			
Regrading Area																			

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF JUNE 30, 2003

ACTIVITY	Prior To Period	2nd Qtr. 2003			3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
SHIP LOADER / RECLAIM CONVEYOR DEMOL.																			
Cleanup of Conveyor Areas/Remove Oils																			
Demolish Conveyors																			
DOCK DECOMMISSIONING																			
Inspect / Remove Glycols from Freeze Pipes																			
Remove Metals Contaminated Soils																			
Remove Cells 1 & 2																			
Remove Cells 3 & 4																			
Removal of Temporary Dock																			
Shoreline Recontouring																			
Berm Removal																			
Grade New Beach to Final Profiles																			
TAILINGS SYSTEM DEMOLITION																			
Final Cleanup of Thickener																			
Flush Tails Lines																			
Salvage Equipment																			
Remove hazardous Materials / Wastes																			
Remove Tails Line / Return Line																			
Demolish Equipment																			
Demolish Structure																			
Remove Foundations																			
Remove Contaminated Soils																			
Regrading																			
GARROW LAKE / DAM DECOMMISSIONING																			
Drawdown Lake																			
Removal of Centre Section of Dam																			
Creek Channel Construction																			
Final Grading / Armouring of Dam Remnants																			
CRF PLANT DEMOLITION																			
Final Cleanup of Plant																			
Remove hazardous Materials / Wastes																			
Demolish Plant Equipment																			
Demolish Buildings																			
Site Grading (Plant & Surrounding Area)																			

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF JUNE 30, 2003

ACTIVITY	Prior To Period	2nd Qtr. 2003			3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
ACCOMODATIONS COMPLEX DEMOLITION																			
Establish Temporary Offices / Building Services																			
Use Accomodations Complex																			
Establish Temporary Camp Accomodations																			
Use Temporary Camp																			
Remove hazardous Materials / Wastes																			
Demolish Buildings																			
Regrade Area																			
Remove Temporary Camp																			
FUEL STORAGE (TANK FARM) DEMOLITION																			
Temporary Modifications																			
Transfer Fuel to Temporary Storage																			
Cleaning of Tanks / Piping																			
Demolish Tanks / Piping																			
Cleanup of Berm & Liner																			
Site Grading																			
BLADDER AREA CONTAMINATED SOILS																			
Cleanup of Hydrocarbon Soils																			
Area Grading																			
MISC. BUILDING DEMOLITION																			
Exploration Quonset Huts																			
Core Shack (Atco Trailer)																			
Emergency Shelter at North Portal																			
Steam Wash Bay & Tire Shop																			
Generator Building																			
Bent Horn Building																			
Dock Office Trailer																			
Airstrip Storage Hut																			
Fresh Water Pump House																			
Frsh Water Tank & Shed																			
Carpenter Shop																			
Shipping Containers (Sea Cans)																			
Foldaways by Temporary Dock (3)																			
Firehall																			

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF JUNE 30, 2003

ACTIVITY	Prior To Period	2nd Qtr. 2003			3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
OPERATIONAL LANDFILL CLOSURE																			
Reclocate Construction Landfill																			
Hauling Landfill Cover Cap Material																			
LRD QUARRY Landfill																			
Cut Notch into Quarry / Construct Haul Road																			
Installation of Thermistor Pipe Stands																			
Placing debris in Quarry																			
Grading of Notch to Match Cap																			
Placement of Cap and Final Grading																			
Installation of Thermistors into Pipes																			
MISC. SITE RECLAMATION & EARTHWORKS																			
Reduction in spare parts/supplies by TCML																			
Ship Mill Process Chemicals South for Sale/Recycle																			
Site Cleanup of scrap material during operations																			
Regrading North 40 Area																			
Grading of Reclamation Landfill Area																			
Road Closure / Culvert Removals/Runway																			
DEMOBILIZE FROM SITE																			
Prepare Equipment / Supplies for shipping from site																			
Prepare Residual Chemicals / Wastes for shipping																			
Last Ship from Polaris																			

APPENDIX C

UPDATE

OF ESTIMATED

MINE DECOMMISSIONING, RECLAMATION AND MONITORING COSTS

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE
2nd QUARTER 2003 UPDATE

	BUDGET		June 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
DEMOLITION & RECLAMATION (BARE COSTS)							
MINE EQUIPMENT REMOVAL							
Hazardous Materials Removal	35,845		853		35,845		
Mine Refrigeration Plant	145,525		6,000		145,525		
Mobile & Mine Equipment	2,919		87		12,919		
Remove Salvaged Mine Equipment	20,754		3,983		-		
Misc Sub Contract Costs	45,957		945		45,533		
		$ 251,000		$ 11,868		$ 239,822	
MINE ACCESS SEALING							
Seal Mine Portals	60,000		464		90,459		
		$ 60,000		$ 464		$ 90,459	
CONCENTRATOR BUILDING							
Miscellaneous Materials	22,092				-		
Mill Equipment Clean-Up - Fuels	16,398				-		
Mill Equipment Clean-Up	99,900		40,613		79,333		
Hazardous Materials Removal	151,117		85,352		197,099		
Barge Demolition	608,592		174,694		553,459		
Misc Process Equipment Demolition & Removal	197,432		183,317		183,346		
Misc Sub Contract Costs	88,469		27,909		80,806		
		$ 1,184,000		$ 511,885		$ 1,094,043	
CONCENTRATE STORAGE STRUCTURE & EQUIPMENT							
Concentrate Storage Equipment Clean-Up	26,117		1,905		26,117		
Conveyors	67,600		8,421		61,525		
Concentrate Storage Structure & Equipment	555,283		25,816		505,036		
		$ 649,000		$ 36,142		$ 592,678	
SHIP LOADER & CONVEYOR							
Conveyors	50,000		24,592		29,580		
		$ 50,000		$ 24,592		$ 29,580	
DOCK & SHORELINE							
Dock & Shoreline Reclamation	869,000		55,867		769,131		
		$ 869,000		$ 55,867		$ 769,131	
THICKENER & TAILINGS LINES							
Hazardous Materials Removal	22,577		13,331		33,838		
Tailings Thickener	377,423		58,015		107,759		
		$ 400,000		$ 71,346		$ 141,597	
GARROW LAKE							
Garrow Lake Siphons & Lake Drawdown	120,391		142,312		203,192		
Dam/Spillway Modifications	95,467				137,267		
Escalation Allowance	3,142				-		
		$ 219,000		$ 142,312		$ 340,459	
CRF PLANT STRUCTURE & EQUIPMENT							
CRF Plant Equipment Clean-Up	7,002		1,040		1,041		
CRF Plant Equipment Removal	17,533		9,406		9,404		
CRF Plant Buildings Demolition	130,455		22,169		27,019		
Misc Sub Contract Costs	11,010		39,011		51,857		
		$ 166,000		$ 71,626		$ 89,321	
ACCOMMODATION COMPLEX STRUCTURE & EQUIPMENT							
Accommodation Complex Building Demolition	249,000		10,211		226,441		
		$ 249,000		$ 10,211		$ 226,441	
FUEL STORAGE & HANDLING EQUIPMENT							
Miscellaneous Materials	3,681				(1,319)		
Purge & Decommission Fuel Tanks	53,404		200,741		319,000		
Hazardous Materials Removal	50,645		39,452		64,272		
Fuel Pumping & Distribution Systems	87,270				90,133		
		$ 195,000		$ 240,193		$ 472,086	
BUILDINGS & CONTAINERS							
Miscellaneous Materials	1,323				-		
Misc Warehouse / Shipping Equipment	1,221		3,292		3,292		
Misc Buildings Demolition	250,456		32,133		243,960		
		$ 253,000		$ 35,425		$ 247,252	
MISC CONTRACTOR LABOUR							
Unallocated Labour	133,000		70,408		215,994		
		$ 133,000		$ 70,408		$ 215,994	
GENERAL SITE GRADING							
Hazardous Materials Removal	44,719		2,041		46,760		
General Site Grading & Reclamation	7,129		170,956		168,832		
Escalation Allowance	4,152				-		
		$ 56,000		$ 172,997		$ 215,592	
LANDFILL RECLAMATION							
Landfill Reclamation	432,000		503,921		552,315		
		$ 432,000		$ 503,921		$ 552,315	

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE
2nd QUARTER 2003 UPDATE

	BUDGET		June 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
CONTAMINATED SOILS - CLEANUP							
Metals & Hydrocarbon Contaminated Soils Cleanup & Disposal	366,623		205,020		823,069		
Hydrocarbon Contaminated Soils (By Polaris)	6,097		13,131		13,131		
Metals Contaminated Soils (By Polaris)	173,605		52,382		52,382		
U/G Handling & Disposal Of Contaminated Soils	48,675		21,632		65,110		
		$ 595,000		$ 292,165		$ 953,692	
QUARRIES & MINE SURFACE RECLAMATION (EARTHWORK)							
Backfill & Re-Contouring	263,000		87,165		219,312		
		$ 263,000		$ 87,165		$ 219,312	
MISC. DEMOLITION & CLEAN-UP							
Misc Unallocated Clean-Up / Demo	380,000		2,452		44,157		
		$ 380,000		$ 2,452		$ 44,157	
EQUIPMENT PURCHASE/RENTAL							
Contractor Equipment Rental	5,274,900		2,064,425		5,274,900		
Contractor Misc Equipment Purchase	719,407		431,759		448,309		
Escalation Allowance	59,693				-		
		$ 6,054,000		$ 2,496,184		$ 5,723,209	
MISC. SERVICES & SUPPLIES							
Misc Purchased Materials / Supplies	235,333		142,147		219,789		
Escalation Allowance	19,667				-		
		$ 255,000		$ 142,147		$ 219,789	
FUEL							
Fuel Supply	3,294,536		2,300,673		4,325,673		
Fuel Taxes (Heating & Power Generation)	68,677				99,727		
Fuel Taxes (Equipment)	467,343		207,153		677,493		
Escalation Allowance	157,444				-		
		$ 3,988,000		$ 2,507,826		$ 5,102,893	
MAINTENANCE OF EQUIPMENT & FACILITIES							
Mobile Equip Maintenance	1,296,759		1,842,885		4,685,780		
Building Maintenance	506,923		902,076		1,196,778		
Escalation Allowance	101,318				-		
		$ 1,905,000		$ 2,744,961		$ 5,882,558	
PRE - PURCHASED EQUIPMENT (BY COMINCO)							
Construction Equipment - Purchase (By Owner)	541,000		541,271		541,271		
		$ 541,000		$ 541,271		$ 541,271	
CONTRACTOR'S FIELD SUPPORT & SUPPLIES							
TRANSPORTATION (SHIPPING)							
Packing & Preparation	85,326		13,852		92,804		
Shipping Costs	948,661		861,774		1,867,438		
Escalation Allowance	78,013				-		
		$ 1,112,000		$ 875,626		$ 1,960,242	
CONTRACTOR MOB, DEMOB & SUPERVISION							
Contractor Mob/Demob	61,883		62,456		146,031		
Contractor Supervisory/Admin Personnel	2,127,339		1,084,351		2,839,195		
Safety Services & Supplies See Note 1	36,000		163,953		218,513		
Misc Temporary Services / Modifications	223,824		696,031		1,109,787		
Escalation Allowance	13,954				-		
		$ 2,463,000		$ 2,006,791		$ 4,313,526	
MISC. SERVICES & SUPPLIES							
Communications & TV	374,000		77,374		290,679		
Escalation Allowance	31,000				-		
		$ 405,000		$ 77,374		$ 290,679	
ACCOMODATIONS							
Catering	1,487,166		725,828		1,831,193		
Escalation Allowance	122,834				-		
		$ 1,610,000		$ 725,828		$ 1,831,193	
TRAVEL & PERSONNEL							
Travel (Airfares & Expenses)	1,552,881		1,070,110		3,656,460		
Travel Premium - Revised Rotation Schedule	1,072,773				-		
Misc Personnel Transport	72,274		78,029		122,274		
Escalation Allowance	575,072				-		
		$ 3,273,000		$ 1,148,139		$ 3,778,734	
CONTRACTOR INDIRECTS							
HO MOB & DEMOB SUPPORT							
Mob & Demob	1,912,000		1,526,300		1,912,376		
		$ 1,912,000		$ 1,526,300		$ 1,912,376	
CONTRACTOR MANAGEMENT SUPPORT							
Personnel	3,928,932		670,506		3,928,932		
Safety & First Aid Personnel to Provide Overlap	184,068		31,350		183,644		
		$ 4,113,000		$ 701,856		$ 4,112,576	
OTHER CONTRACTOR INDIRECTS							
Contractor's General Indirects	4,952,000		3,526,384		5,120,102		
		$ 4,952,000		$ 3,526,384		$ 5,120,102	

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE
2nd QUARTER 2003 UPDATE

	BUDGET		June 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
ENGINEERING / PROJECT MANAGEMENT							
ENVIRONMENTAL SITE ASSESMENT							
Environmental Consultants - Site Assesment	275,787		254,823		276,417		
Site Assessment - Unallocated	207,874		105,263		191,524		
Escalation Allowance	2,339				-		
		$ 486,000		$ 360,086		$ 467,941	
CLOSURE PLAN							
Environmental Consultants - Closure Plan	415,772		371,776		365,772		
Escalation Allowance	2,228				-		
		$ 418,000		$ 371,776		$ 365,772	
ENGINEERING / SPECIAL CONSULTANTS							
Design Consultants - Dock / Loadout	1,316		1,320		1,320		
Design Consultants - Tailings / Garrow Lake	3,520		3,515		3,515		
Design Consultants - Dock / Loadout	79,684		64,838		79,477		
Design Consultants - Tailings / Garrow Lake	54,780		45,328		45,328		
Sitework & Demolition Procedures - Design Services	18,300		14,555		44,994		
Escalation Allowance	2,400				-		
		$ 160,000		$ 129,556		$ 174,634	
PROJECT MANAGEMENT CONSULTANT (HO STAFF)							
Project Management - Salaries	411,069		668,006		1,082,069		
Project Management - Reimb Expenses	100,000		49,890		100,000		
Escalation Allowance	31,931				-		
		$ 543,000		$ 717,896		$ 1,182,069	
CONSTRUCTION MANAGEMENT (FIELD STAFF)							
Construction Management - Salaries	2,142,878		693,990		1,755,878		
Escalation Allowance	179,122				-		
		$ 2,322,000		$ 693,990		$ 1,755,878	
ENVIRONMENTAL TESTING AND SAMPLING							
Environmental Reclamation Supervision - Staff	337,123		65,039		475,000		
Escalation Allowance	29,550				-		
Environmental Reclamation Supervision - Testing	330,000		76,369		210,000		
Additional Sampling and Consultant Services (MMER)	0		-		450,000		
Escalation Allowance	26,327				-		
		$ 723,000		$ 141,408		$ 1,135,000	
OWNER'S COSTS							
SALARIES & EXPENSES							
Teck Cominco HO Proj Mgmnt (Staff Lab)	374,631		264,794		374,631		
Teck Cominco HO Proj Mgmnt (Misc Material & Exp)	199,149		127,922		215,406		
Escalation Allowance	34,220				33,750		
		$ 608,000		$ 392,716		$ 623,787	
OVERHEAD / HO SUPPORT							
Land Leases, Licences	175,000		93,021		234,225		
Miscellaneous Permits	45,000		8,018		14,122		
Insurance	445,900		82,072		200,000		
Property Taxes	495,000		37,181		495,000		
Home Office General Admin (Labour & Exp)	722,384		14,058		109,212		
Public Relations	74,292		58,718		74,292		
Legal	57,540		48,021		48,021		
Escalation Allowance	168,560				-		
Misc Owner's Overhead	6,324		13,882		13,882		
		$ 2,190,000		$ 354,971		$ 1,188,754	
GENERAL ADMIN							
Closure Management - Polaris Personnel	54,000				-		
Escalation Allowance	2,880				-		
Closure Wrap Up	5,120		15,667		-		
		$ 62,000		$ 15,667		$ -	
POST RECLAMATION COSTS (2005 - 2011)							
SITE MONITORING AND HOLDING COSTS							
Annual Post Closure Environmental Monitoring (2005 to 2011)	510,000		-		135,000		
Final Sampling Program, Data Evaluation and Reporting in 2011	160,000		-		70,000		
Land Lease/Licence costs from 2005 to 2011	126,000		-		126,000		
Property Taxes - 2005 to 2011	70,000		-		160,000		
Escalation Allowance	135,000		-		510,000		
		$ 1,001,000		$ -		$ 1,001,000	
UNALLOCATED							
Uncoded Forecast Cost Adjustments (Net)	-		-		-1,357,008		
		$ -		$ -		$ (1,357,008)	1
TOTAL DECOMMISSIONING / RECLAMATION & MONITORING COSTS		**$ 47,500,000**		**$ 24,539,792**		**$ 53,860,906**	

NOTE #1 - Identified potential cost adjustments to above accounts based on end of period review of manhours and materials costs to date - Not yet distributed to applicable accounts.

