



TYPE A WATER LICENSE

2AM-JER0410

Jericho Diamond Mine

2007 ANNUAL REPORT

April 2008

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1 INTRODUCTION

This Annual Report is prepared as per Part B, Section 2 of the Type A Water License NWB1JER0410 (now 2AM-JER0410) issued to Tahera Diamond Corporation, by the Nunavut Water Board 22 December 2004.

As of the end of 2007 Jericho Diamond Mine began transitioning to care and maintenance. A Care and Maintenance Plan is under construction. Overall objectives of care and maintenance are as follows:

1. Preserve the Jericho Mine Site area environment in order to minimize any impact associated with the site being on C&M. Where any environmental concern is noted, timely and appropriate mitigation and management are the highest priority.
2. Work within and assure that all areas of the site conform to all regulatory permits and environmental and mining regulations are complied with.
3. Restrict access to all prohibited areas of the site including, but not limited to, the pit, emulsion plant and blasting magazines.
4. Maintain the process plant, camp and other mine site facilities in such a state that;
 - a. All site occupants are able to inhabit the site safely and all areas are kept in a good state of repair.
 - b. Mining can be restarted in as short a period as possible and with minimized time and financial costs associated with re-start
 - c. Facilities can be showcased to perspective investors or buyers during C&M
 - d. Access to the camp facilities from the airstrip is maintained whenever it is safely possible to do so
 - e. Asset value is retained as much as possible
 - f. A minimum of fuel and financial resources are consumed during C&M
5. Complete all C&M related tasks and procedures with safety as a paramount concern.

2 MONTHLY AND ANNUAL QUANTITIES OF FRESHWATER OBTAINED FROM CARAT LAKE (Schedule B, Item 1A)

During 2007, freshwater was drawn from Carat Lake for domestic water use in the accommodations complex, emulsion plant, offices, maintenance complex, dust control and the operation of the process plant. The table below provides the monthly and annual quantity of freshwater used. The annual water license limit of 350,400 m³ was not exceeded in 2007. A total of 325,619.6 m³ of water was drawn from Carat Lake. Changes in the process plant as well as a longer timeframe for reclaim from the PKCA reduced the annual consumption in 2007 to below the 350,400 m³ annual limit.

Table 2.1– Freshwater Use January – December 2007 (in cubic meters – m³)

Month	Domestic Water Use	Process Plant	Cumulative Totals
January	551.2	30,088.3	30,639.5
February	794.8	29,273.2	30,068.0
March	1029.4	28,728.8	29,758.2
April	1148.9	20,609.6	21,758.5
May	868.1	21,701.5	22,569.6
June	836.2	25,219.4	26,055.6
July	1086.0	23,303.2	24,389.2
August	996.2	19,151.7	20,147.9
September	1227.6	24,935.1	26,162.7
October	1075.0	33,905.3	34,980.3
November	773.7	26,543.4	27,317.1
December	843.6	30,929.4	31,773.0
Annual Total	11,230.7	314,388.9	325,619.6

Maximum Limit as per Type A Water License **350, 400 m³**

3 MONTHLY AND ANNUAL QUANTITIES OF RECYCLED WATER (Schedule B, Item 1B)

During 2007, 51,812.9m³ of water was recycled from the PKC. This recycled water was used in the diamond processing plant. Water from the East Sump was pumped via pipeline directly to the PKCA and was not used for dust suppression during 2007.

Table 3.1 summarizes monthly quantities recycled.

Table 3.1 – Quantities of Recycled Water from all sources

Month	PKC (m ³)
January	86.6
February	620.7
March	0.0
April	0.0
May	0.0
June	0.0
July	9,568.6
August	29,120.0
September	12,417.0
October	0.0
November	0.0
December	0.0
Total	51,812.9

4 MONTHLY AND ANNUAL QUANTITIES OF SOLIDS IN TONNES AND LIQUID FRACTIONS OF EACH WASTE STREAM DISCHARGED TO THE PROCESSED KIMBERLITE CONTAINMENT AREA (PKCA) (Schedule B, Item 1C)

During 2007 there were three input sources of waste to the PKCA (East Sump, Sewage Treatment Plant (STP) and Process Plant). The east sump contributed 86,314.7 m³ of waste water to the PKCA. The east sump prior to 2007 acted as a settling pond for waters being pumped from the open pit. In 2007, per Table 4.1, the East Sump was drained. The area was then used for expansion of the coarse PK pile commencing at the western side of the former East Sump. The STP contributed 7,834.3 m³ of treated sewage to the PKCA. The process plant made up the bulk of the volumetric contribution to the PKCA, with 284,219 m³ water and 168,350 tonnes of solids being deposited in 2007. Total volumetric discharges to the PKCA from all sources were 378,368 m³ of waste water and 168,350 tonnes of solids.

Table 4.1 – Quantities of Waste Streams to PKCA

Month	East Sump (m ³)	Treated Sewage Effluent (m ³)	Fine Rejects (Tonnes)	Process Effluent (m ³)
Jan-07	0.0	385.8	15,228	30,088
Feb-07	0.0	556.4	18,387	29,273
Mar-07	0.0	693.5	14,036	28,729
Apr-07	0.0	804.2	7,815	20,610
May-07	0.0	607.7	6,543	20,867
Jun-07	77,879.7	585.3	11,249	19,118
Jul-07	0.0	760.2	15,729	15,729
Aug-07	8,435.0	697.3	18,549	18,549
Sep-07	0.0	859.3	19,595	25,513
Oct-07	0.0	752.5	16,716	27,141
Nov-07	0.0	541.6	12,127	22,255
Dec-07	0.0	590.5	12,376	26,347
Total	86,314.7	7,834.3	168,350	284,219

5 MONTHLY AND ANNUAL QUANTITIES OF ANY DISCHARGES FROM THE PROCESSED KIMBERLITE CONTAINMENT AREA (Schedule B, Item 1D)

Discharges from the PKCA took place from June 18 through September 4, 2007. 791,101.9 m³ of water was discharged from the PKC into the receiving environment.

Table 5.1 – Volume of Supernatant Discharge to Receiving Environment

Month	Volume discharged from the PKC (m³)
January	0.0
February	0.0
March	0.0
April	0.0
May	0.0
June	536,786.7
July	134,157.4
August	77,174.4
September	42,983.4
October	0.0
November	0.0
December	0.0
Annual Total	791,101.9

6 MONTHLY AND ANNUAL QUANTITIES OF MINE WATER AND DYKE SEEPAGE PUMPED FROM ALL FACILITIES TO THE PROCESSED KIMBERLITE CONTAINMENT AREA (Schedule B, Item 1E)

Table 6.1 summarizes the monthly and annual volumes of water pumped from the Jericho pit. During the course of production activities the east sump was partially filled in by the extension of the coarse process kimberlite pad. Mine water was removed from the Jericho Pit directly to the PKCA via a pipeline that was installed in June 2007.

Table 6.1 – Quantities in m³ of mine water pumped to the PKCA.

Month	Volume pumped from Pit to PKCA (m ³)	Volume pumped from East Sump to PKCA (m ³)
January	0.0	0.0
February	0.0	0.0
March	0.0	0.0
April	0.0	0.0
May	0.0	0.0
June	14,289.2	77,879.7
July	35,266.0	0.0
August	0.0	8,435.0
September	0.0	0.0
October	0.0	0.0
November	0.0	0.0
December	0.0	0.0
Total	49,555.2	86,314.7

7 MONTHLY AND ANNUAL QUANTITIES OF TREATED EFFLUENT DISCHARGED FROM THE WASTE WATER TREATMENT FACILITY (Schedule B, Item 1F)

All discharges of treated effluent from the sewage treatment plant (STP) in 2007 were deposited into the PKCA. A total of 7,834.3 m³ of treated sewage effluent was discharged from the STP to the PKCA.

In December 2007 it was discovered that raw sewage from the satellite sewage tanks located at the Emulsion Plant, Airport Office and the Safety and Training Room were disposed of to sludge pits rather than the sewage treatment plant. This discovery was reported on December 5 to the NWT/NU Spill Report Line. A total of 8000 L of raw sewage was estimated to have been disposed at these locations with 3150 L disposed to the original sludge pit (reclaimed in summer 2007) and 4850 L disposed to the current sludge pit.

Table 7.1 – Quantities in m³ discharged from Waste Water Treatment Facility to PKC

Month	Volume Treated – WWTP Treated Effluent (m ³)
January	385.8
February	556.4
March	693.5
April	804.2
May	607.7
June	585.3
July	760.2
August	697.3
September	859.3
October	752.5
November	541.6
December	590.5
Total	7,834.3

8 MONTHLY AND ANNUAL QUANTITIES OF SEWAGE SOLIDS REMOVED FROM THE WASTE WATER TREATMENT FACILITY (Schedule B, Item 1G)

In order to maintain efficient functioning of the sewage treatment plant settled solids are removed from the aeration tank twice monthly or as required based on camp population. Settled solids are collected using a vacuum truck and deposited into a designated basin located on the till dump. A total of 453.6 m³ of settled sludge was deposited into the designated basin on the till dump during 2007.

Table 8.1 – Sewage Solids Removed January – December 2007

Month	Sewage Solids Removed (m ³)
January	40.5
February	47.3
March	33.8
April	54.0
May	40.5
June	28.4
July	34.1
August	34.0
September	34.0
October	28.0
November	45.0
December	34.0
Total	453.6

9 ANNUAL QUANTITIES OF OVERBURDEN, WASTE ROCK, ORE STOCKPILED AND ORE PROCESSED STORED (Schedule B, Item 1H)

Table 9.1 – Quantities of Materials Mined

Month	Quantity of Waste Rock (tonnes)	Quantity of Esker (tonnes)	Quantity of till (tonnes)	Ore Processed (tonnes)
Jan-07	506,410	0.0	12,317	56,550
Feb-07	487,700	0.0	0.0	61,831
Mar-07	538,600	0.0	0.0	52,231
Apr-07	627,601	809	0.0	25,340
May-07	618,579	706	5,207	34,876
Jun-07	650,800	14,000	0.0	36,320
Jul-07	569,100	100	0.0	39,907
Aug-07	641,807	1,960	0.0	43,466
Sep-07	664,106	676	0.0	44,046
Oct-07	591,212	4,649	0.0	55,094
Nov-07	449,664	0.0	0.0	51,689
Dec-07	404,580	0.0	0.0	52,107
Total	6,750,159	22,900	17,524	553,457

10 SUMMARY REPORT OF SNP DATA GENERATED (Schedule B, Item 1i)

Tabular Summaries of SNP data from site water stations JER-SW1 – JER-SW4 and JER-SW8, including QA/QC data collected in 2007 as required by the Type A Water License are included in Appendix A.

Tabular summaries and a summary report of SNP data JER-WQ1 to JER-WQ21, including QA/QC data collected in 2007 as required by the Type A Water License are included in Appendix B.

In 2007 Dillon Consulting completed a Discharge Rating Curve for Lake C3 Outlet. A copy of this letter report can be found in Appendix B.

In accordance with the Schedule K of water license NWB1JER0410 (now 2AM-JER410) there were 107 samples collected from 26 monitoring locations. In addition there were 26 QA/QC samples which included field replicates, field blanks and travel blanks. The QA/QC samples equaled 24% of samples collected at monitoring locations. Table 10.1 provides a monthly and annual summary of sampling activities.

A new sample station, JER-WQ21, was established on July 1, 2007 in Stream C6 to provide a control stream water quality station.

During PKCA discharge, in accordance with Part G, Item 7 toxicity tests of effluent were conducted once prior to and monthly during discharge, with the exception of September. The discharge was discontinued early in the month, before a toxicity sample could be collected. Results are attached in Appendix C.

As per the Waste Rock Management Plan, samples were collected from drill cuttings in the pit, coarse processed kimberlite, fine processed kimberlite and recovery rejects. Results of this program have been complied by Site Personnel and are found in Appendix D.

As per Schedule K, Table 3, monthly temperature readings were taken from thermistors located on the east/southeast and west dams as well as the north dam. Results of the temperature readings can be found in Appendix E.

As per Part F, Item 4(e) and Part G, Item 2(g) a geotechnical inspection was conducted in July 2007. The engineer's report is attached in Appendix F.

Table 10.1 – Monthly and annual summary of SNP sampling including QA/QC

		Month												Totals
Station		January	February	March	April	May	June	July	August	September	October	November	December	
SNP Station Sampling	JER-SW1	1	1		1	1	1	1	1	1	1	1	1	11
	JER-SW2						1	1	1					3
	JER-SW3	1	1	1	1	1	1	1	1	1	1	1	1	12
	JER-SW4	1	1	1	1		1	1	1	2		1	1	11
	JER-SW8													0
	JER-WQ1						1	1	2	1				5
	JER-WQ10				1			1	1	1			1	5
	JER-WQ11				1			1	1	1			1	5
	JER-WQ12						1	1	2					4
	JER-WQ13				1		1	1	1	1			1	6
	JER-WQ14						1	1	1	1				4
	JER-WQ15						1	1	1					3
	JER-WQ16							1	1				1	3
	JER-WQ17							1						1
	JER-WQ18							1	1					2
	JER-WQ19													0
	JER-WQ2					1	2	4	5	3				15
	JER-WQ20													0
	JER-WQ21						1	1	1					3
	JER-WQ3						1	1	1					3
	JER-WQ4				1			1	1	1			1	5
	JER-WQ5						1	1	1	1				4
	JER-WQ6				1			1	1	1			2	6
	JER-WQ7						1	1	1	1				4
	JER-WQ8				1			1	1	1			1	5
	JER-WQ9				1		1	1	1	1			1	6
	Annual Total Samples	3	3	2	10	3	16	26	28	18	2	3	12	126
QA/QC	Duplicates		1		2		1	2	1	1				8
	Field Blanks		1				1	2	1	1			2	8
	Travel Blanks		1		1		2	2	1	1			2	10
	Total QA/QC	0	3	0	3	0	4	6	3	3	0	0	4	26
Percentage QA/QC		0%	100%	0%	30%	0%	25%	23%	11%	17%	0%	0%	33%	21%

11 SUMMARY OF CONSTRUCTION ACTIVITIES AND UPDATED MINE PLAN (Schedule B, Item1J)

January:

No construction activities.

February:

Ice shoal construction on Carat Lake commenced and completed. Approximately 200 tonnes of ice shoal material were placed during this period.

Existing West (W) Dam structure and South East (SE) key trench cleaning prior to continuation of work. It should be noted that all dam/dyke/plug work carried out on the Jericho mine site was designed and supervised by EBA Engineering Consultants Ltd.

March:

Batch/Asphalt plant commissioned on site. Multiple core lifts were placed on the W Dam and saturated fill lifts were placed on both the upstream side and across the entirety of the dam. The cleaning of the SE Dam key trench continued whilst some work started on the already clean areas. This work included placement of leveling coarse and one lift of saturated fill over till.

April:

W Dam work included a single core lift and a saturated fill level across the entire structure. Additional work saw transitional material and rock fill position downstream and dressing material upstream. An ice lens was identified downstream, excavated and replaced. The cleaning of the SE Dam key trench and all backfilling was completed. The Liner system was installed for the frozen core and deposition of the transition and ROM material commenced.

May:

Snow removal was required primarily due to drift across both dams during this period. The W Dam received additional liner sections as required. Continuation of construction included deposition of PK for liner cover, transition material and ROM thermal cover. The SE Dam work included the continued placement of ROM shell, transition and liner bedding materials

June:

Work on the W Dam was completed in June whilst construction on the SE Dam continued similar to work outlined in May.

July:

Work on the SE. Dam was completed in July.

August:

Grubbing for the North (N) Till Plug commenced.

September:

Placement of till material in the N Till Plug Key Trench was completed. Grubbing for the South Saddle (SS) Till Plug commenced. Further work in this area included PK and till placement. Divider Dyke A remedial work commenced and ceased with the construction of a small till plug upstream.

October:

All dam/dyke/plug work completed for 2007.

November:

No construction activity

December:

Winter road construction by Nuna Logistics commenced.

12 SUMMARY OF ANY MODIFICATION AND/OR MAJOR MAINTENANCE WORK AND/OR DEMOLITION WORK AND ANY ASSOCIATED STRUCTURES (Schedule B, Item 1K)

The divider dyke commenced seeping slurry under the south side at the beginning of September. Repairs were attempted with till patches and a coffer dam on the upstream side of the dyke. One silt curtain was previously in place downstream of the dyke to catch any suspended sediment generated by dyke raising; a second silt curtain was installed about 200 m from the West Dam. Testing indicated suspended sediments were controlled. EBA Engineering, dyke design engineers were contacted and conducted a site inspection.

The coffer dam was subsequently breached as it did not stop slurry seepage. The two silt curtains were left to freeze into the PKCA. A silt curtain is planned to be placed in the west cell of the PKCA to replace the existing curtains once ice is off the west cell.

Discharge from the West Dam ceased 3 September 2007.

An as-built report for the East and Southeast Dam were provided by EBA Engineering. Their report is provided under separate cover.

13 SUMMARY OF ALL WORK CARRIED OUT UNDER MANAGEMENT PLANS WITH LICENSE (Schedule B, Item 1L)

Collection of waste rock, coarse processed kimberlite, fine processed kimberlite and recovery rejects was undertaken in 2007 as per the Waste Rock Management Plan. Results of this sampling can be found in Appendix D.

An annual seepage survey was conducted by Mine Site Staff in July 2007 as required by Water License Part L, Item 9. A report by Tahera Diamond Corporation was submitted pursuant to Item 9 in August, 2007. These data can be found in Appendix D.

Thermistor monitoring data were submitted monthly to EBA Engineering for analysis from August 2007 through December 2007 as required by Water Licence Part K, Item 5. The summary of this data can be found in Appendix E.

14 PROGRESS REPORTS ON ANY STUDIES REQUESTED BY THE BOARD THAT RELATE TO WASTE MANAGEMENT, WATER USE OR RECLAMATION AND A BRIEF DESCRIPTION OF ANY FUTURE STUDIES PLANNED BY THE LICENSEE (Schedule B, Item 1M)

Dr. Anne Naeth of the University of Alberta has been approached with regards to revegetation research. Dr. Naeth completed a site visit in September 2007.

Seed samples were collected through August and September 2007 and soil samples were collected from till, fine process kimberlite and coarse process kimberlite for determination of nutrients and possible treatment options. Greenhouse trials and soil sample analysis are still pending.

No other studies were requested by the Board in 2007.

15 REPORT IDENTIFYING WHETHER RECYCLE WILL BE IMPLEMENTED AT THE PKCA FOR THE REMAINING YEARS OF OPERATION, AND IF NOT, PROVIDING A DETAILED RATIONALE FOR WHY RECYCLE IS NOT CONSIDERED A VALID MANAGEMENT PRACTICE (Schedule B, Item N)

Water recycling from the PKCA was instituted per the PKCA Management Plan, Section 4.2.6, submitted 10 March 2006. A total of 51,812.9 m³ was recycled through the process plant in 2007. This compares favorably to the estimated 57,600 m³ originally estimated. The reclaim line was constructed in the summer of 2007 and recycled water was utilized as much as possible until freeze up 30 September 2007.

16 RESULTS OF THE AQUATIC EFFECTS MONITORING PROGRAM IN ACCORDANCE WITH PART L INCLUDING QA/QC MEASURES (Schedule B, Item O)

The Annual AEMP Report produced by Mainstream Aquatics is currently under construction and is expected to be completed in April. This report will be forwarded under separate cover.

During PKCA discharge, in accordance with Part G, acute toxicity tests were conducted prior to and monthly on discharge effluent. Results are attached in Appendix C.

During PKCA discharge, in accordance with Schedule L, Item D, chronic toxicity tests were conducted monthly from water collected at the edge of the 200 m mixing zone in Lake C3. Results are attached in Appendix C.

Samples were collected prior to discharge and then monthly during discharge, with the exception of the month of September. Water quality samples were collected early in the month; however discharge was discontinued the day after water quality samples were collected and the toxicity samples were not collected during the month.

17 REVISIONS TO THE CONTINGENCY PLAN (Schedule B, Item P)

The revised Contingency Plan was submitted to the Nunavut Water Board April 10, 2008 via e-mail..

18 LIST OF UNAUTHORIZED DISCHARGES (Schedule B, Item Q)

Table 18.1 – Summary of Unauthorized Discharges

Date of Spill	Contractor	Equipment Type	Cause of Spill	Location of Spill	Fluid Type	Spill Volume (L)
Jan 1, 2007	Nuna Logistics	Lubetainer Cube	Bobcat hit cube, knocking it over	Tire laydown are outside of Maintenance shop	Propylene Glycol and Corrosion inhibitors	40 L
Mar 6, 2007	Nuna Logistics	Tanker Truck	Overfilled storage tank	Main Tank Farm	Diesel Fuel	2000 L
Mar 23, 2007	Nuna Logistics	Valve on Diesel Tank	Valve opened in error	Airport Tank Farm	Diesel Fuel	47,000 L
Mar 26, 2007	Nuna Logistics	777 Haul Truck	Seal on brake system compromised	Truck Line-Up	Hydraulic Oil	25 L
Mar 27, 2007	Nuna Logistics	Fuel Transfer	Overfill Tank	Main Generator Fuel Tank	Diesel	250 L
Apr 3, 2007	Nuna Logistics	Fuel Truck	Drove away with hose attached	Fuel Transfer Area	Diesel	75 – 100 L
Jun 24, 2007	Tahera Diamond Corporation	Transfer Pump	Cam loc fitting vibrated loose	Main Powerhouse	Motor Oil	250 L
Aug 12, 2007	Nuna Logistics	Fuel Transfer	Pump not shut off	Fuel Island Day Tank	Diesel	50 L
Sep 9, 2007	Nuna Logistics	5130 Shovel	Hydraulic Hose Failure	Jericho Pit	Hydraulic Oil	1100 L
Sep 9, 2007	Nuna Logistics	5130 Shovel	Hydraulic Hose Failure	Jericho Pit	Hydraulic Oil	1100 L
Oct 7, 2007	Nuna Logistics	5130 Shovel	Hydraulic Hose Failure	Jericho Pit	Hydraulic Oil	900 L
Oct 7, 2007	McCaws Drilling and Blasting	T-07 Pick up Truck	Oil Bung fell out of oil pan	Light Vehicle Line up	Motor Oil	15 L

Date of Spill	Contractor	Equipment Type	Cause of Spill	Location of Spill	Fluid Type	Spill Volume (L)
Oct 27, 2007	McCaws Drilling and Blasting	Drill	Drill Fire	Apron of Jericho Pit	Diesel	200 L
					Hydraulic Oil	20 L
Nov 26, 2007	Tahera Diamond Corporation	Ambulance	Overfilled truck tank	Light Vehicle Fueling Station	Diesel	4 L
Dec 1, 2007	Tahera Diamond Corporation	Fine Process Kimberlite Discharge Line	Compressed air in line	Edge of East/S. East Dam	Fine Process Kimberlite	200 L
Dec 2, 2007	Nuna Logistics	992 C Loader	Main pump line failure	Jericho Pit	Hydraulic Oil	150 L
Dec 2, 2007	Nuna Logistics	992 C Loader	Main Pump Line failure Wrong location used for disposal raw sewage	Jericho Pit	Hydraulic Oil	120 L
Dec 4, 2007	Nuna Logistics	Satellite Sewage Tanks		Sludge Dump	Raw Sewage	8000 L
Dec 9, 2007	Tahera Diamond Corporation	Fine Process Kimberlite Discharge Line	Leaking valve	Edge of East/S/East Dam	Fine Process Kimberlite	1000 L
					Treated Sewage Sludge	
Dec 21, 2007	Nuna Logistics	Sewage Treatment Plant	Broken Line	Inside Sewage Treatment Plant		4370 L
Dec 26, 2007	McCaws Drilling and Blasting	Drill	Drill Fire	Jericho Pit	Hydraulic Oil	100 L

19 OUTLINE OF SPILL TRAINING EXERCISES CARRIED OUT (Schedule B, Item R)

There were no spill exercises conducted during 2007.

20 REVISIONS TO THE CLOSURE AND RECLAMATION PLAN (Schedule B, Item S)

An updated Closure and Reclamation Plan reflecting ground disturbance to 31 December 2007 will be submitted to NWB in April 2008 as part of the Closure and Reclamation Plan. An updated RECLAIM reclamation cost spreadsheet, cost comparison with 2006 and site footprint map will be included.

21 SUMMARY OF CLOSURE AND RECLAMATION WORK UNDERTAKEN AND AN OUTLINE OF ANY WORK ANTICIPATED FOR THE FOLLOWING YEAR, INCLUDING ANY CHANGES TO IMPLEMENTATION AND SCHEDULING (Schedule B, Item T)

Jericho Diamond Mine was in its second year of operations during 2007. The original Exploration camp located along the Shore of Carat Lake was removed. Soil samples were collected to ensure that there was no hydrocarbon contamination as a result of the operations in the area. All samples were found to be uncontaminated. Results are attached in Appendix G.

Discussions are underway with Dr. Anne Naeth of the University of Alberta with respect to scope of 2008 programs and a proposal provided to Tahera Corporation by Dr. Naeth.

22 UPDATED ESTIMATE OF THE TOTAL CURRENT MINE RESTORATION LIABILITY BASED UPON RESULTS OF MINE RECLAMATION RESEARCH, MONITORING DURING MINE CONSTRUCTION AND DEVELOPMENT AND ANY MODIFICATION TO THE MINE PLAN (Schedule B, Item U)

The updated reclamation and closure plan, cited in Section 20 above included an updated reclamation liability estimate in the amount of \$ 9,317,225. This amount reflects the cost for an independent contractor to reclaim the Jericho site as it existed at the end of 2007 and includes a 10% contingency. No credit has been assumed for sale of salvageable equipment or materials.

23 SUMMARY REPORT DESCRIBING PUBLIC CONSULTATION AND PARTICIPATION WITH LOCAL ORGANIZATIONS AND THE RESIDENTS OF NEARBY COMMUNITIES, INCLUDING A SCHEDULE OF UPCOMING COMMUNITY EVENTS/INFORMATION SESSIONS (Schedule B, Item V)

Tahera Diamond Corporation was in discussion with KIA and NIRB in 2007 with respect to establishing a socio-economic monitoring committee. As the mine will be put into care and maintenance in 2008, further discussion has been delayed until the mine resumes full operations.

24 SUMMARY OF ACTIONS TAKEN TO ADDRESS CONCERNS OR DEFICIENCIES LISTED IN INSPECTION REPORTS AND/OR COMPLIANCE REPORTS FILED BY AN INSPECTOR (Schedule B, Item W)

A total of three (3) inspections were conducted by Land Use and Water Use Inspectors during 2007 for which follow up was required.

- On June 30th, a water resources inspector and a land use inspector from Indian and Northern Affairs Canada (INAC) conducted a visual inspection of the Jericho Diamond Mine. An action plan to address seepage/runoff on the south side of waste rock dump 2 was requested by the water resources inspector and was provided by Tahera environment staff. No inspection report was provided by INAC.
- On July 1, 2007 KIA conducted an inspection. Concerns were expressed about grease-covered machine parts in the landfill. The part was subsequently removed and placed in the waste transfer area. A follow-up written request was provided by KIA and a response provided from Tahera with respect to actions taken to address the landfill issue.
- On December 17th, INAC, NIRB and KIA Inspectors were on site for a site inspection and water quality inspections. Samples were collected from JER-WQ6 and JER-WQ16. Weather conditions did not allow for collection of samples from JER-WQ13. Water quality results did not exceed permitted limits and there were no concerns noted for the Site Inspection. KIA inspector requested data on landfilled quantities. Quantities were submitted to KIA in Kugluktuk at the end of the year.

**25 ANY OTHER DETAILS ON WATER USE OR WASTE DISPOSAL
REQUESTED BY THE BOARD BY NOVEMBER 1ST (Schedule B,
Item X)**

There were no additional requests by the Board in 2007.