APPENDIX D

RECORD OF DEBRIS

PLACEMENT INTO

LITTLE RED DOG QUARRY LANDFILL

PLACEMENT OF DEBRIS INTO LRD QUARRY LANDFILL

2nd QUARTER, 2003

DRAWING OF WASTE PLACEMENT

The following drawing indicates the areas where debris was placed each month during the 2nd quarter of 2003 (April 1, 2003 to June 30, 2003). The locations represent the final placement locations and not temporary staging areas. The drawing also includes locations of debris place prior to the beginning of the quarter where the debris was placed at the same elevation in the pit.

This drawing represents the Second Lift (L2) of debris in the pit. The Second Lift of the debris is being placed into Bench 6 of LRD Quarry. The drawing indicates a different colour for each lift, year, and month that the debris was placed. For example 'L2 – 2003 – 05' represents Lift 2, for the month of May, 2003.

RECORD OF WASTE SOURCE/VOLUME & TYPE

Following the diagram are records from each month showing the source of the debris, where it was placed, the quantity and the type of debris.

VERIFICATION OF HYDROCARBON REMOVAL

Stationary and Mobile Equipment usually contain sources of hydrocarbons such as lubrication oils, fuels, greases and/or hydraulic oil. Attached to this appendix are signoff sheets indicating equipment that contained hydrocarbons were cleaned and/or drained of the hydrocarbons. After the equipment was drained and/or cleaned, they were inspected by our prime contractor, the demolition subcontractor and an owner representative. Each representative signs the inspection sheet once it has been verified that the equipment has been adequately drained. The only equipment prepared during this quarter relates to the power house facilities on the barge.

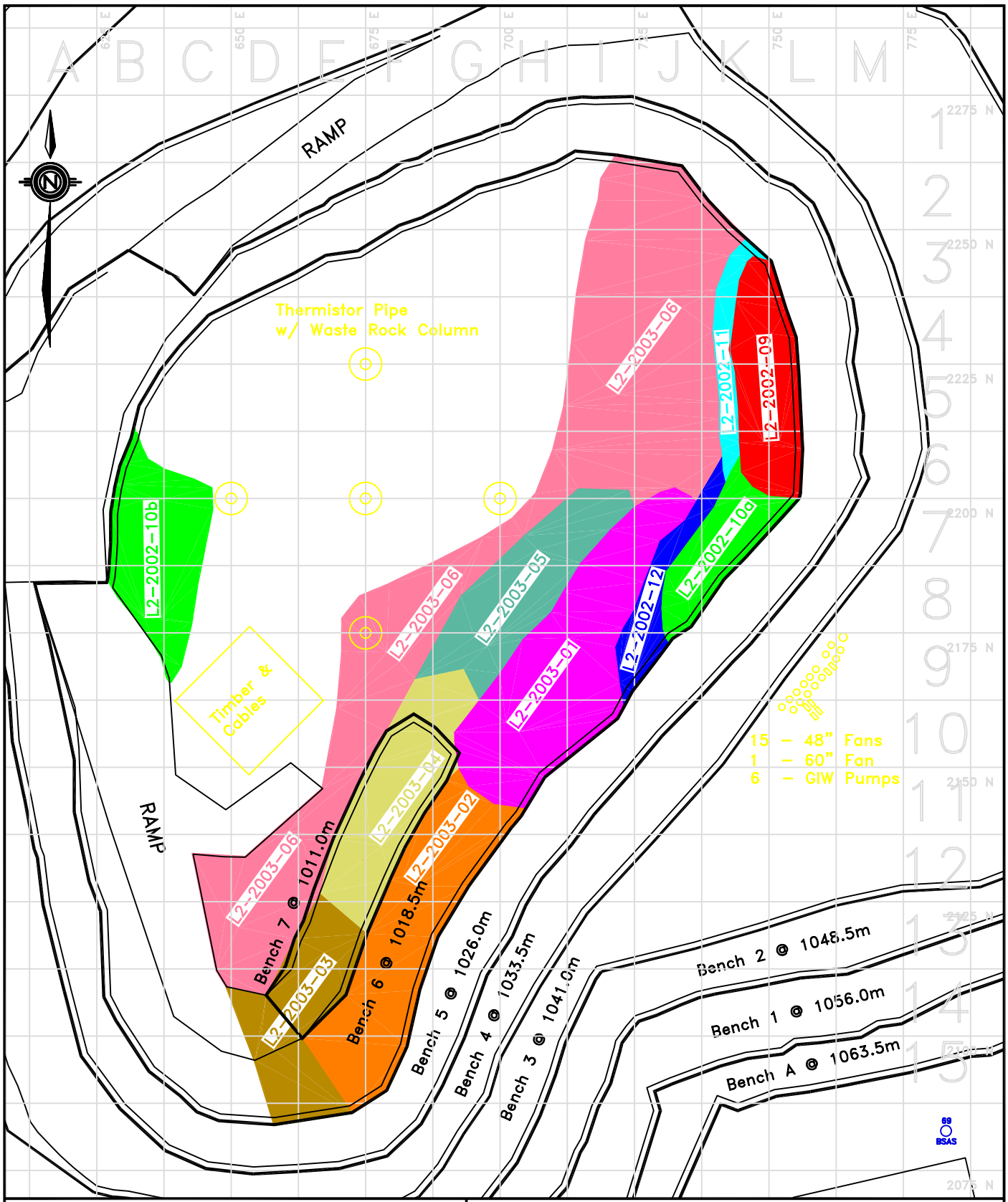
PHOTOGRAPHIC RECORD

As specified in the Closure Plan, a photographic record of debris placement is being maintained. Attached to this appendix are pictures of typical debris being placed in LRD Quarry.

The weather was too cold for the hydraulic shearers and bailer to function properly until May. Debris shown has been further processed using the bailer for siding and shearers for heavier steel prior to final burial.

The pictures are included in chronological order. Comments related to some of the pictures are as follows:

Date	Comment
2003 05 09	Secondary shearing of debris is underway
2003 05 20	The trailer mounted bailing machine is now in operation
2003 05 30	Temporary stock piles have separated out some different material types into separate piles for easier handling/cutting up prior to burial
2003 06 01	Note the pipes in the picture. These are return lines and not tailings lines. Tailings lines are being disposed of underground as per the Closure Plan.
2003 06 01	Note the large cylindrical ball mills. They are made of heavy walled steel and are difficult to cut into small pieces.
2003 06 14	The ball mills have been placed on end with one end cut off. This will allow filling of them so there are no voids caused when they are buried.
2003 06 24	Melting of snow and rain starting to cause water to pond in the quarry. This is helping to fill voids within the fill and will quickly freeze along with the landfill.



POLARIS PROJECT

teckcominco

LRD Quarry – LIFT 02

Demolition Debris Placement

DRAWN BY:	SCALE:	DATE:	DWG #:
TSF	1:1000	June 30, 2003	

Polaris Mine Decommissioning and Reclamation Project

Daily Disposal Record For 2nd Quarter 2003

Structural Steel/Concrete/Building Components

Date	Origin location	Disposal Location	Disposal Location Details	Quantity (m3)	Remarks
04-Apr-03	Barge	L.R.D	Bench 5 (B13-B14)	500	Concrete from barge demolition.
04-Apr-03	Barge	L.R.D	Bench 6	50	Steel from demolitiom of the ball mill
18-Apr-03	Barge	L.R.D.	bench 6(H7)	100	ball mill
18-Apr-03	Barge	L.R.D.	bench 6 (G10)	20	steel
28-apr-03	Barge	L.R.D.	Bench 6 (D13)	75	(6 loads)Concrete
29-apr-03	Barge	L.R.D.	Bench 6 (D13)	240	(14 loads) Concrete
29-apr-03	Barge	L.R.D.	Bench 6 (G9)	20	(2 loads) Steel
May 1, 03	Burn Pit	L.R.D.	Bench 6 (J4-I5)	165	(11 loads) steel + wood
May 2, 03	Barge	L.R.D.	Bench 6 (H8-J7)	105	(7 loads) steel
May 3, 03	Barge	L.R.D.	Bench 6 (F9-H8)	315	(21 loads) steel
May 8, 03	Barge	L.R.D.	Bench 6 (G5-6)	25	(1 load) rubber + steel
May 11, 03	Barge	L.R.D.	Bench 6 (G5-6)	20	(1 load) steel
May 11, 03	Thickener	L.R.D.	Bench 6 (G5-6)	30	(2 loads) steel
May 13, 03	Barge	L.R.D.	Bench 6 (F13-14)	40	(2 loads) steel
May 13, 03	Barge	L.R.D.	Bench 6 (F13-14)	140	(7 loads) steel
May 17, 03	Barge	L.R.D.	Bench 6	24	Steel
May 19, 03	Barge	L.R.D.	Bench 6	324	Steel
May 20, 03	Barge	L.R.D.	Bench 6	142	Steel
May 21, 03	Barge	L.R.D.	Bench 6	284	Steel
May 22, 03	Barge	L.R.D.	Bench 6	145	Steel
May 22, 03	Barge	Burn Pit	Bench 6	80	Steel
23-May-03	Storage	L.R.D.	Bench 6	110	Steel
24-May-03	Storage	L.R.D.	Bench 6	140	Steel
25-May-03	Storage	L.R.D.	Bench 6	130	Steel
25-May-03	Barge	L.R.D.	Bench 6	15	Steel
27-May-03	Storage	L.R.D.	Bench 6	168	Steel
28-May-03	Barge	L.R.D.	Bench 6	30	Steel
28-May-03	Storage	L.R.D.	Bench 6	162	Steel
29-May-03	Barge	L.R.D.	Bench 6	534	Steel
30-May-03	Barge	L.R.D.	Bench 6	478	Steel
29-May-03	Barge	L.R.D.	Bench 6	534	Steel
30-May-03	Barge	L.R.D.	Bench 6	478	Steel
31-May-03	Storage building	L.R.D.	Bench 6	64	Steel
31-May-03	Barge	L.R.D.	Bench 6	250	Steel

Polaris Mine Decommissioning and Reclamation Project

Daily Disposal Record For 2nd Quarter 2003

Structural Steel/Concrete/Building Components

Date	Origin location	Disposal Location	Disposal Location Details	Quantity (m3)	Remarks
01-Jun-03	Barge	L.R.D.	Bench 6	296	Steel
01-Jun-03	Storage building	L.R.D.	Bench 6	120	Steel
02-Jun-03	Barge	L.R.D.	Bench 6	230	Steel
03-Jun-03	Barge	L.R.D.	Bench 6	78	Steel
June 04-03	Barge	L.R.D.	Bench 6	420	Steel
June 5,03	Storage Building	L.R.D.	Bench 6	315	Steel
June 6,03	Storage Building	L.R.D.	Bench 6	255	Steel
June 6,03	Barge	L.R.D.	Bench 6	255	Steel
June 7,03	Storage Building	L.R.D.	Bench 6	75	Steel
June 7,03	Barge	L.R.D.	Bench 6	270	Steel
June 7,03	Foldaway	L.R.D.	Bench 6	30	Steel
	Note - material taken to burn pit was then transerred to LRD				
TOTAL DEBRIS TAKEN TO LRD QUARRY				**8,281**	

STATIONARY EQUIPMENT LUBRICANT EVACUATION CHECKLIST

Cominco Polaris Minesite Demolition and Reclamation Project
Daily Activity Log and Disposal Record

SNC-LAVALIN Engineers & Constructors

Date	Origin Location	Equipment Description	Lubricant/Fluid Type	Quantity If Appl.	Disposal Location	Sub-Contractor	SLEC	Owner/Rep
	BARGE Power House	141-CK-01 Heat dump	Glycol		Future Incineration		PS	
	" "	141-CK-02 " "	"		" "		PS	
	" "	141-CK-03 " "	"		" "		PS	
	" "	141-CK-04 " "	"		" "		PS	
	" "	141-CK-05 " "	"		" "		PS	
	" "	141-CK-06 Heat dump	"		" "		P.S	
	BARGE "	144-TK-01 Fuel TANK	Diesel Fuel		" "		PS	
	" "	144-TK-02 " "	" "		" "		PS	
	" "	241-AH-01 Air Handler unit	Glycol		" "		PS	
	" "	241-AH-02 "	"		" "		PS	
	" "	241-AH-03 "	"		" "		PS	
	" "	241-AH-06 "	"		" "		PS	
	" "	241-PP-01 Diesel Fuel Supply Pump	Diesel Fuel		" "		PS	
	" "	241-PP-02 "	" "		" "		PS	
	" "	241-PP-03 "	" "		" "		PS	

NOTE - SNC Records indicate this work was done Between April 12-2003 and May 12, 2003.
- ONCE THE Individuals WHO DID the work are back on site, will get MORE INFO

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STATIONARY EQUIPMENT LUBRICANT EVACUATION CHECKLIST

Cominco Polaris Minesite Demolition and Reclamation Project
Daily Activity Log and Disposal Record

SNC-LAVALIN Engineers & Constructors

Date	Origin Location	Equipment Description	Lubricant/Fluid Type	Quantity If Appl.	Disposal Location	Sub-Contractor	SLEC	Owner/Rep
	BARGE Power House	Domestic HOT WATER Dump 241-PP-08	Gear box oil		Future Incineration			
	" "	241-PP-09 "	" " "		" "			
	" "	241-PP-10 "	" " "		" "			
	" "	241-PP-11 "	" " "		" "			
	" "	241-PP-12 "	Gear box oil		" "			
	" "	HEATING WATER RECIR PUMP 241-PP-15	" " "		Future Incineration			
	" "	241-PP-16 "	" " "		" "			
	" "	Compressed AIR RECEIVER 241-RE-01	Oil		" "			
	" "	241-RE-02 "	"		" "			
	" "	Fuel oil DRIP TANK 241-TK-04	Diesel Fuel		" "			
	" "	HOT Water TANK 241-TK-07						
	" "	241-TK-08 "						
	" "	HOT Water Expansion TANK 241-TK-15						
	" "	241-TK-20 "						
	" "	241-TK-21 "						

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SEE SHEET. ① B

Apr 12/03 to May 12/03

STATIONARY EQUIPMENT LUBR. ANT EVACUATION CHECKLIST

Cominco Polaris Minesite Demolition and Reclamation Project
Daily Activity Log and Disposal Record

SNC-LAVALIN Engineers & Constructors

Date	Origin Location	Equipment Description	Lubricant/Fluid Type	Quantity If Appl.	Disposal Location	Sub-Contractor	SLEC	Owner/Rep
	BARGE POWER HOUSE	GLYCOL Solution 241-TK-23 TANK	GLYCOL		FUTURE Incineration		PS	
	" "	MAK Diesel 244-GE-01 Generator	LUBE OIL		" "		PS	
	" "	244-GE-02 "	LUBE OIL		" "		PS	
	" "	244-GE-03 "	LUBE OIL		" "		PS	
	" "	244-GE-04 "	LUBE OIL		" "		PS	
	" "	Diesel Fuel Transfer 244-PP-07 Pump	LUBE OIL Diesel Fuel		" "		PS	
	" "	244-PP-08 "	LUBE OIL Diesel Fuel		" "		PS	
	" "	LUBE OIL Priming 244-PP-09 Pump	GEAR OIL Box		" "		PS	
	" "	244-PP-10 "	" "		" "		PS	
	" "	244-PP-11 "	" "		" "		PS	
	" "	244-PP-12 "	" "		" "		PS	
	" "	Separator LUBE OIL 244-PP-13 Pump	" "		" "		PS	
	" "	Separator Sludge 244-PP-14 Pump	GEAR OIL Box		" "		PS	
	" "	Engine HOT Cooling 244-PP-15 WATER Pump	" "		" "		PS	
	" "	Diesel Cooling water 244-PP-17 Pump	" "		" "		PS	
	" "	244-PP-18 "	" "		" "		PS	