APPENDIX A

Sample ID	Units	PKCA Discharge Criteria	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW1	JER-SW2	JER-SW2	JER-SW2	JER-SW3	JER-SW3
Date Sampled			22-Jan-07	12-Feb-07	25-APR-07	30-MAY-07	27-JUN-07	23-JUL-07	20-AUG-07	24-SEP-07	15-OCT-07	14-NOV-07	10-DEC-07	27-JUN-07	22-JUL-07	25-AUG-07	22-Jan-07	12-Feb-07
Time Sampled			13:43	09:15	09:00	07:30	07:30	09:15	08:15	07:15	09:00	07:00	07:30	16:20	10:55	17:45	11:35	07:29
Lab Sample ID			L473043-1	L478932-1	L499572-1	L512227-1	L523057-1	L534134-7	L545480-1	L557895-15	L566140-1	L577565-1	L585854-1	L523057-2	L534134-5	L546749-14	L473043-2	L478932-2
Hardness (as CaCO3)	mg/L		30.6	31	28.5	31.9	37.7	29.4	37.3	31.8	32.4	31.4	36.3	257	381	466	31.8	45.6
Conductivity	uS/cm		982	995	941	931	950	974	892	994	884	953	1140	715	1250	1570	258	291
pH	pH	6.0 - 8.8	7.86	7.91	7.86	7.63	7.70	7.63	7.50	7.66	7.76	7.65	7.49	7.87	7.78	7.82	8.53	9.14
Total Dissolved Solids	mg/L	4000	375	393	338	318	393	364	370	359	318	350	380	452	1010	1200	140	195
Total Suspended Solids	mg/L	25	20.5	54.8	22.7	43.2	81.0	53.3	53.0	30.2	37.6	17.5	72.4	3.5	26.2	16.7	<3.0	6.4
Turbidity	NTU		18.1	36.8	20.8	27.4	71.0	30.5	47.2	37.4	29.2	17.1	52.9	4.13	15.3	10.8	1.16	4.72
Ammonia as N	mg/L	12	62.8	73.0	75.1	64.3	70.7	77.5	57.6	77.7	74.4	61.1	64.6	8.61	14.0	20.8	5.89	8.30
Acidity (as CaCO3)	mg/L		18.9	17.7	28.5	27.0	23.4	27.1	31.7	27.7	24	23.8	33.5	9.4	4.9	8.2	<1.0	<1.0
Alkalinity, Bicarbonate (as CaCO3)	mg/L		354	358	344	337	335	329	309	<1.0	322	301	322	75.6	35.9	63.8	27.1	<1.0
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.5	28.1
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.7
Alkalinity, Total (as CaCO3)	mg/L		354	358	344	337	335	329	309	<1.0	322	301	322	75.6	35.9	63.8	35.6	35.8
Chloride (Cl)	mg/L	1000	39.8	44.0	36.9	38.9	40.0	40.8	36.9	40.2	36.4	64.8	122	25.8	88.0	97.4	5.12	7.45
Sulfate (SO4)	mg/L		61.6	60.6	64.8	46.6	51.0	53.7	47.4	39.2	35	43.9	30	32.3	53.1	52.3	10.3	7.37
Nitrate (as N)	mg/L	56	<0.050	0.0156	0.0286	<0.0050	<0.0050	0.0799	<0.0050	0.0126	<0.0050	0.0094	0.0053	56.4	92.8	121	16.9	24.1
Nitrite (as N)	mg/L	5.0	0.021	0.0190	<0.0010	<0.0010	<0.0010	0.0021	<0.0010	<0.0010	<0.0010	0.0155	<0.0010	1.58	2.98	4.56	0.753	0.643
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	-	0.901	82.5	62.2	64.3	-	-	-	-	-
Ortho Phosphate as P	mg/L		0.64	7.71	6.50	7.36	9.54	9.05	7.38	9.26	9.29	6.49	7.68	0.0045	<0.0010	<0.0010	<0.0010	0.0012
Total Dissolved Phosphate As P	mg/L		6.98	7.74	8.8	7.33	7.84	0.833	7.9	10.4	8.11	7.05	7.17	0.0127	0.0059	<0.0020	0.0035	0.0049
Total Phosphate as P	mg/L		8.79	9.3	7.36	8.71	10.5	8.55	9.6		9.5	7.1	8.77	0.0204	0.0184	0.0026	0.0066	0.0068
Aluminum (Al)-Total	mg/L	3.0	0.190	0.113	54000	0.140	0.201	0.818	0.378	0.105	0.0992	0.0707	0.543	0.0580	0.372	0.216	0.0448	0.0764
Antimony (Sb)-Total	mg/L	2.0	0.00161	0.00082	0.105	0.00111	0.00165	0.00633	0.00200	0.00113	0.00085	0.00107	0.00365	0.00094	0.00098	0.00114	0.00154	0.00073
Arsenic (As)-Total	mg/L	0.10	0.00066	0.00044	0.00109	0.00061	0.00068	0.00111	0.00089	0.00073	0.00057	0.00064	0.00118	0.00042	0.00038	0.00085	0.00036	0.00029
Barium (Ba)-Total	mg/L		0.0169	0.0123	0.00076	0.0107	0.0183	0.0523	0.0188	0.0192	0.013	0.0144	0.0342	0.168	0.325	0.283	0.184	0.159
Beryllium (Be)-Total	mg/L		<0.0010	<0.00050	0.00889	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		0.0011	0.00104	<0.00050	0.00084	0.0014	0.00227	<0.0010	0.00063	<0.00050	0.00127	0.0045	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		0.684	0.025	<0.00050	0.022	0.030	0.023	0.028	0.025	0.047	0.026	0.029	0.096	0.092	0.190	0.043	0.035
Cadmium (Cd)-Total	mg/L	0.0024	0.00014	0.000079	0.025	0.000080	0.00014	0.000655	0.00073	0.000115	0.000115	0.000067	0.00038	<0.000050	<0.00010	0.000073	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		8.61	8.62	0.000087	8.93	11.0	9.97	10.9	9.15	9.25	8.74	14	40.1	110	117	11.5	14.3
Chromium (Cr)-Total	mg/L	0.170	0.0104	0.00206	8.27	0.00202	0.0033	0.0116	0.0034	0.00180	0.00189	0.00143	0.0089	0.00072	0.0043	0.00270	0.00112	0.00250
Cobalt (Co)-Total	mg/L		0.00063	0.00040	0.00205	0.00034	0.00071	0.00160	0.00054	0.00031	0.00032	0.00023	0.00125	0.00235	0.00293	0.00327	0.00030	0.00072
Copper (Cu)-Total	mg/L		0.217	0.0808	0.00030	0.0900	0.120	0.444	0.0850	0.0658	0.0608	0.08	0.52	0.00596	0.00655	0.0216	0.00057	0.00120
Iron (Fe)-Total	mg/L		1.34	0.700	0.193	0.625	0.867	4.67	0.690	0.518	0.578	0.827	2.12	0.123	0.692	0.577	0.121	0.252
Lead (Pb)-Total	mg/L	0.02	0.00766	0.00111	0.578	0.00115	0.00167	0.0109	0.00274	0.000980	0.0009	0.00152	0.0192	0.000387	0.00110	0.000658	<0.000050	0.000067
Lithium (Li)-Total	mg/L		0.030	0.0260	0.00334	0.0265	0.036	0.0309	0.031	0.0326	0.0271	0.0229	0.026	0.0125	<0.010	0.0203	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		3.52	3.12	0.0216	3.15	3.84	4.58	3.41	3.15	3.32	2.8	4.84	37.5	33.4	47.7	1.73	3.08
Manganese (Mn)-Total	mg/L		0.0432	0.0330	2.79	0.0362	0.0479	0.0551	0.0447	0.0325	0.0301	0.0297	0.0563	0.0256	0.0496	0.255	0.00244	0.00397
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	0.0301	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.00012	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.00397	0.00145	<0.000050	0.00191	0.00344	0.00852	0.00259	0.00151	0.00135	0.00121	0.00739	0.0189	0.0333	0.0672	0.0126	0.00398
Nickel (Ni)-Total	mg/L	0.10	0.0144	0.00769	0.00138	0.00638	0.0089	0.0240	0.0085	0.00584	0.00645	0.00677	0.0264	0.0308	0.0487	0.0768	0.00741	0.00963
Potassium (K)-Total	mg/L		21.6	21.6	0.00619	20.9	21.8	20.0	19.7	21.2	17.9	17.6	21.5	7.87	24.4	22.5	16.3	16.0
Selenium (Se)-Total	mg/L		<0.0020	<0.0010	19.9	<0.0010	<0.0020	0.0016	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0050	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		3.26	3.21	<0.0010	2.05	3.04	4.50	2.76	2.77	3.63	2.06	3.47	4.52	4.94	5.60	3.55	3.12
Silver (Ag)-Total	mg/L		0.000109	0.000046	2.97	0.000050	0.000125	0.000282	0.000057	0.000048	0.00003	0.000034	0.000232	0.000040	<0.000050	0.000082	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		94.4	95.0	0.000084	77.1	86.9	77.0	80.6	80.0	78.3	87.5	121	17.0	49.1	57.1	19.2	20.4
Strontium (Sr)-Total	mg/L		0.0249	0.0223	89.5	0.0211	0.0272	0.0259	0.0270	0.0219	0.0195	0.0193	0.0293	0.499	3.67	2.61	0.616	0.555
Thallium (Tl)-Total	mg/L		<0.00020	<0.00010	0.0194	<0.00010	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00020	0.00012	<0.00020	<0.00010	0.00011	<0.00010
Tin (Sn)-Total	mg/L		0.00150	0.00225	<0.00010	0.00229	0.00219	0.00162	0.00203	0.00335	0.00356	0.00222	0.00173	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		<0.010	<0.010	0.00164	<0.010	<0.010	0.028	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	0.017	0.012	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000217	0.000173	<0.010	0.000207	0.000359	0.000660	0.000221	0.000203	0.000133	0.000167	0.000539	0.0508	0.0184	0.120	0.000035	0.000054
Vanadium (V)-Total	mg/L		<0.0020	<0.0010	0.000162	<0.0010	<0.0020	0.0022	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.185	0.0678	<0.0010	0.0545	0.0827	2.97	0.0634	0.0436	0.047	0.0562	0.627	0.0024	<0.0040	<0.0050	<0.0010	<0.0010
Aluminum (Al)-Dissolved	mg/L		0.0330	0.0373	0.0386	0.0321	0.0361	0.0387	0.0538	0.0333	0.0296	0.0235	0.0323	0.0023	<0.0020	<0.0030	<0.0020	0.0010
Antimony (Sb)-Dissolved	mg/L		0.00102	0.00059	0.00079	0.00051	0.00070	0.00178	0.00101	0.00072	0.00052	0.00089	0.00081	0.00095	0.00096	0.00113	0.00157	0.00082
Arsenic (As)-Dissolved	mg/L		0.00055	0.00049	0.00074	0.00054	0.00043	0.00053	0.00075	0.00069	0.00055	0.00065	0.00058	0.00040	0.00032	0.00073	0.00034	0.00029
Barium (Ba)-Dissolved	mg/L		0.00854	0.00835	0.00604	0.00730	0.0112	0.0126	0.0148	0.0143	0.00981	0.0104	0.00818	0.168	0.300	0.280	0.182	0.158
Beryllium (Be)-Dissolved	mg/L		<0.0010	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.0010	<0.00050	<0.00050	<0.00050	<0.0010	<0.00050	<0.0010	<0.00								

Sample ID	Units	PKCA Discharge Criteria	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW3	JER-SW4	JER-SW4	JER-SW4	JER-SW4	SW-4	JER-SW4
Date Sampled			30-MAR-07	25-APR-07	30-MAY-07	24-JUN-07	22-JUL-07	19-AUG-07	23-SEP-07	15-OCT-07	11-NOV-07	09-DEC-07	22-Jan-07	12-Feb-07	29-MAR-07	28-APR-07	13-JUN-07	15-JUL-07
Time Sampled			10:00	11:17	17:30	08:30	09:07	15:00	07:20	08:30	15:30	18:45	13:31	09:05	17:00	18:36	13:30	14:30
Lab Sample ID			L491821-1	L501255-1	L512227-2	L522053-5	L534134-1	L545480-2	L557895-2	L566140-2	L577565-2	L585854-2	L473043-3	L478932-3	L491821-2	L501255-11	L518949-1	L530246-2
Hardness (as CaCO3)	mg/L		29.8	36.3	32.1	79.7	40.4	50.1	43.7	33.9	51.9	23	102	109	109	106	47	62.4
Conductivity	uS/cm		173	156	193	297	247	343	284	219	257	211	311	334	332	308	158	192
pH	pH	6.0 - 8.8	7.94	8.94	8.06	8.36	9.15	8.91	8.01	8.16	8.45	8.48	7.73	7.89	7.66	7.81	7.66	7.60
Total Dissolved Solids	mg/L	4000	104	87.0	110	158	171	214	198	125	136	118	184	200	193	182	101	118
Total Suspended Solids	mg/L	25	72.2	<3.0	196	<3.0	107	48.8	<3.0	<3.0	5.5	2600	<3.0	<3.0	<3.0	3.0	3.7	<3.0
Turbidity	NTU		36.8	1.71	84.7	0.46	62.1	29.7	0.80	1.38	4.14	1400	0.43	0.59	0.67	0.44	3.22	0.37
Ammonia as N	mg/L	12	1.8	1.11	0.704	6.84	4.19	2.73	4.41	2.59	3.24	2.1	0.157	0.127	2.7	0.137	0.337	0.143
Acidity (as CaCO3)	mg/L		28.3	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	1.5	<1.0	<1.0	2.4	3.7	67.6	2.0	2.4	1.6
Alkalinity, Bicarbonate (as CaCO3)	mg/L		2.9	29.5	43.9	76.6	16.4	14.7	25.2	36.4	55.9	43.3	65.3	70.5	<1.0	65.2	29.1	36.5
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	6.5	<1.0	1.7	14.4	6.8	8.5	<1.0	3.1	4.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		31.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	67.6	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		4.41	36.0	43.9	78.4	30.8	21.5	33.7	36.4	59	48.1	65.3	70.5	15.3	65.2	29.1	36.5
Chloride (Cl)	mg/L	1000	11.8	8.42	7.20	8.88	8.23	14.6	12.4	9.36	11	11.1	14.0	15.2	19.9	14.9	6.02	7.43
Sulfate (SO4)	mg/L		7.30	16.4	21.0	13.9	10.3	38.4	10.7	16.2	15.5	16.2	18.6	20.1	-	20.0	12.7	13.0
Nitrate (as N)	mg/L	56	0.280	2.77	3.70	9.25	15.6	18.6	18.8	8.04	7.6	5.28	12.7	14.0	-	12.9	6.13	8.25
Nitrite (as N)	mg/L	5.0	0.0026	0.142	0.835	2.33	0.688	0.184	0.445	0.529	0.404	0.295	0.122	0.116	0.0043	0.0608	0.0656	0.0784
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	-	2.39	2.73	2.69	-	-	-	-	-	-
Ortho Phosphate as P	mg/L		-	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	0.0028	-	<0.0010	0.0017	<0.0010
Total Dissolved Phosphate As P	mg/L		-	0.0030	0.0042	<0.0020	0.0049	<0.0020	<0.0020	0.0021	0.0021	0.0035	0.0041	0.0053	-	0.0037	0.0053	0.0036
Total Phosphate as P	mg/L		-	0.0065	0.109	0.0055	0.0553	0.0272	0.0032	0.0054	0.0094	1.32	0.0106	0.0108	-	0.0348	0.0207	0.0054
Aluminum (Al)-Total	mg/L	3.0	0.342	0.0568	1.83	0.268	0.284	0.136	0.0151	0.0222	0.0178	0.133	0.0128	0.0114	0.0085	0.0075	0.0692	0.0142
Antimony (Sb)-Total	mg/L	2.0	0.00100	0.00077	0.00217	0.00077	0.00085	0.00078	0.00101	0.00094	0.00104	0.00088	0.00052	0.00054	0.00050	0.00039	0.00037	0.00035
Arsenic (As)-Total	mg/L	0.10	0.00044	0.00032	0.00058	0.00023	0.00021	0.00040	0.00032	0.00029	0.0002	0.00036	0.00060	0.00059	0.00049	0.00047	0.00037	0.00043
Barium (Ba)-Total	mg/L		0.102	0.0759	0.200	0.276	0.236	0.133	0.168	0.138	0.201	0.135	0.0726	0.0783	0.0692	0.0658	0.0372	0.0335
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		0.092	0.130	0.047	0.043	0.025	0.067	0.047	0.047	0.081	0.08	0.042	0.044	0.039	0.040	0.034	0.028
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	0.000070	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000090	0.000055	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		8.99	8.01	13.6	8.96	10.9	15.5	10.5	8.26	7.29	6.66	21.3	22.3	21.4	20.4	10.5	12.4
Chromium (Cr)-Total	mg/L	0.170	0.00780	0.00115	0.0601	0.0132	0.0114	0.00264	0.00054	0.00064	<0.00050	0.00584	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L		0.00166	0.00028	0.0101	0.00230	0.00204	0.00060	0.00013	0.00015	0.00014	0.00114	0.00012	0.00012	0.00012	0.00010	0.00029	0.00013
Copper (Cu)-Total	mg/L		0.00252	0.00094	0.0108	0.00314	0.00153	0.00276	0.00029	0.00023	0.00025	0.00082	0.00398	0.00668	0.00373	0.00208	0.00198	0.00202
Iron (Fe)-Total	mg/L		0.879	0.119	5.27	1.18	1.01	0.388	0.050	0.06	0.055	0.515	0.038	<0.030	<0.030	0.102	0.038	
Lead (Pb)-Total	mg/L	0.02	<0.00030	0.000075	0.00149	0.000377	0.000256	0.00481	<0.000050	<0.000050	<0.000050	0.000124	0.000183	0.000441	0.000129	<0.000050	0.000116	<0.000050
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		4.38	4.31	20.4	19.1	7.90	3.53	4.42	2.93	8.17	3.08	12.4	12.6	13.2	12.5	5.68	7.32
Manganese (Mn)-Total	mg/L		0.0149	0.00215	0.0892	0.0189	0.0157	0.00562	0.00114	0.00122	0.00148	0.00817	0.00563	0.00757	0.0302	0.0296	0.0733	0.0148
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.00934	0.00486	0.0101	0.00577	0.00303	0.0123	0.00565	0.0123	0.00519	0.00669	0.00383	0.00389	0.00270	0.00267	0.00382	0.00323
Nickel (Ni)-Total	mg/L	0.10	0.0279	0.00475	0.192	0.0418	0.0388	0.0113	0.00319	0.00366	0.00484	0.0213	0.00272	0.00276	0.00212	0.00178	0.00386	0.00170
Potassium (K)-Total	mg/L		11.3	10.4	13.0	15.0	17.4	24.1	14.0	12.2	17	13.1	10.4	10.9	10.4	9.67	6.23	5.73
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		7.26	4.78	19.1	4.79	6.00	5.62	4.82	3.47	3.41	5.26	1.72	1.88	1.91	1.98	1.71	0.990
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	0.000022	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		13.0	9.34	14.2	12.8	14.8	24.9	19.2	18.3	13	20.3	13.8	14.5	14.0	13.3	8.03	8.30
Strontium (Sr)-Total	mg/L		0.291	0.261	0.345	0.302	0.446	0.672	0.418	0.362	0.3	0.218	0.270	0.288	0.268	0.248	0.154	0.159
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	0.00025	0.00016	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	<0.00010	<0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00071	0.00080	<0.00010
Titanium (Ti)-Total	mg/L		0.021	<0.010	0.148	0.021	0.028	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000148	0.000044	0.000985	0.000632	0.000303	0.000055	0.000056	0.000039	0.00002	0.000143	0.00140	0.00150	0.000966	0.000969	0.00167	0.00133
Vanadium (V)-Total	mg/L		0.0013	<0.0010	0.0040	0.0013	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0070	0.0010	0.0079	0.0034	<0.0030	0.0042	<0.0010	<0.0010	<0.0010	0.0011	0.0083	0.0152	0.0093	<0.0010	0.0030	<0.0010
Aluminum (Al)-Dissolved	mg/L		0.0089	<0.0040	0.0046	<0.0010	0.0021	0.0017	<0.0010	<0.0020	<0.0010	0.0034	<0.0030	0.0041	0.0034	<0.0040	0.0091	0.0091
Antimony (Sb)-Dissolved	mg/L		0.00101	0.00078	0.00235	0.00105	0.00074	0.00094	0.00102	0.00096	0.00106	0.00118	0.00050	0.00050	0.00046	0.00039	0.00037	0.00034
Arsenic (As)-Dissolved	mg/L		0.00043	0.00031	0.00039	0.00019	0.00019	0.00041	0.00031	0.00025	0.0002	0.00035	0.00059	0.00058	0.00047	0.00046	0.00036	0.00042
Barium (Ba)-Dissolved	mg/L		0.106	0.0739	0.129	0.262	0.223	0.131	0.166	0.136	0.205	0.134	0.0723	0.0783	0.0681	0.0673	0.0360	0.0339
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050	<0.0													

Sample ID	Units	PKCA Discharge Criteria	JER-SW4	JER-SW4A	JER-SW4	JER-SW4	JER-SW4	JER-SW4 F1	JER-SW2,F1	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-TB	SNP-TB
Date Sampled			20-AUG-07	09-SEP-07	23-SEP-07	13-NOV-07	07-DEC-07	12-Feb-07	22-JUL-07	12-Feb-07	03-Jul-07	23-Jul-07	30-Jul-07	25-Aug-07	23-SEP-07	18-Dec-07	12-Feb-07	30-MAR-07
Time Sampled			07:45	20:05	07:05	11:45	15:15	09:05	10:55	09:04		00:00		00:00	12:15	09:04	00:00	
Lab Sample ID			L545480-3	L552075-2	L557895-1	L577565-5	L585854-5	L478932-4	L534134-6	L478932-5	L525299-7	L534134-9	L535988-6	L546749-21	L557895-22	L588743-3	L478932-6	L491821-5
Hardness (as CaCO3)	mg/L		85.7	90.6	78	102	115	107	385	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Conductivity	uS/cm		305	336	294	387	417	338	1250	-	<2.0	<2.0	<2.0	2.5	<2.0	<2.0	-	<2.0
pH	pH	6.0 - 8.8	7.90	7.82	7.59	7.7	7.55	7.83	7.77	-	5.79	5.67	5.50	5.72	5.56	5.7	-	5.86
Total Dissolved Solids	mg/L	4000	223	243	190	244	21	198	1130	-	<10	<10	<10	<10	<10	<10	-	<10
Total Suspended Solids	mg/L	25	7.3	<3.0	<3.0	<3.0	6.3	<3.0	21.6	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	-	<3.0
Turbidity	NTU		5.08	2.08	1.05	0.33	0.23	0.58	15.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10
Ammonia as N	mg/L	12	0.366	0.685	1.24	3.65	0.849	0.132	14.3	-	0.0120	0.0157	0.0193	0.0173	<0.0050	0.0122	-	<1.0
Acidity (as CaCO3)	mg/L		3.2	1.7	5.0	3.8	3.3	3.3	4.6	-	<1.0	1.1	1.4	2.3	2.0	1.9	-	1.1
Alkalinity, Bicarbonate (as CaCO3)	mg/L		30.2	34.9	48.5	42.9	47.8	71.5	35.9	-	<1.0	<1.0	<1.0	1.5	<1.0	1.6	-	<1.0
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Alkalinity, Total (as CaCO3)	mg/L		30.2	34.9	48.5	42.9	47.8	71.5	35.9	-	<1.0	<1.0	<1.0	1.5	<1.0	1.6	-	<0.50
Chloride (Cl)	mg/L	1000	14.6	15.2	14.0	17.7	19.5	15.4	87.9	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
Sulfate (SO4)	mg/L		24.7	26.7	26.6	30.6	33.1	20.4	53.1	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.0050
Nitrate (as N)	mg/L	56	17.3	18.5	11.8	21	22.9	14.1	92.2	-	<0.0050	0.0154	<0.0050	<0.0050	<0.0050	<0.0050	-	<0.0010
Nitrite (as N)	mg/L	5.0	0.206	0.244	0.0483	0.213	0.235	0.115	2.96	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0020
Total Kjeldahl Nitrogen	mg N/L		-	-	-	4.06	1.02	-	-	-	-	-	-	-	-	-	-	-
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
Total Dissolved Phosphate As P	mg/L		0.0026	0.0070	0.0029	<0.0020	0.0025	0.0055	0.0057	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	-
Total Phosphate as P	mg/L		0.0071	0.0063	0.0060	0.0026	0.0041	0.0120	0.0200	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	-
Aluminum (Al)-Total	mg/L	3.0	0.121	0.0476	0.0349	<0.0020	0.002	0.0124	0.512	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Antimony (Sb)-Total	mg/L	2.0	0.00047	0.00046	0.00032	0.00048	0.00058	0.00053	0.00095	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00053	0.00039	0.00039	0.00039	0.00046	0.00055	0.00039	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium (Ba)-Total	mg/L		0.0868	0.0875	0.0636	0.0946	0.107	0.0764	0.315	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		0.038	0.032	0.030	0.039	0.047	0.043	0.084	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000066	0.000068	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		21.8	21.6	17.6	23.9	26.7	22.0	106	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr)-Total	mg/L	0.170	0.00133	0.00051	<0.00050	<0.00050	<0.00050	<0.00050	0.00500	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L		0.00055	0.00028	0.00030	0.00012	0.00017	0.00013	0.00290	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L		0.00209	0.00110	0.00169	0.00094	0.00119	0.00634	0.00643	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Iron (Fe)-Total	mg/L		0.219	0.075	0.037	<0.030	<0.030	<0.030	0.909	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	0.000109	0.000086	0.000386	<0.000050	<0.000050	0.000451	0.00109	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0086	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		8.58	8.96	8.38	9.73	11.2	12.4	31.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn)-Total	mg/L		0.0148	0.0142	0.188	0.00352	0.00604	0.00747	0.0512	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.00864	0.00714	0.00450	0.00737	0.00665	0.00385	0.0314	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Total	mg/L	0.10	0.00926	0.00532	0.00294	0.00412	0.00488	0.00277	0.0485	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	mg/L		12.0	10.9	7.26	12.8	14.4	10.8	20.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		2.78	2.69	3.45	2.98	3.33	1.86	5.48	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000012	<0.000010	0.000034	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		18.0	16.4	14.9	19.9	21.7	14.2	47.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Total	mg/L		0.555	0.550	0.279	0.593	0.691	0.285	3.48	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00016	<0.00010	<0.00010	0.00151	<0.0010	<0.0010	0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000967	0.000821	0.00830	0.00121	0.00123	0.00150	0.0188	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0027	<0.0010	<0.0010	<0.0030	<0.0010	0.0136	0.0038	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aluminum (Al)-Dissolved	mg/L		0.0022	0.0580	0.0083	0.0013	0.0015	0.0038	0.0017	-	-	-	-	-	-	-	-	-
Antimony (Sb)-Dissolved	mg/L		0.00051	0.00046	0.00030	0.0005	0.00058	0.00050	0.00095	-	-	-	-	-	-	-	-	-
Arsenic (As)-Dissolved	mg/L		0.00049	0.00040	0.00035	0.00039	0.00045	0.00056	0.00033	-	-	-	-	-	-	-	-	-
Barium (Ba)-Dissolved	mg/L		0.0832	0.0869	0.0627	0.0956	0.107	0.0765	0.308	-	-	-	-	-	-	-	-	-
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0														

Sample ID	Units	PKCA Discharge Criteria	SNP-TB	SNP-TB	SNP-TB	SNP-TB	SNP-TB	SNP-TB	SNP-TB	SNP-TB
Date Sampled			30-APR-07	27-JUN-07	03-Jul-07	17-JUL-07	30-Jul-07	25-Aug-07	23-SEP-07	18-Dec-07
Time Sampled			10:39	08:00		00:00			00:00	00:00
Lab Sample ID			L501255-12	L523057-6	L525299-8	L531523-13	L535988-5	L546749-20	L557895-21	L588743-4
Hardness (as CaCO3)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Conductivity	uS/cm		-	5.1	<2.0	<2.0	-	<2.0	<2.0	<2.0
pH	pH	6.0 - 8.8	-	6.06	5.70	5.69	-	5.83	5.64	5.64
Total Dissolved Solids	mg/L	4000	-	<10	<10	<10	-	<10	<10	<10
Total Suspended Solids	mg/L	25	-	<3.0	<3.0	<3.0	-	<3.0	4.1	<3.0
Turbidity	NTU		-	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10
Ammonia as N	mg/L	12	-	0.0125	0.0143	0.0135	-	<0.0050	<0.0050	0.0169
Acidity (as CaCO3)	mg/L		-	<1.0	1.5	<1.0	-	2.5	2.3	1.8
Alkalinity, Bicarbonate (as CaCO3)	mg/L		-	2.4	<1.0	<1.0	-	<1.0	<1.0	2
Alkalinity, Carbonate (as CaCO3)	mg/L		-	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		-	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		-	2.4	<1.0	<1.0	-	<1.0	<1.0	2
Chloride (Cl)	mg/L	1000	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50
Sulfate (SO4)	mg/L		-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50
Nitrate (as N)	mg/L	56	-	<0.0050	<0.0050	<0.0050	-	<0.0050	<0.0050	<0.0050
Nitrite (as N)	mg/L	5.0	-	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	-	-
Ortho Phosphate as P	mg/L		-	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		-	<0.0020	<0.0020	<0.0020	-	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L		-	<0.0020	<0.0020	<0.0020	-	<0.0020	<0.0020	0.0023
Aluminum (Al)-Total	mg/L	3.0	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Antimony (Sb)-Total	mg/L	2.0	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium (Ba)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Beryllium (Be)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Bismuth (Bi)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr)-Total	mg/L	0.170	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L		<0.00010	0.00038	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Iron (Fe)-Total	mg/L		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Total	mg/L	0.10	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Potassium (K)-Total	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aluminum (Al)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Antimony (Sb)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Arsenic (As)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Barium (Ba)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Beryllium (Be)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Bismuth (Bi)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Boron (B)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Cadmium (Cd)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Calcium (Ca)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Chromium (Cr)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Cobalt (Co)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Copper (Cu)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Iron (Fe)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Lead (Pb)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Lithium (Li)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Magnesium (Mg)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Manganese (Mn)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Mercury (Hg)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Nickel (Ni)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Potassium (K)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Selenium (Se)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Silicon (Si)-Dissolved	mg/L		-	-	-	-	-	-	<0.0010	<0.0010
Silver (Ag)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Sodium (Na)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Strontium (Sr)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Thallium (Tl)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Tin (Sn)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Titanium (Ti)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Uranium (U)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Vanadium (V)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Zinc (Zn)-Dissolved	mg/L		-	-	-	-	-	-	-	-
Oil and Grease	mg/L	5.0	-	<5.0	-	-	-	<1.0	-	-
Total Inorganic Carbon	mg/L		-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50
Total Organic Carbon	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BOD	mg/L	25	-	-	-	-	-	-	-	-
Fecal Coleform	CFU/100 mL	20	-	-	-	-	-	-	-	-
Field Water Temperature	deg C		-	-	-	-	-	-	-	-
Field Conductivity	uS/cm		-	-	-	-	-	-	-	-
Field DO	%		-	-	-	-	-	-	-	-
Field DO	mg/L		-	-	-	-	-	-	-	-
Field pH			-	-	-	-	-	-	-	-
Field ORP	mV		-	-	-	-	-	-	-	-

APPENDIX B

RECEIVING ENVIRONMENT WATER QUALITY

Sample ID	Units	PKCA Discharge Criteria	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	WQ-02	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			02-JUL-07	30-JUL-07	11-AUG-07	27-AUG-07	24-SEP-07	09-MAY-07	25-JUN-07	02-JUL-07	09-JUL-07	15-JUL-07	23-JUL-07	30-JUL-07	08-AUG-07	11-AUG-07	15-AUG-07
Time Sampled			09:00	08:30	00:00	06:45	07:00	10:00	09:00	09:30	07:00	09:00	08:40	08:50	07:00	00:00	09:00
Lab Sample ID			L525299-5	L535988-3	L543213-3	L546749-17	L557895-13	L504848-1	L522053-4	L525299-6	L528110-1	L530246-3	L534134-8	L535988-4	L539594-1	L543213-2	L543212-1
Hardness (as CaCO3)	mg/L		5.74	7.5	5.43	6.05	5.45	95	55.7	57.6	62.3	61.3	96.3	96.4	89	81.8	81.7
Conductivity	uS/cm		-	-	15.2	-	-	288	173	171	187	192	298	297	293	289	291
pH	pH	6.0 - 8.8	-	-	6.82	-	-	7.58	7.58	7.68	7.81	7.71	7.82	7.87	7.88	7.82	7.83
Total Dissolved Solids	mg/L	4000	-	-	<10	-	-	174	111	109	120	115	214	214	220	199	202
Total Suspended Solids	mg/L	25	28.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	8.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Turbidity	NTU		-	-	0.55	-	-	1.49	3.03	4.03	1.40	0.49	0.68	0.69	0.70	0.82	0.66
Ammonia as N	mg/L	12	-	-	0.0076	-	-	0.958	0.211	0.153	0.116	0.136	0.0076	0.181	0.113	0.102	0.113
Acidity (as CaCO3)	mg/L		-	-	1.3	-	-	3.4	2.5	4.4	<1.0	1.4	1.6	1.1	1.5	<1.0	1.0
Alkalinity, Bicarbonate (as CaCO3)	mg/L		-	-	4.6	-	-	54.9	35.6	35.7	35.4	36.1	38.9	37.8	34.8	32.8	32.4
Alkalinity, Carbonate (as CaCO3)	mg/L		-	-	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		-	-	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		-	-	4.6	-	-	54.9	35.6	35.7	35.4	36.1	38.9	37.8	34.8	32.8	32.4
Chloride (Cl)	mg/L	1000	-	-	<0.50	-	-	14.4	7.48	6.88	7.11	7.42	11.6	11.7	11.7	13.3	13.3
Sulfate (SO4)	mg/L		-	-	1.10	-	-	19.9	12.7	12.0	12.0	12.9	20.8	20.5	21.5	21.8	22.5
Nitrate (as N)	mg/L	56	-	-	0.0250	-	-	12.1	6.95	7.61	7.80	8.17	16.2	16.2	16.2	15.6	15.6
Nitrite (as N)	mg/L	5.0	-	-	<0.0010	-	-	0.0899	0.0429	0.0627	0.0771	0.0773	0.156	0.158	0.134	0.120	0.111
Total Kjeldahl Nitrogen	mg N/L		-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-
Ortho Phosphate as P	mg/L		-	-	<0.0020	-	-	0.0068	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		-	-	0.0034	-	-	0.0097	0.0030	0.0035	0.0031	0.0028	0.030	<0.0020	0.0027	0.0021	0.0023
Total Phosphate as P	mg/L		-	-	0.0170	-	-	0.0169	0.0148	0.0171	0.0106	0.0060	0.0058	0.0044	0.0153	0.0141	0.0050
Aluminum (Al)-Total	mg/L	3.0	0.0305	0.0211	<0.00010	0.0191	0.0135	0.0213	0.0461	0.0727	0.0238	0.0152	0.0159	0.0101	0.0169	0.0203	0.0142
Antimony (Sb)-Total	mg/L	2.0	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	0.00048	0.00030	0.00033	0.00031	0.00033	0.00046	0.00043	0.00044	0.00047	0.00046
Arsenic (As)-Total	mg/L	0.10	0.00019	0.00017	0.00180	0.00016	0.00017	0.00058	0.00033	0.00041	0.00041	0.00043	0.00051	0.00047	0.00045	0.00047	0.00046
Barium (Ba)-Total	mg/L		0.00209	0.00198	<0.00050	0.00172	0.00162	0.0653	0.0354	0.0365	0.0334	0.0324	0.0575	0.0550	0.0507	0.0543	0.0556
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.000050	<0.010	<0.010	0.062	0.027	0.027	0.023	0.028	0.036	0.034	0.033	0.032	0.032
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	1.18	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		1.34	1.93	<0.00050	1.38	1.22	20.1	11.2	13.0	11.6	12.3	20.0	19.5	19.2	18.3	18.5
Chromium (Cr)-Total	mg/L	0.170	<0.00050	<0.00050	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	0.00087	<0.00010	<0.00010	0.00018	0.00016	0.00021	0.00013	0.00013	0.00021	0.00018	0.00017	0.00018	0.00015
Copper (Cu)-Total	mg/L		0.00145	0.00325	<0.030	0.00158	0.00117	0.00224	0.00171	0.00290	0.00188	0.00205	0.00225	0.00174	0.00162	0.00141	0.00131
Iron (Fe)-Total	mg/L		0.041	<0.030	<0.000050	<0.030	<0.030	0.050	0.067	0.100	0.059	0.034	0.034	<0.030	<0.030	0.037	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.000050	<0.000050	<0.0050	<0.000050	0.000101	<0.000050	0.000070	0.000163	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000058	<0.000050
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	0.606	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.593	0.622	0.00324	0.646	0.595	11.1	6.69	6.81	6.94	7.19	11.0	9.87	9.17	8.77	8.59
Manganese (Mn)-Total	mg/L		0.0102	0.00223	<0.000050	0.00185	0.00152	0.0669	0.0460	0.0352	0.0185	0.0137	0.0124	0.00702	0.00899	0.00864	0.00639
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000061	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.000050	<0.000050	<0.00050	<0.000050	<0.000050	0.00336	0.00265	0.00312	0.00288	0.00325	0.00530	0.00522	0.00579	0.00630	0.00667
Nickel (Ni)-Total	mg/L	0.10	0.00054	<0.00050	<0.50	<0.00050	<0.00050	0.00399	0.00247	0.00270	0.00184	0.00164	0.00315	0.00201	0.00204	0.00222	0.00222
Potassium (K)-Total	mg/L		<0.50	<0.50	<0.0010	<0.50	<0.50	10.2	5.80	5.78	5.41	5.66	8.28	8.27	8.88	8.80	9.11
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	0.169	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.242	0.248	<0.000010	0.182	0.169	2.17	1.25	1.07	0.968	0.964	1.54	1.60	1.55	1.79	1.78
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	0.53	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.54	0.55	0.00536	0.54	0.55	13.8	7.93	7.92	7.87	8.14	12.0	12.1	13.2	13.6	14.4
Strontium (Sr)-Total	mg/L		0.00558	0.0100	<0.00010	0.00546	0.00526	0.260	0.159	0.161	0.149	0.157	0.319	0.300	0.327	0.359	0.379
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	<0.00010	<0.010	<0.00010	<0.00010	0.00122	<0.00010	0.0281	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00409
Titanium (Ti)-Total	mg/L		<0.010	<0.010	0.000148	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000309	0.000255	<0.0010	0.000180	0.000143	0.00109	0.00143	0.00170	0.00136	0.00132	0.00222	0.00185	0.00157	0.00136	0.00129
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0023	0.0104	-	<0.0010	0.0025	0.0015	<0.0010	0.0197	0.0013	<0.0010	0.0023	0.0018	0.0016	<0.0010	0.0011
Aluminum (Al)-Dissolved	mg/L		0.0108	<0.010	-	<0.010	0.0084	0.0017	0.0062	0.0038	0.0096	0.0093	0.0059	<0.0050	<0.0060	-	0.0045
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	-	<0.00010	<0.00010	0.00052	0.00031	0.00031	0.00032	0.00034	0.00045	0.00046	0.00046	-	0.00047
Arsenic (As)-Dissolved	mg/L		0.00016	0.00019	0.63	0.00016	0.00016	0.00055	0.00030	0.00040	0.00038	0.00041	0.00048	0.00043	0.00045	6.20	0.00048
Barium (Ba)-Dissolved	mg/L		0.00189	0.00180	2.80	0.00167	0.00156	0.0660	0.0344	0.0332	0.0330	0.0326	0.0558	0.0552	0.0517	2.67	0.0557
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050
Boron (B)-Dissolved	mg/L		<0.010	<0.010	-	<0.010	<0.010	0.066	0.027	0.025	0.028	0.028	0.035	0.035	0.034	-	0.033
Cadmium (Cd)-Dissolved	mg/L		<0.000050	<0.000050	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	-	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.31	1.93	-</												