See Sheet ①.
Apr 12/03 to May 14/03

STATIONARY EQUIPMENT LUBR[illegible]NT EVACUATION CHECKLIST

(9)

Cominco Polaris Minesite Demolition and Reclamation Project
Daily Activity Log and Disposal Record

SNC-LAVALIN Engineers & Constructors

Date	Origin Location	Equipment Description	Lubricant/Fluid Type	Quantity If Appl.	Disposal Location	Sub-Contractor	SLEC	Owner/Rep
	BARGE Power House	Compressor Starting Air Receiver 244-RE-01	Oil Gear Box		Future Incineration		PS	
	" "	244-RE-02 "	" "		" "		PS	
	" "	244-SP-01 Oil Separator	" "		" "		PS	
	" "	244-SP-02 Fuel Separator	Diesel Fuel Gear Box Oil		" "		PS	
	" "	Separator Sludge 244-TK-05 Tank	Sludge Gear Box Oil		" "		PS	
	" "	Starting Receiver 244-TK-06 Tank	Oil		" "		PS	
	" "	244-TK-07 "	"		" "		PS	
	" "	Cooling water Expansion 244-TK-08 Tank					PS	
	" "	Emergency Starting Fuel 244-TK-01 Tank	Diesel Fuel		" "		PS	

See Sheet ①.
Apr 12/03 to May 12/03

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2003 04 04 14:05


2003 04 05 16:43


2003 04 18


2003 04 18


2003 06 03 16:34


2003 05 03 16:35


2003 05 09 13:58


2003 05 09 13:50


2003 05 09 13:50


2003 05 12 13:42


2003 05 20 16:47


2003 05 26 16:25


CAT
2003 05 27 14:37


2003 05 30 10:14


2003 06 01 11:38


2003 06 01 11:38


2003 06 01 11:38


2003 06 01 11:38


2003 06 02 14:55


CAT
CATERPILLAR
CAT 345B L
CAT
2003 06 04


2003 06 09


2003 06 14


2003 06 17


2003 06 24 10:36


2003 06 26

APPENDIX E

PLACEMENT OF

METALS & HYDROCARBON CONTAMINATED WASTES

UNDERGROUND IN THE MINE

2200 N | 2100 N | 2000 N | 1900 N | 1800 N

1600 E

1500 E

1400 E

730-210

730-208

730-207

730-205

730-204

730-158

730-156

212 LWR

213 LWR

STG III

218 STG 4 LWR

215 STG 1 LWR

218 STG 2 LWR

W/H FROM 760

STEEL VENT DOORS

C/H'S TO 790 SLED

STEEL VENT DOORS

CV-09

CABLE HOLES FROM #2 DEC.

MAIN CRUSHER ACCESS

BOTTOM CRUSHER ACCESS

TOP CRUSHER ACCESS

C/H FROM #2 DEC. @790 ELEV.

REFUGE STATION

WOODEN VENT DOORS

CV-09

MATERIALS PLACED UNDERGROUND

NORMAL MINE BACKFILL FROM OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER MATERIALS STORAGE

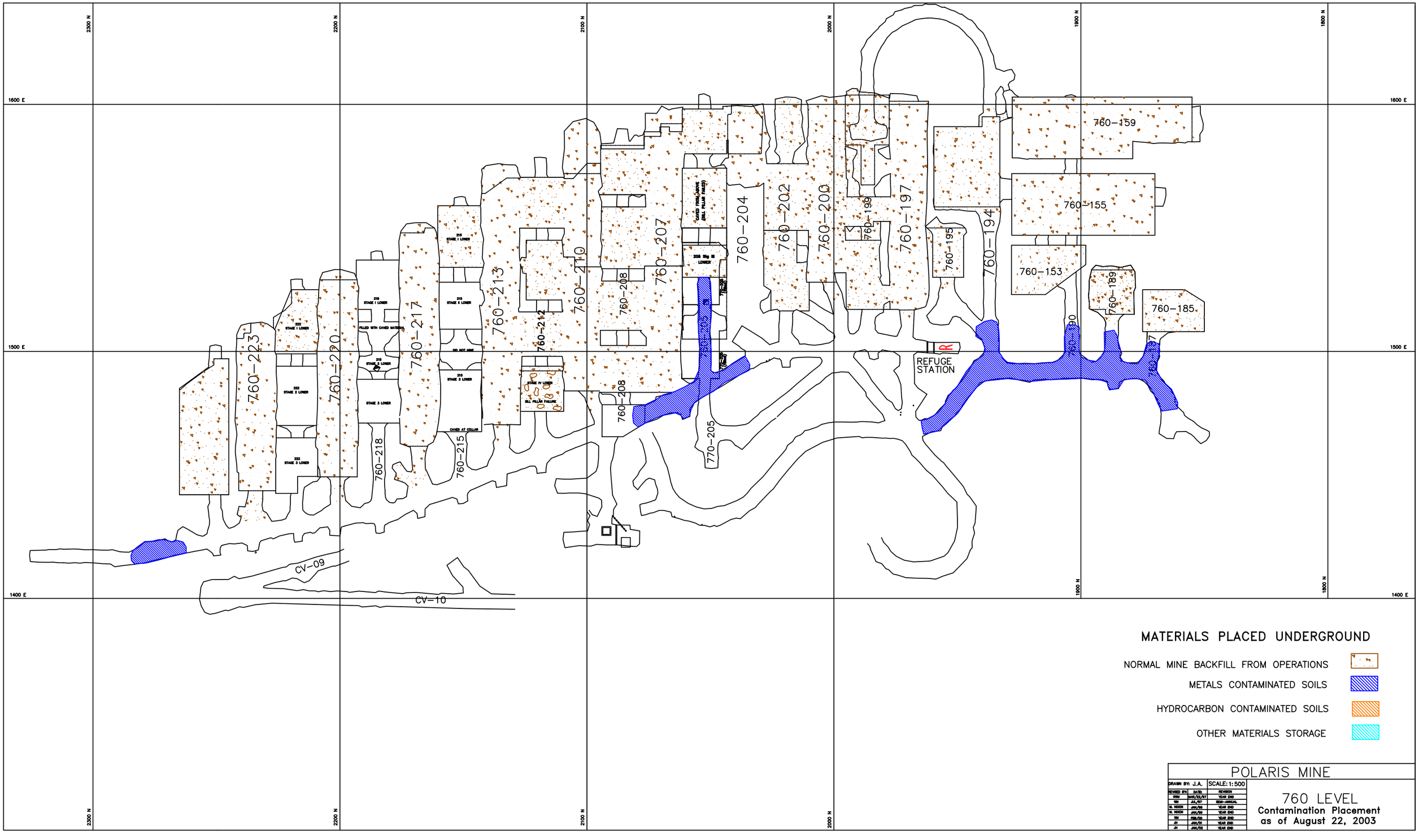
POLARIS MINE

DRAWN BY: J.A. | SCALE: 1:500

REVISED BY:	DATE:	REVISION
CHM	MAR/22/97	YEAR END
WH	JUL/97	SEMI-ANNUAL
M. NIXON	JAN/98	YEAR END
M. NIXON	JAN/99	YEAR END
WH	FEB/00	YEAR END
WLB	JAN/01	YEAR END
JH	JAN/02	YEAR END

730 LEVEL

Contamination Placement as of August 22, 2003



MATERIALS PLACED UNDERGROUND

- NORMAL MINE BACKFILL FROM OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER MATERIALS STORAGE

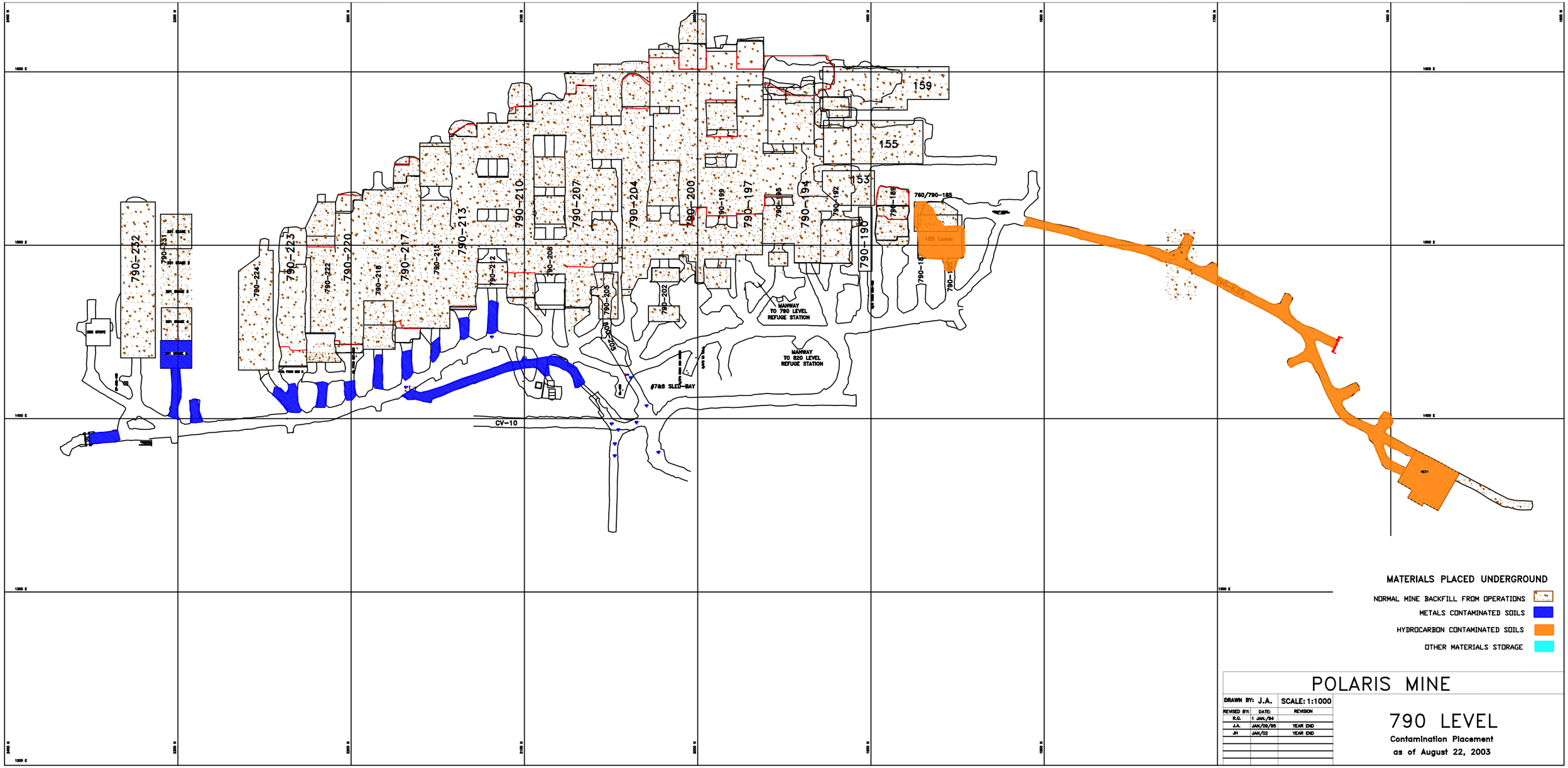
POLARIS MINE

DRAWN BY: J.A. | SCALE: 1:500

REVISED BY:	DATE:	REVISION
GWM	MAR/22/97	YEAR END
TM	JUL/97	SEMI-ANNUAL
M. HIXON	JAN/98	YEAR END
M. HIXON	JAN/99	YEAR END
TM	FEB/00	YEAR END
JH	JAN/01	YEAR END
JH	JAN/02	YEAR END