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ5	JER-WQ5
Date Sampled			20-AUG-07	27-AUG-07	04-SEP-07	09-SEP-07	24-SEP-07	24-JUN-07	17-JUL-07	25-AUG-07	28-APR-07	16-JUL-07	25-AUG-07	23-SEP-07	08-DEC-07	24-JUN-07	16-JUL-07
Time Sampled			07:30	06:20	09:00	09:00	06:30	15:17	00:00	13:30	17:24	09:40	13:15	10:00	12:00	14:14	00:00
Lab Sample ID			L545480-4	L546749-18	L549862-1	L552075-1	L557895-14	L522053-1	L531523-11	L546749-5	L501255-10	L530246-1	L546749-4	L557895-4	L585854-6	L522053-2	L531523-5
Hardness (as CaCO3)	mg/L		85.9	82.2	78.6	87.6	92	28.1	46.8	70.8	9.79	5.48	6.64	7.55	7.14	6.44	5.15
Conductivity	uS/cm		286	313	325	325	327	98.9	166	245	27.0	13.4	19.5	21.6	18	18.1	17.4
pH		6.0 - 8.8	7.82	7.76	7.10	7.33	7.48	7.09	7.26	7.54	7.12	6.86	6.90	7.46	6.76	6.38	6.84
Total Dissolved Solids	mg/L	4000	212	216	217	231	203	72.0	93.0	173	17.0	11.0	19.0	14.0	18	18.0	12.0
Total Suspended Solids	mg/L	25	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Turbidity	NTU		0.72	1.28	0.62	0.48	0.47	0.87	0.27	0.24	0.22	0.41	0.51	0.38	0.25	1.15	0.51
Ammonia as N	mg/L	12	0.169	0.297	0.338	0.354	0.0927	0.0128	0.0061	<0.0050	0.0426	0.0080	0.0092	0.0186	0.0202	0.0116	0.0099
Acidity (as CaCO3)	mg/L		3.5	3.3	4.1	2.9	4.4	3.1	3.0	3.3	1.2	1.2	1.3	2.3	2.1	2.5	2.1
Alkalinity, Bicarbonate (as CaCO3)	mg/L		30.9	31.5	33.3	33.2	38.1	12.1	28.9	24.8	7.9	4.1	4.9	5.0	5.4	4.3	5.2
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		30.9	31.5	33.3	33.2	38.1	12.1	28.9	24.8	7.9	4.1	4.9	5.0	5.4	4.3	5.2
Chloride (Cl)	mg/L	1000	13.5	14.6	14.8	14.7	16.3	5.87	7.46	12.8	0.83	<0.50	0.69	1.13	0.57	0.63	<0.50
Sulfate (SO4)	mg/L		22.5	25.0	26.1	26.0	26.0	9.57	12.6	20.9	2.04	1.06	1.59	2.47	1.5	1.60	1.06
Nitrate (as N)	mg/L	56	15.9	17.5	17.8	17.8	16.8	4.20	5.95	12.7	0.277	0.0674	0.254	0.313	0.167	0.280	0.0536
Nitrite (as N)	mg/L	5.0	0.117	0.169	0.185	0.176	0.0315	0.0023	0.0057	0.0062	0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	-	-	-	-	-	-	0.42	-	-
Ortho Phosphate as P	mg/L		<0.0010	0.0012	<0.0010	<0.0010	0.0011	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		0.0028	0.0029	0.0021	0.0081	0.0021	0.0039	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020
Total Phosphate as P	mg/L		0.0059	0.106	0.0035	0.0054	0.0066	0.0069	0.0020	0.0039	0.0045	0.0060					

Sample ID	Units	PKCA Discharge Criteria	JER-WQ5	JER-WQ5	JER-WQ06	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ08	JER-WQ8	JER-WQ8
Date Sampled			25-AUG-07	23-SEP-07	27-APR-07	29-JUL-07	26-AUG-07	23-SEP-07	08-DEC-07	17-DEC-07	26-JUN-07	17-JUL-07	25-AUG-07	23-SEP-07	27-APR-07	16-JUL-07	25-AUG-07	
Time Sampled			13:00	10:10	14:30	09:30	09:30	11:25	12:45	13:52	13:30	00:00	16:10	10:25	14:00	00:00	15:15	
Lab Sample ID			L546749-3	L557895-5	L501255-7	L535988-2	L546749-15	L557895-10	L585854-7	L587890-1	L523057-3	L531523-12	L546749-12	L557895-6	L501255-6	L531523-4	L546749-10	
Hardness (as CaCO3)	mg/L		6.57	6.4	5.63	5.5	5.13	6.07	5.75	6.89	5.35	5.31	5.37	5.37	7.6	5.08	5.43	
Conductivity	uS/cm		19.4	18.5	15.3	15.0	15.4	16.1	13.8	18.9	14.4	17.3	14.7	13.1	19.5	16.3	14.4	
pH	pH	6.0 - 8.8	6.88	7.09	6.73	6.70	6.89	7.00	6.71	8.56	6.45	6.89	6.86	7.09	6.51	6.91	6.85	
Total Dissolved Solids	mg/L	4000	19.0	16.0	<10	13.0	14.0	<10	17	16	10	<10	17.0	16.0	<10	12.0	18.0	
Total Suspended Solids	mg/L	25	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Turbidity	NTU		0.39	0.43	0.13	0.48	0.37	0.33	0.24	0.45	1.31	0.56	0.34	0.42	0.32	0.61	0.43	
Ammonia as N	mg/L	12	0.0062	0.0092	0.0337	0.0080	0.0093	0.0131	0.0122	0.0244	0.0108	0.0073	0.0090	0.0079	0.0187	0.0056	0.0060	
Acidity (as CaCO3)	mg/L		2.1	1.4	1.2	1.1	1.9	1.8	1.6	<1.0	<1.0	1.7	1.6	2.0	1.3	2.0	1.7	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		4.9	6.2	4.7	4.8	4.4	4.6	4.4	5.6	3.9	5.4	4.3	4.4	6.5	5.3	4.6	
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, Total (as CaCO3)	mg/L		4.9	6.2	4.7	4.8	4.4	4.6	4.4	5.6	3.9	5.4	4.3	4.4	6.5	5.3	4.6	
Chloride (Cl)	mg/L	1000	0.60	0.65	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Sulfate (SO4)	mg/L		1.50	1.74	1.14	1.09	1.11	1.77	1.11	1.76	0.91	0.95	1.07	1.28	1.40	0.87	1.00	
Nitrate (as N)	mg/L	56	0.196	0.221	0.0071	0.0223	0.0524	0.0398	0.0386	0.0395	0.0408	0.0243	0.0237	0.0354	0.0164	<0.0050	<0.0050	
Nitrite (as N)	mg/L	5.0	<0.0010	0.0013	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	0.137	-	-	-	-	-	-	-	-	
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Total Dissolved Phosphate As P	mg/L		<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	0.0021	<0.0020	<0.0020	
Total Phosphate as P	mg/L		0.0031	0.0025	0.0042	0.0033	0.0023	0.0026	0.0025	0.0034	0.0051	0.0022	0.0062	0.0026	0.0049	0.0037	0.0039	
Aluminum (Al)-Total	mg/L	3.0	0.0151	0.0092	0.0148	0.0183	0.0141	0.0128	0.0104	0.013	0.0391	0.0203	0.0246	0.0146	0.0122	0.0199	0.0137	
Antimony (Sb)-Total	mg/L	2.0	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic (As)-Total	mg/L	0.10	0.00018	0.00018	0.00016	0.00016	0.00018	0.00015	0.00015	0.00017	0.00015	0.00015	0.00017	0.00017	0.00019	0.00017	0.00018	
Barium (Ba)-Total	mg/L		0.00177	0.00157	0.00174	0.00188	0.00179	0.00210	0.00171	0.00237	0.00231	0.00178	0.00189	0.00169	0.00267	0.00164	0.00160	
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Calcium (Ca)-Total	mg/L		1.39	1.35	1.22	1.24	1.10	1.37	1.25	1.53	1.15	1.13	1.30	1.16	1.60	1.09	1.17	
Chromium (Cr)-Total	mg/L	0.170	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper (Cu)-Total	mg/L		0.00089	0.00074	0.00097	0.00093	0.00080	0.00083	0.00081	0.00115	0.00091	0.00088	0.00161	0.00086	0.00101	0.00085	0.00089	
Iron (Fe)-Total	mg/L		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.041	<0.030	0.050	<0.030	<0.030	<0.030	<0.030	
Lead (Pb)-Total	mg/L	0.02	0.000062	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L		0.773	0.731	0.642	0.582	0.614	0.659	0.638	0.823	0.632	0.580	0.620	0.578	0.807	0.551	0.598	
Manganese (Mn)-Total	mg/L		0.00231	0.00157	0.00113	0.00435	0.00218	0.00187	0.000639	0.000716	0.00562	0.00521	0.00400	0.00246	0.00182	0.00393	0.00249	
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Molybdenum (Mo)-Total	mg/L	1.50	<0.000050	<0.000050	<0.000050	<0.000050	0.000104	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Nickel (Ni)-Total	mg/L	0.10	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00058	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Potassium (K)-Total	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Silicon (Si)-Total	mg/L		0.149	0.149	0.162	0.188	0.182	0.176	0.139	0.165	0.300	0.180	0.167	0.175	0.277	0.193	0.119	
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium (Na)-Total	mg/L		0.80	0.76	0.55	0.55	0.55	0.59	0.59	0.71	<0.50	0.52	0.57	0.53	0.64	<0.50	0.52	
Strontium (Sr)-Total	mg/L		0.00684	0.00692	0.00538	0.00547	0.00520	0.00579	0.0061	0.00671	0.00538	0.00511	0.00546	0.00516	0.00692	0.00476	0.00498	
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin (Sn)-Total	mg/L		<0.00010	<0.00010	0.00048	0.00152	0.00580	<0.00010	0.0019	0.00483	<0.00010	<0.00010	<0.00010	<0.00010	0.00052	0.00247	0.00135	
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total	mg/L	1.0	0.000132	0.000109	0.000152	0.000156	0.000165	0.000137	0.000129	0.000168	0.000207	0.000151	0.000165	0.000135	0.000136	0.000138	0.000114	
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc (Zn)-Total	mg/L	0.50	0.0020	<0.0010	<0.0010	<0.0010	0.0033	<0.0010	<0.0010	0.0047	<0.0010	<0.0010	<0.0030	<0.0010	<0.0010	<0.0010	<0.0010	
Aluminum (Al)-Dissolved	mg/L		<0.0060	0.0061	0.0109	<0.0090	<0.0090	0.0083	0.0087	0.0097	0.0204	0.0125	<0.0090	0.0080	0.0098	0.0111	<0.0080	
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic (As)-Dissolved	mg/L		0.00017	0.00016	0.00016	0.00013	0.00016	0.00017	0.00015	0.00017	0.00015	0.00017	0.00015	0.00016	0.00019	0.00016	0.00017	
Barium (Ba)-Dissolved	mg/L		0.00156	0.00152	0.00175	0.00172	0.00164	0.00204	0.00166	0.00209	0.00205	0						

Sample ID	Units	PKCA Discharge Criteria	JER-WQ8	JER-WQ8	JER-WQ09	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10
Date Sampled			23-SEP-07	18-DEC-07	27-APR-07	01-JUL-07	16-JUL-07	25-AUG-07	23-SEP-07	18-DEC-07	26-APR-07	16-JUL-07	25-AUG-07	23-SEP-07	08-DEC-07	26-APR-07	16-JUL-07
Time Sampled			10:40	13:25	13:30	18:05	00:00	16:00	10:50	14:00	15:15	00:00	12:00	09:40	11:30	14:30	00:00
Lab Sample ID			L557895-7	L588743-1	L501255-5	L525299-1	L531523-1	L546749-11	L557895-8	L588743-2	L501255-3	L531523-3	L546749-2	L557895-3	L585854-8	L501255-4	L531523-2
Hardness (as CaCO3)	mg/L		5.37	6.18	10.9	4.83	4.96	5.12	5.43	7.86	5.05	4.43	4.67	4.38	4.78	6.36	4.87
Conductivity	uS/cm		13.0	15.3	27.7	11.8	16.4	14.4	13.3	20.2	13.6	14.5	12.9	11.3	11.6	17.2	15.8
pH	pH	6.0 - 8.8	7.06	6.49	7.17	6.50	6.87	6.86	7.03	7.3	6.63	6.81	6.75	7.17	6.67	6.70	6.89
Total Dissolved Solids	mg/L	4000	13.0	13	15.0	<10	19.0	23.0	<10	17	<10	15.0	17.0	<10	13	<10	16.0
Total Suspended Solids	mg/L	25	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Turbidity	NTU		0.44	0.31	0.23	0.89	0.41	0.48	0.36	0.29	0.12	0.45	0.40	0.29	0.21	0.21	0.45
Ammonia as N	mg/L	12	0.0066	0.0204	0.0066	0.0052	0.0095	0.0097	0.0066	0.0187	0.0260	0.0106	0.0062	0.0068	0.0123	0.0180	0.0063
Acidity (as CaCO3)	mg/L		1.8	1.6	1.6	1.4	2.3	1.9	1.8	2.4	1.2	2.0	1.9	1.6	1.7	1.1	2.0
Alkalinity, Bicarbonate (as CaCO3)	mg/L		4.5	6.2	9.0	3.2	5.5	4.4	4.6	7.2	4.3	4.7	3.9	4.0	3.8	6.0	5.8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		4.5	6.2	9.0	3.2	5.5	4.4	4.6	7.2	4.3	4.7	3.9	4.0	3.8	6.0	5.8
Chloride (Cl)	mg/L	1000	<0.50	<0.50	0.62	<0.50	<0.50	<0.50	<0.50	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Sulfate (SO4)	mg/L		1.19	1.22	1.96	0.79	0.88	1.03	1.14	1.47	1.09	0.86	0.99	1.45	1.03	0.98	0.69
Nitrate (as N)	mg/L	56	0.0081	0.0051	0.153	0.0237	0.0106	0.0109	0.0199	0.0333	0.0182	<0.0050	<0.0050	0.0256	0.0153	0.0058	<0.0050
Nitrite (as N)	mg/L	5.0	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	mg N/L		-	0.15	-	-	-	-	-	0.154	-	-	-	-	0.129	-	-
Ortho Phosphate as P	mg/L		<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.0020	0.0025	0.0028	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L		0.0033	0.0056	0.0071	0.0043	0.0037	0.0026	0.0030	0.0045	0.0031	0.0027	0.0036	0.0031	0.003	0.0028	<0.0020
Aluminum (Al)-Total	mg/L	3.0	0.0114	0.0086	0.0203	0.0265	0.0173	0.0122	0.0109	0.0108	0.0115	0.0210	0.0167	0.0128	0.0113	0.0067	0.0131
Antimony (Sb)-Total	mg/L	2.0	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00019	0.00019	0.00024	0.00014	0.00016	0.00016	0.00017	0.00019	0.00017	0.00020	0.00021	0.00017	0.00018	0.00013	0.00013
Barium (Ba)-Total	mg/L		0.00161	0.00193	0.00462	0.00186	0.00177	0.00149	0.00153	0.00248	0.00169	0.00163	0.00159	0.00158	0.00165	0.00150	0.00134
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		1.18	1.37	2.37	1.07	1.03	1.14	1.24	1.71	1.10	0.917	0.996	0.948	1.03	1.55	1.08
Chromium (Cr)-Total	mg/L	0.170	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L		0.00091	0.00935	0.00148	0.00078	0.00085	0.00081	0.00083	0.00104	0.00070	0.00073	0.00079	0.00073	0.00078	0.00094	0.00074
Iron (Fe)-Total	mg/L		<0.030	0.07	0.052	0.033	0.032	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.581	0.689	1.21	0.494	0.530	0.587	0.594	0.835	0.601	0.491	0.527	0.497	0.542	0.675	0.494
Manganese (Mn)-Total	mg/L		0.00184	0.000782	0.0293	0.00324	0.00261	0.00253	0.00252	0.00461	0.000255	0.00325	0.00212	0.00120	0.000619	0.000816	0.00354
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Total	mg/L	0.10	<0.00050	0.00174	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	mg/L		<0.50	<0.50	0.64	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.118	0.167	0.598	0.193	0.206	0.134	0.142	0.198	0.251	0.224	0.187	0.206	0.175	0.310	0.238
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.52	0.59	0.98	<0.50	<0.50	0.53	0.53	0.76	0.50	<0.50	<0.50	<0.50	<0.50	0.57	<0.50
Strontium (Sr)-Total	mg/L		0.00512	0.00607	0.0106	0.00457	0.00474	0.00481	0.00514	0.00746	0.00500	0.00450	0.00464	0.00477	0.005	0.00573	0.00435
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	0.00154	0.00365	<0.00010	0.00435	<0.00010	<0.00010	0.00745	0.00080	0.00193	0.00132	<0.00010	0.0018	0.00074	0.00259
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000102	0.000121	0.000189	0.000135	0.000123	0.000106	0.000104	0.000133	0.000144	0.000146	0.000135	0.000130	0.000133	0.000119	0.000104
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0016	0.006	0.0011	0.0021	0.0022	<0.0010	0.0023	0.0024	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	0.0012
Aluminum (Al)-Dissolved	mg/L		0.0091	0.0078	0.0123	0.0116	0.0076	<0.0060	0.0063	0.0084	0.0131	0.0129	<0.010	0.0091	0.0093	<0.0050	0.0094
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.00018	0.00019	0.00022	0.00016	0.00015	0.00015	0.00015	0.00017	0.00016	0.00017	0.00020	0.00017	0.00016	0.00013	0.00013
Barium (Ba)-Dissolved	mg/L		0.00159	0.00203	0.00436	0.00173	0.00168	0.00143	0.00148	0.00247	0.00167	0.00159	0.00156	0.00144	0.00157	0.00145	0.00131
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050													

[illegible]

Sample ID	Units	PKCA Discharge Criteria	JER-WQ14	JER-WQ14	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ16	JER-WQ16	JER-WQ-16	JER-WQ17	JER-WQ18	JER-WQ18	JER-WQ21	JER-WQ21	JER-WQ21	JER- WQ6,F1
Date Sampled			25-AUG-07	23-SEP-07	24-JUN-07	22-JUL-07	26-AUG-07	17-JUL-07	11-AUG-07	17-DEC-07	17-JUL-07	17-JUL-07	11-AUG-07	01-JUL-07	29-JUL-07	25-AUG-07	27-APR-07
Time Sampled			14:45	11:05	09:00	10:00	09:45	00:00	00:00	11:45	00:00	00:00	00:00	17:55	08:30	16:15	14:45
Lab Sample ID			L546749-9	L557895-9	L522053-3	L534134-3	L546749-16	L531523-6	L543213-5	L587890-2	L531523-7	L531523-8	L543213-4	L525299-4	L535988-1	L546749-13	L501255-8
Hardness (as CaCO3)	mg/L		11.7	11.6	5.82	11.1	16.1	7.12	7.38	10.7	7.64	8.84	9.49	4.06	6.4	6.12	6.7
Conductivity	uS/cm		26.8	27.4	13.2	25.0	36.5	20.1	18.4	24.4	20.8	24.0	23.3	9.9	16.2	15.5	14.6
pH	pH	6.0 - 8.8	7.25	7.73	6.59	7.18	6.96	6.77	7.14	7.7	6.81	6.87	7.30	6.67	7.05	6.92	6.72
Total Dissolved Solids	mg/L	4000	31.0	27.0	16.0	21.0	28.0	<10	15.0	22	13.0	15.0	11.0	11.0	17.0	15.0	<10
Total Suspended Solids	mg/L	25	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Turbidity	NTU		0.43	0.41	0.79	0.48	0.52	0.65	0.57	0.84	0.93	0.91	1.22	1.02	0.98	0.61	0.15
Ammonia as N	mg/L	12	0.0126	0.0117	0.0157	0.0215	<0.0050	0.0099	0.0084	0.0263	0.0183	0.0067	0.0090	0.0105	0.0124	0.0211	0.0319
Acidity (as CaCO3)	mg/L		2.2	1.9	2.6	1.6	4.3	2.2	<1.0	1.4	2.1	2.0	<1.0	2.5	1.2	1.9	1.1
Alkalinity, Bicarbonate (as CaCO3)	mg/L		10.2	10.9	4.5	9.8	15.2	7.5	6.3	9.3	8.0	9.3	8.9	3.6	6.0	5.4	4.5
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		10.2	10.9	4.5	9.8	15.2	7.5	6.3	9.3	8.0	9.3	8.9	3.6	6.0	5.4	4.5
Chloride (Cl)	mg/L	1000	0.73	0.81	<0.50	0.60	0.63	<0.50	<0.50	0.58	<0.50	0.60	0.76	<0.50	<0.50	<0.50	<0.50
Sulfate (SO4)	mg/L		0.52	0.68	<0.50	0.61	0.55	0.59	0.71	1.15	0.59	0.51	0.67	<0.50	0.65	0.57	1.07
Nitrate (as N)	mg/L	56	0.0051	0.0198	0.0109	0.0653	0.118	0.0673	0.0708	0.0774	0.0088	<0.0050	<0.0050	0.0082	0.0902	0.0119	0.0061
Nitrite (as N)	mg/L	5.0	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		0.0021	<0.0020	0.0024	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	0.0025	<0.0020	0.0062	<0.0020
Total Phosphate as P	mg/L		0.0047	0.0031	0.0070	0.0050	0.0030	0.0027	0.0052	0.0053	0.0092	0.0060	0.0066	0.0062	0.0071	0.0158	0.0037
Aluminum (Al)-Total	mg/L	3.0	0.0219	0.0170	0.0389	0.0232	0.0344	0.0217	0.0206	0.0138	0.0278	0.0262	0.0336	0.0369	0.0360	0.0141	0.0167
Antimony (Sb)-Total	mg/L	2.0	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00023	0.00022	0.00012	0.00018	0.00016	0.00016	0.00018	0.00018	0.00019	0.00020	0.00020	0.00012	0.00012	0.00015	0.00015
Barium (Ba)-Total	mg/L		0.00196	0.00186	0.00197	0.00317	0.00502	0.00187	0.00180	0.00272	0.00189	0.00167	0.00150	0.00193	0.00303	0.00127	0.00169
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L		2.76	2.77	1.38	2.65	3.90	1.69	1.73	2.5	1.73	2.05	2.20	0.907	1.45	1.33	1.16
Chromium (Cr)-Total	mg/L	0.170	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L		0.00138	0.00134	0.00107	0.00156	0.00092	0.00115	0.00135	0.00157	0.00138	0.00103	0.00101	0.00114	0.00161	0.00138	0.00091
Iron (Fe)-Total	mg/L		0.230	0.174	0.066	0.179	0.172	0.049	0.063	<0.030	0.079	0.117	0.158	0.090	0.219	0.123	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.000050	0.000000	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		1.13	1.14	0.582	1.02	1.47	0.752	0.744	1.14	0.793	0.856	0.971	0.424	0.634	0.674	0.602
Manganese (Mn)-Total	mg/L		0.00304	0.00163	0.00365	0.00511	0.0122	0.00710	0.00501	0.00162	0.00606	0.00464	0.00494	0.00508	0.00727	0.00359	0.00167
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Total	mg/L	0.10	<0.00050	<0.00050	<0.00050	<0.00050	0.00058	<0.00050	0.00055	0.00055	<0.00050	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.235	0.216	0.294	0.330	1.85	0.276	0.230	0.247	0.281	0.187	0.239	0.186	0.180	0.119	0.162
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.72	0.76	<0.50	0.60	0.81	<0.50	<0.50	0.63	<0.50	0.57	0.71	<0.50	0.55	<0.50	0.51
Strontium (Sr)-Total	mg/L		0.00648	0.00667	0.00373	0.00722	0.00924	0.00479	0.00505	0.00679	0.00490	0.00490	0.00521	0.00327	0.00592	0.00413	0.00511
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		0.00476	<0.00010	<0.00010	<0.00010	<0.00010	0.00377	<0.00010	0.0107	0.00338	0.00324	<0.00010	<0.00010	<0.00010	<0.00010	0.00068
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000219	0.000194	0.000208	0.000228	0.000149	0.000080	0.000088	0.000087	0.000062	0.000104	0.000092	0.000124	0.000125	0.000085	0.000149
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.0010	0.0023	<0.0010	<0.0010	<0.0010	0.0010	0.0018	0.0057	0.0022	0.0027	0.0013	<0.0010	0.0058	<0.0010	<0.0010
Aluminum (Al)-Dissolved	mg/L		0.0100	0.0090	0.0275	0.0152	0.0234	0.0124	-	0.0102	0.0128	0.0125	-	0.0130	<0.0060	<0.0040	0.0101
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	-	<0.00010	<0.00010	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.00021	0.00021	0.00012	0.00017	0.00015	0.00016	-	0.00017	0.00019	0.00018	-	0.00010	0.00013	0.00015	0.00016
Barium (Ba)-Dissolved	mg/L		0.00189	0.00180	0.00187	0.00310	0.00500	0.00177	-	0.00251	0.00176	0.00155	-	0.00179	0.00229	0.00120	0.00174
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	-	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		&														

Sample ID	Units	PKCA Discharge Criteria	JER- WQ10,F1	JER-WQ12, F1	JER- WQ15,F1	JER-WQ12- F1	JER-WQ6- F1	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-FB	SNP-TB	SNP-TB	SNP-TB
Date Sampled			26-APR-07	26-JUN-07	22-JUL-07	25-AUG-07	23-SEP-07	2-Jul-07	23-JUL-07	30-Jul-07	27-Aug-07	23-SEP-07	07-DEC-07	18-Dec-07	27-JUN-07	2-Jul-07	17-JUL-07	
Time Sampled			15:30	14:15	10:00	14:15	11:25		00:00			00:00	12:15	12:15	08:00		00:00	
Lab Sample ID			L501255-2	L523057-5	L534134-4	L546749-8	L557895-11	L525299-7	L534134-9	L535988-6	L546749-21	L557895-22	L585854-11	L588743-3	L523057-6	L525299-8	L531523-13	
Hardness (as CaCO3)	mg/L		5.16	25	11	39.7	6.36	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	
Conductivity	uS/cm		13.7	65.0	24.9	105	18.9	<2.0	<2.0	<2.0	2.5	<2.0	<2.0	<2.0	5.1	<2.0	<2.0	
pH	pH	6.0 - 8.8	6.63	7.31	7.18	7.51	6.98	5.79	5.67	5.50	5.72	5.56	5.65	5.7	6.06	5.70	5.69	
Total Dissolved Solids	mg/L	4000	<10	45.0	21.0	73.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Total Suspended Solids	mg/L	25	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Turbidity	NTU		0.16	1.82	0.46	0.40	0.30	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Ammonia as N	mg/L	12	0.0262	0.0073	0.0253	<0.0050	0.0124	0.0120	0.0157	0.0193	0.0173	<0.0050	0.0052	0.0122	0.0125	0.0143	0.0135	
Acidity (as CaCO3)	mg/L		1.1	4.3	1.7	3.1	6.5	<1.0	1.1	1.4	2.3	2.0	1.5	1.9	<1.0	1.5	<1.0	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		4.4	15.8	9.8	26.2	4.6	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	1.6	2.4	<1.0	<1.0	
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Alkalinity, Total (as CaCO3)	mg/L		4.4	15.8	9.8	26.2	4.6	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	1.6	2.4	<1.0	<1.0	
Chloride (Cl)	mg/L	1000	<0.50	3.71	0.59	5.59	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Sulfate (SO4)	mg/L		1.10	3.62	0.59	6.79	1.79	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Nitrate (as N)	mg/L	56	0.0187	1.35	0.0661	2.33	0.0430	<0.0050	0.0154	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Nitrite (as N)	mg/L	5.0	<0.0010	0.0044	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Total Dissolved Phosphate As P	mg/L		<0.0020	0.0022	0.0044	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Total Phosphate as P	mg/L		0.0039	0.0047	0.0054	0.0022	0.0030	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Aluminum (Al)-Total	mg/L	3.0	0.0138	0.0567	0.0235	0.0181	0.0135	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Antimony (Sb)-Total	mg/L	2.0	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Arsenic (As)-Total	mg/L	0.10	0.00018	0.00019	0.00017	0.00018	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Barium (Ba)-Total	mg/L		0.00167	0.00981	0.00314	0.0134	0.00216	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Cadmium (Cd)-Total	mg/L	0.0024	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Calcium (Ca)-Total	mg/L		1.06	5.69	2.64	9.83	1.40	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Chromium (Cr)-Total	mg/L	0.170	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper (Cu)-Total	mg/L		0.00086	0.00234	0.00159	0.00180	0.00088	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00038	<0.00010	<0.00010	
Iron (Fe)-Total	mg/L		<0.030	0.057	0.180	<0.030	0.037	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	
Lead (Pb)-Total	mg/L	0.02	<0.000050	0.000100	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L		0.583	2.67	1.02	3.81	0.687	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Manganese (Mn)-Total	mg/L		0.000687	0.00406	0.00518	0.00248	0.00196	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Molybdenum (Mo)-Total	mg/L	1.50	<0.000050	0.000180	<0.000050	0.000357	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Nickel (Ni)-Total	mg/L	0.10	<0.00050	0.00166	<0.00050	0.00094	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Potassium (K)-Total	mg/L		<0.50	0.85	<0.50	1.06	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Silicon (Si)-Total	mg/L		0.232	1.03	0.328	1.37	0.188	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium (Na)-Total	mg/L		<0.50	2.26	0.60	3.19	0.61	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Strontium (Sr)-Total	mg/L		0.00508	0.0217	0.00711	0.0362	0.00594	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin (Sn)-Total	mg/L		0.00632	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total	mg/L	1.0	0.000174	0.00128	0.000222	0.000785	0.000134	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc (Zn)-Total	mg/L	0.50	<0.0010	0.0041	0.0010	0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Aluminum (Al)-Dissolved	mg/L		0.0121	0.0143	0.0137	<0.010	0.0090	-	-	-	-	-	-	-	-	-	-	
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	-	-	-	-	-	-	-	-	-	-	
Arsenic (As)-Dissolved	mg/L		0.00017	0.00019	0.00017	0.00019	0.00017	-	-	-	-	-	-	-	-	-	-	
Barium (Ba)-Dissolved	mg/L		0.00169	0.00923	0.00313	0.0131	0.00210	-	-	-	-	-	-	-	-	-	-	
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050												

DILLON CONSULTING LAKE C3 OUTLET RATING CURVES

Our File No. 07-7684

October 1, 2007

Tahera Diamond Corporation
c/o Mr. Bruce Ott
130 Adelaide Street West
Suite 1900
Toronto, Ontario
M5H 3P5

Attention: Mr. Bruce Ott, PhD, RPBio

Subject: Tahera Jericho Lake C3 Outlet Discharge Monitoring

Dear Mr. Ott,

This letter summarizes the 2007 field monitoring effort and data gathered in support of the rating curve development for Lake C3 at the Jericho Diamond mine site.

Dillon Consulting Limited (Dillon) was retained by Tahera Diamond Corporation (Tahera) to collect additional hydrometric data at the outlet of Lake C3 to add to data gathered in 2006. The additional hydrometric measurements would be used to construct a rating curve for discharges from Lake C3 as a function of lake water levels. Determination of discharges from Lake C3 is important in determining the allowable discharge from the Processed Kimberlite Containment Area (PKCA).

Below is a brief description of the project background, data collected in 2007, and the rating curve developed to-date.

Background

An automated hydrometric station at Lake C3 was established at the end of May 2006 prior to the freshet peak that would operate over the open water season to collect hourly averaged water depth data. The station was de-mobilized in early October 2006 to protect the water level pressure transducer sensor against ice damage prior to lake freeze-up (the sensor was stored over-winter in a dry heated storage shed at the camp). The station consists of a Keller submersible pressure transducer and Campbell Scientific datalogger (CR10x) powered by rechargeable battery and solar panel. The station also wirelessly transmits data to the base camp by radio modem (RF401). A repeater station was installed at the top of a hill between the station and camp to improve signal reception of the radio modem as transmission signals require line-of-sight.

The hydrostatic pressure head over the sensor is measured by a strain gauge element that produces an analog output signal and is converted by the data logger to an equivalent depth of water. The pressure transducer sensor is vented to atmosphere to compensate for barometric pressure changes. The datalogger was set to read the instantaneous water level once per minute and to record averaged 60-minute water levels. Data loggers were calibrated by direct measurements of water level by closed circuit levelling from established temporary benchmarks.

A complicating factor associated with the use of benchmarks in the north is the likelihood of movement during the season due to thawing and freezing of the active layer. Vertical control (elevation) for water level measurements was thus obtained by a set of three local benchmarks established when the station was installed. The benchmarks generally consist of bright paint marks (and/or chiselled X-marks) on nearby bedrock outcrops or large rocks in the vicinity. Standard Water Survey of Canada (WSC) practice is to use three benchmarks to provide enough cross checks so that relative benchmark movement can be determined. Alternative methods such as driving or drilling steel rods into the ground have generally not been successful in the type of terrain common to the study area.

A staff gauge was established to observe lake water levels and was installed in a location away from the lake outlet channel and outlet drawdown influence. The submersible transducer was affixed to the staff gauge post such that the sensor was in sufficiently deep water to remain submerged should water levels drop in the lake below the lake outlet control elevation. Water depth readings were referenced relative to the established assumed local benchmark datum elevation. The benchmarks should be surveyed each year and the water level elevation established at the start of each open water season.

Monitoring of discharge was accomplished using standard WSC methods, and consisted of measuring the cross-sectional area and water flow velocity of the lake outlet stream channel and calculating a discharge rate, for a range of discharges and water levels over the monitoring season. Monitoring of water flow velocity was taken using Tahera's Swoffer propeller-type current meter initiated by the undersigned and carried on during the course of the 2006 monitoring year by Tahera staff. All discharge measurements were carried out by wading. The discharges measured in 2006 ranged from a high of 4.37 m³/s on May 30, 2006, to a low of 0.28 m³/s on August 28, 2006. Only two measurements were above 1.00 m³/s.

The December 1, 2006 summary memorandum "Jericho Mine Site – Lake C3 Hydrometric Station 2006 Outflow Measurements" by AMEC Earth & Environmental Limited, recommended that additional field discharge measurements be undertaken to capture high flows during the June freshet and to capture the peak flow especially for discharges above 4.40 m³/s and for intermediate flows above 1.00 m³/s.

Summary of 2007 Hydrometric Monitoring

Of the three temporary benchmarks established in May 2006, only TBM1 was not found in the field in June 2007. Subsequently, a new TBM4 was established and benchmark elevations were referenced using TBM3. See Table 1.

The UTM coordinates for the station and benchmarks in NAD27 Zone 12 are listed below:

- Hydrometric Station Tower: 0475259m E, 7320464m N
- TBM2: 0475291m E, 7320478m N
- TBM3: 0475272m E, 7320483m N
- TBM4: 0475276m E, 7320433m N

Table 2 lists the summary of discharge measurements for 2006 and 2007.

Table 1 Survey Summary – Outlet of Lake C3

Date	Bench Mark Survey (m)				Survey WL (m) Relative to TBM1		Survey WL (m) Relative to TBM3		Actual WL (m)
	TBM1	TBM2	TBM3	TBM4	TBM1	WL	TBM3	WL	
27-May-06	10.000	9.866	9.282		10.000	8.830			8.830
29-May-06	10.000	9.867	9.283		10.000	8.862			8.862
15-Jun-07		9.878	9.282	9.679			9.282	8.888	8.888

Table 2 Summary of Discharge Measurements – Outlet of Lake C3

Date	Discharge (m ³ /s)	Direct Water Level (DWL) (m)	Lake Staff Gauge (m)	Datalogger (DL) (m)
27-May-06	3.864	8.830		8.830
28-May-06				8.865
29-May-06		8.862	0.733	8.857
30-May-06	4.371	8.857 E	0.728	8.853
07-Jul-06	0.882	8.609 E	0.480	8.598
14-Jul-06	0.682	8.538 E	0.409	8.528
16-Jul-06	0.679	8.526 E	0.397	8.515
16-Jul-06	0.676	8.538 E	0.409	8.515
18-Jul-06	0.678	8.526 E	0.397	8.500
22-Jul-06	0.459	8.470 E	0.341	8.470
24-Jul-06	0.313	8.461 E	0.332	8.461
26-Jul-06	0.320	8.461 E	0.332	8.451
30-Jul-06	0.371	8.419 E	0.290	NDLR
12-Aug-06	0.399	8.420 E	0.291	8.409
19-Aug-06	0.347	8.400 E	0.271	8.371
28-Aug-06	0.278		NR	8.398
11-Jun-07			0.552	NDLR
12-Jun-07	1.757	8.742 E	0.598	NDLR
13-Jun-07	2.930	8.811 E	0.667	NDLR
14-Jun-07	3.348	8.835 E	0.691	NDLR
15-Jun-07	4.306	8.888	0.744	8.885
16-Jun-07	6.307	8.941 E	0.797	
17-Jun-07	5.969	8.939 E	0.795	
18-Jun-07	5.782	8.915 E	0.771	
19-Jun-07	5.304	8.894 E	0.750	
20-Jun-07	4.592	8.868 E	0.724	
21-Jun-07	3.596	8.848 E	0.704	
22-Jun-07	3.956	8.842 E	0.698	
23-Jun-07	4.035	8.835 E	0.691	
24-Jun-07	3.987	8.840 E	0.696	
02-Jul-07	2.155	8.771 E	0.627	
03-Jul-07	2.731	8.763 E	0.619	
13-Jul-07	0.876	8.615 E	0.471	
23-Jul-07	0.522	8.518 E	0.374	
24-Jul-07	0.519	8.506 E	0.362	

Note: DWL = Direct water level surveyed from bench mark (adjusted for BM movement)
DL = Data logger water level
E = Estimated based on Lake Staff Gauge Readings
NR = Not Recorded in Field Notes
NDLR = No Data Logger Records

Both the lake staff gauge and outlet channel staff gauge were typically recorded in field notes during manual discharge measurements. It should be noted that the relationship between the two sets of values will not be linear.

Two discharge measurements from 2006 (May 27 & 30) were corrected from previously reported values to account for angular flow that was not incorporated in previous computations. The change resulted in lower discharge values for those 2 days. Discharge measurements taken by Tahera staff were also corrected for calculation errors resulting in lower discharge values.

The resulting rating curves (normal and low water curves) are attached based on 2006 and 2007 measurements. The rating curves are only applicable during open water conditions when the lake outlet control is not ice affected. Ice, in the form of anchor ice on the shore or on the bed of the lake outlet control, will be an obstruction to flow and will cause backwater at the lake outlet control. The relative effect of ice on the stage-discharge rating is largely unpredictable. In addition, changes to the outlet channel may occur year over year that affect the rating relationship. Changes such as aquatic vegetation growth, gradual boulder movement by anchor ice lifting, or other artificial changes or structures at the outlet control will change the stage-discharge rating relationship. The rating curve should be periodically checked by manual measurements.

The water level elevation in the rating curve is expressed relative to the established temporary benchmarks. An equivalent rating curve can be expressed relative to the lake staff gauge readings but as the staff gauge may shift from year to year due to ice action, new curves would be required at the start of each year once the staff gauge zero elevation has been surveyed.

At the time that the submersible transducer is mobilized and installed at the station at the start of each open water season before the freshet, the water level must be surveyed off the benchmarks and the offset in the datalogger program revised to allow water depth to be converted to water level elevation in the readings.

In addition to storing the submersible transducer inside over the freezing months, the rechargeable batteries in the hydrometric station and the repeater station must also be disconnected and stored in a warm dry location to prevent damage.

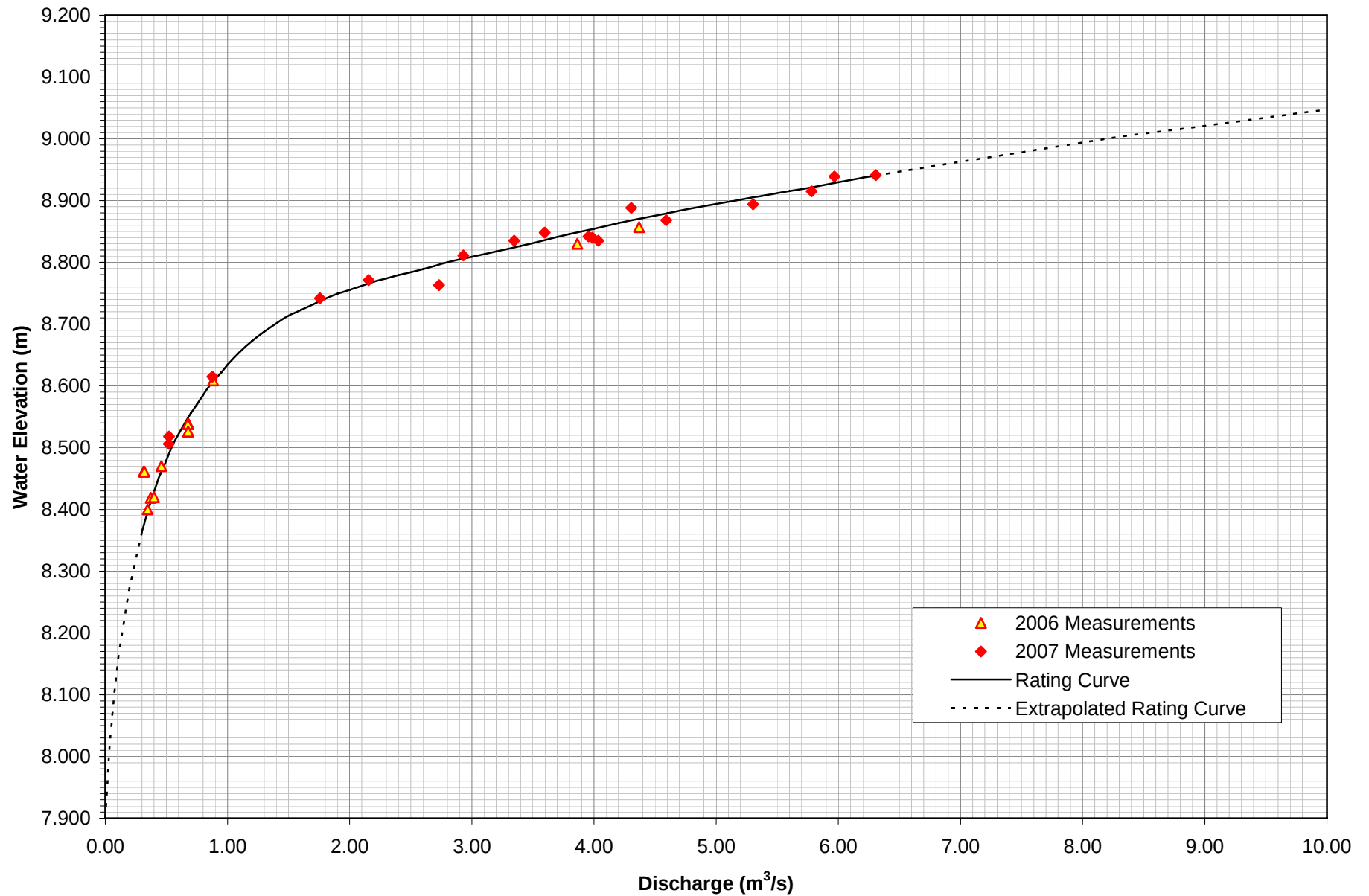
A suggested field measurement entry form is attached for use by Tahara staff. A blank Excel version is included. Also attached, is a CD that includes the digital data.

Yours truly,
Dillon Consulting Limited

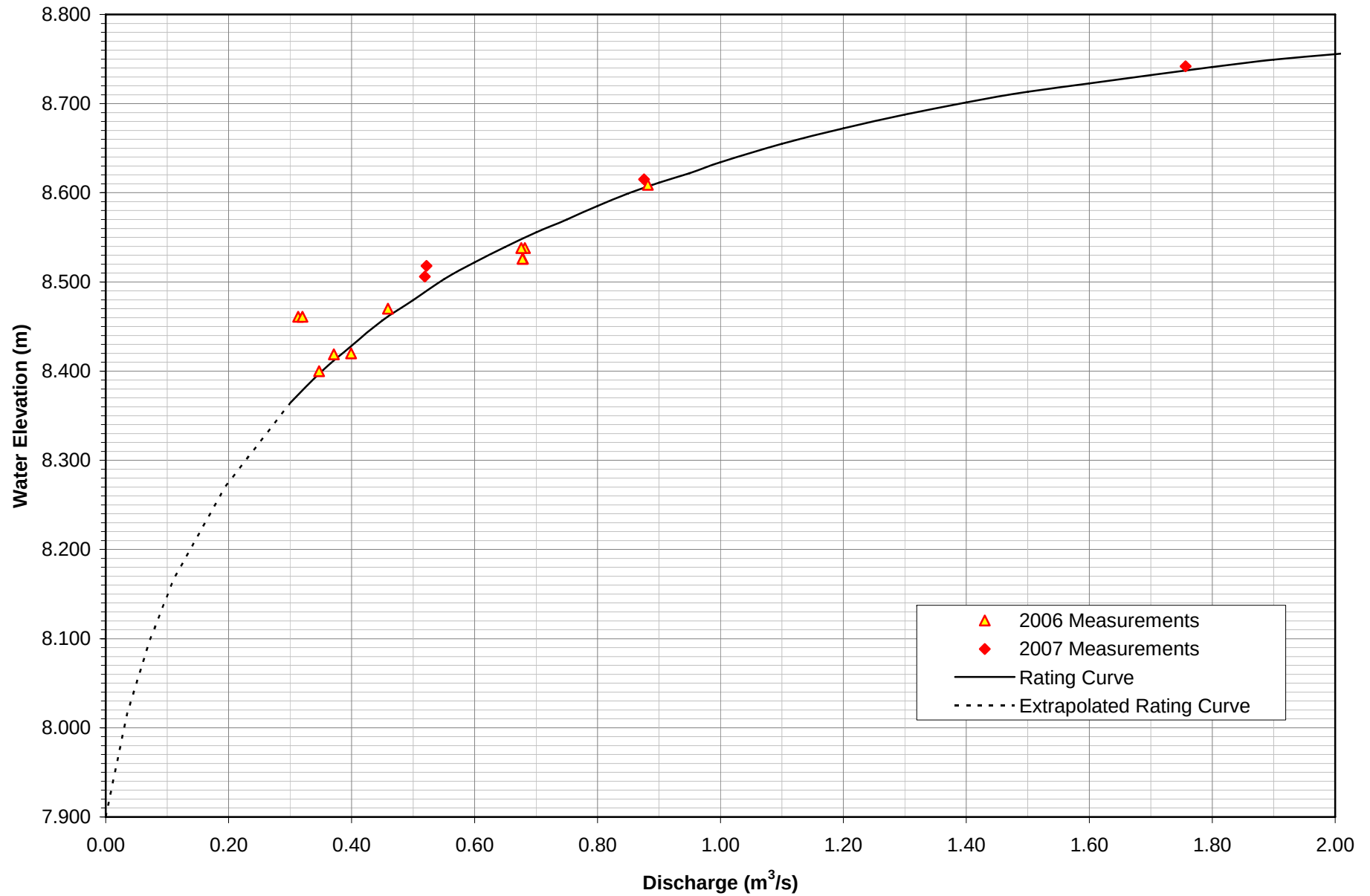
Andrew M.C. Chan, M.Sc., P.Eng.
Senior Water Resources Engineer

Attachments: - Lake C3 Rating Curve
 - Lake C3 Rating Curve – Low Water Curve
 - Blank streamflow measurement form
 - CD of digital data

Lake C3 Outlet
2007 Rating Curve



Lake C3 Outlet
2007 Rating Curve - Low Water Curve





Stream Flow Monitoring Data Sheet

Location:	Lake C3 outlet		
Date (DD/MM/YY):	19-Aug-06		
Start Time (24 hour MST):	15:36		
End Time (24 hour MST):			
Crew:	J. Handy / B. Simpson		
Meter:	Swoffer		
Weather: Clouds (in 10 th)	3/10	Precipitation (Y/N)	N
Snowpatches visible (Y/N)	N	Air Temp (°C)	4.0
Ice at Outlet (Y/N)	N	Water Temp (°C)	1.5

Staff Gauge Reading(s) (m):	in Channel:	0.010	Lake:	0.271
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[illegible]

Calculated Values				
Panel Width (W) (m)	Area (A) (=WxD) (m ²)	Velocity Correction Factor	Mean Velocity (m/s)	Discharge (Q) (=AxV) (m ³ /s)
0.2				
0.7	0.00	1	0.10	0.000
1	0.22	1	0.05	0.011
1	0.11	1	0.14	0.015
1	0.52	1	0.12	0.062
1	0.63	1	0.04	0.025
1	0.63	1	0.19	0.120
1	0.18	1	0.22	0.040
1	0.26	1	0.17	0.044
1	0.22	1	0.02	0.004
1	0.13	1	0.09	0.012
1	0.15	1	0.00	0.000
1	0.11	1	0.01	0.001
1	0.13	1	0.05	0.007
1	0.09	1	0.00	0.000
1	0.10	1	0.04	0.004
1	0.05	1	0.02	0.001
1	0.07	1	0.00	0.000
1	0.10	1	0.00	0.000
0.85	0.02	1	0.00	0.000
0.35				
19.1	3.7191			0.347

APPENDIX C

Acute Toxicity Test Results

Result Summary

Client: TAH102
 Reference: 07-0761-01-TRS

Client: Tahera Diamond Corporation; operation Yellowknife

Sample: PKCTox-14 May 07

Collection: collected on 2007/05/14 at 0900 by B.O.

Receipt: received on 2007/05/16 at 1328 by J. Abcede

Containers: received 1 x 20L pail at 19 °C, in good condition with no seals and no initials

Description: type: water, collection method: grab

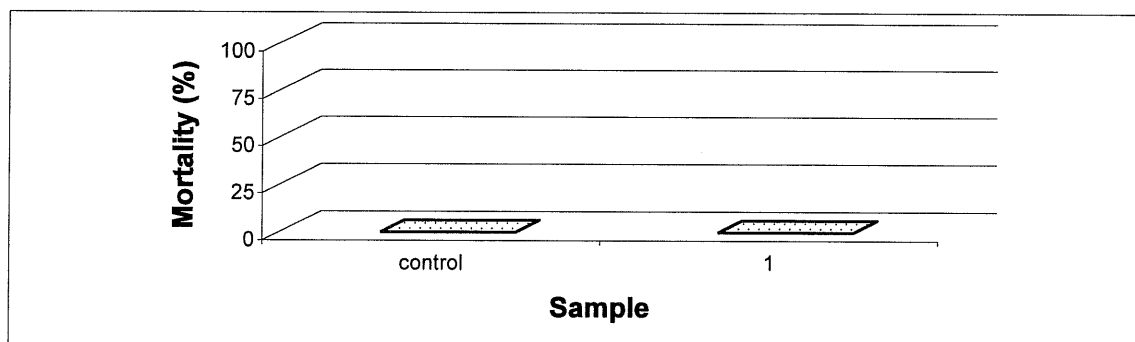
Test: started on 2007/05/17 ; ended on 2007/05/21

Result:

Contents

Result Summary.....	1
Test Conditions.....	2
Test Data.....	3
Comments/Statistics..	5
QA/QC.....	6

Sample	Client Code	Mortality (%)	Comment
control	lab control	0	
1	PKCTox-14 May 07	0	not toxic as tested



K. Steele as per
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-0761-01-TRS

Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 2000. Environment Canada, EPS 1/RM/13. Second Edition.

Test type: Trout 96-h Static Acute Test (HQ 4.4.4.1)

Species: *Oncorhynchus mykiss*

Organism source: Spring Valley Trout Farms (Batch 20070411TR)

Acclimation: 36 days

Stock mortality: 1.4% (seven days preceeding testing)

Sample initial chemistry: pH: 7.7; EC: 223 (µS/cm); DO: 7.5 (mg/L); temperature: 21 °C
hardness (mg CaCO₃/L): 57; colour: colourless; odour: organic/ chemical

Sample holding time: 3 days (must be ≤ 5 days)

Sample storage: 4 ± 2°C in darkness

Test vessel: The test was conducted in 22 L plastic pails with polyethylene liners

Test volume: 18.5 Litres (depth of solution in each test vessel ≥15cm)

Sample pre-treatment: All test solutions and controls were pre-aerated for 30 minutes
Dissolved oxygen in full strength sample was 8.7 mg/L after pre-aeration
The sample was not filtered or pH adjusted prior to or during testing

Loading density: 0.31g/Litre (must be ≤ 0.5 g/Litre)

Control water: Dechlorinated City of Calgary water acclimated to test conditions

Test concentrations: Undiluted sample plus a negative control

Test replicates: One replicate per treatment; 10 fish per replicate

Feeding: Fish are not fed 24 hours before test initiation and no feeding during test

Measurements: pH, conductivity, dissolved oxygen and temperature measured daily

Aeration: All treatments aerated at 6.5 ±1 mL/min/L by oil-free compressed air
passed through disposable glass pipettes

Lighting: Overhead full spectrum fluorescent lights; 100-500 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: 15 ± 1°C

Endpoint: Mortality, % mortality at 96-h

Test validity: The control had 100% survival (must ≥ 90%)

Reference toxicant: 96-h test with Phenol (C₆H₅OH) initiated May 3, 2007; current results
(96-h LC₅₀ and 95% confidence limits) = 1.00 (0.94-1.06) log (mg/L Phenol)

Note: Outlined sections are protocol deviations explained on the comment page; v/v, volume per volume

Test Data

Client: TAH102
Reference: 07-0761-01-TRS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/05/17	0	1145	J. Lantz/S. Ford	test fish loaded at 1145 h
2007/05/18	1	1040	J. Lantz/S. Ford	all test fish appear normal
2007/05/19	2	1100	S. Krishnappa/L. Henson	all test fish appear normal
2007/05/20	3	1230	B. Denny/C.A. Martens	all test fish appear normal
2007/05/21	4	1130	J. Lantz/S. Ford	all test fish appear normal

Chemistry:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

pH (units)

0	8.2	8.0						
1	8.3	8.4						
2	8.3	8.1						
3	8.4	8.0						
4	7.9	7.6						

Conductivity (µS/cm)

0	343	190						
1	340	206						
2	405	238						
3	379	220						
4	405	239						

Dissolved Oxygen (mg/L)

0	8.8	8.7						
1	9.4	9.4						
2	9.0	9.1						
3	8.6	8.5						
4	9.2	9.3						

Temperature (°C)

0	15	15						
1	15	15						
2	15	15						
3	15	15						
4	15	15						

Test Data

Client: TAH102
Reference: 07-0761-01-TRS

Number Alive:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

0	10	10						
1	10	10						
2	10	10						
3	10	10						
4	10	10						

Mortality (%)

4	0	0						
---	---	---	--	--	--	--	--	--

Biology Summary Tables:

Control Fish	Length (cm)	Wet Weight(g)
1	3.6	0.5
2	3.8	0.5
3	4.2	0.7
4	3.9	0.6
5	3.8	0.5
6	4.2	0.7
7	3.6	0.5
8	3.5	0.4
9	4.2	0.7
10	4.1	0.6

Sample	Group Wet Weight (g)
control	5.7
1	5.5

average	3.9	0.6
sd	0.3	0.1
cv(%)	7.0	18.6

Notes: nd, not done; na, not applicable;
 sd, standard deviation; cv(%), coefficient
 of variation

Comments/Statistics

Client: TAH102 Reference: 07-0761-01-TRS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Test Method: Trout 96h Static Acute Test. (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.4.1

Reference: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 1990. Environment Canada, EPS 1/RM/13. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Oncorhynchus mykiss*
 culture source: Spring Valley Trout Farms
 temperature (°C): 15 ± 1
 dissolved oxygen: saturated
 stock mortality (last 7d): 0.3%
 batch number: 20070411TR

Test Design:

vol. of test vessel (L): 22
 test volume depth: >15 cm
 replicates per treatment: 1
 fingerlings per replicate: 10
 loading (g fish/L): <0.5
 temperature (°C): 15 ± 1
 photoperiod: 16h light: 8h dark
 light level (water surface): 100-500 lux
 control/dilution water: dechlorinated tap water

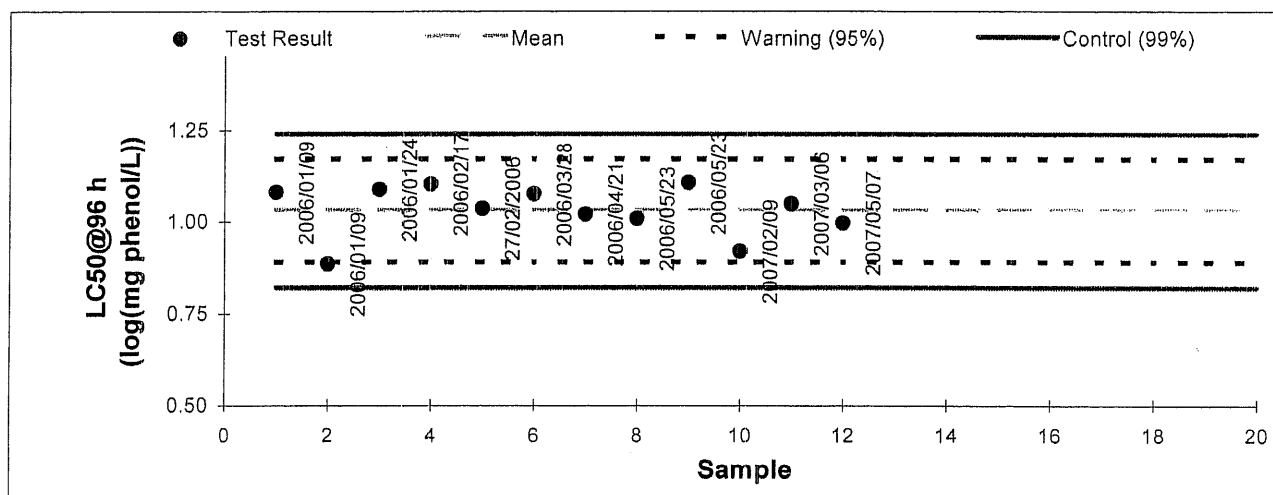
Current Test

toxicant phenol (C₆H₅OH)
 started on 2007/05/03 ended on 2007/05/07
 Result (LC50 @ 96h) 1.00 log (mg phenol/L); geometric mean
 Confidence Limits (95%) lower 0.94 upper 1.06

Historical Values

	mean	sd	cv(%)
	1.03	0.07	7
	lower	upper	
warning limits (±2 sd)	0.89	1.17	(95% confidence limits)
control limits (±3 sd)	0.82	1.24	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:

G. Diaz 2007/05/09
 Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Result Summary

Client: Tahera Diamond Corporation; operation
Yellowknife

Sample: PKCTox-14 May 07

Collection: collected on 2007/05/14 at 0900 by B.O.

Receipt: received on 2007/05/16 at 1328 by J. Abcede

Containers: received 1 x 20L pail at 19 °C, in good condition
with no seals and no initials

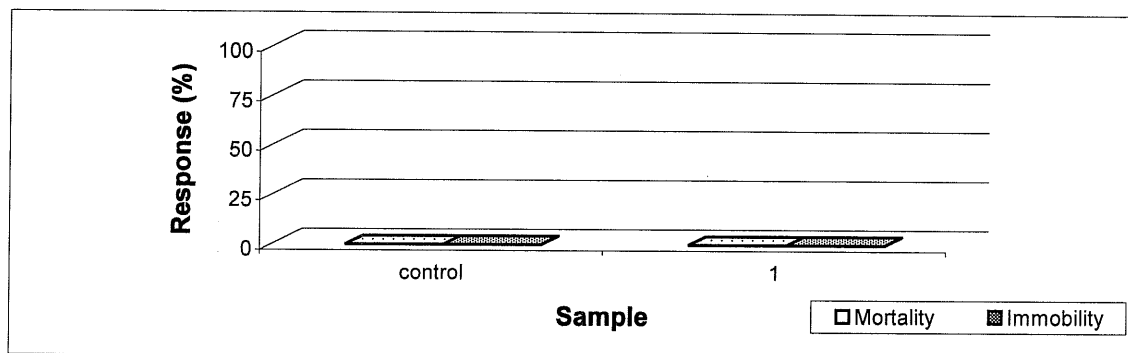
Description: type: water, collection method: grab

Test: started on 2007/05/17 ; ended on 2007/05/19

Result:

Sample	Client Code	Mortality (%)	Average Immobility (%)	Comment
control	lab control	0	0	
1	PKCTox-14 May 07	0	0	not toxic as tested

Notes: sd, sample standard deviation; cv, coefficient of variation; nd, not done; na, not applicable;



Giovanna D. Steel as per
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-0761-01-DAS

Method: Biological Test method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*, 2000. Environ. Can., EPS 1/RM/14. Second Edition.

Test type: *Daphnia* 48-h Static Acute Test (HQ 4.4.3.1)

Species: *Daphnia magna*

Age: < 24 hours old

Organism source: in-house culture

Stock mortality: 0%

Culture brood data: 11 days to first brood
23 neonates per average brood

Sample initial chemistry: pH: 7.7; EC: 223 ($\mu\text{S}/\text{cm}$); DO: 7.5 (mg/L); temperature: 21 °C
hardness (mg CaCO_3/L): 57; colour: colourless; odour: organic/ chemical

Sample holding time: 3 days (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: 385 mL plastic vessels

Test volume: 150 mL

Sample pre-treatment: The sample was not filtered or pH adjusted prior to or during testing
The sample was pre-aerated for 0 minutes (rate of $37.5 \pm 12.5 \text{ mL}/\text{min} \cdot \text{L}^{-1}$)
The hardness of the sample was not adjusted (mg CaCO_3/L) prior to or during testing

Loading density: One daphnid/15 mL (must ≤ 1 organism/15 mL)

Control water: Dechlorinated City of Calgary water acclimated to test conditions
The hardness of the control/dilution water was 193 mg CaCO_3/L

Test concentrations: Undiluted sample plus a negative control

Test replicates: Three replicates per treatment, 10 daphnids per replicate

Feeding: None

Aeration: None

Measurements: pH, conductivity, dissolved oxygen and temperature at test initiation and termination

Lighting: Overhead full spectrum fluorescent lights; 400-800 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $20 \pm 2^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-0761-01-DAS

Endpoint: Mortality, % mortality at 48-h
Immobility, % immobility at 48-h

Test validity: The control had 100% survival (must $\geq 90\%$)
Control had 0% abnormal behaviour (must $< 10\%$), e.g. immobility

Reference toxicant: 48-h test with NaCl initiated May 15, 2007; current results
(48-h LC50 and 95% confidence limits) = 0.83 (0.81-0.85) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

 Client: TAH102
 Reference: 07-0761-01-DAS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/05/17	0	1235	S. Krishnappa	test <i>Daphnia</i> appear normal
2007/05/18	1	1010	M. Luong	test <i>Daphnia</i> appear normal
2007/05/19	2	1210	C.A. Martens	test <i>Daphnia</i> appear normal

Chemistry:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	pH (units)					
0	8.3	8.3	8.3	7.8	7.8	7.8
2	8.1	8.2	8.2	7.6	7.5	7.5

	Conductivity ($\mu\text{S}/\text{cm}$)					
0	398	398	398	229	229	229
2	475	453	459	278	275	270

	Dissolved Oxygen (mg/L)					
0	8.3	8.3	8.3	8.3	8.3	8.3
2	8.5	8.5	8.5	8.5	8.3	8.4

	Temperature ($^{\circ}\text{C}$)					
0	20	20	20	20	20	20
2	20	21	21	21	21	21

Biology:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	Number Alive and Behavior (behavior is in brackets)					
1	10	10	11	10	10	10
2	10	10	11	10	10	10

Notes: F, floating; I, immobile; B, stuck on bubble; D, caught in debris

	Mortality (%)					
2	0	0	0	0	0	0

	Immobility (%)					
2	0	0	0	0	0	0

Comments/Statistics

Client: TAH102 Reference: 07-0761-01-DAS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

The test vessel control replicate c was loaded with 11 daphnids at test initiation.