760 LEVEL

Contamination Placement as of August 22, 2003



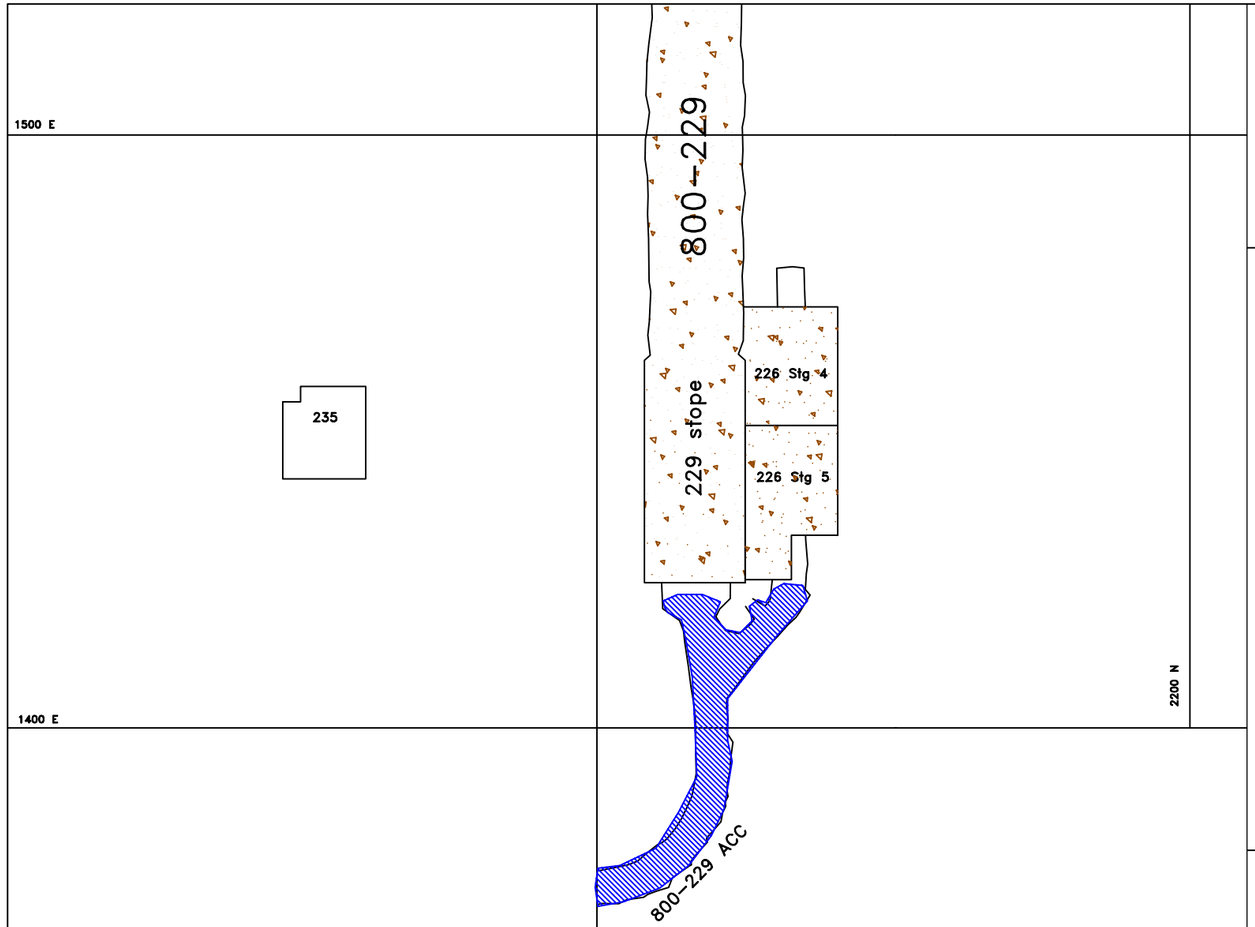
POLARIS MINE

DRAWN BY: J.A.	SCALE: 1:1000

REVISED BY:	DATE:	REVISION
R.G.	1 JAN./94	
J.A.	JAN/03/05	YEAR END
JH	JAN/02	YEAR END

790 LEVEL

Contamination Placement
as of August 22, 2003



MATERIALS PLACED UNDERGROUND

NORMAL MINE BACKFILL FROM OPERATIONS

METALS CONTAMINATED SOILS

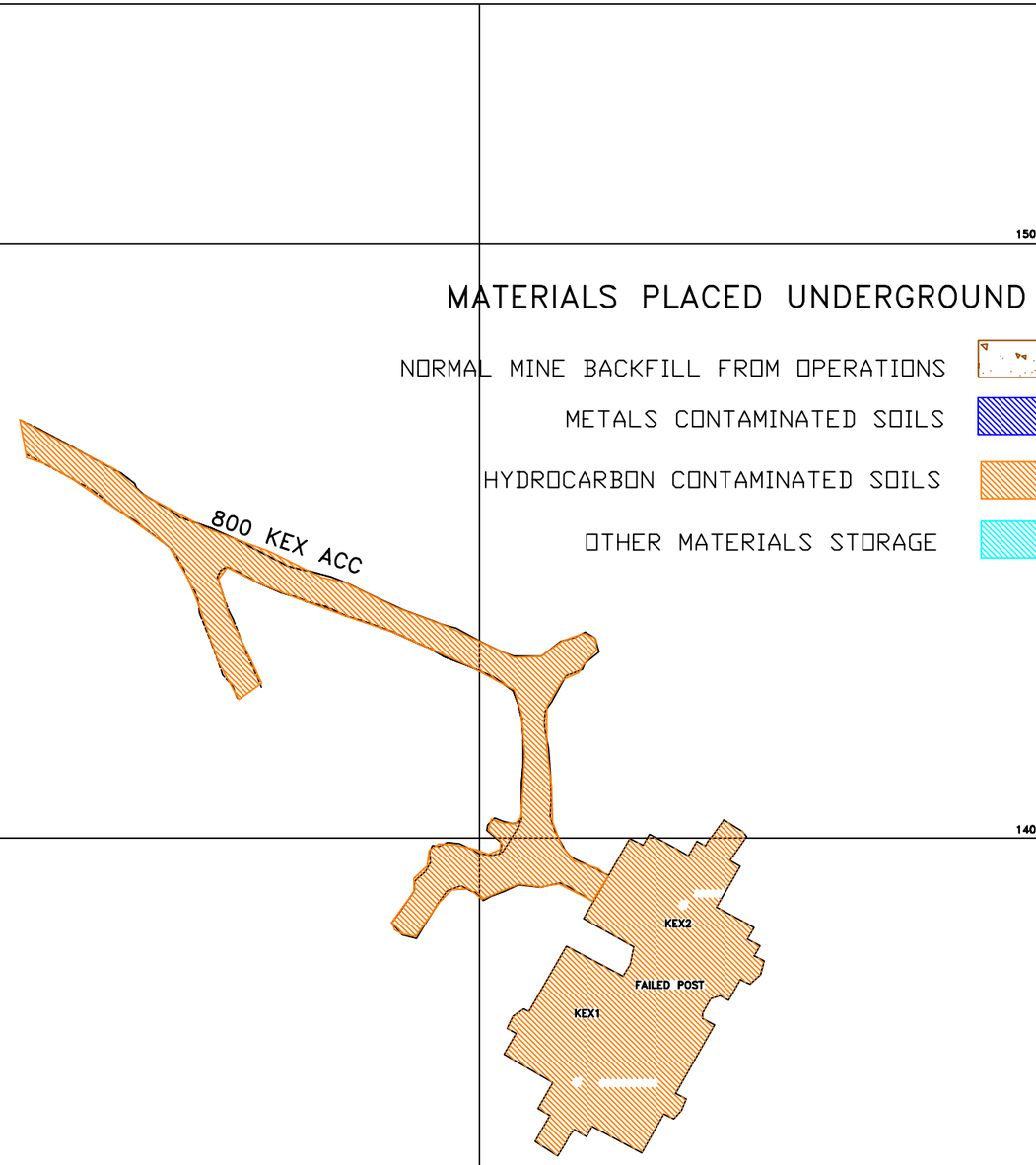
HYDROCARBON CONTAMINATED SOILS

OTHER MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A.		SCALE: 1:500
REVISED BY:	DATE:	REVISION
GWM	MAR/22/97	YEAR END
WM	JUL/97	SEMI-ANNUAL
M. NIXON	JAN/98	YEAR END
M. NIXON	JAN/99	YEAR END
WM	FEB/00	YEAR END
JH	JAN/01	YEAR END
JH	JAN/02	YEAR END

800 LEVEL
Contamination Placement
as of August 22, 2003



MATERIALS PLACED UNDERGROUND

NORMAL MINE BACKFILL FROM OPERATIONS

METALS CONTAMINATED SOILS

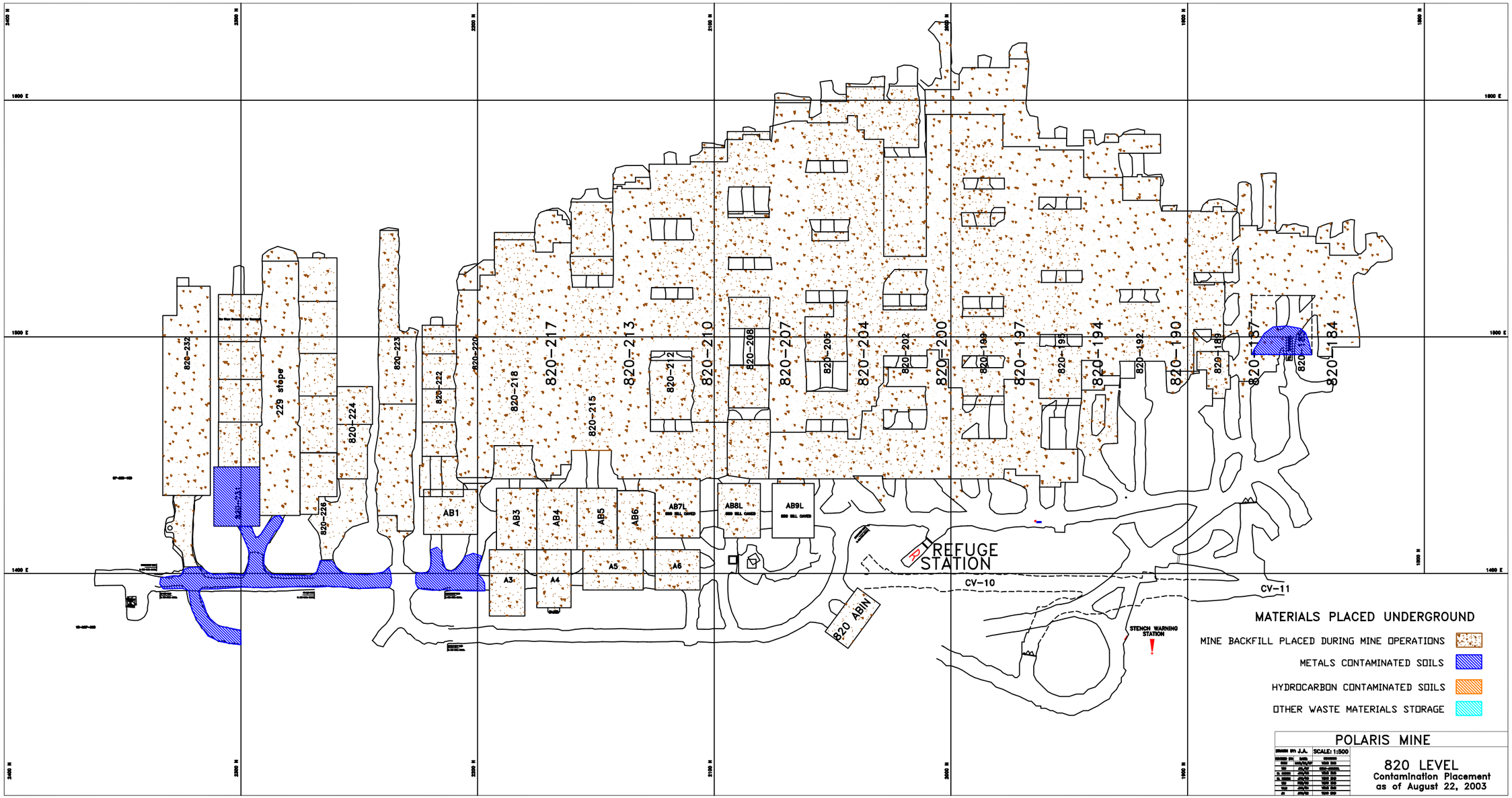
HYDROCARBON CONTAMINATED SOILS

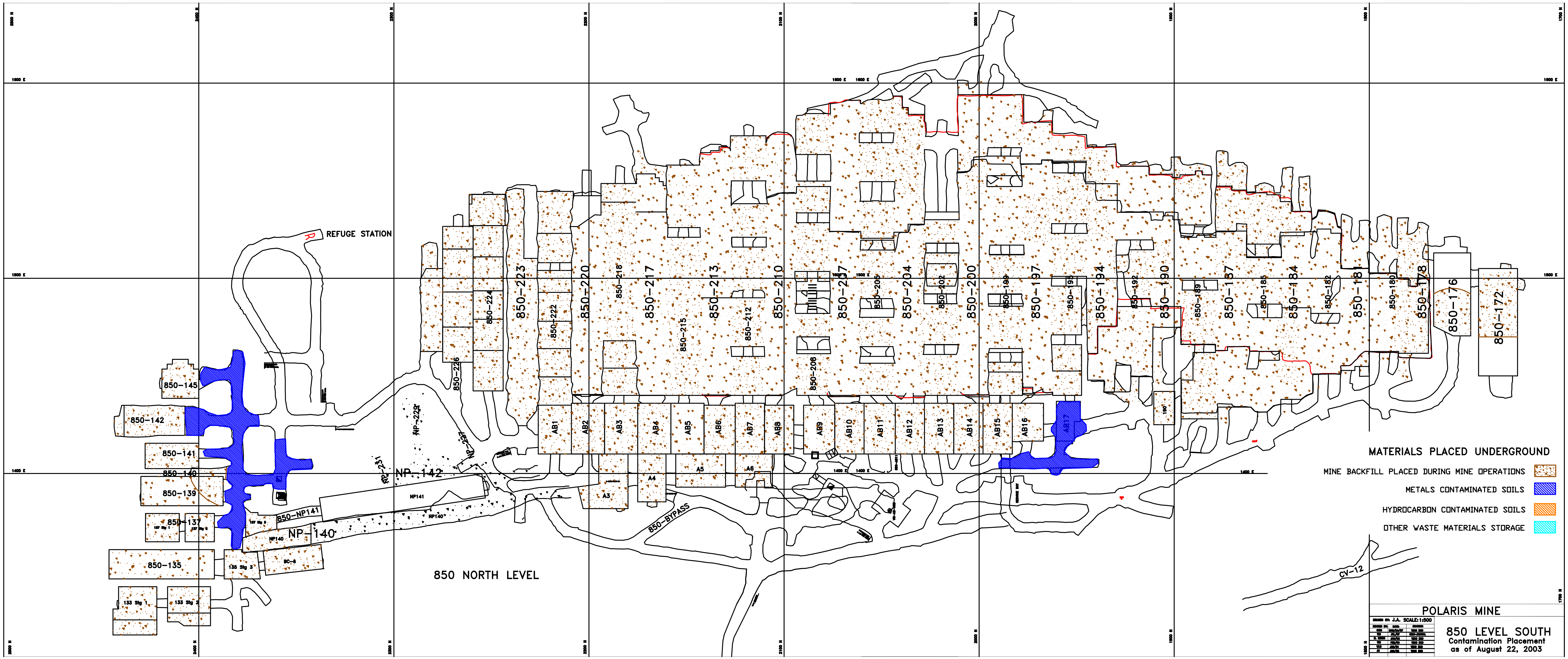
OTHER MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A.		SCALE: 1:500
REVISED BY:	DATE:	REVISION
GWM	MAR/22/97	YEAR END
WM	JUL/97	SEMI-ANNUAL
M. NIXON	JAN/98	YEAR END
M. NIXON	JAN/99	YEAR END
WM	FEB/00	YEAR END
JH	JAN/01	YEAR END
JH	JAN/02	YEAR END

800 LEVEL
Contamination Placement
as of August 22, 2003


2400 N
2300 N
2200 N
2100 N
2000 N
1900 N
1800 E
1900 E
1400 E
1500 E
820-232
229 stope
820-224
820-223
820-222
820-220
820-218
820-217
820-215
820-213
820-212
820-210
820-208
820-207
820-205
820-204
820-202
820-200
820-198
820-197
820-195
820-194
820-192
820-190
820-188
820-187
820-185
820-184
820-226
AB1
AB3
AB4
AB5
AB6
AB7L
AB8L
AB9L
A3
A4
A5
A6
REFUGE STATION
CV-10
CV-11
820 ABIN
STENCH WARNING STATION
MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
POLARIS MINE
DRAWN BY J.A.
SCALE: 1:500
820 LEVEL
Contamination Placement
as of August 22, 2003


MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
REFUGE STATION
850 NORTH LEVEL
850-BYPASS
NP-142
NP-140
850-NP141
CV-12
POLARIS MINE
850 LEVEL SOUTH
Contamination Placement
as of August 22, 2003

REFUGE STATION NEAR BY

880-145

880-142

880-141

880-139

880-137

880-135

880-223

880-220

880-218

880-217

880-215

880-213

880-211

880-210

880-207

880-204

880-202

880-200

880-197

880-194

880-192

880-190

880-189

880-187

880-185

880-184

880-182

880-181

880-179

880-178

NP-231

NP-229

NP-227

NP-142

NP-140

880-224

880-222

AB1

AB2

AB3

AB4

AB5

AB6

AB7

AB8

AB9

AB10

AB11

AB12

AB13

AB14

AB15

AB16

AB17

AB19

AB20

A STOPE

A/B UNDERCUT

B STOPE

B/C UNDERCUT

105-7

105-6

BC-6

880 DUMP

133 Stg 1

133 Stg 2

133 Stg 3

135 Stg 3

128 Stg 3

125W

680-124W

ELECT. VENT DOORS

VENT DOORS (Primary exit)

SLED-BAY

LADDER UP TO REFUGE STATION

REFUGE STATION NEXT RIGHT

MATERIALS PLACED UNDERGROUND

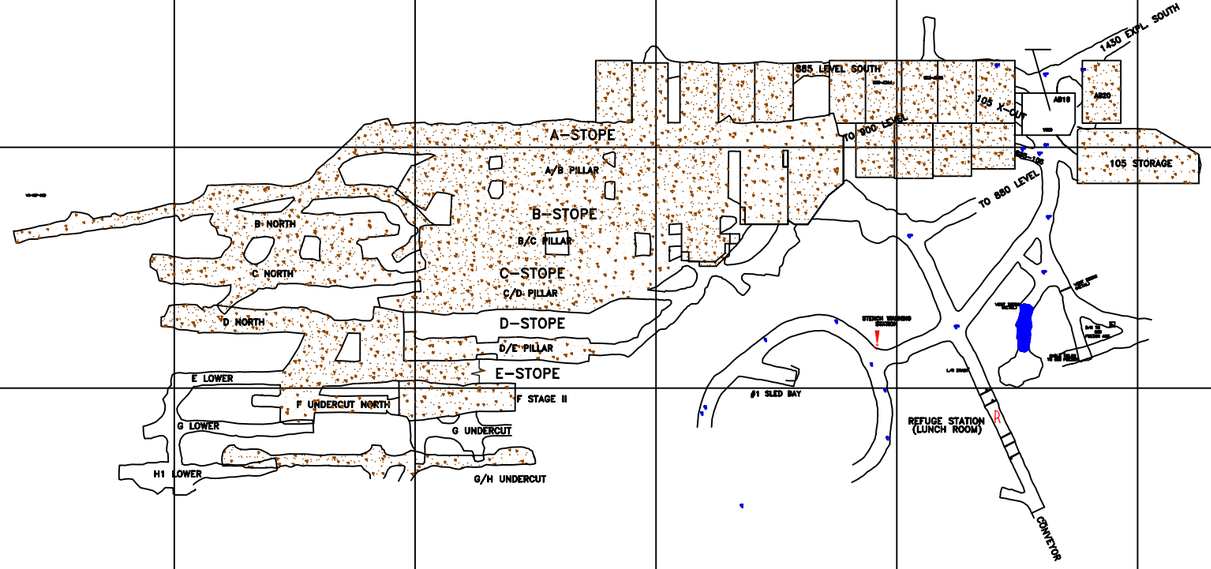
- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.J. SCALE: 1:500

880 LEVEL SOUTH

Contamination Placement as of August 22, 2003



MATERIALS PLACED UNDERGROUND

- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A. | SCALE:1:1000

REVISED BY:	DATED	REVISION
R.G.	1 JAN./94	
J.A.	JAN/08/95	YEAR END

885 LEVEL

Contamination Placement as of August 22, 2003

REFUGE STATION
NEXT RIGHT

#2 SLED BAY

105 X-CUT

AB20

A STOPE

A/B PILLAR

B STOPE

B/C PILLAR

C STOPE

C/D PILLAR

D STOPE

D/E PILLAR

E LOWER

E STOPE

F PILLAR

F RAMP U/C

G LOWER

G STOPE

G UNDERCUT

H LOWER

F RAMP BYPASS

105 X.C. BYPASS

105 BYPASS EXT.

105 STORAGE

105 CROSS CUT

115 X/C

REFUGE STATION
NEXT LEFT

F-900

CV-12 HEAD PULLEY

MAIN DECLINE

900-137

900-135

900-133

900 CD

900 CD2

900 CD1

900-DE

900 DE

DE3

120W STO 1

900-120W

900-121W ACC

900-124W

122 Stp 1

122 Stp 2

2122 Stp 3

900-121W

MATERIALS PLACED UNDERGROUND

- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A. SCALE: 1:1000

REVISED BY:	DATE:	REVISION:
D.G.	1 AUG/04	
J.A.	AUG/04/05	YEAR END
JH	AUG/05	YEAR END

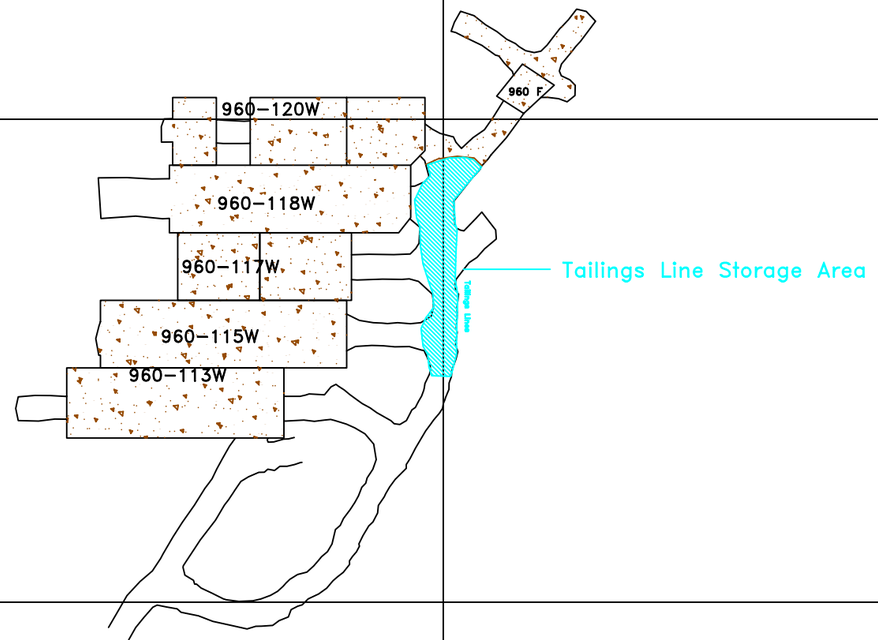
900 LEVEL

Contamination Placement
as of August 22, 2003

2500 N | 2500 N | 2400 N | 2300 N | 2200 N

1300 E | 1300 E

1200 E | 1200 E



1100 E | 2200 N | 1100 E

2500 N | 2500 N | 2400 N | 2300 N

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: MJH | SCALE: 1:500

REVISED BY:	DATE:	REVISION
MJH/SGH	JAN/00	YEAR END
MJH	JAN/00	YEAR END
WLB	JAN/01	YEAR END
JH	JAN/02	YEAR END

960 LEVEL

Contamination Placement
as of August 22, 2003

NORTH PORTAL

ANFO PLANT

#4 SLED-BAY

FUEL BAY (1000 GAL)

ANFO STORAGE

MAIN DECLINE

STEEL SETS

CV-01 CONVEYOR

JUNE 2003 MELT WATER STORAGE AREA

COB #1

CV-02 CONVEYOR

MAIN DECLINE

75° EXCAVATION DEPT

CV-03

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A. | SCALE: 1:1000

REVISED BY:	DATE:	REVISION
S.S.	1 JAN./04	
J.J.	JAN/05/05	YEAR END

980 LEVEL

Contamination Placement as of August 22, 2003

APPENDIX F

THERMISTOR MONITORING DATA

POLARIS MINE - GARROW LAKE DAM THERMISTOR TEMPERATURES

NORTH THERMISTOR

DATE	Core A	Core B	Core C	Core D	Core E	Core F	Core G	Core H	Core J	Bedrock K	Bedrock L
15-Jan-03											
10-Feb-03	-18.9	-15.7	-14.0	-12.9	-12.2	-11.9	-11.7	-11.7	-11.9	-12.0	-12.0
11-Mar-03	-20.8	-17.9	-15.7	-14.3	-13.1	-12.6	-12.2	-12.2	-12.2	-12.2	-12.1
17-Apr-03	-20.8	-18.7	-17.1	-15.8	-14.5	-13.6	-13.1	-13.1	-12.8	-12.8	-12.5
14-May-03	-17.7	-17.5	-16.9	-16.0	-15.0	-14.2	-13.7	-13.7	-13.3	-13.1	-12.9
16-Jun-03	-13.9	-19.1	-14.9	-15.0	-14.6	-14.3	-13.8	-13.8	-13.5	-13.3	-13.0

CENTRE THERMISTOR

DATE	Core A	Core B	Core C	Core D	Core E	Core F	Core G	Bedrock H	Bedrock J	Bedrock K	Bedrock L
15-Jan-03											
10-Feb-03	-13.7	-12.7	-12.2	-12.0	-11.8	-11.8	-11.8	-11.8	-11.8	-11.9	-12.1
11-Mar-03	-15.3	-14.0	-13.2	-12.6	-12.2	-12.2	-12.1	-12.1	-12.0	-11.8	-12.1
17-Apr-03	-16.6	-15.3	-14.5	-13.7	-13.1	-12.9	-12.7	-12.7	-12.4	-12.2	-12.4
14-May-03	-16.5	-15.7	-14.9	-14.3	-13.6	-13.4	-13.1	-13.1	-12.6	-12.5	-12.6
16-Jun-03	-15.0	-14.9	-14.5	-14.2	-13.7	-13.5	-13.5	-13.5	-12.9	-12.8	-12.8

SOUTH THERMISTOR

DATE	Core A	Core B	Core C	Core D	Core E	Core F	Core G	Core H	Bedrock J	Bedrock K	Bedrock L
15-Jan-03											
10-Feb-03	-12.8	-12.3	-11.9	-11.8	-11.6	-11.8	-11.5	-11.5	-11.6	-11.6	-11.8
11-Mar-03	-14.1	-13.5	-12.9	-12.6	-12.4	-12.4	-12.0	-12.0	-11.9	-11.8	-12.0
17-Apr-03	-15.5	-14.8	-14.1	-13.8	-13.4	-13.3	-12.8	-12.8	-12.5	-12.3	-12.3
14-May-03	-15.7	-15.1	-14.6	-14.3	-13.9	-13.8	-13.3	-13.3	-12.9	-12.6	-12.6
16-Jun-03	-14.3	-13.5	-13.9	-13.2	-13.2	-12.5	-13.4	-13.4	-12.8	-12.1	-12.6

POLARIS MINE - OPERATIONAL LANDFILL TEMPERATURE MONITORING - THERMISTOR STRING #1

TEMPERATURES IN DEGREES C

	Bead # 1	Bead # 2	Bead # 3	Bead # 4	Bead # 5	Bead # 6	Bead # 7	Bead # 8	Bead # 9	Bead # 10	Bead # 11	Bead # 12
Installation Depth Below Collar (M)	-0.5	-1.0	-1.5	-2.0	-3.0	-4.0	-4.5	-5.0	-5.5	-6.0		
20-Mar-99	-22.9	-23.9	-24.0	-23.7	-21.7	-17.0	-15.9	-15.0	-14.2	-13.5		
22-Mar-99	-22.7	-23.3	-23.5	-23.3	-21.6	-17.1	-16.0	-15.2	-14.3	-13.6		
23-Mar-99	-22.5	-23.2	-23.3	-23.1	-21.5	-17.2	-16.0	-15.2	-14.4	-13.6		
24-Mar-99	-22.4	-23.0	-23.2	-22.9	-21.4	-17.2	-16.1	-15.3	-14.4	-13.7		
25-Mar-99	-22.4	-22.9	-23.0	-22.8	-21.4	-17.2	-16.2	-15.4	-14.5	-13.8		
26-Mar-99	-23.1	-22.8	-22.9	-22.6	-21.3	-17.3	-16.2	-15.4	-14.5	-13.8		
27-Mar-99	-23.7	-23.0	-22.8	-22.5	-21.2	-17.3	-16.3	-15.5	-14.6	-13.9		
29-Mar-99	-24.7	-23.4	-22.8	-22.4	-21.0	-17.4	-16.4	-15.6	-14.7	-14.0		
30-Mar-99	-25.9	-23.9	-23.0	-22.3	-21.0	-17.4	-16.4	-15.6	-14.7	-14.0		
6-Apr-99	-24.1	-24.1	-23.5	-22.7	-20.9	-17.5	-16.6	-15.9	-15.0	-14.3		
13-Apr-99	-22.7	-22.8	-22.6	-22.2	-20.8	-17.6	-16.8	-16.0	-15.3	-14.5		
20-Apr-99	-19.9	-20.6	-21.2	-21.3	-20.6	-17.7	-16.9	-16.2	-15.5	-14.7		
26-Apr-99	-18.4	-19.8	-20.5	-20.6	-20.0	-17.7	-17.0	-16.4	-15.6	-14.9		
4-May-99	-16.2	-18.0	-19.0	-19.5	-19.4	-17.6	-17.0	-16.4	-15.7	-15.1		
11-May-99	-14.1	-16.2	-17.4	-18.2	-18.7	-17.4	-16.9	-16.4	-15.8	-15.2		
18-May-99	-9.6	-12.8	-15.0	-16.5	-17.7	-17.2	-16.8	-16.4	-15.8	-15.3		
25-May-99	-6.7	-10.1	-12.6	-14.5	-16.5	-16.8	-16.6	-16.3	-15.8	-15.3		
1-Jun-99	-5.0	-8.4	-10.7	-12.7	-15.1	-16.3	-16.2	-16.0	-15.7	-15.3		
8-Jun-99	-0.5	-2.9	-7.0	-10.2	-13.6	-15.7	-15.8	-15.8	-15.5	-15.2		
15-Jun-99	-0.7	-2.7	-5.6	-8.3	-12.0	-15.0	-15.3	-15.4	-15.3	-15.1		
22-Jun-99	0.2	-1.8	-4.5	-7.1	-10.7	-14.2	-14.7	-14.9	-15.0	-14.9		
29-Jun-99	1.3	-1.3	-3.5	-5.9	-9.4	-13.2	-14.0	-14.3	-14.5	-14.6		
5-Jul-99	4.3	-0.5	-2.3	-4.7	-8.8	-12.8	-13.5	-13.9	-14.2	-14.4		
13-Jul-99	3.9	2.9	-1.6	-4.3	-8.0	-12.2	-13.0	-13.5	-13.8	-14.1		
20-Jul-99	3.3	1.3	-1.3	-3.8	-7.4	-11.6	-12.5	-13.0	-13.4	-13.8		
27-Jul-99	3.9	1.7	-1.1	-3.4	-6.8	-11.1	-12.0	-12.5	-13.1	-13.4		
3-Aug-99	4.8	2.0	-0.8	-3.0	-6.4	-10.6	-11.5	-12.1	-12.7	-13.2		
10-Aug-99	4.8	2.4	-0.8	-2.8	-6.0	-10.3	-11.1	-11.8	-12.3	-12.8		
17-Aug-99	3.9	2.0	-0.7	-2.6	-5.7	-9.9	-10.7	-11.4	-12.0	-12.5		
24-Aug-99	1.4	0.7	-0.7	-2.5	-5.4	-9.6	-10.4	-11.1	-11.7	-12.3		
31-Aug-99	0.0	0.1	-0.7	-2.4	-5.2	-9.3	-10.2	-10.8	-11.4	-12.0		
7-Sep-99	-0.2	-0.1	-0.2	-1.5	-4.3	-8.2	-9.5	-10.2	-10.8	-11.5		
14-Sep-99	-0.4	-0.1	-0.3	-1.6	-4.1	-8.0	-9.3	-10.0	-10.6	-11.2		
22-Sep-99	-1.3	-0.4	-0.4	-1.6	-4.0	-7.8	-9.1	-9.7	-10.4	-11.1		
28-Sep-99	-1.0	-0.5	-0.5	-1.6	-3.9	-7.6	-8.8	-9.5	-10.2	-10.9		
5-Oct-99	-5.9	-3.0	-1.4	-1.8	-3.9	-7.4	-8.6	-9.3	-10.0	-10.7		
12-Oct-99	-8.1	-5.4	-3.7	-2.8	-3.9	-7.3	-8.5	-9.1	-9.8	-10.5		
19-Oct-99	-12.9	-9.4	-6.3	-4.5	-4.3	-7.2	-8.3	-9.0	-9.6	-10.3		
26-Oct-99	-14.3	-11.3	-8.4	-6.4	-5.2	-7.2	-8.2	-8.8	-9.5	-10.1		
2-Nov-99	-15.8	-13.7	-10.8	-8.3	-6.3	-7.3	-8.2	-8.7	-9.3	-10.0		
9-Nov-99	-21.1	-16.7	-12.7	-10.0	-7.6	-7.6	-8.2	-8.7	-9.3	-9.9		
16-Nov-99	-20.7	-17.0	-13.7	-11.5	-9.0	-8.1	-8.4	-8.8	-9.3	-9.8		
23-Nov-99	-18.6	-17.8	-15.7	-13.3	-10.3	-8.7	-8.8	-9.0	-9.4	-9.8		
30-Nov-99	-19.3	-16.7	-15.1	-13.6	-11.4	-9.4	-9.2	-9.3	-9.5	-9.9		
7-Dec-99	-24.9	-21.4	-17.8	-15.2	-12.3	-10.0	-9.6	-9.6	-9.8	-10.0		
13-Dec-99	-26.8	-23.8	-20.3	-17.3	-13.6	-10.6	-10.1	-10.0	-10.0	-10.2		
22-May-00	-12.3	-14.1	-15.7	-16.9	-18.2	-18.1	-17.8	-17.4	-16.9	-16.4		
29-May-00	-10.3	-13.2	-14.7	-15.9	-17.2	-17.6	-17.4	-17.2	-16.8	-16.4		
6-Jun-00	-0.3	-0.1	-1.0	-2.3	-10.8	-12.2	-13.0	-15.6	-16.6	-16.2		
16-Jun-00	1.0	-2.0	-5.7	-9.6	-13.9	-16.2	-16.4	-16.4	-16.2	-16.0		
26-Jun-00	5.3	1.2	-1.8	-5.6	-10.9	-14.8	-15.5	-15.8	-15.8	-15.7		
4-Jul-00	2.1	0.7	-1.3	-4.4	-9.3	-13.7	-14.7	-15.1	-15.3	-15.4		
11-Jul-00	2.8	1.0	-1.2	-3.9	-8.2	-12.8	-14.0	-14.5	-14.8	-15.0		
18-Jul-00	2.5	1.2	-1.1	-3.5	-7.5	-12.1	-13.3	-13.9	-14.3	-14.6		
19-Sep-00	-3.9	-0.4	-1.0	-2.1	-4.6	-8.4	-9.6	-10.3	-11.0	-11.6		
26-Sep-00	-6.3	-3.7	-2.4	-2.6	-4.5	-8.2	-9.4	-10.1	-10.8	-11.4		
10-Oct-00	-9.9	-7.4	-5.6	-4.9	-5.2	-7.9	-9.0	-9.7	-10.3	-10.9		
10-Nov-00	-18.7	-16.8	-14.2	-12.0	-9.5	-8.8	-9.2	-9.5	-9.9	-10.4		
27-Apr-01	-19.8	-21.5	-23.0	-23.7	-23.5	-21.0	-19.8	-19.1	-18.2	-17.3		
22-May-01	-9.9	-12.8	-15.5	-17.6	-19.7	-19.6	-19.1	-18.7	-18.2	-17.5		
18-Jun-01	1.9	-0.7	-3.9	-7.3	-12.1	-16.0	-16.8	-17.0	-17.0	-16.9		
19-Jul-01	8.5	2.4	-1.1	-3.4	-7.3	-12.0	-13.4	-14.1	-14.6	-15.0		
21-Aug-01	0.0	0.0	-0.1	-2.0	-5.3	-9.8	-11.2	-11.9	-12.6	-13.2		
21-Aug-01	0.0	0.0	-0.1	-2.0	-5.3	-9.8	-11.2	-11.9	-12.6	-13.2		
16-Nov-02	-14.3	-13.3	-11.4	-9.7	-8.1	-8.5	-9.1	-9.5	-10.0	-10.6		
18-Dec-02	-18.6	-17.6	-16.8	-15.8	-13.7	-11.0	-10.6	-10.5	-10.5	-10.7		
10-Feb-03	-27.6	-25.3	-23.4	-21.6	-18.6	-14.8	-13.8	-13.3	-12.9	-12.5		
11-Mar-03	-28.3	-26.2	-24.9	-23.8	-21.4	-17.0	-15.7	-15.0	-14.3	-13.8		
17-Apr-03	-24.7	-24.5	-24.0	-23.3	-21.9	-18.6	-17.4	-16.7	-16.0	-15.2		
15-May-03	-15.2	-17.1	-18.1	-18.8	-19.4	-18.3	-17.6	-17.1	-16.6	-15.9		
17-Jun-03	-24.7	-24.5	-24.0	-23.3	-21.9	-18.6	-17.4	-16.7	-16.0	-15.2		