Quality Assurance Information

Test Method: *Daphnia* Static Acute Test (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.3.1

Reference: Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to *Daphnia magna*, 1990. Environment Canada, EPS 1/RM/14. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Daphnia magna*
 culture source: in-house
 original culture source: Environment Canada
 days to first brood: 11
 mean brood size: 23
 ephippia in stock culture: no
 age of test organisms: <24 hours old
 culture mortality (%): 0%

Test Design:

vol. of test vessel (mL): 500
 toxicant: sodium chloride
 test volume (mL): 150
 replicates per treatment: 1
 neonates per replicate: 10
 volume per neonate (mL): 15
 samples preaerated: no
 hardness adjustment: no
 temperature (°C): 20
 photoperiod: 16h light:8h dark
 light level (water surface): 400-800 lux
 control/dilution water: dechlorinated tap water

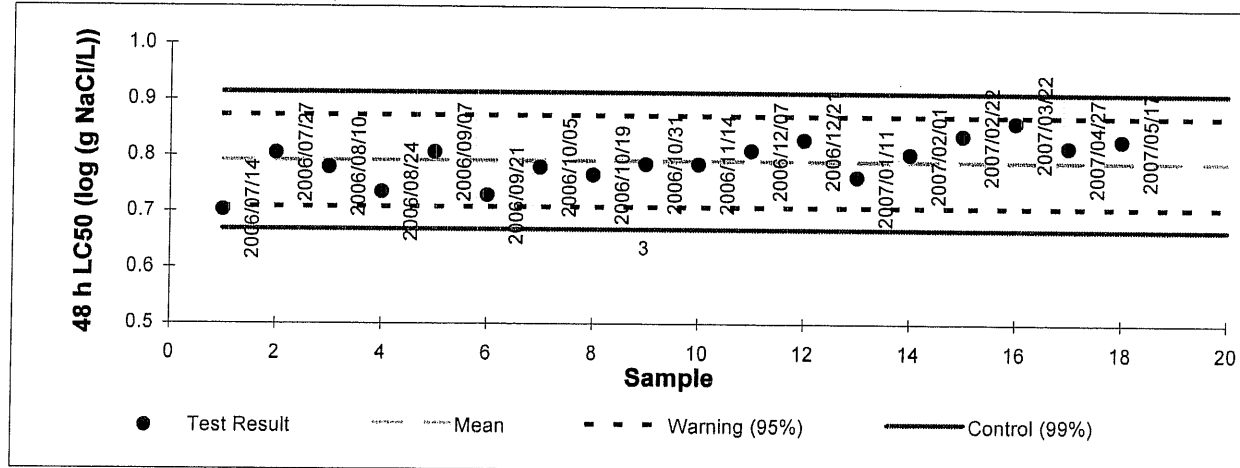
Current Test

toxicant Sodium Chloride (NaCl)
 started on 2007/05/15 ended on 2007/05/17
 Result (LC50 @ 48h) 0.83 log (g NaCl/L); geometric mean
 Confidence Limits (95%) lower 0.81 upper 0.85

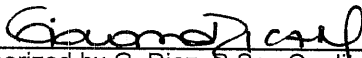
Historical Values

	mean	sd	cv(%)
	0.79	0.04	5
warning limits (± 2 sd)	0.71	0.87	(95% confidence limits)
control limits (± 3 sd)	0.67	0.91	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:



Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Result Summary

Client: TAH102
 Reference: 07-1068-01-TRS

Client: Tahera Diamond Corporation; operation Yellowknife

Sample: JER-WQ2

Collection: collected on 2007/06/25 at 0900 by C. Wray

Receipt: received on 2007/06/26 at 1325 by J. Abcede

Containers: received 1 x 20L pail at 12 °C, in good condition with
 no seals and no initials

Description: type: water, collection method: grab

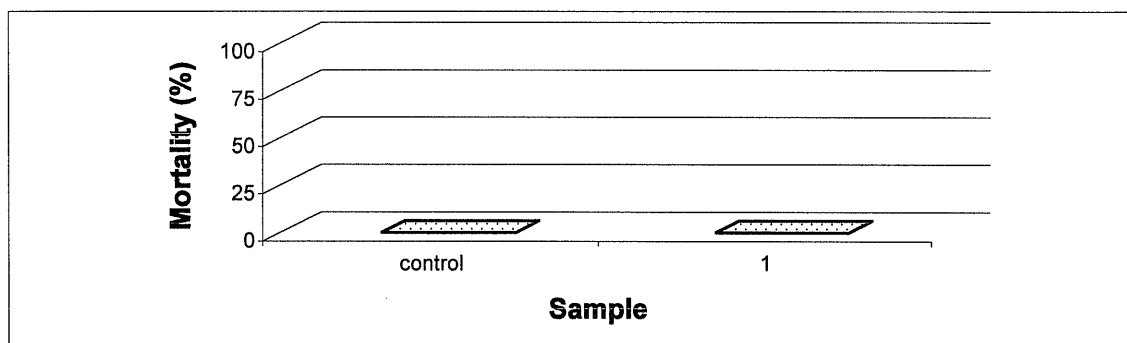
Test: started on 2007/06/28 ; ended on 2007/07/02

Result:

Contents

Result Summary.....	1
Test Conditions.....	2
Test Data.....	3
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QA/QC.....	6

Sample	Client Code	Mortality (%)	Comment
control	lab control	0	
1	JER-WQ2	0	not toxic as tested



K. Steele
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-1068-01-TRS

Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 2000. Environment Canada, EPS 1/RM/13. Second Edition.

Test type: Trout 96-h Static Acute Test (HQ 4.4.4.1)

Species: *Oncorhynchus mykiss*

Organism source: Sun Valley Trout Farms (Batch 20070626TR)

Acclimation: 2 days (must be ≥ 2 weeks)

Stock mortality: 0.25% (seven days preceeding testing)

Sample initial chemistry: pH: 7.6; EC: 281 ($\mu\text{S}/\text{cm}$); DO: 8.3 (mg/L); temperature: 17 °C
hardness (mg CaCO_3/L): 56; colour: colourless; odour: odourless

Sample holding time: 3 days (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: The test was conducted in 22 L plastic pails with polyethylene liners

Test volume: 17 Litres (depth of solution in each test vessel $\geq 15\text{cm}$)

Sample pre-treatment: All test solutions and controls were pre-aerated for 30 minutes
Dissolved oxygen in full strength sample was 8.8 mg/L after pre-aeration
The sample was not filtered or pH adjusted prior to or during testing

Loading density: 0.24 g/Litre (must be ≤ 0.5 g/Litre)

Control water: Dechlorinated City of Calgary water acclimated to test conditions

Test concentrations: Undiluted sample plus a negative control

Test replicates: One replicate per treatment; 10 fish per replicate

Feeding: Fish are not fed 24 hours before test initiation and no feeding during test

Measurements: pH, conductivity, dissolved oxygen and temperature measured daily

Aeration: All treatments aerated at 6.5 ± 1 mL/min/L by oil-free compressed air
passed through disposable glass pipettes

Lighting: Overhead full spectrum fluorescent lights; 100-500 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $15 \pm 1^\circ\text{C}$

Endpoint: Mortality, % mortality at 96-h

Test validity: The control had 100% survival (must $\geq 90\%$)

Reference toxicant: 96-h test with Phenol ($\text{C}_6\text{H}_5\text{OH}$) initiated June 29, 2007; current results
(96-h LC50 and 95% confidence limits) = 1.13 (1.10-1.16) log (mg/L Phenol)

Note: Outlined sections are protocol deviations explained on the comment page; v/v, volume per volume

Trout (single concentration) Test Report

Test Data

Client: TAH102 Reference: 07-1068-01-TRS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/06/28	0	1000	S. Krishnappa/J. Lantz	test fish loaded at 1000 h
2007/06/29	1	1045	S. Krishnappa/J. Lantz	all test fish appear normal
2007/06/30	2	0945	S. Krishnappa/J. Lantz	all test fish appear normal
2007/07/01	3	1100	J. Lantz/C.A. Martens	all test fish appear normal
2007/07/02	4	1040	J. Lantz/C.A. Martens	all test fish appear normal

Chemistry:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

pH (units)

0	7.6	7.7						
1	7.8	7.8						
2	7.8	7.9						
3	8.0	8.0						
4	7.7	7.6						

Conductivity (µS/cm)

0	378	211						
1	372	190						
2	370	211						
3	368	191						
4	373	189						

Dissolved Oxygen (mg/L)

0	8.8	8.8						
1	8.7	8.8						
2	8.4	8.5						
3	8.3	8.6						
4	8.6	8.8						

Temperature (°C)

0	15	15						
1	16	15						
2	15	15						
3	14	14						
4	14	14						

Trout (single concentration)

Test Report

Test Data

Client: TAH102
Reference: 07-1068-01-TRS

Number Alive:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

0	10	10						
1	10	10						
2	10	10						
3	10	10						
4	10	10						

Mortality (%)

4	0	0						
---	---	---	--	--	--	--	--	--

Biology Summary Tables:

Control Fish	Length (cm)	Wet Weight(g)
1	3.6	0.4
2	3.7	0.4
3	4.0	0.5
4	3.9	0.5
5	3.7	0.3
6	3.3	0.3
7	4.1	0.6
8	3.6	0.4
9	3.8	0.4
10	3.7	0.4

Sample	Group Wet Weight (g)
control	4.2
1	4.8

average	3.7	0.4
sd	0.2	0.1
cv(%)	6.1	21.9

Notes: nd, not done; na, not applicable;
 sd, standard deviation; cv(%), coefficient
 of variation

Comments/Statistics

Client: TAH102 Reference: 07-1068-01-TRS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

The fish were held less than 14 days prior to test initiation

Test Method: Trout 96h Static Acute Test. (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.4.1

Reference: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 1990. Environment Canada, EPS 1/RM/13. including May 1996 and December 2000 amendments.

Test Organism:

test species:
 culture source: Sun Valley Trout Farms
 temperature (°C): 15 ± 1
 dissolved oxygen: saturated
 stock mortality (last 7d): 0.2%
 batch number: 20070626TR

Test Design:

vol. of test vessel (L): 22
 test volume depth: >15 cm
 replicates per treatment: 1
 fingerlings per replicate: 10
 loading (g fish/L): <0.5
 temperature (°C): 15 ± 1
 photoperiod: 16h light: 8h dark
 light level (water surface): 100-500 lux
 control/dilution water: dechlorinated tap water

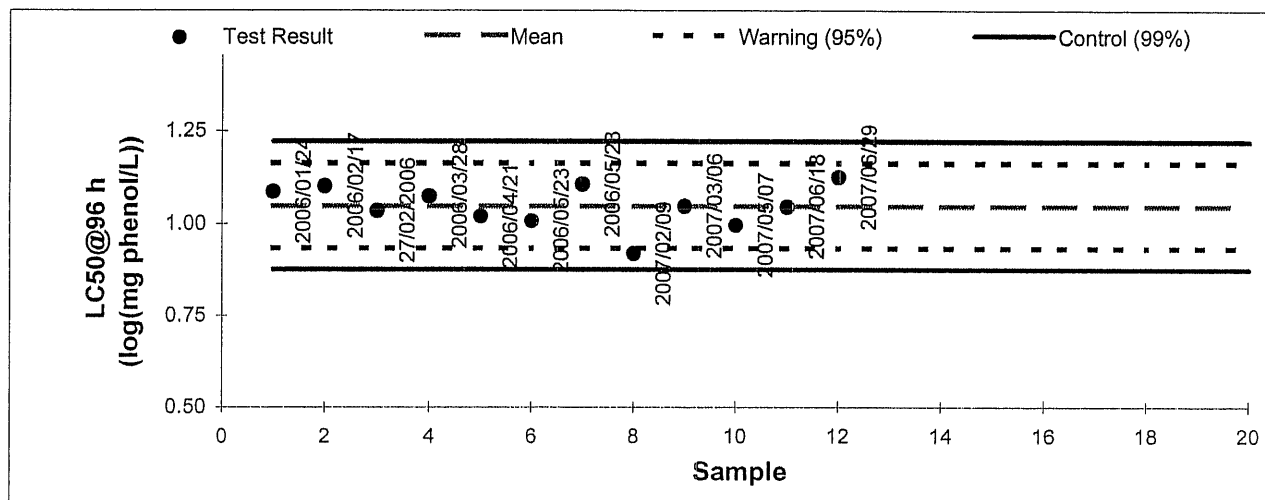
Current Test

toxicant phenol (C ₆ H ₅ OH)		started on 2007/06/29		ended on 2007/07/03	
Result (LC50 @ 96h)	1.13	log (mg phenol/L); geometric mean			
Confidence Limits (95%)	lower	1.10	upper	1.16	

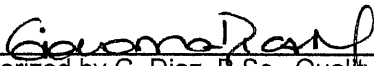
Historical Values

mean	1.05	sd	0.06	cv(%)	5
	lower	upper			
warning limits (±2 sd)	0.93	1.16	(95% confidence limits)		
control limits (±3 sd)	0.88	1.22	(99% confidence limits)		

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:


 Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Result Summary

Client: TAH102
 Reference: 07-1068-01-DAS

Client: Tahera Diamond Corporation; operation
 Yellowknife

Sample: JER-WQ2

Collection: collected on 2007/06/25 at 0900 by C. Wray

Receipt: received on 2007/06/26 at 1325 by J. Abcede

Containers: received 1 x 20L pail at 12 °C, in good condition
 with no seals and no initials

Description: type: water, collection method: grab

Test: started on 2007/06/26 ; ended on 2007/06/28

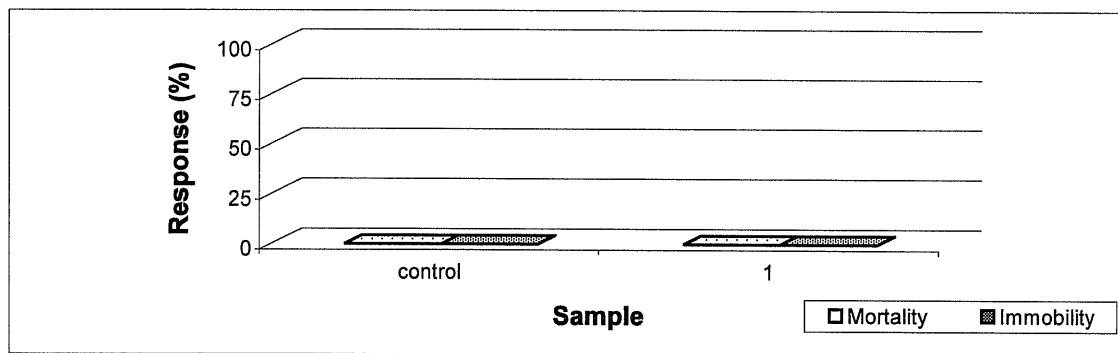
Contents

Result Summary.....	1
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Comments/Statistics..	5
QA/QC.....	6

Result:

Sample	Client Code	Average Mortality (%)	Average Immobility (%)	Comment
control	lab control	0	0	
1	JER-WQ2	0	0	not toxic as tested

Notes: sd, sample standard deviation; cv, coefficient of variation; nd, not done; na, not applicable;




 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-1068-01-DAS

Method: Biological Test method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*, 2000. Environ. Can., EPS 1/RM/14. Second Edition.

Test type: *Daphnia* 48-h Static Acute Test (HQ 4.4.3.1)

Species: *Daphnia magna*

Age: < 24 hours old

Organism source: in-house culture

Stock mortality: 0% (must be $\leq 25\%$)

Culture brood data: 12 days to first brood (must be ≤ 12 days)
25 neonates per average brood (must be ≥ 15 young)

Sample initial chemistry: pH: 7.6; EC: 281 ($\mu\text{S}/\text{cm}$); DO: 8.3 (mg/L); temperature: 17 °C
hardness ($\text{mg CaCO}_3/\text{L}$): 56; colour: colourless; odour: odourless

Sample holding time: 1 day (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: 385 mL plastic vessels

Test volume: 150 mL

Sample pre-treatment: The sample was not filtered or pH adjusted prior to or during testing
The sample was pre-aerated for 0 minutes (rate of $37.5 \pm 12.5 \text{ mL}/\text{min} \cdot \text{L}^{-1}$)
The hardness of the sample was not adjusted ($\text{mg CaCO}_3/\text{L}$) prior to or during testing

Loading density: One daphnid/15 mL (must ≤ 1 organism/15 mL)

Control water: Dechlorinated City of Calgary water acclimated to test conditions
The hardness of the control/dilution water was 162 $\text{mg CaCO}_3/\text{L}$

Test concentrations: Undiluted sample plus a negative control

Test replicates: Three replicates per treatment, 10 daphnids per replicate

Feeding: None

Aeration: None

Measurements: pH, conductivity, dissolved oxygen and temperature at test initiation and termination

Lighting: Overhead full spectrum fluorescent lights; 400-800 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $20 \pm 2^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-1068-01-DAS

Endpoint: Mortality, percent (%) mortality at 48-h
Immobility, percent (%) immobility at 48-h

Test validity: The control had 100% survival (must $\geq 90\%$)
Control had 0 percent (%) abnormal behaviour (must $< 10\%$, e.g. immobility)

Reference toxicant: 48-h test with NaCl initiated June 12, 2007; current results
(48-h LC50 and 95% confidence limits) = 0.76 (0.73-0.80) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

Client: TAH102
Reference: 07-1068-01-DAS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/06/26	0	1615	M. Luong	test <i>Daphnia</i> appear normal
2007/06/27	1	1535	L. Henson	test <i>Daphnia</i> appear normal
2007/06/28	2	1530	A. Calvert/J. Lantz	test <i>Daphnia</i> appear normal

Chemistry:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	pH (units)					
0	7.9	7.9	7.9	7.9	7.9	7.9
2	7.9	7.9	7.8	7.8	7.7	7.7

	Conductivity (µS/cm)					
0	372	372	372	231	231	231
2	415	394	395	235	226	224

	Dissolved Oxygen (mg/L)					
0	8.2	8.2	8.2	8.3	8.3	8.3
2	7.9	8.2	8.2	8.3	8.3	8.3

	Temperature (°C)					
0	19	19	19	20	20	20
2	22	22	22	22	22	22

Biology:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	Number Alive and Behavior (behavior is in brackets)					
1	10	10	10	10	10	10
2	10	10	10	10	10	10

Notes: F, floating; I, immobile; B, stuck on bubble; D, caught in debris

	Mortality (%)					
2	0	0	0	0	0	0

	Immobility (%)					
2	0	0	0	0	0	0

Comments/Statistics

Client: TAH102 Reference: 07-1068-01-DAS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Quality Assurance Information

Test Method: *Daphnia* Static Acute Test (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.3.1

Reference: Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to *Daphnia magna*, 1990. Environment Canada, EPS 1/RM/14. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Daphnia magna*
 culture source: in-house
 original culture source: Environment Canada
 days to first brood: 12
 mean brood size: 25
 ephippia in stock culture: no
 age of test organisms: <24 hours old
 culture mortality (%): 0%

Test Design:

vol. of test vessel (mL): 500
 toxicant: sodium chloride
 test volume (mL): 150
 replicates per treatment: 1
 neonates per replicate: 10
 volume per neonate (mL): 15
 samples preared: no
 hardness adjustment: no
 temperature (°C): 20
 photoperiod: 16h light:8h dark
 light level (water surface): 400-800 lux
 control/dilution water: dechlorinated tap water

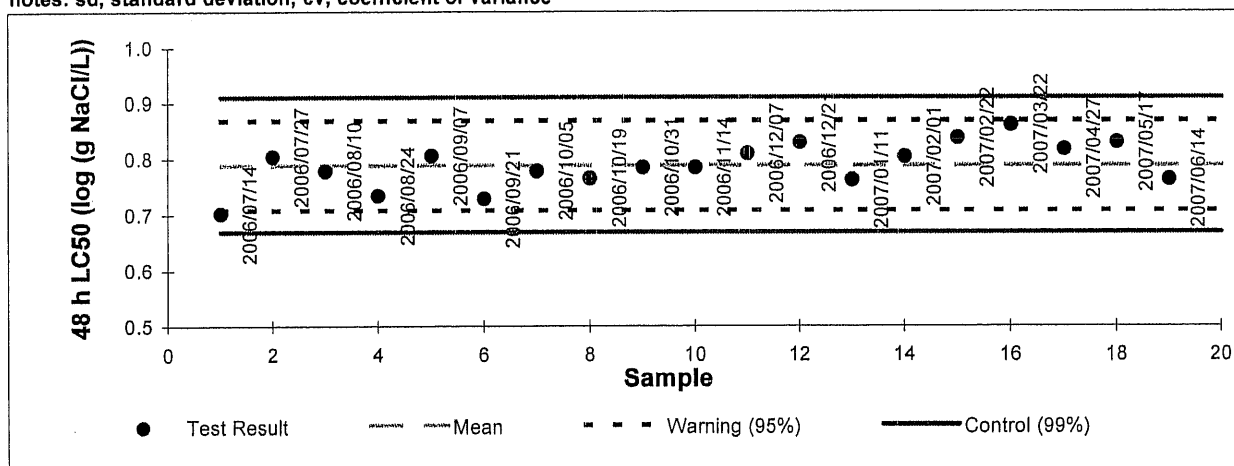
Current Test

toxicant Sodium Chloride (NaCl)
 started on 2007/06/12 ended on 2007/06/14
 Result (LC50 @ 48h) 0.76 log (g NaCl/L); geometric mean
 Confidence Limits (95%) lower 0.73 upper 0.80

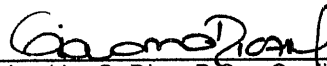
Historical Values

	mean	sd	lower	upper	cv(%)
	0.79	0.04			5
warning limits (± 2 sd)	0.71	0.87	(95% confidence limits)		
control limits (± 3 sd)	0.67	0.91	(99% confidence limits)		

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:


 Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Result Summary

Client: TAH102
 Reference: 07-1292-01-TRS

Client: Tahera Diamond Corporation; operation Jericho

Sample: JER-WQ2

Collection: collected on 2007/07/18 at 0930 by M. Wasuita

Receipt: received on 2007/07/19 at 1500 by J.Abcde

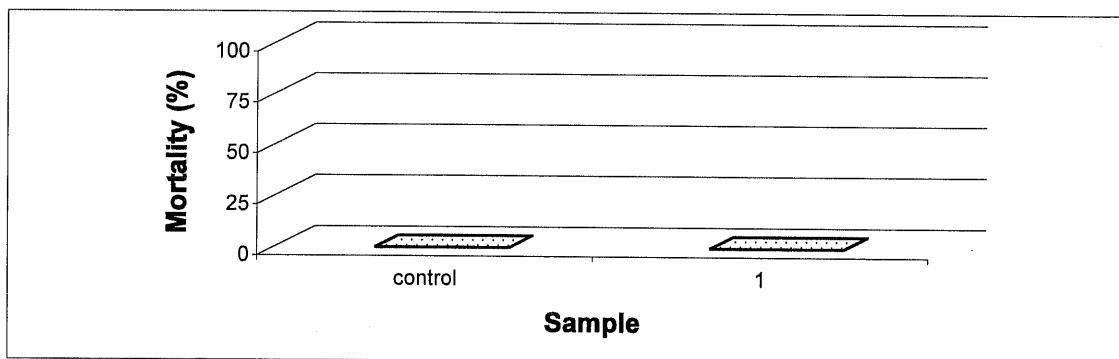
Containers: received 1 x 20L pail at 21 °C, in good condition with no seals and no initials

Description: type: Effluent, collection method: Grab

Test: started on 2007/07/20 ; ended on 2007/07/24

Result:

Sample	Client Code	Mortality (%)	Comment
control	lab control	0	
1	JER-WQ2	0	none



K. Steele For
 Authorized by K.Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-1292-01-TRS

Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 2000. Environment Canada, EPS 1/RM/13. Second Edition.

Test type: Trout 96-h Static Acute Test (HQ 4.4.4.1)

Species: *Oncorhynchus mykiss*

Organism source: Rainbow Springs Trout Farms (Batch 20070627TR)

Acclimation: 23 days (must be ≥ 2 weeks)

Stock mortality: 1.3% (seven days preceeding testing)

Sample initial chemistry: pH: 8.1; EC: 244 ($\mu\text{S}/\text{cm}$); DO: 7.7 (mg/L); temperature: 21 °C
hardness (mg CaCO_3/L): 52; colour: colourless; odour: odourless

Sample holding time: 2 days (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: The test was conducted in 22 L plastic pails with polyethylene liners

Test volume: 19 Litres (depth of solution in each test vessel $\geq 15\text{cm}$)

Sample pre-treatment: All test solutions and controls were pre-aerated for 30 minutes
Dissolved oxygen in full strength sample was 8.8 mg/L after pre-aeration
The sample was not filtered or pH adjusted prior to or during testing

Loading density: 0.225 g/Litre (must be ≤ 0.5 g/Litre)"

Control water: Dechlorinated City of Calgary water acclimated to test conditions

Test concentrations: Undiluted sample plus a negative control

Test replicates: One replicate per treatment; 10 fish per replicate

Feeding: Fish are not fed 24 hours before test initiation and no feeding during test

Measurements: pH, conductivity, dissolved oxygen and temperature measured daily

Aeration: All treatments aerated at 6.5 ± 1 mL/min/L by oil-free compressed air
passed through disposable glass pipettes

Lighting: Overhead full spectrum fluorescent lights; 100-500 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $15 \pm 1^\circ\text{C}$

Endpoint: Mortality, % mortality at 96-h

Test validity: The control had 100% survival (must $\geq 90\%$)

Reference toxicant: 96-h test with Phenol ($\text{C}_6\text{H}_5\text{OH}$) initiated July 20, 2007; current results
(96-h LC50 and 95% confidence limits) = 1.01 (0.98-1.03) log (mg/L Phenol)

Note: Outlined sections are protocol deviations explained on the comment page; v/v, volume per volume



Test Data

Client: TAH102
Reference: 07-1292-01-TRS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/07/20	0	1230	L. Henson/ E. Blais	test fish loaded at 1230 h
2007/07/21	1	1245	S. Krishnappa/ J. Lantz	all test fish appear normal
2007/07/22	2	1230	S. Krishnappa/ J. Lantz	all test fish appear normal
2007/07/23	3	1200	E. Blais/ J. Lantz	all test fish appear normal
2007/07/24	4	1130	E. Blais/ S. Krishnappa	all test fish appear normal

Chemistry:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

pH (units)

0	7.8	8.0						
1	8.4	8.5						
2	8.4	8.5						
3	8.2	8.3						
4	8.1	8.2						

Conductivity (µS/cm)

0	395	214						
1	430	248						
2	391	218						
3	403	224						
4	367	223						

Dissolved Oxygen (mg/L)

0	8.7	8.8						
1	8.4	8.5						
2	8.6	8.6						
3	8.5	8.6						
4	8.4	8.7						

Temperature (°C)

0	15	15						
1	14	14						
2	14	15						
3	14	14						
4	16	16						

Test Data

Client: TAH102
Reference: 07-1292-01-TRS

Number Alive:

Sample	control	1						
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Day

Day	0	1	2	3	4			
0	10	11						
1	10	11						
2	10	11						
3	10	11						
4	10	11						

Mortality (%)

Day	0	1	2	3	4			
4	0	0						

Biology Summary Tables:

Control Fish	Length (cm)	Wet Weight(g)
1	3.6	0.5
2	3.4	0.4
3	3.6	0.4
4	3.6	0.5
5	3.7	0.5
6	3.8	0.5
7	3.7	0.5
8	3.4	0.4
9	3.4	0.4
10	3.2	0.2

Sample	Group Wet Weight (g)
control	4.3
1	4.7

average	3.5	0.4
sd	0.2	0.1
cv(%)	5.2	21.8

Notes: nd, not done; na, not applicable;
 sd, standard deviation; cv(%), coefficient
 of variation



Comments/Statistics

Client: TAH102 Reference: 07-1292-01-TRS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Test Method: Trout 96h Static Acute Test. (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.4.1

Reference: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 1990. Environment Canada, EPS 1/RM/13. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Oncorhynchus mykiss*
 culture source: Rainbow Springs
 temperature (°C): 15 ± 1
 dissolved oxygen: saturated
 stock mortality (last 7d): 1.3%
 batch number: 20070627TR

Test Design:

vol. of test vessel (L): 22
 test volume depth: >15 cm
 replicates per treatment: 1
 fingerlings per replicate: 10
 loading (g fish/L): <0.5
 temperature (°C): 15 ± 1
 photoperiod: 16h light: 8h dark
 light level (water surface): 100-500 lux
 control/dilution water: dechlorinated tap water

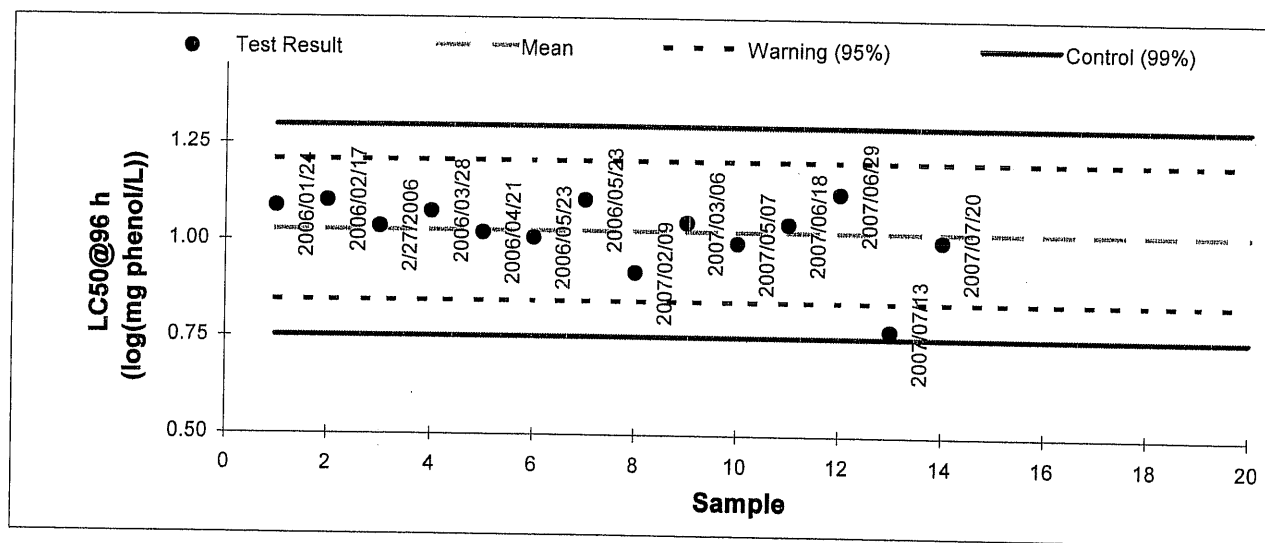
Current Test

toxicant phenol (C₆H₅OH)
 started on 2007/07/20 ended on 2007/07/24
 Result (LC50 @ 96h) 1.01 log (mg phenol/L); geometric mean
 Confidence Limits (95%) lower 0.98 upper 1.03

Historical Values

	mean	sd	cv(%)
	1.03	0.09	9
	lower	upper	
warning limits (±2 sd)	0.84	1.21	(95% confidence limits)
control limits (±3 sd)	0.75	1.30	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:


 Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested on the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results in part or in whole.