POLARIS MINE - OPERATIONAL LANDFILL TEMPERATURE MONITORING - THERMISTOR STRING #2
TEMPERATURES IN DEGREES C

	Bead # 1	Bead # 2	Bead # 3	Bead # 4	Bead # 5	Bead # 6	Bead # 7	Bead # 8	Bead # 9	Bead # 10	Bead # 11	Bead # 12
Installation Depth Below Collar (M)	-0.5	-1.0	-1.5	-2.0	-2.5	-3.0	-3.5	-4.0	-4.5	-5.0		
20-Mar-99	-24.2	-24.8	-24.9	-24.5	-23.8	-22.7	-21.5	-20.0	-18.6	-17.4		
22-Mar-99	-24.0	-24.2	-24.5	-24.2	-23.5	-22.5	-21.5	-20.1	-18.7	-17.5		
23-Mar-99	-23.7	-24.2	-24.3	-24.0	-23.4	-22.5	-21.4	-20.1	-18.8	-17.6		
24-Mar-99	-23.5	-24.0	-24.1	-23.9	-23.3	-22.4	-21.4	-20.1	-18.8	-17.6		
25-Mar-99	-23.5	-23.8	-23.9	-23.7	-23.1	-22.3	-21.3	-20.1	-18.8	-17.6		
26-Mar-99	-24.0	-23.8	-23.8	-23.6	-23.0	-22.2	-21.3	-20.1	-18.9	-17.7		
27-Mar-99	-24.3	-24.0	-23.7	-23.5	-22.9	-22.2	-21.3	-20.1	-18.9	-17.7		
29-Mar-99	-25.2	-24.4	-23.8	-23.3	-22.8	-22.0	-21.2	-20.1	-18.9	-17.8		
30-Mar-99	-26.1	-25.0	-23.9	-23.3	-22.7	-21.9	-21.2	-20.0	-18.9	-17.8		
6-Apr-99	-24.7	-24.8	-24.3	-23.6	-22.8	-21.9	-21.0	-20.0	-19.0	-18.0		
13-Apr-99	-23.5	-23.6	-23.4	-23.0	-22.5	-21.8	-21.0	-20.0	-19.0	-18.1		
20-Apr-99	-20.9	-21.5	-22.0	-22.2	-21.9	-21.4	-20.8	-20.0	-19.1	-18.2		
26-Apr-99	-19.9	-20.7	-21.4	-21.5	-21.3	-20.9	-20.5	-19.8	-19.0	-18.3		
4-May-99	-18.1	-19.3	-20.1	-20.4	-20.5	-20.4	-20.1	-19.6	-18.9	-18.2		
11-May-99	-16.1	-17.6	-18.8	-19.4	-19.7	-19.7	-19.5	-19.2	-18.7	-18.2		
18-May-99	-12.5	-14.6	-16.6	-17.8	-18.5	-18.8	-18.9	-18.8	-18.5	-18.0		
25-May-99	-10.2	-12.3	-14.5	-15.9	-17.0	-17.7	-18.1	-18.2	-18.1	-17.8		
1-Jun-99	-7.6	-10.4	-12.7	-14.3	-15.6	-16.5	-17.1	-17.5	-17.5	-17.4		
8-Jun-99	-3.3	-6.2	-9.6	-11.9	-13.8	-15.2	-16.0	-16.7	-16.9	-17.0		
15-Jun-99	-1.4	-4.1	-7.4	-9.8	-11.9	-13.6	-14.7	-15.7	-16.2	-16.5		
22-Jun-99	-0.4	-2.1	-5.0	-7.7	-10.2	-12.1	-13.4	-14.7	-15.5	-15.9		
29-Jun-99	1.6	-1.0	-3.6	-6.1	-8.4	-10.4	-11.9	-13.3	-14.4	-15.1		
5-Jul-99	4.2	0.0	-2.7	-5.3	-7.6	-9.6	-11.2	-12.7	-13.8	-14.6		
13-Jul-99	3.9	1.1	-1.9	-4.4	-6.7	-8.7	-10.3	-11.9	-13.1	-13.9		
20-Jul-99	3.1	1.0	-1.5	-3.8	-6.0	-7.9	-9.5	-11.1	-12.4	-13.3		
27-Jul-99	4.0	1.2	-1.3	-3.4	-5.4	-7.3	-8.8	-10.4	-11.7	-12.7		
3-Aug-99	4.3	1.6	-1.1	-3.1	-5.0	-6.8	-8.3	-9.9	-11.1	-12.1		
10-Aug-99	4.2	1.7	-1.0	-2.8	-4.7	-6.4	-7.8	-9.4	-10.6	-11.7		
17-Aug-99	3.3	1.7	-0.8	-2.6	-4.4	-6.0	-7.4	-8.9	-10.2	-11.2		
24-Aug-99	1.0	0.5	-0.7	-2.4	-4.2	-5.7	-7.1	-8.6	-9.8	-10.8		
31-Aug-99	0.0	0.0	-0.9	-2.4	-4.0	-5.5	-6.7	-8.2	-9.4	-10.4		
7-Sep-99	-0.1	-0.2	-1.0	-2.4	-3.9	-5.3	-6.5	-7.9	-9.1	-10.1		
14-Sep-99	-0.2	-0.3	-1.2	-2.3	-3.7	-5.1	-6.3	-7.6	-8.8	-9.8		
21-Sep-99	-0.8	-0.5	-1.4	-2.5	-3.7	-5.0	-6.1	-7.4	-8.6	-9.5		
28-Sep-99	-1.1	-1.2	-1.8	-2.6	-3.7	-4.9	-6.0	-7.2	-8.3	-9.3		
5-Oct-99	-4.7	-3.2	-2.7	-3.0	-3.9	-4.9	-5.9	-7.1	-8.1	-9.1		
12-Oct-99	-6.8	-5.2	-4.3	-4.0	-4.3	-5.0	-5.8	-6.9	-7.9	-8.8		
19-Oct-99	-11.7	-9.0	-6.7	-5.6	-5.2	-5.4	-6.1	-7.0	-7.9	-8.7		
26-Oct-99	-13.9	-11.3	-9.0	-7.6	-6.7	-6.4	-6.6	-7.2	-7.9	-8.6		
2-Nov-99	-15.9	-14.0	-11.5	-9.7	-8.3	-7.6	-7.5	-7.7	-8.1	-8.7		
9-Nov-99	-19.7	-16.3	-13.2	-11.3	-9.9	-8.9	-8.5	-8.3	-8.5	-8.9		
16-Nov-99	-20.3	-17.0	-14.3	-12.7	-11.3	-10.2	-9.6	-9.1	-9.0	-9.2		
23-Nov-99	-19.1	-18.1	-16.1	-14.4	-12.7	-11.4	-10.6	-9.9	-9.6	-9.6		
30-Nov-99	-18.7	-17.0	-15.6	-14.6	-13.4	-12.3	-11.5	-10.8	-10.3	-10.1		
7-Dec-99	-24.2	-21.2	-18.1	-16.0	-14.4	-13.1	-12.2	-11.4	-10.8	-9.9		
13-Dec-99	-26.6	-23.8	-20.7	-18.3	-16.1	-14.4	-13.2	-12.1	-11.4	-11.0		
22-May-00	-11.9	-13.3	-15.0	-16.3	-17.3	-18.1	-18.5	-18.8	-18.9	-18.6		
29-May-00	-11.0	-12.7	-14.2	-15.3	-16.3	-17.1	-17.7	-18.1	-18.3	-18.2		
6-Jun-00	-7.2	-10.0	-12.3	-13.9	-15.2	-16.2	-16.8	-17.4	-17.6	-17.7		
16-Jun-00	0.0	-2.3	-6.7	-10.2	-12.6	-14.3	-15.4	-16.3	-16.8	-17.1		
26-Jun-00	2.4	-1.0	-4.3	-7.1	-9.7	-11.9	-13.3	-14.8	-15.7	-16.2		
4-Jul-00	1.4	-0.4	-3.2	-5.8	-8.2	-10.3	-11.9	-13.6	-14.7	-15.4		
11-Jul-00	1.7	-0.2	-2.8	-5.0	-7.3	-9.3	-10.9	-12.6	-13.9	-14.7		
18-Jul-00	1.8	-0.2	-2.4	-4.5	-6.6	-8.6	-10.1	-11.8	-13.0	-14.1		
19-Sep-00	-3.8	-2.4	-2.5	-3.2	-4.3	-5.4	-6.5	-7.9	-9.0	-10.0		
26-Sep-00	-5.7	-4.1	-3.7	-3.9	-4.6	-5.6	-6.5	-7.8	-8.9	-9.8		
10-Oct-00	-9.5	-7.7	-6.6	-6.1	-6.1	-6.4	-7.0	-7.8	-8.7	-9.5		
10-Nov-00	-18.6	-16.8	-14.7	-13.0	-11.6	-10.6	-10.1	-9.8	-9.8	-10.0		
27-Apr-01	-20.5	-22.2	-23.3	-23.9	-23.9	-23.6	-23.1	-22.3	-21.3	-20.4		
22-May-01	-15.1	-17.4	-18.9	-20.0	-20.6	-21.0	-21.0	-20.8	-20.5	-20.0		
18-Jun-01	-0.3	-3.2	-6.6	-9.4	-12.1	-14.2	-15.6	-17.0	-17.7	-18.2		
19-Jul-01	4.3	-0.1	-2.4	-4.7	-7.0	-9.0	-10.5	-12.3	-13.6	-14.7		
21-Aug-01	-0.1	-0.1	-1.3	-3.0	-4.9	-6.5	-8.0	-9.6	-11.0	-12.1		
14-Sep-02	-0.1	-0.4	-1.6	-3.0	-4.5	-5.9	-7.2	-8.6	-9.8	-10.9		
23-Oct-02	-6.9	-6.9	-6.8	-6.8	-6.8	-7.0	-7.5	-8.1	-8.9	-9.6		
16-Nov-02	-14.8	-13.1	-11.7	-10.5	-9.6	-9.2	-9.1	-9.2	-9.5	-9.9		
18-Dec-02	-18.4	-17.7	-17.0	-16.1	-15.1	-14.0	-13.1	-12.3	-11.7	-11.4		
10-Feb-03	-27.0	-25.2	-23.5	-21.9	-20.2	-18.8	-17.7	-16.4	-15.4	-14.6		
11-Mar-03	-28.0	-26.4	-25.3	-24.2	-22.9	-21.6	-20.3	-18.9	-17.6	-16.5		
17-Apr-03	-24.9	-24.9	-24.4	-23.7	-15.8	-22.2	-21.4	-20.4	-19.3	-18.4		
15-May-03	-16.0	-17.3	-18.1	-18.9	-19.4	-19.7	-19.7	-19.5	-19.1	-18.6		
17-Jun-03	-1.5	-4.0	-6.6	-8.9	-11.0	-12.8	-14.0	-15.2	-16.1	-16.5		

POLARIS MINE - OPERATIONAL LANDFILL TEMPERATURE MONITORING - THERMISTOR STRING #4
TEMPERATURES IN DEGREES C

	Bead # 1	Bead # 2	Bead # 3	Bead # 4	Bead # 5	Bead # 6	Bead # 7	Bead # 8	Bead # 9	Bead # 10	Bead # 11	Bead # 12
Installation Depth Below Collar (M)	-0.5	-1.0	-1.5	-2.0	-2.5	-3.0	-4.0	-5.0	-5.5	-6.0	-6.5	-7.0
20-Mar-99	-23.1	-23.8	-23.7	-23.3	-22.5	-21.2	-18.1	-15.3	-14.2	-13.3	-12.5	
22-Mar-99	-22.7	-23.2	-23.3	-22.9	-22.2	-21.1	-18.2	-15.4	-14.3	-13.4	-12.6	
23-Mar-99	-22.7	-23.1	-23.1	-22.7	-22.1	-21.0	-18.2	-15.5	-14.3	-13.5	-12.7	
24-Mar-99	-22.4	-22.9	-22.9	-22.6	-22.0	-20.9	-18.2	-15.5	-14.4	-13.5	-12.7	
25-Mar-99	-22.3	-22.7	-22.7	-22.4	-21.8	-20.8	-18.2	-15.6	-14.4	-13.6	-12.8	
26-Mar-99	-22.7	-22.6	-22.5	-22.3	-21.7	-20.7	-18.2	-15.6	-14.5	-13.6	-12.8	
27-Mar-99	-23.2	-22.6	-22.4	-22.2	-21.6	-20.6	-18.2	-15.6	-14.5	-13.7	-12.8	
29-Mar-99	-24.3	-23.0	-22.4	-22.0	-21.4	-20.5	-18.2	-15.7	-14.6	-13.7	-12.9	
30-Mar-99	-25.4	-23.4	-22.6	-21.9	-21.3	-20.4	-18.1	-15.7	-14.6	-13.8	-13.0	
6-Apr-99	-23.9	-23.6	-23.0	-22.3	-21.4	-20.3	-18.1	-15.8	-14.8	-14.0	-13.2	
13-Apr-99	-22.4	-22.3	-22.0	-21.7	-21.1	-20.2	-18.1	-15.9	-15.0	-14.2	-13.4	
20-Apr-99	-20.3	-20.8	-21.0	-20.9	-20.6	-19.8	-18.0	-16.0	-15.1	-14.4	-13.6	
26-Apr-99	-18.8	-20.0	-20.3	-20.2	-19.9	-19.3	-17.8	-16.0	-15.2	-14.5	-13.8	-13.2
4-May-99	-17.6	-18.7	-19.0	-19.2	-19.1	-18.8	-17.6	-16.0	-15.3	-14.6	-13.9	-13.3
11-May-99	-15.3	-17.0	-17.7	-18.1	-18.3	-18.1	-17.3	-15.9	-15.2	-14.6	-14.0	-13.5
18-May-99	-10.5	-13.7	-15.3	-16.4	-17.0	-17.2	-16.9	-15.7	-15.2	-14.6	-14.1	-13.6
25-May-99	-8.0	-11.2	-13.0	-14.4	-15.4	-16.0	-16.2	-15.5	-15.1	-14.6	-14.1	-13.6
1-Jun-99	-6.2	-9.5	-11.2	-12.7	-13.8	-14.7	-15.5	-15.2	-14.8	-14.5	-14.0	-13.6
8-Jun-99	-1.9	-4.7	-7.7	-10.1	-11.9	-13.3	-14.6	-14.7	-14.5	-14.2	-13.9	-13.6
15-Jun-99	-1.3	-3.5	-5.9	-8.1	-9.9	-11.5	-13.6	-14.2	-14.2	-14.0	-13.7	-13.5
22-Jun-99	-0.4	-2.5	-4.7	-6.7	-8.4	-10.1	-12.4	-13.6	-13.7	-13.7	-13.5	-13.3
29-Jun-99	0.3	-1.8	-3.7	-5.5	-7.1	-8.7	-11.1	-12.6	-13.0	-13.1	-13.2	-13.1
5-Jul-99	2.1	-1.4	-3.2	-4.9	-6.5	-8.0	-10.6	-12.2	-12.6	-12.8	-13.0	-12.9
13-Jul-99	3.1	-0.8	-2.6	-4.3	-5.8	-7.3	-9.9	-11.5	-12.1	-12.4	-12.6	-12.7
20-Jul-99	2.4	-0.6	-2.2	-3.7	-5.2	-6.7	-9.2	-11.0	-11.6	-11.9	-12.2	-12.4
27-Jul-99	3.1	-0.4	-1.9	-3.3	-4.7	-6.1	-8.6	-10.4	-11.0	-11.4	-11.8	-12.0
3-Aug-99	3.5	-0.2	-1.7	-3.0	-4.3	-5.7	-8.1	-10.0	-10.6	-11.1	-11.5	-11.7
10-Aug-99	3.6	0.0	-1.5	-2.8	-4.0	-5.3	-7.7	-9.6	-10.2	-10.7	-11.2	-11.5
17-Aug-99	3.2	0.2	-1.3	-2.5	-3.7	-5.0	-7.3	-9.2	-9.9	-10.4	-10.9	-11.1
24-Aug-99	1.1	0.0	-1.2	-2.3	-3.4	-4.7	-7.0	-8.8	-9.5	-10.1	-10.5	-10.9
7-Sep-99	0.0	-0.3	-0.1	-0.6	-1.5	-2.4	-4.6	-6.6	-7.5	-8.4	-9.1	-9.6
14-Sep-99	-0.6	-0.6	-0.2	-0.9	-1.6	-2.4	-4.4	-6.3	-7.3	-8.1	-8.8	-9.3
21-Sep-99	-1.3	-1.8	-1.5	-1.4	-1.9	-2.5	-4.3	-6.1	-7.0	-7.9	-8.6	-9.1
28-Sep-99	-2.4	-1.6	-1.7	-2.0	-2.3	-2.8	-4.3	-5.9	-6.8	-7.6	-8.3	-8.8
5-Oct-99	-10.1	-6.9	-4.3	-3.1	-3.0	-3.1	-4.3	-5.8	-6.7	-7.4	-8.1	-8.7
12-Oct-99	-14.6	-8.7	-6.2	-4.8	-4.2	-4.0	-4.5	-5.8	-6.6	-7.3	-7.9	-8.4
19-Oct-99	-15.7	-14.1	-10.2	-7.0	-5.7	-5.0	-4.9	-5.8	-6.4	-7.1	-7.7	-8.2
26-Oct-99	-16.5	-15.6	-12.1	-9.1	-7.6	-6.6	-5.7	-6.0	-6.6	-7.1	-7.7	-8.1
2-Nov-99	-18.9	-16.9	-14.6	-11.4	-9.5	-8.1	-6.5	-6.4	-6.7	-7.2	-7.7	-8.1
9-Nov-99	-25.9	-22.1	-16.9	-12.7	-10.8	-9.4	-7.5	-6.9	-7.0	-7.4	-7.7	-8.1
16-Nov-99	-24.7	-21.6	-17.0	-13.5	-11.8	-10.6	-8.4	-7.4	-7.4	-7.6	-7.9	-8.2
23-Nov-99	-17.4	-19.1	-17.6	-15.2	-13.4	-11.8	-9.3	-8.1	-7.9	-7.9	-8.1	-8.3
30-Nov-99	-25.6	-19.3	-16.4	-14.7	-13.5	-12.4	-10.2	-8.7	-8.4	-8.2	-8.3	-8.4
7-Dec-99	-28.8	-25.7	-21.0	-17.0	-14.9	-13.3	-10.8	-9.3	-8.9	-8.6	-8.6	-8.6
13-Dec-99	-30.5	-27.3	-23.4	-19.5	-17.1	-15.0	-11.7	-9.9	-9.3	-9.0	-8.9	-8.8
22-May-00	-3.3	-10.4	-11.9	-13.8	-14.9	-15.7	-16.7	-16.7	-16.4	-16.0	-15.5	-15.0
29-May-00	3.3	-9.5	-11.7	-13.2	-14.1	-14.9	-15.9	-16.1	-16.0	-15.7	-15.3	-14.9
6-Jun-00	4.3	-5.8	-9.3	-11.7	-13.0	-13.9	-15.2	-15.5	-15.5	-15.3	-15.1	-14.7
16-Jun-00	16.3	6.8	2.5	-1.8	-5.7	-8.8	-13.1	-14.6	-14.8	-14.9	-14.7	-14.5
26-Jun-00	15.8	5.5	2.0	-1.1	-3.5	-5.8	-10.2	-12.8	-13.6	-14.0	-14.1	-14.1
4-Jul-00	7.5	2.9	1.6	-0.8	-2.9	-4.8	-8.8	-11.5	-12.5	-13.1	-13.5	-13.6
11-Jul-00	7.1	3.2	-1.7	-6.6	-10.9	-13.5	-15.0	-15.3	-15.5	-15.6	-15.3	-15.1
18-Jul-00	4.8	3.0	-1.5	-5.9	-10.0	-12.5	-14.4	-14.8	-15.1	-15.3	-15.1	-15.0
19-Sep-00	-6.1	-3.8	-1.5	-1.4	-1.9	-2.6	-4.6	-6.5	-7.4	-8.3	-9.0	-9.5
26-Sep-00	-10.4	-5.6	-3.5	-2.6	-2.6	-3.0	-4.6	-6.3	-7.2	-8.1	-8.7	-9.3
10-Oct-00	-9.4	-10.0	-7.3	-5.5	-5.0	-4.7	-5.1	-6.3	-7.0	-7.7	-8.4	-8.9
10-Nov-00	-19.4	-19.0	-16.4	-13.1	-11.4	-10.1	-8.2	-7.6	-7.7	-8.0	-8.3	-8.6
27-Apr-01	-17.5	-18.2	-20.1	-21.9	-22.4	-22.4	-21.3	-19.5	-18.5	-17.4	-16.5	-15.8
22-May-01	-0.2	-8.9	-12.0	-15.1	-16.7	-17.8	-18.7	-18.3	-17.8	-17.2	-16.6	-16.1
18-Jun-01	6.4	1.7	-0.8	-3.6	-6.3	-8.6	-12.6	-14.9	-15.4	-15.7	-15.6	-15.5
19-Jul-01	18.4	5.9	0.0	-1.8	-3.5	-5.1	-8.4	-10.8	-11.9	-12.7	-13.2	-13.5
21-Aug-01	2.3	0.0	0.0	-1.0	-2.3	-3.5	-6.3	-8.6	-9.6	-10.5	-11.2	-11.7
14-Sep-02	3.5	-0.1	-0.6	-1.5	-2.5	-3.5	-6.0	-8.1	-9.1	-10.0		
23-Oct-02	-6.8	-6.7	-6.7	-6.6	-6.6	-6.5	-6.8	-7.6	-8.2	-8.9	-9.5	-10.0
16-Nov-02	-19.4	-17.0	-14.8	-13.1	-11.6	-10.3	-8.8	-8.5	-8.8	-9.1	-9.5	-9.8
18-Dec-02	-22.1	-19.3	-18.7	-18.2	-17.5	-16.6	-14.0	-11.9	-11.2	-10.8	-10.5	-10.5
10-Feb-03	-31.7	-29.2	-27.1	-25.4	-23.8	-22.1	-18.8	-16.1	-15.0	-14.1	-13.5	-13.0
11-Mar-03	-25.5	-29.6	-27.6	-26.6	-25.7	-24.7	-21.7	-18.7	-17.3	-16.2	-15.2	-14.5
17-Apr-03	-21.6	-24.8	-25.1	-24.9	-24.5	-23.9	-22.3	-20.2	-19.1	-18.0	-17.1	-16.3
15-May-03	-6.1	-13.6	-15.6	-16.9	-18.0	-18.8	-19.7	-19.3	-18.8	-18.2	-17.6	-17.0
17-Jun-03	8.2	-0.3	-2.9	-5.8	-8.3	-10.5	-13.8	-15.5	-15.4	-15.9	-16.2	-16.2

POLARIS MINE - OPERATIONAL LANDFILL TEMPERATURE MONITORING - THERMISTOR STRING #5
TEMPERATURES IN DEGREES C

	Bead # 1	Bead # 2	Bead # 3	Bead # 4	Bead # 5	Bead # 6	Bead # 7	Bead # 8	Bead # 9	Bead # 10	Bead # 11	Bead # 12
Installation Depth Below Collar (M)	0.2	-0.3	-1.3	-2.3	-3.3	-4.3	-5.3	-5.8	-6.3	-6.8	-7.3	-7.8
20-Mar-99	-19.9	-23.6	-25.1	-23.9	-21.4	-18.5	-15.5	-14.6	-13.9	-13.1	-12.4	
22-Mar-99	-19.0	-23.5	-24.5	-23.6	-21.4	-18.6	-15.7	-14.8	-14.1	-13.2	-12.5	
23-Mar-99	-19.1	-23.3	-24.3	-23.4	-21.3	-18.6	-15.8	-14.9	-14.1	-13.2	-12.6	
24-Mar-99	-20.5	-23.1	-24.1	-23.3	-21.3	-18.7	-15.8	-14.9	-14.2	-13.3	-12.7	
25-Mar-99	-21.6	-23.0	-23.9	-23.1	-21.2	-18.7	-15.9	-15.0	-14.3	-13.3	-12.7	
26-Mar-99	-22.6	-23.5	-23.7	-23.0	-21.2	-18.7	-16.0	-15.1	-14.3	-13.4	-12.7	
27-Mar-99	-24.9	-23.9	-23.6	-22.9	-21.1	-18.7	-16.0	-15.1	-14.3	-13.4	-12.8	
29-Mar-99	-29.1	-25.0	-23.6	-22.7	-21.0	-18.7	-16.1	-15.2	-14.5	-13.5	-12.8	
30-Mar-99	-25.6	-26.2	-23.8	-22.6	-21.0	-18.8	-16.2	-15.3	-14.5	-13.6	-12.9	
6-Apr-99	-18.8	-24.6	-24.4	-22.7	-20.8	-18.8	-16.5	-15.6	-14.9	-14.0	-13.2	
13-Apr-99	-20.1	-23.1	-23.3	-22.3	-20.8	-18.9	-16.7	-15.9	-15.2	-14.3	-13.5	
20-Apr-99	-16.6	-20.7	-21.9	-21.8	-20.6	-18.9	-16.8	-16.1	-15.5	-14.5	-13.7	
26-Apr-99	-16.4	-19.8	-21.2	-21.0	-20.2	-18.8	-17.0	-16.3	-15.6	-14.8	-14.0	-13.3
4-May-99	-14.4	-18.1	-19.9	-20.3	-19.8	-18.7	-17.1	-16.4	-15.8	-15.0	-14.2	-13.6
11-May-99	-8.9	-16.1	-18.6	-19.5	-19.3	-18.5	-17.1	-16.5	-16.0	-15.1	-14.4	-13.8
18-May-99	-6.0	-11.8	-16.1	-18.2	-18.7	-18.2	-17.0	-16.5	-16.0	-15.3	-14.6	-13.9
25-May-99	-5.0	-9.2	-13.6	-16.5	-17.8	-17.7	-16.9	-16.5	-16.1	-15.4	-14.7	-14.1
1-Jun-99	2.4	-6.3	-11.5	-14.9	-16.8	-17.1	-16.7	-16.4	-16.0	-15.4	-14.8	-14.2
8-Jun-99	3.3	-3.3	-9.0	-13.2	-15.6	-16.4	-16.4	-16.2	-15.9	-15.4	-14.8	-14.2
15-Jun-99	7.1	-2.0	-7.2	-11.5	-14.5	-15.7	-16.0	-16.0	-15.7	-15.3	-14.8	-14.3
22-Jun-99	2.4	-0.8	-5.4	-10.1	-13.3	-14.9	-15.6	-15.6	-15.5	-15.2	-14.8	-14.3
29-Jun-99	6.7	1.7	-3.8	-8.3	-11.9	-13.8	-15.0	-15.1	-15.1	-14.9	-14.7	-14.3
5-Jul-99	8.2	4.9	-1.1	-7.3	-11.2	-13.2	-14.6	-14.8	-14.9	-14.8	-14.6	-14.2
13-Jul-99	7.5	5.0	-1.5	-6.4	-10.2	-12.5	-14.0	-12.2	-14.5	-14.5	-14.4	-14.1
20-Jul-99	6.4	3.6	-1.0	-5.6	-9.4	-11.7	-13.5	-13.9	-14.1	-14.2	-14.2	-14.0
27-Jul-99	9.8	4.3	-0.8	-5.0	-8.7	-11.0	-12.9	-13.4	-13.7	-13.9	-14.0	-13.9
3-Aug-99	10.0	5.0	-0.5	-4.6	-8.1	-10.5	-12.4	-12.9	-13.2	-13.6	-13.7	-13.7
10-Aug-99	10.3	4.8	-0.4	-4.2	-7.6	-9.9	-11.9	-12.5	-12.9	-13.3	-13.5	-13.5
17-Aug-99	6.2	4.0	-0.2	-3.9	-7.2	-9.5	-11.5	-12.1	-12.5	-12.9	-13.2	-13.3
24-Aug-99	1.5	1.6	-0.2	-3.6	-6.8	-9.1	-11.1	-11.7	-12.1	-12.6	-12.9	-13.1
31-Aug-99	-0.3	0.2	-0.3	-3.4	-6.5	-8.7	-10.7	-11.4	-11.8	-12.3	-12.7	-12.9
7-Sep-99	0.0	-0.2	-0.4	-3.3	-6.2	-8.4	-10.4	-11.0	-11.5	-12.0	-12.4	-12.7
15-Sep-99	-0.7	-0.3	-0.5	-3.2	-5.9	-8.1	-10.1	-10.7	-11.1	-11.7	-12.2	-12.5
21-Sep-99	-1.3	-0.8	-0.7	-3.1	-5.7	-7.8	-9.8	-10.4	-10.9	-11.5	-12.0	-12.3
28-Sep-99	-1.9	-0.7	-0.9	-3.1	-5.5	-7.6	-9.5	-10.1	-10.6	-11.2	-11.8	-12.1
5-Oct-99	-8.8	-4.1	-1.5	-3.1	-5.4	-7.4	-9.2	-9.9	-10.3	-11.0	-11.5	-11.9
12-Oct-99	-13.0	-6.3	-3.2	-3.5	-5.3	-7.2	-9.0	-9.6	-10.1	-10.8	-11.3	-11.6
19-Oct-99	-15.4	-12.1	-5.8	-4.4	-5.4	-6.9	-8.7	-9.4	-9.9	-10.5	-11.1	-11.5
26-Oct-99	-16.5	-14.2	-8.6	-6.2	-5.8	-7.0	-8.6	-9.2	-9.7	-10.3	-10.9	-11.3
2-Nov-99	-18.4	-16.4	-11.4	-7.8	-6.6	-7.2	-8.5	-9.1	-9.5	-10.2	-10.7	-11.2
9-Nov-99	-25.5	-20.7	-13.2	-9.4	-7.6	-7.5	-8.5	-9.0	-9.4	-10.0	-10.5	-11.0
16-Nov-99	-24.3	-20.6	-14.4	-10.9	-8.7	-8.1	-8.6	-9.4	-9.4	-9.9	-10.5	-10.9
23-Nov-99	-18.2	-19.8	-16.5	-12.3	-9.8	-8.7	-8.8	-9.1	-9.4	-9.9	-10.4	-10.7
30-Nov-99	-24.7	-18.8	-16.0	-13.2	-10.8	-9.4	-9.1	-9.3	-9.5	-9.9	-10.3	-10.7
7-Dec-99	-28.4	-25.4	-18.5	-14.1	-11.5	-10.1	-9.5	-9.5	-9.6	-10.0	-10.3	-10.6
13-Dec-99	-30.3	-27.5	-21.4	-15.9	-12.6	-10.7	-9.9	-9.8	-9.9	-10.1	-10.4	-10.6
22-May-00	-5.2	-11.4	-14.4	-16.8	-18.3	-18.5	-18.0	-17.7	-17.3	-16.5	-15.8	-15.2
29-May-00	1.0	-10.7	-13.6	-15.9	-17.4	-18.0	-17.7	-17.5	-17.1	-16.5	-15.9	-15.2
6-Jun-00	2.7	-7.0	-12.0	-14.9	-16.6	-17.3	-17.4	-17.2	-16.9	-16.4	-15.9	-15.3
16-Jun-00	13.3	-1.0	-7.8	-12.5	-15.3	-16.4	-16.8	-16.8	-16.6	-16.2	-15.8	-15.3
26-Jun-00	13.9	3.3	-3.8	-9.5	-13.4	-15.3	-16.2	-16.3	-16.2	-16.0	-15.7	-15.2
4-Jul-00	7.5	2.3	-2.1	-7.8	-12.0	-14.3	-15.6	-15.9	-15.9	-15.8	-15.5	-15.2
11-Jul-00	7.6	3.5	1.8	-0.9	-2.5	-4.3	-7.8	-10.6	-11.6	-12.3	-13.0	-13.0
18-Jul-00	5.2	3.2	1.6	-0.8	-2.3	-3.9	-7.2	-9.9	-10.9	-11.6	-12.4	-12.5
19-Sep-00	-5.8	-2.2	-1.4	-3.6	-6.2	-8.3	-10.4	-11.0	-11.5	-12.1	-12.6	-12.9
26-Sep-00	-9.7	-4.3	-2.3	-3.8	-6.0	-8.1	-10.1	-10.7	-11.2	-11.9	-12.4	-12.7
10-Oct-00	-9.1	-8.6	-5.4	-5.1	-6.1	-7.8	-9.6	-10.2	-10.7	-11.3	-11.9	-12.3
10-Nov-00	-19.2	-18.2	-13.8	-10.6	-8.9	-8.6	-9.3	-9.7	-10.0	-10.6	-11.1	-11.5
27-Apr-01	-17.9	-20.2	-23.2	-23.8	-22.9	-21.4	-19.3	-18.5	-17.8	-16.8	-15.8	-15.1
22-May-01	-1.9	-11.5	-16.4	-19.3	-20.4	-20.2	-19.2	-18.7	-18.1	-17.3	-16.5	-15.7
18-Jun-01	4.7	-0.5	-6.4	-11.6	-15.3	-17.0	-17.7	-17.7	-17.5	-17.1	-16.6	-16.0
19-Jul-01	17.4	4.8	-1.8	-6.4	-10.3	-12.9	-14.9	-15.4	-15.6	-15.8	-15.8	-15.5
21-Aug-01	2.5	0.0	-0.7	-4.3	-7.7	-10.2	-12.4	-13.0	-13.5	-14.0	-14.4	-14.5
14-Sep-02	2.6	-0.1	-1.2	-4.0	-6.8	-9.1	-11.1	-11.8	-12.3	-13.0	-13.5	-13.8
23-Oct-02	-6.7	-6.6	-6.3	-6.2	-6.7	-8.0	-9.7	-10.3	-10.8	-11.5	-12.1	-12.5
16-Nov-02	-18.7	-16.1	-12.6	-9.8	-8.5	-8.6	-9.6	-10.0	-10.4	-10.9	-11.6	-11.9
18-Dec-02	-21.5	-19.5	-18.6	-16.3	-13.6	-11.7	-10.8	-10.7	-10.8	-10.9	-11.3	-11.6
10-Feb-03	-30.9	-28.8	-25.6	-21.9	-18.5	-16.1	-14.2	-13.6	-13.2	-12.8	-12.5	-12.4
11-Mar-03	-27.7	-29.1	-27.1	-24.7	-21.6	-18.7	-16.2	-15.5	-14.9	-14.1	-13.6	-13.2
17-Apr-03	-22.8	-25.5	-25.4	-24.2	-22.5	-20.6	-18.4	-18.4	-16.8	-15.9	-15.1	-14.5
15-May-03	-8.9	-15.5	-18.0	-19.8	-20.5	-20.0	-18.8	-18.2	-17.6	-16.8	-16.0	-15.3
17-Jun-03	5.3	-2.1	-7.4	-11.8	-15.0	-16.6	-17.3	-17.3	-17.1	-16.8	-16.3	-15.8