Result Summary

Client: Tahera Diamond Corporation; operation Jericho

Sample: JER-WQ2

Collection: collected on 2007/07/18 at 0930 by M. Wasuita

Receipt: received on 2007/07/19 at 1500 by J.Abcede

Containers: received 1 x 20L pail at 21 °C, in good condition with no seals and no initials

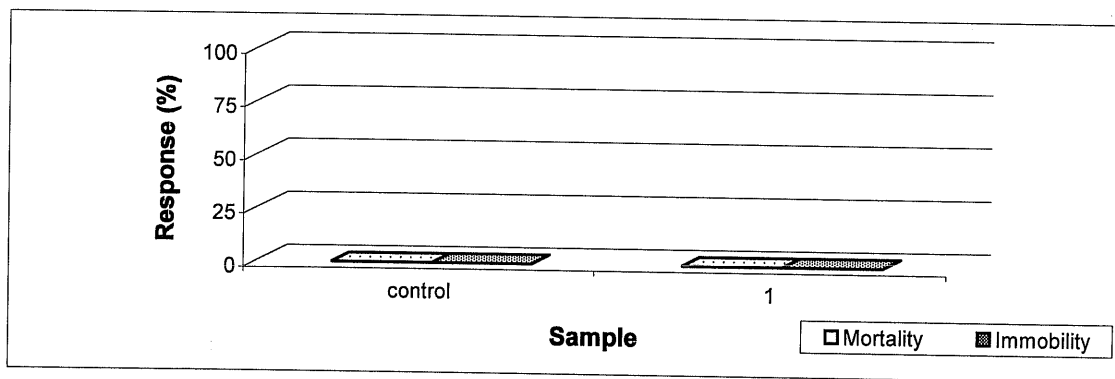
Description: type: Effluent, collection method: Grab

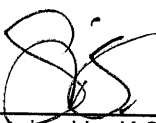
Test: started on 2007/07/20 ; ended on 2007/07/22

Result:

Sample	Client Code	Average Mortality (%)	Average Immobility (%)	Comment
control	lab control	0	0	
1	JER-WQ2	0	0	not toxic as tested

Notes: sd, sample standard deviation; cv, coefficient of variation; nd, not done; na, not applicable;



 For
Authorized by K. Steele, B.Sc., Quality Assurance Officer
The test data and results are verified correct.

Client: TAH102
Reference: 07-1292-01-DAS

Contents

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Test Conditions

Client: TAH102 Reference: 07-1292-01-DAS

Method: Biological Test method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*, 2000. Environ. Can., EPS 1/RM/14. Second Edition.

Test type: *Daphnia* 48-h Static Acute Test (HQ 4.4.3.1)

Species: *Daphnia magna*

Age: < 24 hours old

Organism source: in-house culture

Stock mortality: 0% (must be $\leq 25\%$)

Culture brood data: 10 days to first brood (must be ≤ 12 days)
30 neonates per average brood (must be ≥ 15 young)

Sample initial chemistry: pH: 8.1; EC: 244 ($\mu\text{S}/\text{cm}$); DO: 7.7 (mg/L); temperature: 21 °C
hardness (mg CaCO_3/L): 52; colour: colourless; odour: odourless

Sample holding time: 2 days (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: 385 mL plastic vessels

Test volume: 150 mL

Sample pre-treatment: The sample was not filtered or pH adjusted prior to or during testing
The sample was pre-aerated for 0 minutes (rate of $37.5 \pm 12.5 \text{ mL}/\text{min} \cdot \text{L}^{-1}$)
The hardness of the sample was not adjusted (mg CaCO_3/L) prior to or during testing

Loading density: One daphnid/15 mL (must ≤ 1 organism/15 mL)

Control water: Dechlorinated City of Calgary water acclimated to test conditions
The hardness of the control/dilution water was 184 mg CaCO_3/L

Test concentrations: Undiluted sample plus a negative control

Test replicates: Three replicates per treatment, 10 daphnids per replicate

Feeding: None

Aeration: None

Measurements: pH, conductivity, dissolved oxygen and temperature at test initiation and termination

Lighting: Overhead full spectrum fluorescent lights; 400-800 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $20 \pm 2^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-1292-01-DAS

Endpoint: Mortality, percent (%) mortality at 48-h
Immobility, percent (%) immobility at 48-h

Test validity: The control had 100% survival (must $\geq 90\%$)
Control had 0 percent (%) abnormal behaviour (must $< 10\%$, e.g. immobility)

Reference toxicant: 48-h test with NaCl initiated July 12, 2007; current results
(48-h LC50 and 95% confidence limits) = 0.80 (0.78-0.82) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

 Client: TAH102
 Reference: 07-1292-01-DAS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/07/20	0	1215	L. Henson/ E. Blais	test <i>Daphnia</i> appear normal
2007/07/21	1	1230	S. Krishnappa	test <i>Daphnia</i> appear normal
2007/07/22	2	1145	S. Krishnappa	test <i>Daphnia</i> appear normal

Chemistry:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	pH (units)					
0	7.9	8.0	8.0	8.2	8.1	8.0
2	8.2	8.2	8.2	8.3	8.3	8.2

	Conductivity ($\mu\text{S/cm}$)					
0	390	387	387	240	232	231
2	412	390	403	247	239	236

	Dissolved Oxygen (mg/L)					
0	8.2	8.3	8.2	8.2	8.3	8.7
2	8.6	8.5	8.5	8.5	8.5	8.5

	Temperature ($^{\circ}\text{C}$)					
0	19	19	19	20	20	20
2	19	19	19	19	19	19

Biology:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	Number Alive and Behavior (behavior is in brackets)					
1	10	10	10	10	10	10
2	10	10	10	10	10	10

Notes: F, floating; I, immobile; B, stuck on bubble; D, caught in debris

	Mortality (%)					
2	0	0	0	0	0	0

	Immobility (%)					
2	0	0	0	0	0	0

Comments/Statistics

Client: TAH102 Reference: 07-1292-01-DAS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Quality Assurance Information

Test Method: *Daphnia* Static Acute Test (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.3.1

Reference: Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to *Daphnia magna*, 1990. Environment Canada, EPS 1/RM/14. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Daphnia magna*
 culture source: in-house
 original culture source: Environment Canada
 days to first brood: 10
 mean brood size: 30
 ephippia in stock culture: no
 age of test organisms: <24 hours old
 culture mortality (%): 0%

Test Design:

vol. of test vessel (mL): 500
 toxicant: sodium chloride
 test volume (mL): 150
 replicates per treatment: 1
 neonates per replicate: 10
 volume per neonate (mL): 15
 samples preacrated: no
 hardness adjustment: no
 temperature (°C): 20
 photoperiod: 16h light:8h dark
 light level (water surface): 400-800 lux
 control/dilution water: dechlorinated tap water

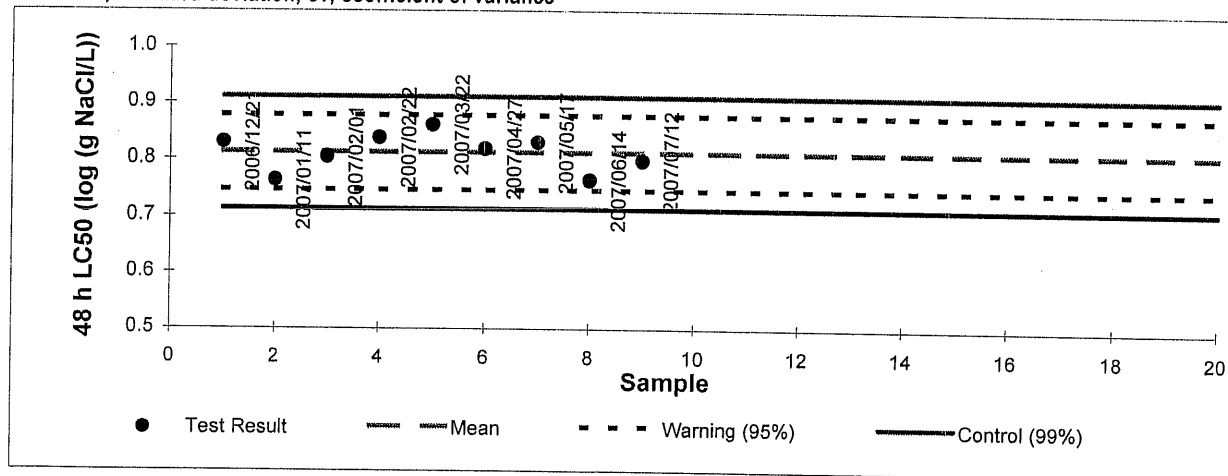
Current Test

toxicant Sodium Chloride (NaCl)
 started on 2007/07/12 ended on 2007/07/14
 Result (LC50 @ 48h) 0.80 log (g NaCl/L); geometric mean
 Confidence Limits (95%) lower 0.78 upper 0.82

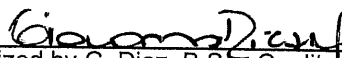
Historical Values

	mean	sd	cv(%)
	0.81	0.03	4
warning limits (± 2 sd)	0.75	0.88	(95% confidence limits)
control limits (± 3 sd)	0.71	0.91	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:


 Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Result Summary

 Client: TAH102
 Reference: 07-1526-01-DAS

Client: Tahera Diamond Corporation; operation Jericho

Sample: JER-WQ2

Collection: collected on 2007/08/20 at 0730 by B. Ott

Receipt: received on 2007/08/23 at 1255 by M. Stevenson

Containers: received 1 x 20L pail at 17 °C, in good condition
 with no seals and no initials

Description: type: Effluent, collection method: Grab

Test: started on 2007/08/23 ; ended on 2007/08/25

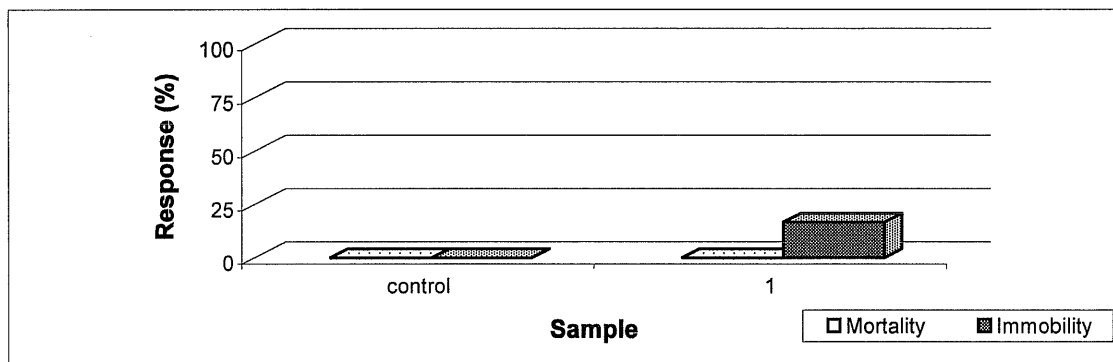
Contents

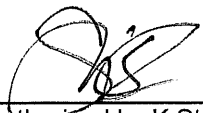
Result Summary.....	1
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Result:

Sample	Client Code	Average Mortality (%)	Average Immobility (%)	Comment
control	lab control	0	0	
1	JER-WQ2	0	17	not toxic as tested

Notes: sd, sample standard deviation; cv, coefficient of variation; nd, not done; na, not applicable;



 For
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-1526-01-DAS

Method: Biological Test method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*, 2000. Environ. Can., EPS 1/RM/14. Second Edition.

Test type: *Daphnia* 48-h Static Acute Test (HQ 4.4.3.1)

Species: *Daphnia magna*

Age: < 24 hours old

Organism source: in-house culture

Stock mortality: 0% (must be $\leq 25\%$)

Culture brood data: 8 days to first brood (must be ≤ 12 days)
25 neonates per average brood (must be ≥ 15 young)

Sample initial chemistry: pH: 7.6; EC: 330 ($\mu\text{S}/\text{cm}$); DO: 7.3 (mg/L); temperature: 22 °C
hardness (mg CaCO_3/L): 78; colour: colourless; odour: odourless

Sample holding time: 3 days (must be ≤ 5 days)

Sample storage: 4 $\pm$ 2°C in darkness

Test vessel: 385 mL plastic vessels

Test volume: 150 mL

Sample pre-treatment: The sample was not filtered or pH adjusted prior to or during testing
The sample was pre-aerated for 0 minutes (rate of 37.5 $\pm$ 12.5 mL/min.L⁻¹)
The hardness of the sample was not adjusted (mg CaCO_3/L) prior to or during testing

Loading density: One daphnid/15 mL (must ≤ 1 organism/15 mL)

Control water: Dechlorinated City of Calgary water acclimated to test conditions
The hardness of the control/dilution water was 181 mg CaCO_3/L

Test concentrations: Undiluted sample plus a negative control

Test replicates: Three replicates per treatment, 10 daphnids per replicate

Feeding: None

Aeration: None

Measurements: pH, conductivity, dissolved oxygen and temperature at test initiation and termination

Lighting: Overhead full spectrum fluorescent lights; 400-800 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: 20 $\pm$ 2°C

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-1526-01-DAS

Endpoint: Mortality, percent (%) mortality at 48-h
Immobility, percent (%) immobility at 48-h

Test validity: The control had 100% survival (must $\geq 90\%$)
Control had 0 percent (%) abnormal behaviour (must $< 10\%$, e.g. immobility)

Reference toxicant: 48-h test with NaCl initiated August 21, 2007; current results
(48-h LC50 and 95% confidence limits) = 0.75 (0.71-0.79) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

 Client: TAH102
 Reference: 07-1526-01-DAS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/08/23	0	1215	T. McDonald/ S. Krishnappa	test <i>Daphnia</i> appear normal
2007/08/24	1	0930	T. McDonald	test <i>Daphnia</i> appear normal
2007/08/25	2	1015	T. McDonald	test <i>Daphnia</i> appear normal

Chemistry:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	pH (units)					
0	7.9	7.9	7.9	7.8	7.8	7.8
2	7.9	7.9	8.0	8.0	7.9	7.9

	Conductivity ($\mu\text{S}/\text{cm}$)					
0	362	362	362	295	295	295
2	408	411	409	343	337	335

	Dissolved Oxygen (mg/L)					
0	7.9	7.9	7.9	8.1	8.1	8.1
2	8.4	8.6	8.6	8.5	8.7	8.7

	Temperature ($^{\circ}\text{C}$)					
0	20	20	20	20	20	20
2	21	21	21	22	22	22

Biology:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	Number Alive and Behavior (behavior is in brackets)					
1	10	10	10	10	10 (1F)	10 (1F)
2	10	10	10	10 (1I)	10 (2I)	10 (2I)

Notes: F, floating; I, immobile; B, stuck on bubble; D, caught in debris

	Mortality (%)					
2	0	0	0	0	0	0

	Immobility (%)					
2	0	0	0	10	20	20

Comments/Statistics

Client: TAH102 Reference: 07-1526-01-DAS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Quality Assurance Information

Test Method: *Daphnia* Static Acute Test (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.3.1

Reference: Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to *Daphnia magna*, 1990. Environment Canada, EPS 1/RM/14. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Daphnia magna*
 culture source: in-house
 original culture source: Environment Canada
 days to first brood: 8
 mean brood size: 25
 ephippia in stock culture: no
 age of test organisms: <24 hours old
 culture mortality (%): 4%

Test Design:

vol. of test vessel (mL): 500
 toxicant: sodium chloride
 test volume (mL): 150
 replicates per treatment: 1
 neonates per replicate: 10
 volume per neonate (mL): 15
 samples preaerated: no
 hardness adjustment: no
 temperature (°C): 20
 photoperiod: 16h light:8h dark
 light level (water surface): 400-800 lux
 control/dilution water: dechlorinated tap water

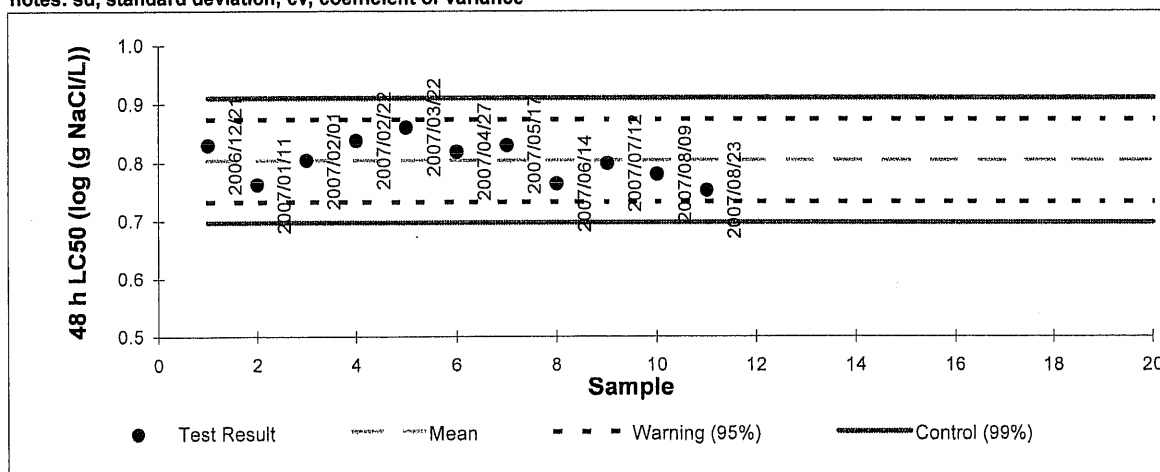
Current Test

toxicant Sodium Chloride (NaCl)
 started on 2007/08/21 ended on 2007/08/23
 Result (LC50 @ 48h) 0.75 log (g NaCl/L); geometric mean
 Confidence Limits (95%) lower 0.71 upper 0.79

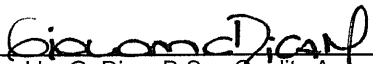
Historical Values

	mean	sd	cv(%)
	0.80	0.04	4
warning limits (± 2 sd)	0.73	0.88	(95% confidence limits)
control limits (± 3 sd)	0.70	0.91	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:


 Authorized by G. Diaz, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested on the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results in part or in whole.

Result Summary

Client: TAH102
 Reference: 07-1526-01-TRS

Client: Tahera Diamond Corporation; operation Jericho

Sample: JER-WQ2

Collection: collected on 2007/08/20 at 0730 by B. Ott

Receipt: received on 2007/08/23 at 1255 by M. Stevenson

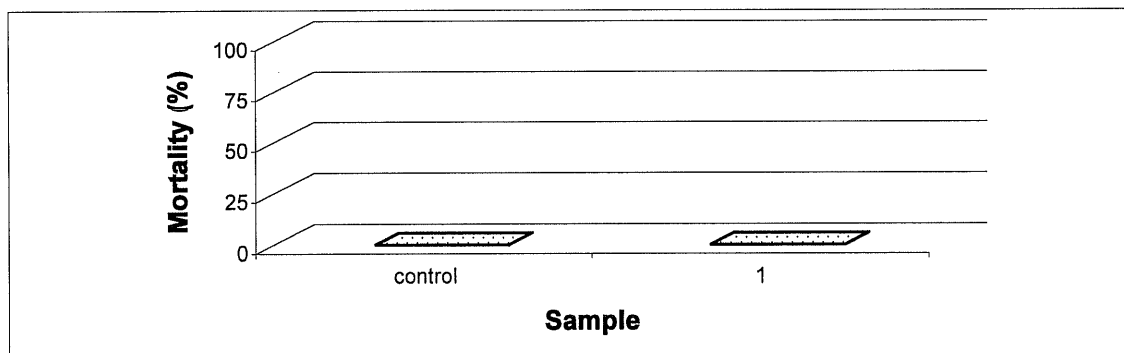
Containers: received 1 x 20L pail at 17 °C, in good condition with no seals and no initials

Description: type: Effluent, collection method: Grab

Test: started on 2007/08/24 ; ended on 2007/08/28

Result:

Sample	Client Code	Mortality (%)	Comment
control	lab control	0	
1	JER-WQ2	0	none



 For
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 07-1526-01-TRS

Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 2000. Environment Canada, EPS 1/RM/13. Second Edition.

Test type: Trout 96-h Static Acute Test (HQ 4.4.4.1)

Species: *Oncorhynchus mykiss*

Organism source: Sun Valley Trout Farms (Batch 20070713TR)

Acclimation: 41 days (must be ≥ 2 weeks)

Stock mortality: 0.6% (seven days preceeding testing)

Sample initial chemistry: pH: 7.6; EC: 330 ($\mu\text{S}/\text{cm}$); DO: 7.3 (mg/L); temperature: 22 °C
hardness ($\text{mg CaCO}_3/\text{L}$): 78; colour: colourless; odour: odourless

Sample holding time: 4 days (must be ≤ 5 days)

Sample storage: 4 $\pm$ 2°C in darkness

Test vessel: The test was conducted in 22 L plastic pails with polyethylene liners

Test volume: 16 Litres (depth of solution in each test vessel $\geq 15\text{cm}$)

Sample pre-treatment: All test solutions and controls were pre-aerated for 30 minutes
Dissolved oxygen in full strength sample was 8.9 mg/L after pre-aeration
The sample was not filtered or pH adjusted prior to or during testing

Loading density: 0.225 g/Litre (must be $\leq 0.5 \text{ g}/\text{Litre}$)

Control water: Dechlorinated City of Calgary water acclimated to test conditions

Test concentrations: Undiluted sample plus a negative control

Test replicates: One replicate per treatment; 10 fish per replicate

Feeding: Fish are not fed 24 hours before test initiation and no feeding during test

Measurements: pH, conductivity, dissolved oxygen and temperature measured daily

Aeration: All treatments aerated at 6.5 $\pm$ 1 $\text{mL}/\text{min}/\text{L}$ by oil-free compressed air
passed through disposable glass pipettes

Lighting: Overhead full spectrum fluorescent lights; 100-500 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: 15 $\pm$ 1°C

Endpoint: Mortality, % mortality at 96-h

Test validity: The control had 100% survival (must $\geq 90\%$)

Reference toxicant: 96-h test with Phenol ($\text{C}_6\text{H}_5\text{OH}$) initiated July 27, 2007; current results
(96-h LC50 and 95% confidence limits) = 1.08 (1.01-1.14) log (mg/L Phenol)

Note: Outlined sections are protocol deviations explained on the comment page; v/v, volume per volume

Test Data

Client: TAH102
Reference: 07-1526-01-TRS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2007/08/24	0	1025	J. Lantz/ E. Blais	test fish loaded at 1025 h
2007/08/25	1	1020	J. Lantz/T. McDonald	all test fish appear normal
2007/08/26	2	1210	L. Henson/C.A. Martens	all test fish appear normal
2007/08/27	3	1015	L. Henson/J. Lantz	all test fish appear normal
2007/08/28	4	0935	S. Krishnappa/T. McDonald	all test fish appear normal

Chemistry:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

pH (units)

0	8.0	8.1						
1	8.1	8.1						
2	8.1	8.1						
3	8.0	8.0						
4	7.9	7.9						

Conductivity (µS/cm)

0	379	310						
1	375	313						
2	379	300						
3	371	304						
4	336	227						

Dissolved Oxygen (mg/L)

0	8.8	8.9						
1	8.8	8.5						
2	9.4	9.4						
3	9.0	8.9						
4	8.9	8.7						

Temperature (°C)

0	16	16						
1	16	16						
2	16	15						
3	15	15						
4	14	15						

Test Data

Client: TAH102
Reference: 07-1526-01-TRS

Number Alive:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

0	10	10						
1	10	10						
2	10	10						
3	10	10						
4	10	10						

Mortality (%)

4	0	0						
---	---	---	--	--	--	--	--	--

Biology Summary Tables:

Control Fish	Length (cm)	Wet Weight(g)
1	4.0	0.6
2	4.2	0.9
3	4.0	0.7
4	4.3	0.8
5	3.9	0.6
6	3.8	0.5
7	4.4	0.7
8	4.7	1.1
9	4.4	0.8
10	4.4	0.9

Sample	Group Wet Weight (g)
control	7.6
1	7.6

average	4.2	0.8
sd	0.3	0.2
cv(%)	6.7	23.9

Notes: nd, not done; na, not applicable;
 sd, standard deviation; cv(%), coefficient
 of variation

Comments/Statistics

Client: TAH102 Reference: 07-1526-01-TRS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None



Test Method: Trout 96h Static Acute Test. (LC50, five or more treatments plus a control)
HydroQual Test Method Manual, section: 4.4.4.1

Reference: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 1990. Environment Canada, EPS 1/RM/13. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Oncorhynchus mykiss*
culture source: Sun Valley
temperature (°C): 15 ± 1
dissolved oxygen: saturated
stock mortality (last 7d): 0.1%
batch number: 20070713TR

Test Design:

vol. of test vessel (L): 22
test volume depth: >15 cm
replicates per treatment: 1
fingerlings per replicate: 10
loading (g fish/L): <0.5
temperature (°C): 15 ± 1
photoperiod: 16h light: 8h dark
light level (water surface): 100-500 lux
control/dilution water: dechlorinated tap water

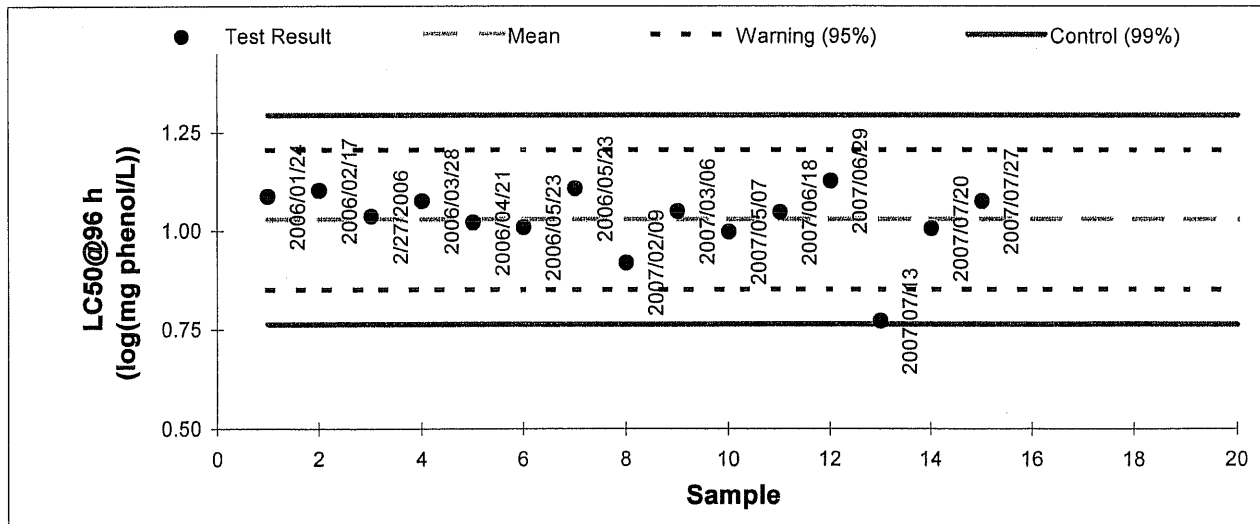
Current Test

toxicant phenol (C₆H₅OH)
started on 2007/07/27 ended on 2007/07/31
Result (LC50 @ 96h) 1.08 log (mg phenol/L); geometric mean
Confidence Limits (95%) lower 1.01 upper 1.14

Historical Values

	mean	sd	cv(%)
	1.03	0.09	9
	lower	upper	
warning limits (±2 sd)	0.85	1.21	(95% confidence limits)
control limits (±3 sd)	0.76	1.29	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance



Quality Assurance Unit:

Giovanna Diaz
Authorized by G. Diaz, B.Sc., Quality Assurance Officer
The test data and results are verified correct.

Our liability is limited to the cost of the test requested on the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results in part or in whole.

Chronic Toxicity Tests

Result Summary

 Client: TAH102
 Reference: 07-1273-01-CDD

Client: Tahera Diamond Corporation; operation Jericho

Sample: Lake C3

Collection: collected on 2007/07/16 at 0830 by M. Wasuita

Receipt: received on 2007/07/17 at 1435 by J.Abcde

Containers: received 1 x 20L pail at 19 °C, in good condition with no seals and no initials

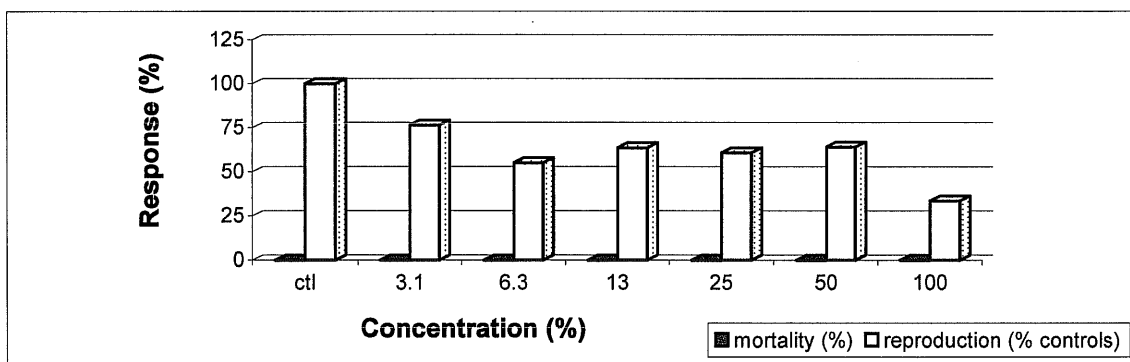
Description: type: Water, collection method: Grab

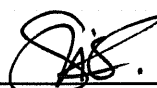
Test: started on 2007/07/18 ; ended on 2007/07/24

Result:

	Endpoint (6-day)	Value	Confidence Limits (95%)		Units	Method Calculated
			lower	upper		
Acute: (survival)	LC25	>100			%	could not be calculated
	LC50	>100			%	could not be calculated
Chronic: (fecundity)	IC25	3.3	2.2	4.3	%	Linear Interpolation
	IC50	66	59	77	%	Linear Interpolation

Notes: LCx & ICx, concentrations lethal or inhibitory to 'x' percent of the test population; fecundity, reproduction as the number of young produced; ctl, control; na, could not be calculated



 For
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Conditions

Client: TAH102 Reference: 07-1273-01-CDD

Method: Biological Test method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*, 1992. Environ.Can., EPS 1/RM/21. (amended November, 1997)

Test type: *Ceriodaphnia* 6-day Survival and Reproduction Static Renewal Test (HQ 4.4.3.2)

Species: *Ceriodaphnia dubia*

Age: <24 hours old; all from same brood source within 12 h of the same age

Organism source: in-house cultures; cultures from a single brood organism to provide test organisms

Culture health: Culture mortality was 14% (must be $\leq 20\%$)

7-d prior to test initiation: No ephippia were noted in the cultures

Average young produced per adult was 37 (must be ≥ 15)

Number of young produced by each brood organism in the last complete brood before use was 10 (must be ≥ 6)

Organism observations: No unusual behavior, appearance or treatment of test organisms was noted prior to or during the test

Sample initial chemistry: pH: 7.7; EC: 58 ($\mu\text{S}/\text{cm}$); DO: 9.2 (mg/L); temperature: 21 °C
hardness (mg CaCO_3/L): 8; colour: colourless; odour: odourless

Sample holding time: 2 days (must be ≤ 3 days); The test was conducted with three subsamples, samples a, b, and c were for days 0 to 2, 3 to 4, and 5 to 7.