APPENDIX G

SUMMARY OF

EFFLUENT MONITORING
AND
EFFLUENT CHARACTERIZATION

Bruce J. Donald
Reclamation Manager

August 14, 2003

Prairie & Northern Region
Environment Canada
Room 200, 4999 98th Ave.
Edmonton, AB T6B 2X3

Attention: Peter Blackall, Regional Director of Environmental Protection

Dear Sir;

Re: Polaris Mine – 2003 2nd Quarter Metal Mining Effluent Regulations Report

Despite having a designated discharge location for effluent identified under Section 9 of the MMER, there was no discharge from the Garrow Lake Tailings Impoundment Area during the period April 1st to June 30th of 2003. This will be the situation through most of each year. While there is no data to report other than that there was no effluent discharge, I have completed the monitoring report as required by the regulations and have attached it to this letter.

Please note that the Final Discharge Point referred to in Section 8.1.1 'Effluent' of the 2003, 1st Quarter report was missing the location of the Final Discharge Point. The Final Discharge Point for Garrow Lake siphons is geo referenced as 75° 22' 32" N, 97° 48' 37" W.

If you have any questions regarding the quarterly report or aspects of the application of the MMER to the Polaris Mine, please feel free to contact me at any time.

Yours truly,

Bruce Donald

Attachments: Quarterly Monitoring Report

cc:
Walter Kuit (Teck Cominco Ltd.)
John Knapp (Teck Cominco Ltd.)
Randy Baker (Azimuth Consulting Group)

POLARIS MINE – MMER MONITORING REPORT

2nd QUARTER 2003

APPENDIX A

i. Information specified by Section 8.1 of Reference Method EPS 1/Rm/13

APPENDIX B

i. Information specified by Section 8.1 of Reference Method EPS 1/Rm/14

APPENDIX C

i. Concentration & monthly mean concentrations of each deleterious substance of Schedule 4
ii. pH of the effluents samples as required by subsection 12(1)
iii. Description of sample collection method
iv. Total volume of effluent deposited during each month of the quarter as per section 19
v. Mass loading of the deleterious substances set out in Schedule 4 and as per section 20

APPENDIX D

i. Results of the effluent characterization as per paragraph 15(1)(a)

APPENDIX A

Reporting Requirements for Reference Method EPS 1/RM/13

Section 8.1.1 Effluent

i. Name & location of operation generating the effluent
   - Polaris Mine, Little Cornwallis Island, Nunavut
   - Final Discharge Point for Garrow Lake is geo referenced as 75° 22' 32" N, 97° 48' 37" W.

ii. Date & time of sampling
   - No sampling conducted as there was no effluent discharge during the quarter.

iii. Type of sample
   - No sampling conducted as there was no effluent discharge during the quarter

iv. Brief description of sampling point
   - Discharge point of siphon at Garrow Lake dam

v. Sampling method
   - No sampling conducted as there was no effluent discharge during the quarter

vi. Name of person submitting samples
   - No sampling conducted as there was no effluent discharge during the quarter

Section 8.1.2 Test Facilities and Conditions

i. Test type & method
   - No testing conducted as there was no effluent discharge during the quarter

ii. Indications of deviations from requirements in Sections 2 to 7 of Method EPS 1/RM/13
   - No deviations to report as there was no testing conducted during the quarter

iii. Name and city of testing laboratory
   - No laboratory used during the quarter

iv. Percent mortality of fish in stock tank(s)
   - None to report. There were no tests conducted during the period

v. Species of test organism
   - None to report as there were no tests conducted during the period

vi. Date and time for start of definitive test
   - None to report as there were no tests conducted during the period

vii. Person(s) performing the test and verifying the results
   - No tests performed during the quarter

viii. pH, temperature, dissolved oxygen, and conductivity of unadjusted, undiluted effluent
   - No data to report as there were no tests conducted during the period

ix. Confirmation that no adjustment of sample or solution pH occurred
   - No adjustment to report as there were no tests conducted during the period

x. Indication of aeration of test solutions before introduction of fish
   - None to report as there were no tests conducted during the period

xi. Concentrations and volumes tested
   - No data to report as there were no tests conducted during the period

xii. Measurements of dissolved oxygen, pH and temperature
   - No data to report as there were no tests conducted during the period

xiii. Number of fish added to each test vessel
   - No fish added as there were no tests conducted during the period

xiv. Mean and range of fork length of control fish at end of test
   - No data to report as there were no tests conducted during the period

xv. Mean wet weight of individual control fish at end of the test
   - No data to report as there were no tests conducted during the period

xvi. Estimated loading density of fish in test solutions
   - No data to report as there were no tests conducted during the period

Reporting Requirements for Reference Method EPS 1/RM/13 - Continued

Section 8.1.3 Results

i. Number of mortalities of fish in each test solution
   - None to report. No tests conducted during the period

ii. Number of control fish showing atypical/stressed behaviour
   - None to report. No tests conducted.

iii. Mean mortality rate in solutions of effluent and control water
   - None to report. No tests conducted

iv. Estimate of 96-h LC50 in multi-concentration tests
   - No data to report. No tests conducted

v. Most recent 96-h LC50 for reference toxicity test(s)
   - No data to report. No tests conducted

APPENDIX B

Reporting Requirements for Reference Method EPS 1/RM/14

Section 8.1.1 Effluent

i. Name & location of operation generating the effluent
   - Polaris Mine, Little Cornwallis Island, Nunavut
   - Final Discharge Point for Garrow Lake is geo referenced as 75° 22' 32" N, 97° 48' 37" W.

ii. Date & time of sampling
   - No sampling conducted as there was no effluent discharge during the quarter.

iii. Type of sample
   - No sampling conducted as there was no effluent discharge during the quarter

iv. Brief description of sampling point
   - Discharge point of siphon at Garrow Lake dam

v. Sampling method
   - No sampling conducted as there was no effluent discharge during the quarter

vi. Name of person submitting samples
   - No sampling conducted as there was no effluent discharge during the quarter

Section 8.1.2 Test Facilities and Conditions

i. Test type & method
   - No testing conducted as there was no effluent discharge during the quarter

ii. Indications of deviations from requirements in Sections 2 to 7 of Method EPS 1/RM/13
   - No deviations to report as there was no testing conducted during the quarter

iii. Name and city of testing laboratory
   - No laboratory used during the quarter

iv. Species of test organism
   - None to report as there were no tests conducted during the period

v. Date and time for start of definitive test
   - None to report as there were no tests conducted during the period

vi. Person(s) performing the test and verifying the results
   - No tests performed during the quarter

vii. pH, temperature, dissolved oxygen, and conductivity of unadjusted, undiluted effluent
   - No data to report as there were no tests conducted during the period

viii. Confirmation that no adjustment of sample or solution pH occurred
   - No adjustment to report as there were no tests conducted during the period

ix. Indication of any adjustment of hardness of effluent sample
   - No adjustment to report as there were no tests conducted during the period

x. Indication of any aeration of sample
   - No indication to report as there were no tests conducted during the period

xi. Concentrations and volumes tested
   - No data to report as there were no tests conducted during the period

xii. Measurements of dissolved oxygen, pH and temperature
   - No data to report as there were no tests conducted during the period

xiii. Estimates of time to first brood, average number of neonates per brood, and percent mortality during the seven-day period prior to the test
   - No data to report as there were no tests conducted during the period

xiv. Number of neonates per test vessel and milliliters of solution per daphnid
   - No data to report as there were no tests conducted during the period

Reporting Requirements for Reference Method EPS 1/RM/14 - Continued

Section 8.1.3 Results

i. Number of dead and/or immobile daphnids in each test solution including controls
   - No data to report. No tests conducted during the period.

ii. For single-concentration test the number of daphnids dead in each of three replicate effluent solutions and in each of three replicate control solutions at end of test. Also report the mean value.
   - No data to report. No tests conducted during the period.

iii. Estimate of 48-h LC50 and 95% confidence limits in multi-concentration tests, 48-h EC50 for immobilization and 95% confidence limits, indication of statistical method on which results are based.
   - No data to report. No tests conducted during the period

iv. Most recent 48-h LC50 for reference toxicant test(s), reference chemical(s), date test initiated, historic geometric mean LC50 and warning limits.
   - No data to report. No tests conducted during the period.

APPENDIX C

2003 2nd QUARTER MMER REPORT

LOCATION - FINAL DISCHARGE POINT FROM GARROW LAKE (GARROW LAKE DAM SIPHONS)

CONCENTRATIONS OF EFFLUENT FOR MMER SCHEDULE 4 SAMPLED WEEKLY

Sample Taken During The Week of	Date Sample Taken	DELETERIOUS SUBSTANCE								pH	Collection Method[1]
		Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226		
07-Apr-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
14-Apr-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
21-Apr-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
28-Apr-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
05-May-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
12-May-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
19-May-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
26-May-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
02-Jun-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
09-Jun-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
16-Jun-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
23-Jun-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
30-Jun-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]

All concentration in mg/L except Radium 226 which is Bq/L

Note [1] - Collection Method is either grap sample or composite sample

Note [2] - No effluent discharge to sample

MONTHLY MEAN CONCENTRATIONS OF EFFLUENT FOR MMER SCHEDULE 4

MONTH OF	MONTHLY MEAN CONCENTRATION OF DELETERIOUS SUBSTANCE[1]							
	Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226
April-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
May-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]
June-03	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]	na[2]

All concentration in mg/L except Radium 226 which is Bq/L

Note[1] - Monthly Mean Concentrations - the MEAN value of the concentrations measured in all composite or grab samples collected from each final dishcarge measured during each month when a deleterious substance is deposited.

Note [2] - No effluent discharge to sample

MASS LOADING OF DELETERIOUS SUBSTANCE FOR EACH DAY SAMPLED

Sample Taken During The Week of	Date Sample Taken	DAILY MASS LOADING OF DELETERIOUS SUBSTANCE[1]								Flow Rate[2] (m^3/day)
		Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226	
07-Apr-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
14-Apr-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
21-Apr-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
28-Apr-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
05-May-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
12-May-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
19-May-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
26-May-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
02-Jun-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
09-Jun-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
16-Jun-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
23-Jun-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
30-Jun-03	na[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

Note[1] - Mass Loading is in kilograms per day of the deleterious substance deposited

Note[2] - Flow Rate must be taken at the same time as samples are effluent qualtity samples are taken

Note[3] - na refers to no effluent sampled due to no discharge of effluent

MASS LOADING PER CALENDAR MONTH FOR EACH DELETERIOUS SUBSTANCE

CALENDAR MONTH OF	MASS LOADING FOR DELETERIOUS SUBSTANCE (kg/month)[1]								Average Weekly Flow Rate[2]	Total Monthly Volume[3]
	Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226		
April-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
May-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
June-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0

Note[1] - Total Mass Loading for Calendar month calculated by multiplying the Total Calendar Month Volume x Average Daily Mass Loading for the Month - Refer to Section 20.(3)

Note[2] - Average Weekly Flow Rate - Average each of the weekly flow rates taken during the calendar month - Refer to Section 20.(3)

Note[3] - Total Monthly Volume calculated by multiplying 7 x Average Daily Flow Rate for the month x days in month

APPENDIX D

RESULTS OF EFFLUENT CHARACTERIZATION

AS PER PARAGRAPH 15(1)(a)

No effluent samples were collected during the 2nd Quarter of 2003 as there was no effluent discharge.
No Acute Lethality Testing conducted during the quarter as there was no effluent being discharged.

APPENDIX H

CD of the report