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: The tests were conducted in 30 mL plastic vessels (2 cm depth)

Test volume: 15 mL of solution (2 cm depth); replenished daily

Control/dilution water: The control and dilution water was a mixture of moderately hard reconstituted water and Bow River Water (50:50). Chemicals added to dilution water:
0.96 g NaHCO_3 , 0.60 g CaSO_4 , 0.60 g MgSO_4 , 0.04 g KCl per 20L

Test concentrations: 6 effluent concentrations (3.1, 6.3, 12.5, 25, 50, 100% (v/v) plus a negative control)

Test replicates: One neonate <24 hours old was loaded per test vessel;
10 replicates/concentration

Feeding: The test organisms were fed daily a mixture of fermented trout chow, yeast, alfalfa powder, and the green alga *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum* and *Raphidocelis subcapitata*).
Food expiration date: 2007/07/21; 2007/08/05

Measurements: pH, conductivity, dissolved oxygen and temperature were measured daily

Sample pre-treatment: The sample was not aerated, filtered or pH adjusted prior or during testing
The dissolved oxygen concentration (mg/L) was: 8.7
The sample pH was: 8.3

Lighting: Overhead full spectrum fluorescent lights; 100-600 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $25 \pm 1^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-1273-01-CDD

Endpoints: Survival, 6-d LC50 (with 95% confidence limits)
Reproduction, 6-d IC25 (with 95% confidence limits)
Test endpoints were bracketed by at least 1 test concentration
(except for <0.1% or >100 %)

Test completion: 90% of the control organisms had ≥ 3 broods on day 6 (must be $\geq 60\%$ within 8 days)

Test validity: The control had 100% survival (must $\geq 80\%$)
Number of young produced by each surviving control adult was 21 (must be ≥ 15)

Reference toxicant: 7-d test with NaCl initiated June 29, 2007;
current results: (7-d LC50 and 95% confidence limits) = 3.21 (3.00-3.42) log (g/L NaCl)
current results: (7-d IC50 and 95% confidence limits) = 2.34 (2.02-2.67) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

Client: TAH102
Reference: 07-1273-01-CDD

Test Log:

Date	Day	Time	Technicians	Temperature Before Use (°C)	
				Control	Sample
2007/07/18	0	1400	S. Krishnappa	25	25
2007/07/19	1	1030	S. Krishnappa	25	26
2007/07/20	2	1130	S. Krishnappa	25	25
2007/07/21	3	1030	S. Krishnappa	25	26
2007/07/22	4	1025	S. Krishnappa	26	26
2007/07/23	5	1010	S. Krishnappa	26	26
2007/07/24	6	1000	S. Krishnappa	na	na

Chemistry Summary Tables:

New Solutions

Conc. (%)	ctl	3.1	6.3	13	25	50	100
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Old Solutions

ctl	3.1	6.3	13	25	50	100
-----	-----	-----	----	----	----	-----

Average Values

pH	8.0	8.0	8.0	8.0	8.1	8.1	8.3
cond.	379	370	361	341	303	254	45
DO	7.8	7.9	7.9	8.0	8.1	8.1	8.2
temp.	25	25	25	25	25	25	25

8.0	8.0	8.0	8.0	8.0	8.0	8.1
389	385	376	359	334	244	59
7.8	7.8	7.8	7.7	7.7	7.7	7.6
25	25	25	25	25	25	25

Coefficients of Variation (%)

pH	2	1	2	2	1	1	1
cond.	1	1	1	1	2	14	7
DO	0	1	2	2	2	2	3
temp.	2	2	2	2	2	2	2

1	1	1	1	2	2	3
6	3	2	1	4	1	3
1	2	3	3	2	3	3
3	3	3	3	3	3	3

Test Data

 Client: TAH102
 Reference: 07-1273-01-CDD

Biology (number of young produced):

Conc. (%)	ctl	3.1	6.3	13	25	50	100
-----------	-----	-----	-----	----	----	----	-----

ctl	3.1	6.3	13	25	50	100
-----	-----	-----	----	----	----	-----

Replicate

Day1

1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

Day 4

0	2	2	2	4	0	4
4	2	2	2	2	4	2
2	0	2	2	4	2	2
0	0	0	0	2	2	0
0	4	0	0	0	0	0
4	2	0	0	0	2	0
2	0	0	2	0	2	0
2	0	0	0	0	0	0
0	0	0	2	2	2	0
0	0	2	2	0	0	0

Day 2

1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

Day 5

6	6	4	5	6	6	5
8	5	5	4	7	5	7
9	7	6	4	6	7	5
8	7	6	7	5	6	4
7	6	7	8	5	6	0
6	5	5	0	6	5	6
8	4	5	6	6	7	8
9	8	7	7	5	6	0
9	7	0	5	7	5	3
8	6	6	7	6	4	2

Day 3

1	3	0	0	0	0	0	0
2	2	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	2	2	0	0	0	2	2
5	2	0	0	2	0	2	0
6	3	0	0	2	2	0	0
7	0	2	0	0	2	0	0
8	2	0	2	0	0	2	0
9	2	0	0	0	0	2	2
10	0	0	0	0	2	0	2

Day 6

11	8	6	6	5	6	0
10	9	5	6	7	7	2
9	10	7	5	0	7	2
11	11	5	7	6	8	0
12	10	0	7	6	6	3
10	9	8	8	5	5	0
9	8	7	9	5	5	4
9	7	6	7	4	4	2
13	7	5	6	5	4	4
10	8	7	5	7	5	0

Notes: #, young produced; 0, no young; blank, dead; bold print #, number of young the test organism had the day it died.

Test Data

Client: TAH102
Reference: 07-1273-01-CDD

Biology (number of young produced):

Conc. (%)	ctl	3.1	6.3	13	25	50	100
-----------	-----	-----	-----	----	----	----	-----

ctl	3.1	6.3	13	25	50	100
-----	-----	-----	----	----	----	-----

Replicate

Day 7

1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Day 8

Notes: #, young produced; 0, no young; blank, dead; bold print #, number of young the test organism had the day it died.

Biology Summary Tables:

Conc. (%)	ctl	3.1	6.3	13	25	50	100
-----------	-----	-----	-----	----	----	----	-----

ctl	3.1	6.3	13	25	50	100
-----	-----	-----	----	----	----	-----

Day

Mortality (%)

0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7							
8							

Daily Young Production

0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
16	4	2	4	6	8	6
14	10	8	12	14	14	8
78	61	51	53	59	57	40
104	87	56	66	50	57	17

totals

0	0	0	0	0	0	0	0
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212	162	117	135	129	136	71
-----	-----	-----	-----	-----	-----	----

Replicate

Total Young Produced by Each Adult

1	20	16	12	13	15	12	9
2	24	16	12	12	16	16	11
3	20	17	15	11	10	16	9
4	21	20	11	14	13	18	6
5	21	20	7	17	11	14	3
6	23	16	13	10	13	12	6
7	19	14	12	17	13	14	12
8	22	15	15	14	9	12	2
9	24	14	5	13	14	13	9
10	18	14	15	14	15	9	4

Average Young Per Adult

21	16	12	14	13	14	7
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Young Production as a Percent of Controls

100	76	55	64	61	64	33
-----	----	----	----	----	----	----

Test Data

 Client: TAH102
 Reference: 07-1273-01-CDD

Chemistry:
New Solutions
Old Solutions

Conc. (%)	ctl	3.1	6.3	13	25	50	100
-----------	-----	-----	-----	----	----	----	-----

ctl	3.1	6.3	13	25	50	100
-----	-----	-----	----	----	----	-----

Day

pH (units)

pH (units)

0	7.8	7.9	7.9	7.9	7.9	8.0	8.3
1	7.9	7.9	7.9	7.9	8.0	8.0	8.2
2	8.1	8.1	8.1	8.1	8.1	8.1	8.2
3	8.1	8.1	8.1	8.1	8.1	8.1	8.3
4	8.1	8.1	8.2	8.2	8.2	8.2	8.2
5	8.0	8.0	8.0	8.0	8.0	8.0	8.3
6							
7							
8							

8.0	8.0	7.9	7.9	7.9	7.8	7.8	
7.9	7.8	7.8	7.8	7.7	7.8	7.7	
7.9	8.0	8.0	8.0	8.0	8.0	8.1	
8.0	8.1	8.1	8.1	8.1	8.0	8.1	
8.0	8.0	8.0	8.1	8.1	8.1	8.1	8.3
8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.3

Conductivity (µS/cm)

Conductivity (µS/cm)

0	384	370	361	342	303	237	48
1	380	370	360	340	300	300	46
2	370	366	357	345	297	295	45
3	378	366	359	336	301	225	44
4	380	370	358	340	300	226	47
5	380	376	370	340	317	239	39
6							
7							
8							

400	398	380	360	345	240	60	
407	390	381	360	342	241	58	
408	394	383	363	344	245	60	
397	390	380	360	327	246	58	
351	368	366	351	316	242	62	
372	372	368	362	329	248	57	

Dissolved Oxygen (mg/L)

Dissolved Oxygen (mg/L)

0	7.8	8.0	8.1	8.2	8.3	8.4	8.7
1	7.8	7.9	7.9	8.0	8.0	8.1	8.1
2	7.8	7.8	7.7	7.6	7.9	7.9	8.0
3	7.8	7.9	7.9	8.0	8.0	8.1	8.0
4	7.8	7.7	7.9	8.0	8.1	8.0	8.1
5	7.8	7.9	7.9	8.0	8.0	8.1	8.1
6							
7							
8							

7.9	7.8	7.8	7.7	7.6	7.6	7.5	
8.0	8.0	8.1	8.1	8.0	8.1	8.1	
7.8	7.8	7.7	7.6	7.6	7.6	7.5	
7.7	7.7	7.8	7.8	7.8	7.7	7.6	
7.8	7.6	7.6	7.7	7.6	7.6	7.5	
7.7	7.6	7.5	7.5	7.5	7.6	7.5	

Temperature (°C)

Temperature (°C)

0	25	25	25	25	25	25	25
1	24	24	24	24	24	24	24
2	25	25	25	25	25	25	25
3	25	25	25	25	25	25	25
4	25	25	25	25	25	25	25
5	25	25	25	25	25	25	25
6							
7							
8							

24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25
25	25	25	25	25	25	25	25
24	24	24	24	24	24	24	24
26	26	26	26	26	26	26	26
25	25	25	25	25	25	25	25

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Comments/Statistics

Client: TAH102 Reference: 07-1273-01-CDD

Test Result Comments:

None

Data Analysis:

Endpoints for mortality could not be calculated. No effect occurred.

Endpoints for reproduction were calculated using Linear Interpolation with CETIS v1.1.2 rev P.

Protocol Deviations:

None

Test Method: *Ceriodaphnia* Survival and Reproduction Test (6 treatments plus a control)
HydroQual Test Method Manual, section: 4.4.3.2

Reference: Biological Test Method: Test of Reproduction and Survival Using the
Cladoceran *Ceriodaphnia dubia*, 1992. Environment Canada, EPS 1/RM/21
including November, 1997 amendments.

Test Organism:

test species: *Ceriodaphnia dubia*
culture source: in-house
original culture source: Environment Canada
ephippia in stock culture: none
food type: YAT:Algae
frequency of feeding: daily
age of test organisms: <24 hours
culture mortality 7 days prior: 12
culture fecundity 7 days prior: 30
young produced in previous brood: 14
culture condition prior to test initiation: normal
culture water: 50:50 water

Test Design:

test type: static renewal
toxicant: sodium chloride (NaCl)
test vessel: 30 mL plastic cup
test volume (mL): 15
replicates per treatment: 10
organisms per replicate: 1
feeding: daily
temperature (°C): 24-26
photoperiod: 16 hours light: 8 hours dark
light level (surface): 100-600 lux
hardness adjustment: no

*Note: there are 2 subcultures within this culture source, separated by one week in age. The test is set with organisms from one subculture.
The number of young a culture has is monitored daily. If young are not used that day, they are discarded, therefore organisms in tests are <24h.

Control/Dilution Water:

source: equal volumes of Bow River water and
moderately hard reconstituted water (50:50 water)
pH (units): 8.0
conductance (uS/cm): 426
dissolved oxygen (mg/L): 8.2
NH₄⁺ (mg/L): <0.1
hardness (mg CaCO₃/L): 124
alkalinity (mg CaCO₃/L): 138
total residual chlorine (mg/L): <0.01

Note: moderately hard reconstituted water prepared as per EPS 1/RM/21

Comments: There were no protocol deviations during the conduct of this test.

Quality Assurance Unit:



Authorized by G. Diaz, B.Sc., Quality Assurance Officer
The test data and results are verified correct.

Mortality

Current Test

toxicant Sodium chloride (NaCl)

started on 2007/06/29 ended on 2007/07/13

Result (7d LC50): 3.21 log (mg NaCl/L); geometric mean

Confidence Limits (95%) lower 3.00 upper 3.42

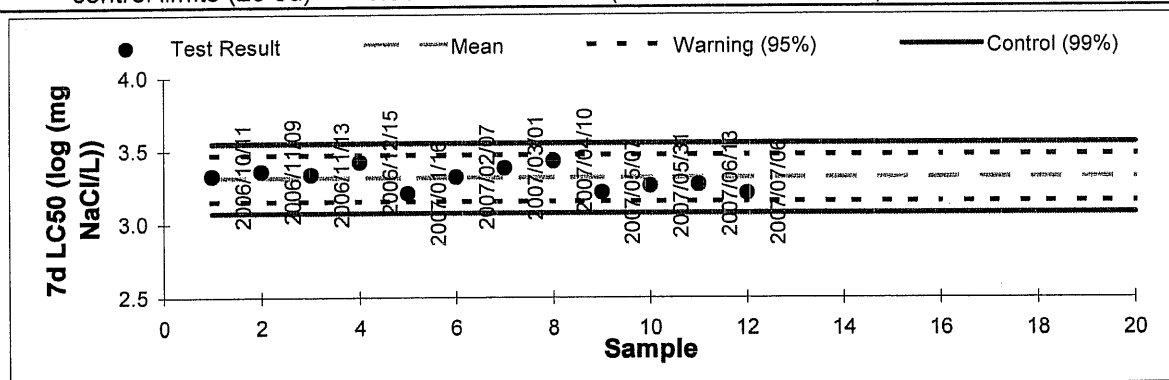
Historical Values

mean 3.31 sd 0.08 cv(%): 2

lower upper

warning limits (± 2 sd) 3.15 3.47 (95% confidence limits)

control limits (± 3 sd) 3.08 3.55 (99% confidence limits)



Reproduction

Current Test

toxicant Sodium chloride (NaCl)

started on 2007/06/29 ended on 2007/07/13

Result (7d IC50): 2.34 log (mg NaCl/L); geometric mean

Confidence Limits (95%) lower 2.02 upper 2.67

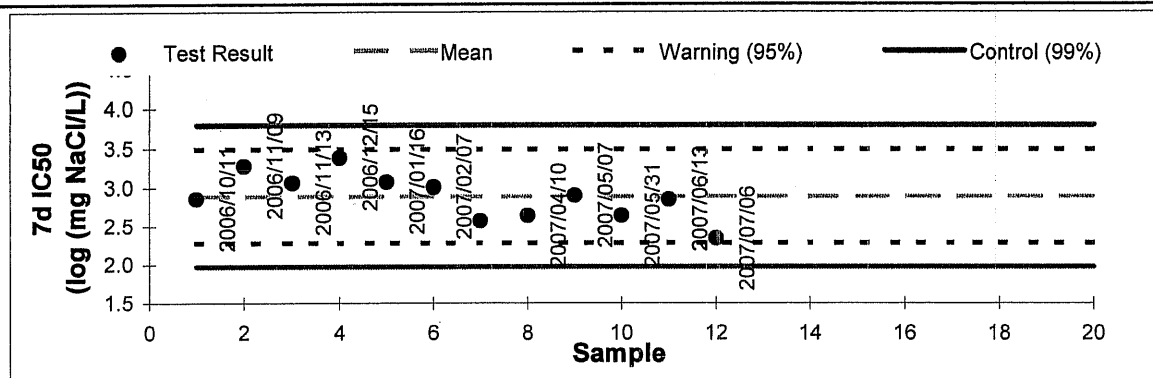
Historical Values

mean 2.89 sd 0.30 cv(%): 10

lower upper

warning limits (± 2 sd) 2.28 3.49 (95% confidence limits)

control limits (± 3 sd) 1.98 3.79 (99% confidence limits)



Notes: sd, standard deviation; cv, coefficient of variance; NA, could not be calculated

Quality Assurance Information

Culture history for adults used in reference toxicant test started on 2007/06/29:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	D3	D7	E2	E4	F1	F6					
7	number of young											
	number of adults											
6		E4	F1	F6								
	number of young											
5	number of adults											
		E4	F1	F6								
4	number of young	0	4	4	8	2	9					
	number of adults	1	1	1	1	1	1					
3		E4	F1	F6								
	number of young	4	8	6	0	8	0					
2	number of adults	1	1	1	1	1	1					
		E4	F1	F6								
Day Used 2007/06/29	number of young	13	11	11	14	11	12					
	number of adults	1	1	1	1	1	1					
Totals		E4	F1	F6								
	number of young per adult	25	23	32	34	38	30					

Number of young produced per organism in the last brood before use

12

Mean number of surviving young per adult over the last seven days

30

Culture mortality over the last seven days

14

Quality Assurance Information

Culture history for adults used in the test for sample 01 reference 07-1273:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	C7	D5	D6	E5	E7	F1	F2	F5			
7	number of young		3	0	8	0	6	2	9			
	number of adults		1	1	1	1	1	1	1			
6		C7	D5	D6	E5	E7	F1	F2	F5			
	number of young		4	0	3	4	2	0	2			
5	number of young		10	8	13	8	10	8	5			
	number of adults		1	1	1	1	1	1	1			
4		C7	D5	D6	E5	E7	F1	F2	F5			
	number of young		9	8	10	6	10	8	7			
3	number of young		5	2	6	0	2	0	3			
	number of adults		1	1	1	1	1	1	1			
2		C7	D5	D6	E5	E7	F1	F2	F5			
	number of young		3	10	0	8	12	2	0			
DAY USED 2007/07/18	number of adults		1	1	1	1	1	1	1			
		C7	D5	D6	E5	E7	F1	F2	F5			
totals	number of young		21	49	34	54	38	39	28			
	per adult											

Number of young produced per organism in the last brood before use

10

Mean number of surviving young per adult over the last seven days

37

Culture mortality over the last seven days

14

Result Summary

Client: TAH102

Reference: 07-1409-01-CDD

Client: Tahera Diamond Corporation; operation Yellowknife

Sample: Lake C3 200m dil z

Collection: collected on 2007/08/06 at 0900 by B. Ott

Receipt: received on 2007/08/07 at 1017 by J. Abcede

Containers: received 1 x 20L pail at 20 °C, in good condition with no seals and no initials

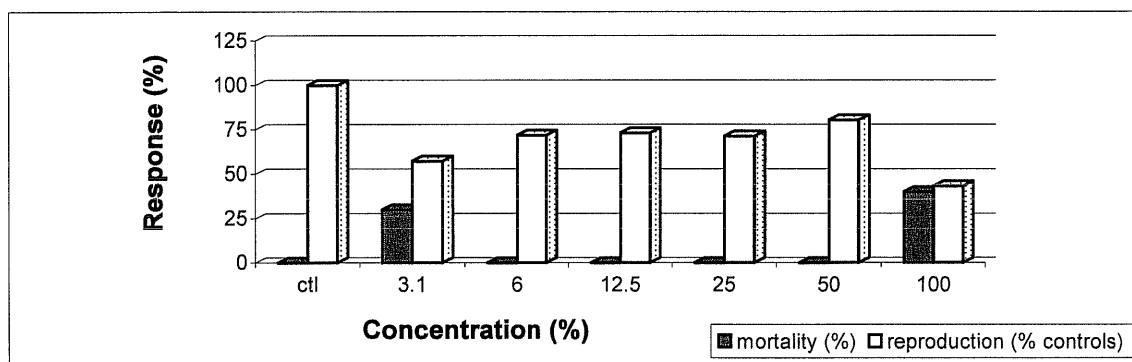
Description: type: water, collection method: not given

Test: started on 2007/08/07 ; ended on 2007/08/14

Result:

	Endpoint (6-day)	Value	Confidence Limits (95%)		Units	Method Calculated
			lower	upper		
Acute: (survival)	LC25	>100			%	could not be calculated
	LC50	>100			%	could not be calculated
Chronic: (fecundity)	IC25	2	1	59	%	Linear Interpolation
	IC50	85	65	na	%	Linear Interpolation

Notes: LCx & ICx, concentrations lethal or inhibitory to 'x' percent of the test population; fecundity, reproduction as the number of young produced; ctl, control; na, could not be calculated



 For

Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Conditions

Client: TAH102 Reference: 07-1409-01-CDD

Method: Biological Test method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*, 1992. Environ.Can., EPS 1/RM/21. (amended November, 1997)

Test type: *Ceriodaphnia* 6-day Survival and Reproduction Static Renewal Test (HQ 4.4.3.2)

Species: *Ceriodaphnia dubia*

Age: <24 hours old; all from same brood source within 12 h of the same age

Organism source: in-house cultures; cultures from a single brood organism to provide test organisms

Culture health: Culture mortality was 10% (must be $\leq 20\%$)

7-d prior to test initiation: No ephippia were noted in the cultures

Average young produced per adult was 22 (must be ≥ 15)

Number of young produced by each brood organism in the last complete brood before use was 8 (must be ≥ 6)

Organism observations: No unusual behavior, appearance or treatment of test organisms was noted prior to or during the test

Sample initial chemistry: pH: 8.5; EC: 77 ($\mu\text{S}/\text{cm}$); DO: 8.6 (mg/L); temperature: 20 °C
hardness (mg CaCO_3/L): 70; colour: colourless; odour: odourless

Sample holding time: 1 day (must be ≤ 3 days); The test was conducted with three subsamples, samples a, b, and c were for days 0 to 2, 3 to 4, and 5 to 7.

Sample storage: 4 $\pm$ 2°C in darkness

Test vessel: The tests were conducted in 30 mL plastic vessels (2 cm depth)

Test volume: 15 mL of solution (2 cm depth); replenished daily

Control/dilution water: The control and dilution water was a mixture of moderately hard reconstituted water and Bow River Water (50:50). Chemicals added to dilution water:
0.96 g NaHCO_3 , 0.60 g CaSO_4 , 0.60 g MgSO_4 , 0.04 g KCl per 20L

Test concentrations: 6 effluent concentrations (3.1, 6.3, 12.5, 25, 50, 100% (v/v) plus a negative control)

Test replicates: One neonate <24 hours old was loaded per test vessel;
10 replicates/concentration

Feeding: The test organisms were fed daily a mixture of fermented trout chow, yeast, alfalfa powder, and the green alga *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum* and *Raphidocelis subcapitata*).
Food expiration date: 2007/08/12

Measurements: pH, conductivity, dissolved oxygen and temperature were measured daily

Sample pre-treatment: The sample was not aerated, filtered or pH adjusted prior or during testing
The dissolved oxygen concentration (mg/L) was: 7.5
The sample pH was: 8

Lighting: Overhead full spectrum fluorescent lights; 100-600 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: 25 $\pm$ 1°C

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-1409-01-CDD

Endpoints: Survival, 6-d LC50 (with 95% confidence limits)
Reproduction, 6-d IC25 (with 95% confidence limits)
Test endpoints were bracketed by at least 1 test concentration
(except for <0.1% or >100 %)

Test completion: 60% of the control organisms had ≥ 3 broods on day 6 (must be $\geq 60\%$ within 8 days)

Test validity: The control had 100% survival (must $\geq 80\%$)
Number of young produced by each surviving control adult was 16 (must be ≥ 15)

Reference toxicant: 7-d test with NaCl initiated July 27, 2007;
current results: (7-d LC50 and 95% confidence limits) = 3.37 (3.20-3.54) log (g/L NaCl)
current results: (7-d IC50 and 95% confidence limits) = 3.05 (2.39-3.13) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

Client: TAH102
Reference: 07-1409-01-CDD

Test Log:

Date	Day	Time	Technicians	Temperature Before Use (°C)	
				Control	Sample
2007/08/07	0	1420	S. Krishnappa	25	25
2007/08/08	1	0815	S. Krishnappa	25	25
2007/08/09	2	1050	S. Krishnappa	25	25
2007/08/10	3	1345	S. Krishnappa	25	25
2007/08/11	4	1035	S. Krishnappa	25	25
2007/08/12	5	1035	A. Calvert	25	25
2007/08/13	6	0905	S. Krishnappa	na	na

Chemistry Summary Tables:
New Solutions

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
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Old Solutions

ctl	3.1	6.3	12.5	25	50	100
-----	-----	-----	------	----	----	-----

Average Values

pH	8.1	8.1	8.1	8.0	8.0	8.0	8.2
cond.	356	341	332	314	275	207	39
DO	8.0	7.9	7.8	7.8	7.8	7.8	7.8
temp.	25	25	25	25	25	25	25

7.9	7.9	7.9	7.9	7.9	7.9	8.0
350	353	343	332	281	209	51
7.7	7.7	7.7	7.7	7.6	7.7	7.7
25	25	25	25	25	25	25

Coefficients of Variation (%)

pH	2	2	2	2	1	1	2
cond.	11	11	13	13	15	17	23
DO	3	5	5	5	4	4	4
temp.	0	0	0	0	0	0	0

2	1	1	1	2	2	3
10	12	11	14	13	20	23
1	1	1	1	1	2	1
2	2	2	2	2	2	2

Test Data

Client: TAH102
 Reference: 07-1409-01-CDD

Biology (number of young produced):

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
-----------	-----	-----	-----	------	----	----	-----

ctl	3.1	6.3	12.5	25	50	100
-----	-----	-----	------	----	----	-----

Replicate

Day1

1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

Day 4

5	4	6	4	4	2	2
4	3	2	4	3	3	2
6	2	2	3	3	2	0
4	4	0	2	2	4	2
2	4	2	0	4	4	4
4	2	4	4	2	6	2
5	0	2	2	2	3	0
5	2	0	0	2	4	2
3	2	3	2	4	5	3
2	4	2	2	3	5	4

Day 2

1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

Day 5

0	0	4	2	0	0	0
3	0	2	0	0	0	3
0	0	0	0	0	6	0
0	0	0	0	0	7	2
0	0	8	6	0	6	3
9	3	5	7	0	6	4
0	0	5	3	0	5	2
0	0	7	0	0	0	0
0	0	0	0	0	4	0
0	2	0	2	0	0	0

Day 3

1	0	2	0	4	0	2	2
2	2	0	0	0	2	2	0
3	2	0	0	2	2	0	2
4	0	0	2	0	0	2	2
5	2	0	2	0	2	2	0
6	2	2	0	0	2	2	2
7	0	2	0	2	4	2	2
8	2	0	2	0	2	0	4
9	2	2	2	0	0	0	2
10	0	0	0	0	2	0	0

Day 6

10		4	7	6	4	
8		4	8	7	8	6
11		8	9	7	2	2
9	6	6	6	8	6	
12	8	5	8	7	4	
10	6	5	8	6	3	4
10	9	7	7	9	6	5
12	10	6	6	8	4	
10	8	6	5	9	7	3
8	7	5	5	5	4	0

Notes: #, young produced; 0, no young; blank, dead; bold print #, number of young the test organism had the day it died.

Test Data

Client: TAH102
Reference: 07-1409-01-CDD

Biology (number of young produced):

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
-----------	-----	-----	-----	------	----	----	-----

ctl	3.1	6.3	12.5	25	50	100
-----	-----	-----	------	----	----	-----

Replicate

Day 7

1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Day 8

Notes: #, young produced; 0, no young; blank, dead; bold print #, number of young the test organism had the day it died.

Biology Summary Tables:

Conc. (%)	ctl	3.1	6	12.5	25	50	100
-----------	-----	-----	---	------	----	----	-----

ctl	3.1	6	12.5	25	50	100
-----	-----	---	------	----	----	-----

Day

Mortality (%)

0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	30	0	0	0	0	40
7							
8							

Daily Young Production

0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
12	8	8	8	16	12	16
40	27	23	23	29	38	21
12	5	31	20	0	34	14
100	54	56	69	72	48	20

totals

0	30	0	0	0	0	40
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164	94	118	120	117	132	71
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Replicate

Total Young Produced by Each Adult

1	15	6	14	17	10	8
2	17	3	8	12	12	13
3	19	2	10	14	12	10
4	13	10	8	8	10	19
5	16	12	17	14	13	16
6	25	13	14	19	10	17
7	15	11	14	14	15	16
8	19	12	15	6	12	8
9	15	12	11	7	13	16
10	10	13	7	9	10	9

Average Young Per Adult

16	9	12	12	12	13	7
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Young Production as a Percent of Controls

100	57	72	73	71	80	43
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Test Data

 Client: TAH102
 Reference: 07-1409-01-CDD

Chemistry:

New Solutions							
Conc. (%)	ctl	3.1	6.3	12.5	25	50	100

Old Solutions						
ctl	3.1	6	12.5	25	50	100

Day	pH (units)						
0	8.1	8.1	8.0	8.0	8.0	8.0	8.4
1	8.0	8.0	8.0	8.0	8.0	7.9	7.9
2	7.9	7.9	7.9	7.9	7.9	8.0	8.3
3	8.0	8.0	8.1	8.0	8.0	8.1	8.2
4	8.3	8.3	8.3	8.3	8.2	8.2	8.1
5	8.1	8.0	8.0	8.0	8.0	8.0	8.2
6							
7							
8							

	pH (units)					
	8.0	7.9	7.9	7.9	7.8	7.8
	8.0	8.0	8.0	8.0	8.0	8.2
	8.0	8.0	8.0	8.0	8.1	8.1
	8.0	8.0	8.0	7.9	7.8	7.8
	7.9	7.9	7.9	7.9	7.9	8.0
	7.7	7.8	7.8	7.8	7.8	7.9

	Conductivity (µS/cm)						
0	391	379	371	351	315	241	44
1	380	361	376	350	320	210	46
2	336	328	314	299	255	217	27
3	360	330	310	299	261	210	28
4	376	371	359	337	289	224	44
5	290	278	263	245	212	139	46
6							
7							
8							

	Conductivity (µS/cm)					
	360	401	363	351	295	230
	365	362	357	350	296	225
	357	363	360	347	290	241
	398	384	387	394	330	243
	302	294	283	264	226	143
	316	312	309	288	246	172

	Dissolved Oxygen (mg/L)						
0	8.0	7.3	7.3	7.3	7.4	7.5	7.6
1	7.9	7.8	7.8	7.7	7.6	7.6	7.6
2	7.9	7.8	7.8	7.7	7.6	7.7	7.7
3	8.0	8.0	7.9	7.9	7.8	7.7	7.6
4	8.4	8.5	8.5	8.4	8.4	8.3	8.3
5	7.7	7.7	7.7	7.7	7.7	7.7	7.7
6							
7							
8							

	Dissolved Oxygen (mg/L)					
	7.7	7.7	7.7	7.7	7.7	7.8
	7.8	7.8	7.8	7.8	7.7	7.8
	7.8	7.8	7.8	7.8	7.6	7.8
	7.7	7.8	7.8	7.8	7.7	7.6
	7.6	7.6	7.6	7.6	7.6	7.6
	7.6	7.6	7.6	7.6	7.5	7.5

	Temperature (°C)						
0	25	25	25	25	25	25	25
1	25	25	25	25	25	25	25
2	25	25	25	25	25	25	25
3	25	25	25	25	25	25	25
4	25	25	25	25	25	25	25
5	25	25	25	25	25	25	25
6							
7							
8							

	Temperature (°C)					
	24	24	24	24	24	24
	25	25	25	25	25	25
	25	25	25	25	25	25
	25	25	25	25	25	25
	25	25	25	25	25	25
	25	25	25	25	25	25

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Comments/Statistics

Client: TAH102 Reference: 07-1409-01-CDD

Test Result Comments:

None

Data Analysis:

Protocol Deviations:

None

Test Method: *Ceriodaphnia* Survival and Reproduction Test (6 treatments plus a control)
HydroQual Test Method Manual, section: 4.4.3.2

Reference: Biological Test Method: Test of Reproduction and Survival Using the
Cladoceran *Ceriodaphnia dubia*, 1992. Environment Canada, EPS 1/RM/21
including November, 1997 amendments.

Test Organism:

test species: *Ceriodaphnia dubia*
culture source: in-house
original culture source: Environment Canada
ephippia in stock culture: none
food type: YAT:Algae
frequency of feeding: daily
age of test organisms: <24 hours
culture mortality 7 days prior: 0
culture fecundity 7 days prior: 16
young produced in previous brood: 7
culture condition prior to test initiation: normal
culture water: 50:50 water

Test Design:

test type: static renewal
toxicant: sodium chloride (NaCl)
test vessel: 30 mL plastic cup
test volume (mL): 15
replicates per treatment: 10
organisms per replicate: 1
feeding: daily
temperature (°C): 24-26
photoperiod: 16 hours light: 8 hours dark
light level (surface): 100-600 lux
hardness adjustment: no

*Note: there are 2 subcultures within this culture source, separated by one week in age. The test is set with organisms from one subculture.
The number of young a culture has is monitored daily. If young are not used that day, they are discarded, therefore organisms in tests are <24h.

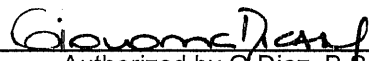
Control/Dilution Water:

source: equal volumes of Bow River water and
moderately hard reconstituted water (50:50 water)
pH (units): 8.3
conductance (uS/cm): 396
dissolved oxygen (mg/L): 7.3
NH₄⁺ (mg/L): <0.1
hardness (mg CaCO₃/L): 126
alkalinity (mg CaCO₃/L): 94
total residual chlorine (mg/L): <0.01

Note: moderately hard reconstituted water prepared as per EPS 1/RM/21

Comments: There were no protocol deviations during the conduct of this test.

Quality Assurance Unit:



Authorized by G. Diaz, B.Sc., Quality Assurance Officer
The test data and results are verified correct.

Mortality

Current Test

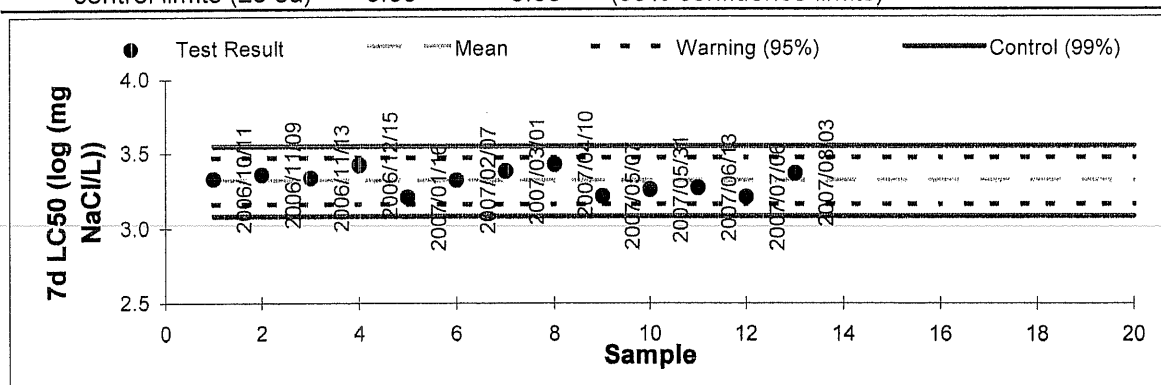
toxicant Sodium chloride (NaCl)

started on 2007/07/27 ended on 2007/08/03

Result (7d LC50): 3.37 log (mg NaCl/L); geometric mean
Confidence Limits (95%) lower 3.20 upper 3.54

Historical Values

mean	3.32	sd	0.08	cv(%):	2
	lower	upper			
warning limits (± 2 sd)	3.16	3.47	(95% confidence limits)		
control limits (± 3 sd)	3.09	3.55	(99% confidence limits)		



Reproduction

Current Test

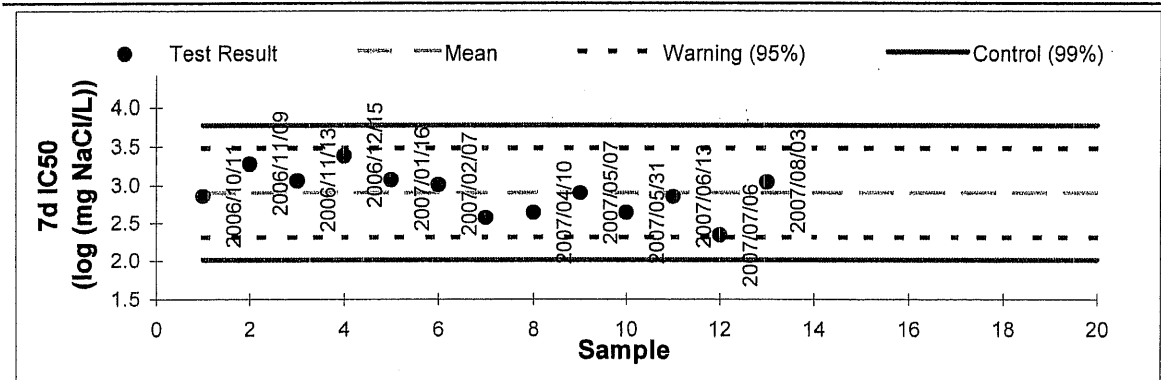
toxicant Sodium chloride (NaCl)

started on 2007/07/27 ended on 2007/08/03

Result (7d IC50): 3.05 log (mg NaCl/L); geometric mean
Confidence Limits (95%) lower 2.39 upper 3.13

Historical Values

mean	2.90	sd	0.29	cv(%):	10
	lower	upper			
warning limits (± 2 sd)	2.31	3.49	(95% confidence limits)		
control limits (± 3 sd)	2.02	3.78	(99% confidence limits)		



Notes: sd, standard deviation; cv, coefficient of variance; NA, could not be calculated

Quality Assurance Information

Culture history for adults used in reference toxicant test started on 2007/07/27:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
7	number of young											
	number of adults											
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
6	number of young											
	number of adults											
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
5	number of young											
	number of adults											
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
4	number of young	10	5	9	5	2	0	5	0	5	11	14
	number of adults	2	1	1	1	1	2	2	2	2	2	2
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
3	number of young	5	5	0	5	0	7	6	11	4	0	0
	number of adults	2	1	1	1	1	2	2	2	2	2	2
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
2	number of young	1	6	4	4	4	9	5	10	6	3	6
	number of adults	2	1	1	1	1	2	2	2	2	2	2
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
Day Used	number of young	14	8	6	6	9	6	6	6	6	6	6
2007/07/27	number of adults	2	1	1	1	1	1	1	1	1	1	1
		D1	E3	E4	F2	F4	D3	D4	D5	D6	E4	F4
Totals	number of young per adult	15	24	19	20	15	14	14	16.5	13.5	13	16

Number of young produced per organism in the last brood before use

7

Mean number of surviving young per adult over the last seven days

16

Culture mortality over the last seven days

0

Quality Assurance Information

Culture history for adults used in the test for sample 01 reference 07-1409:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	A6	B2	B4	B7	D1	D3	D6	E1	F1		
7	number of young											
	number of adults											
6		A6	B2	B4	B7	D1	D3	D6	E1	F1		
	number of young	10	6	9	6							
	number of adults	1	1	1	1							
5		A6	B2	B4	B7	D1	D3	D6	E1	F1		
	number of young	8	11	12	9							
	number of adults	1	1	1	1							
4		A6	B2	B4	B7	D1	D3	D6	E1	F1		
	number of young	11	10	8	6							
	number of adults	1	1	1	1							
3		A6	B2	B4	B7	D1	D3	D6	E1	F1		
	number of young	11	2	0	4							
	number of adults	1	1	1	1							
2		A6	B2	B4	B7	D1	D3	D6	E1	F1		
	number of young	2	0	6	0							
	number of adults	1	1	1	1							
DAY USED		A6	B2	B4	B7	D1	D3	D6	E1	F1		
2007/06/21	number of young	8	12	7	11	6	6	6	6	8		
	number of adults	1	1	1	1	1	1	1	1	1		
totals		A6	B2	B4	B7	D1	D3	D6	E1	F1		
	number of young	50	41	42	36	6	6	6	6	8		
	per adult											

Number of young produced per organism in the last brood before use

8

Mean number of surviving young per adult over the last seven days

22

Culture mortality over the last seven days

10

Result Summary

Client: TAH102
 Reference: 07-1554-01-CDD

Client: Tahera Diamond Corporation; operation Jericho

Sample: Lake C3
 chronic tox

Collection: collected on 2007/08/26 at 1130 by B. Ott

Receipt: received on 2007/08/28 at 1420 by M. Stevenson

Containers: received 1 x 20L pail at 14 °C, in good condition with no seals and no initials

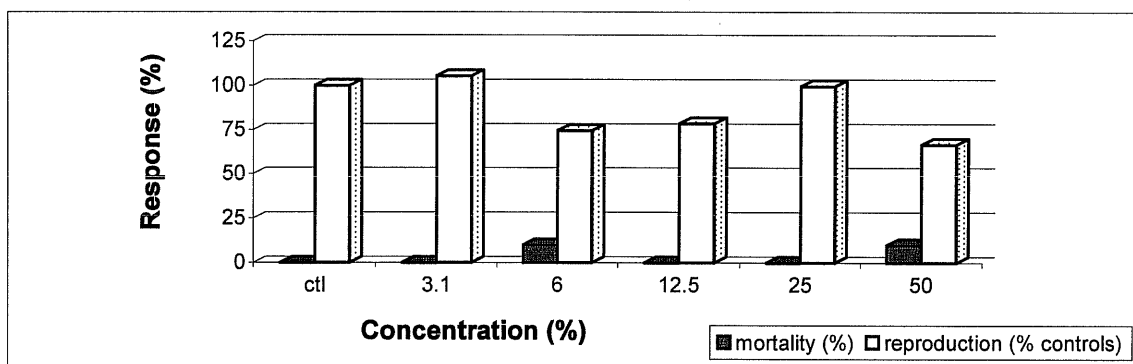
Description: type: Water, collection method: Grab

Test: started on 2007/08/29 ; ended on 2007/09/05

Result:

	Endpoint (6-day)	Value	Confidence Limits (95%)		Units	Method Calculated
			lower	upper		
Acute: (survival)	LC25	>100			%	could not be calculated
	LC50	>100			%	could not be calculated
Chronic: (fecundity)	IC25	52	na	155	%	Log-Logistic
	IC50	80	na	na	%	Log-Logistic

Notes: LCx & ICx, concentrations lethal or inhibitory to 'x' percent of the test population; fecundity, reproduction as the number of young produced; ctl, control; na, could not be calculated




 For
 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Conditions

Client: TAH102 Reference: 07-1554-01-CDD

Method: Biological Test method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*, 1992. Environ.Can., EPS 1/RM/21. (amended November, 1997)

Test type: *Ceriodaphnia* 7-day Survival and Reproduction Static Renewal Test (HQ 4.4.3.2)

Species: *Ceriodaphnia dubia*

Age: <24 hours old; all from same brood source within 12 h of the same age

Organism source: in-house cultures; cultures from a single brood organism to provide test organisms

Culture health: Culture mortality was 14% (must be $\leq 20\%$)

7-d prior to test initiation: No ephippia were noted in the cultures

Average young produced per adult was 24 (must be ≥ 15)

Number of young produced by each brood organism in the last complete brood before use was 8 (must be ≥ 6)

Organism observations: No unusual behavior, appearance or treatment of test organisms was noted prior to or during the test

Sample initial chemistry: pH: 7.6; EC: 42 ($\mu\text{S}/\text{cm}$); DO: 9.1 (mg/L); temperature: 18 °C
hardness (mg CaCO_3/L): 7; colour: pale yellow; odour: odourless

Sample holding time: 3 days (must be ≤ 3 days); The test was conducted with three subsamples, samples a, b, and c were for days 0 to 2, 3 to 4, and 5 to 7.

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: The tests were conducted in 30 mL plastic vessels (2 cm depth)

Test volume: 15 mL of solution (2 cm depth); replenished daily

Control/dilution water: The control and dilution water was a mixture of moderately hard reconstituted water and Bow River Water (50:50). Chemicals added to dilution water:
0.96 g NaHCO_3 , 0.60 g CaSO_4 , 0.60 g MgSO_4 , 0.04 g KCl per 20L

Test concentrations: 6 effluent concentrations (3, 6.3, 12.5, 25, 50, 100% (v/v) plus a negative control)

Test replicates: One neonate <24 hours old was loaded per test vessel;
10 replicates/concentration

Feeding: The test organisms were fed daily a mixture of fermented trout chow, yeast, alfalfa powder, and the green alga *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum* and *Raphidocelis subcapitata*).
Food expiration date: 2007/09/09

Measurements: pH, conductivity, dissolved oxygen and temperature were measured daily

Sample pre-treatment: The sample was not aerated, filtered or pH adjusted prior or during testing
The dissolved oxygen concentration (mg/L) was: 7.8
The sample pH was: 7.7

Lighting: Overhead full spectrum fluorescent lights; 100-600 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $25 \pm 1^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 07-1554-01-CDD

Endpoints: Survival, 7-d LC50 (with 95% confidence limits)
Reproduction, 7-d IC25 (with 95% confidence limits)
Test endpoints were bracketed by at least 1 test concentration
(except for <0.1% or >100 %)

Test completion: 90% of the control organisms had ≥ 3 broods on day 7 (must be $\geq 60\%$ within 8 days)

Test validity: The control had 90% survival (must $\geq 80\%$)
Number of young produced by each surviving control adult was 22 (must be ≥ 15)

Reference toxicant: 7-d test with NaCl initiated August 17, 2007;
current results: (7-d LC50 and 95% confidence limits) = 3.26 (3.05-3.40) log (g/L NaCl)
current results: (7-d IC50 and 95% confidence limits) = 2.96 (2.41-3.51) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

Client: TAH102
Reference: 07-1554-01-CDD

Test Log:

Date	Day	Time	Technicians	Temperature Before Use (°C)	
				Control	Sample
2007/08/29	0	0910	S. Krishnappa	25	25
2007/08/30	1	0915	L. Henson	25	25
2007/08/31	2	1120	L. Henson	24	26
2007/09/01	3	1040	L. Henson	24	24
2007/09/02	4	1050	L. Henson	24	26
2007/09/03	5	1025	L. Henson	24	26
2007/09/04	6	0925	L. Henson	24	26
2007/09/05	7	0940	E. Blais	na	na

Chemistry Summary Tables:
New Solutions

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
-----------	-----	-----	-----	------	----	----	-----

Old Solutions

	ctl	3.1	6.3	12.5	25	50	100
--	-----	-----	-----	------	----	----	-----

Average Values

	7.8	7.8	7.8	7.8	7.8	7.8	7.9	7.9	7.9	8.0	8.0	8.0	7.9	7.9
pH	7.8	7.8	7.8	7.8	7.8	7.8	7.9	7.9	7.9	8.0	8.0	8.0	7.9	7.9
cond.	378	372	364	340	302	227	59	397	378	367	371	313	234	73
DO	7.6	7.6	7.6	7.6	7.6	7.7	7.9	7.6	7.6	7.6	7.6	7.6	7.6	7.6
temp.	25	25	25	25	25	25	25	25	25	25	25	25	25	25

Coefficients of Variation (%)

	2	2	2	2	1	1	1	2	2	2	2	2	2	2
pH	2	2	2	2	1	1	1	2	2	2	2	2	2	2
cond.	7	7	7	10	10	11	14	9	7	8	8	9	13	17
DO	3	3	4	4	4	4	6	4	4	5	5	5	5	5
temp.	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Test Data

Client: TAH102
Reference: 07-1554-01-CDD

Biology (number of young produced):

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
-----------	-----	-----	-----	------	----	----	-----

ctl	3.1	6.3	12.5	25	50	100
-----	-----	-----	------	----	----	-----

Replicate

Day1

1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

Day 4

4	5	3	4	3	0	0
3	3	0	5	4	0	0
4	5	4	4	0	3	0
0	3	3	3	3	0	3
4	4	0	3	3	2	0
3	4	0	4	4	2	0
2	4	5	2	3	3	0
0	0	4	3	4	2	3
5	3	3	0	2	0	0
4	3	0	2	5	3	0

Day 2

1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

Day 5

2	0	0	9	2	5	2
0	8	2	7	5	4	3
6	3	7	5	6	5	2
4	6	3	6	4	0	6
4	7	3	0	7	3	0
7	7	2	5	7	5	3
8	3	9	5	9	7	0
8	9	0	4	5		2
8	8	2	0	8	2	2
10	4	0	5	4	0	2

Day 3

1	0	0	0	0	0	0	0
2	0	0	0	0	0	2	0
3	0	3	2	0	0	0	0
4	0	2	0	0	0	0	0
5	0	3	0	0	0	0	0
6	0	3	0	0	0	0	0
7	0	4	0	0	0	0	0
8	0	3	4	0	0	0	2
9	0	4	3	2	0	0	0
10	0	3	3	0	2	0	0

Day 6

10	3	5	6	9	0	8
11	0	3	0	4	3	4
10	8	9	0	8	6	6
12	5	10	2	7	7	3
3	3	4	4	0	4	0
4	11	0	2	3	2	0
0	9	4	6	10	9	0
8	9	8	7	7		4
3	6	10	2	7	4	6
0	3		4	6	8	2

Notes: #, young produced; 0, no young; blank, dead; bold print #, number of young the test organism had the day it died.

Test Data

Client: TAH102
Reference: 07-1554-01-CDD

Biology (number of young produced):

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
-----------	-----	-----	-----	------	----	----	-----

ctl	3.1	6.3	12.5	25	50	100
-----	-----	-----	------	----	----	-----

Replicate

Day 7

1	0	10	0	12	10	11	2
2	2	2	9	13	12	8	0
3	12	12	8	8	2	0	2
4	10	7	0	10	4	4	0
5	9		6	6	0	9	0
6	6	2	0	8	12	7	0
7	9	10	4	3	10	3	0
8	0	8	12	0	6		0
9	12	10	10	2	10	2	4
10	13	0		0	2	12	4

Day 8

Notes: #, young produced; 0, no young; blank, dead; bold print #, number of young the test organism had the day it died.

Biology Summary Tables:

Conc. (%)	ctl	3.1	6	12.5	25	50	100
-----------	-----	-----	---	------	----	----	-----

ctl	3.1	6	12.5	25	50	100
-----	-----	---	------	----	----	-----

Day

Mortality (%)

0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	10	0
6	0	0	10	0	0	10	0
7	0	10	10	0	0	10	0
8							

Daily Young Production

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	25	12	2	2	2	2	2
29	34	22	30	31	15	6	
57	55	28	46	57	31	22	
61	57	53	33	61	43	33	
73	61	49	62	68	56	12	

totals

0	0	10	0	0	10	0
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220	232	164	173	219	147	75
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Replicate

Total Young Produced by Each Adult

1	16	18	8	31	24	16	
2	16	13	14	25	25	17	
3	32	31	30	17	16	14	
4	26	23	16	21	18	11	
5	20	17	13	13	10	18	
6	20	27	2	19	26	16	
7	19	30	22	16	32	22	
8	16	29	28	14	22	2	
9	28	31	28	6	27	8	
10	27	13	3	11	19	23	

Average Young Per Adult

22	23	16	17	22	15	8
----	----	----	----	----	----	---

Young Production as a Percent of Controls

100	105	75	79	100	67	34
-----	-----	----	----	-----	----	----

Test Data

 Client: TAH102
 Reference: 07-1554-01-CDD

Chemistry:
New Solutions

Conc. (%)	ctl	3.1	6.3	12.5	25	50	100
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Day

pH (units)

0	7.7	7.7	7.8	7.7	7.7	7.7	7.8
1	7.6	7.7	7.7	7.7	7.8	7.8	7.9
2	7.6	7.7	7.7	7.8	7.8	7.8	7.9
3	8.0	7.9	7.9	7.8	7.8	7.8	7.9
4	7.8	8.0	8.0	8.0	8.0	8.0	7.9
5	7.8	7.8	7.8	7.8	7.8	7.8	7.8
6	7.9	8.0	8.0	8.0	8.0	8.0	8.0
7							
8							

Conductivity (µS/cm)

0	324	316	318	273	238	171	55
1	376	367	356	339	302	226	51.0
2	379	380	371	333	312	240	57.9
3	405	402	399	366	321	239	64.0
4	384	379	366	348	310	234	61.9
5	409	390	382	380	330	248	74.6
6	372	369	357	338	301	229	51.7
7							
8							

Dissolved Oxygen (mg/L)

0	7.9	7.9	7.8	7.8	7.8	7.8	7.7
1	7.2	7.3	7.3	7.3	7.3	7.3	7.4
2	7.6	7.4	7.3	7.4	7.4	7.6	7.9
3	7.7	7.8	8.0	8.0	8.0	8.1	8.6
4	7.6	7.9	7.8	7.9	8.0	8.0	8.4
5	7.8	7.8	7.7	7.6	7.6	7.5	7.5
6	7.4	7.4	7.4	7.3	7.4	7.5	7.7
7							
8							

Temperature (°C)

0	25	25	25	25	25	25	25
1	25	25	25	25	25	25	25
2	25	25	25	25	25	25	25
3	24	24	24	24	24	24	24
4	24	24	24	24	24	24	24
5	24	24	24	24	24	24	24
6							
7							
8							

Old Solutions

ctl	3.1	6	12.5	25	50	100
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pH (units)

7.9	7.9	7.9	7.9	7.9	7.8	7.9
7.9	7.9	7.9	7.9	7.9	7.9	8.0
8.1	8.1	8.1	8.1	8.1	8.0	8.1
8.0	8.1	8.1	8.1	8.1	8.0	8.0
7.6	7.6	7.7	7.7	7.7	7.7	7.7
8.2	8.1	8.2	8.1	8.1	8.1	8.1
7.9	7.9	7.9	7.9	7.9	7.8	7.8

Conductivity (µS/cm)

412	390	378	387	333	257	96.6
454	406	396	410	334	251	64.3
337	320	307	319	253	171	59.6
409	394	389	390	327	245	66.4
372	372	365	341	311	245	66.9
398	387	375	376	323	245	76.6
398	374	362	375	309	226	78.9

Dissolved Oxygen (mg/L)

7.6	7.6	7.4	7.3	7.4	7.4	7.4
7.2	7.1	7.1	7.1	7.2	7.2	7.3
8.0	8.0	8.1	8.2	8.2	8.1	8.1
7.8	7.9	8.0	8.1	8.1	8.1	8.1
7.5	7.4	7.4	7.4	7.4	7.5	7.6
7.9	7.8	7.7	7.7	7.5	7.4	7.5
7.5	7.5	7.4	7.4	7.4	7.3	7.3

Temperature (°C)

25	25	25	25	25	25	25
25	25	25	25	25	25	25
24	24	24	24	24	24	24
24	24	24	24	24	24	24
25	25	25	25	25	25	25
24	24	24	24	24	24	24

Comments/Statistics

Client: TAH102
Reference: 07-1554-01-CDD

Test Result Comments:

None

Data Analysis:

Endpoints for mortality could not be calculated. No effect occurred.

Endpoints for reproduction were calculated using a non-linear regression model (3P Log-Logistic) with CETIS v1.1.2 rev P.

Protocol Deviations:

None

Test Method: *Ceriodaphnia* Survival and Reproduction Test (6 treatments plus a control)
HydroQual Test Method Manual, section: 4.4.3.2

Reference: Biological Test Method: Test of Reproduction and Survival Using the
Cladoceran *Ceriodaphnia dubia*, 1992. Environment Canada, EPS 1/RM/21
including November, 1997 amendments.

Test Organism:

test species: *Ceriodaphnia dubia*
culture source: in-house
original culture source: Environment Canada
ephippia in stock culture: none
food type: YAT:Algae
frequency of feeding: daily
age of test organisms: <24 hours
culture mortality 7 days prior: 0
culture fecundity 7 days prior: 15
young produced in previous brood: 9
culture condition prior to test initiation: normal
culture water: 50:50 water

Test Design:

test type: static renewal
toxicant: sodium chloride (NaCl)
test vessel: 30 mL plastic cup
test volume (mL): 15
replicates per treatment: 10
organisms per replicate: 1
feeding: daily
temperature (°C): 24-26
photoperiod: 16 hours light: 8 hours dark
light level (surface): 100-600 lux
hardness adjustment: no

*Note: there are 2 subcultures within this culture source, separated by one week in age. The test is set with organisms from one subculture.
The number of young a culture has is monitored daily. If young are not used that day, they are discarded, therefore organisms in tests are <24h.

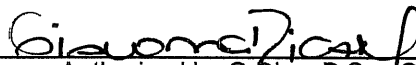
Control/Dilution Water:

source: equal volumes of Bow River water and
moderately hard reconstituted water (50:50 water)
pH (units): 8.3
conductance (uS/cm): 396
dissolved oxygen (mg/L): 7.3
NH₄⁺ (mg/L): <0.1
hardness (mg CaCO₃/L): 126
alkalinity (mg CaCO₃/L): 94
total residual chlorine (mg/L): <0.01

Note: moderately hard reconstituted water prepared as per EPS 1/RM/21

Comments: There were no protocol deviations during the conduct of this test.

Quality Assurance Unit:



Authorized by G. Diaz, B.Sc., Quality Assurance Officer
The test data and results are verified correct.

Mortality

Current Test

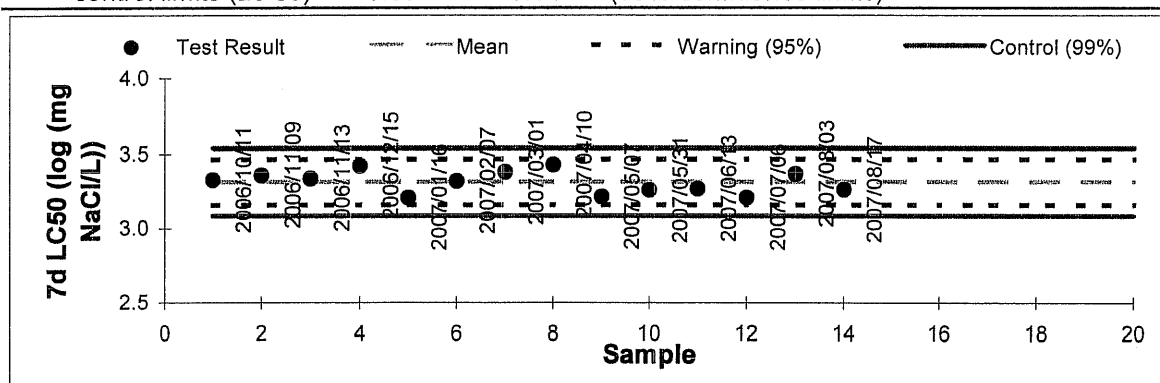
toxicant Sodium chloride (NaCl)

started on 2007/08/17 ended on 2007/08/24

Result (7d LC50): 3.26 log (mg NaCl/L); geometric mean
Confidence Limits (95%) lower 3.05 upper 3.40

Historical Values

	mean	sd	0.08	cv(%)	2
		lower	upper		
warning limits (± 2 sd)	3.16	3.46	(95% confidence limits)		
control limits (± 3 sd)	3.09	3.54	(99% confidence limits)		



Reproduction

Current Test

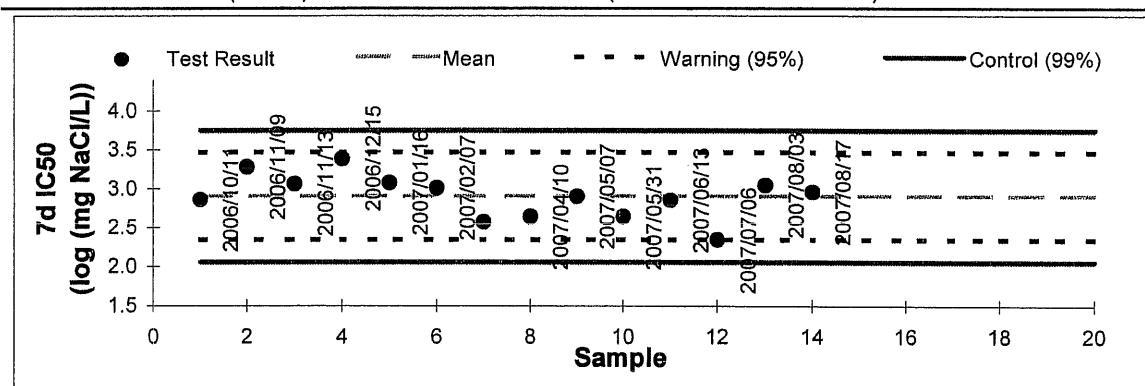
toxicant Sodium chloride (NaCl)

started on 2007/08/17 ended on 2007/08/24

Result (7d IC50): 2.96 log (mg NaCl/L); geometric mean
Confidence Limits (95%) lower 2.41 upper 3.51

Historical Values

	mean	sd	0.28	cv(%)	10
		lower	upper		
warning limits (± 2 sd)	2.34	3.47	(95% confidence limits)		
control limits (± 3 sd)	2.06	3.75	(99% confidence limits)		



Notes: sd, standard deviation; cv, coefficient of variance; NA, could not be calculated

Quality Assurance Information

Culture history for adults used in reference toxicant test started on 2007/08/17:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	B1	C1	A5	B3	C4	B5	C5	A6	B6	C6	C7
7	number of young											
	number of adults											
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
6	number of young											
	number of adults											
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
5	number of young											
	number of adults											
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
4	number of young	2	2	2	2	2	0	0	0	0	2	0
	number of adults	2	2	2	2	2	2	2	2	2	2	2
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
3	number of young	8	0	6	2	6	6	4	4	4	6	6
	number of adults	2	2	2	2	2	2	2	2	2	2	2
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
2	number of young	12	8	7	6	6	6	12	8	4	6	6
	number of adults	2	2	2	2	2	2	2	2	2	2	2
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
Day Used	number of young	6	10	8	8	8	9	12	10	8	9	6
2007/06/07	number of adults	1	1	1	1	1	1	1	1	1	1	1
		B1	C1	A5	B3	C4	B5	C5	A6	B6	C4	B5
Totals	number of young per adult	17	15	16	13	15	15	20	16	12	16	12

Number of young produced per organism in the last brood before use 9

Mean number of surviving young per adult over the last seven days 15

Culture mortality over the last seven days 0

Quality Assurance Information

Culture history for adults used in the test for sample 01 reference 07-1554:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	B1	B3	B4	B6	C3	C4	C5	C6	F7		
7	number of young									6		
	number of adults									1		
6		B1	B3	B4	B6	C3	C4	C5	C6	F7		
	number of young									0		
	number of adults									1		
5		B1	B3	B4	B6	C3	C4	C5	C6	F7		
	number of young									7		
	number of adults									1		
4		B1	B3	B4	B6	C3	C4	C5	C6	F7		
	number of young									9		
	number of adults									1		
3		B1	B3	B4	B6	C3	C4	C5	C6	F7		
	number of young	4	12	5	6	5	5	0	5	2		
	number of adults	1	1	1	1	1	1	1	1	1		
2		B1	B3	B4	B6	C3	C4	C5	C6	F7		
	number of young	7	6	8	8	11	14	6	12	8		
	number of adults	1	1	1	1	1	1	1	1	1		
DAY USED		B1	B3	B4	B6	C3	C4	C5	C6	F7		
2007/08/29	number of young	8	6	8	7	7	6	9	9	14		
	number of adults	1	1	1	1	1	1	1	1	1		
totals		B1	B3	B4	B6	C3	C4	C5	C6	F7		
	number of young	19	24	21	21	23	25	15	26	46		
	per adult											

Number of young produced per organism in the last brood before use

8

Mean number of surviving young per adult over the last seven days

24

Culture mortality over the last seven days

14

APPENDIX D

Waste Rock and Ore Geochemistry

**2007 Waste Rock Survey Report
Tahera Diamond Corporation
Jericho Diamond Mine**

March 2008

Prepared By: Jericho Mine Personnel

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Appendix A: Analytical Results for Waste Rock and Overburden Samples

Appendix B: Analytical Results for Kimberlite Samples

1.0 Introduction

As per conditions set forth in Water License NWB1JER0410, Tahera Diamond Corporation is required to monitor the geochemical properties of waste rock, overburden, Kimberlite ore and processed Kimberlite materials. The results of the monitoring program are reported annually.

The 2007 Waste rock Survey Report has been prepared by Tahera Diamond Corporation. Tahera personnel were responsible for sampling, contracting of sample analysis and data management and analysis.

2.0 Methods

2.1 Waste Rock Overburden Sampling

As part of the routine monitoring programs, Tahera Diamond Corporation Jericho Mine staff collected waste rock samples from the Jericho Pit during the course of 2007.

Samples were collected from blast cuttings. Composite samples from multiple holes within a blast pattern were prepared to represent the entire blast pattern.

Test results from November 2006 to December 2007 have been included in this report. A total of 19 granite samples, 2 diabase samples, 0 till samples, 3 samples of mixed granite and diabase and 1 sample of Kimberlite were collected from November 2006 to December 2007. Results of analysis for these materials are provided in Appendix A.

The distribution of the waste rock samples collected between November 2006 and December 2007 has limited spatial variability due to the mining activities in 2007. The distribution of the samples collected from the various benches (457.5, 465, 472.5 and the 480 level) were collected from a variety of locations around the pit, providing good representation of these benches.

Diabase was not encountered as often during the sampling period and the number of samples collected from diabase bearing drill cuttings was limited to 3 samples. Till samples were not collected during this sampling program although mixed granite/till samples accounted for 5 of the samples collected in 2007.

Table 1 provides a summary of samples collected and analysis conducted for 2007. Results of the analysis for the waste rock overburden samples can be found in Appendix A.

2.2 Kimberlite and Processed Kimberlite Sampling

Kimberlite was sampled once during the sample period. This sample is representative of the face rock in the pit; however the samples collected from the processed Kimberlite during the same sampling period will be far more representative of the chemistry of the Kimberlite.

Processed Kimberlite has been sampled since the start of production. Samples of Coarse Process Kimberlite (CPK), Fine Process Kimberlite (FPK) and Recovery Rejects (RR) were regularly collected approximately twice monthly. Twenty one samples of RR, 22 samples each of CPK and FPK were collected between November 2006 and December 2007.

Table 1 provides a summary of samples collected and analysis conducted. Results of the analysis for the processed Kimberlite can be found in Appendix B.

2.3 Field Inspection

No independent inspection of the pit for sulphide mineralization was conducted in 2007 as was done in 2006. However, the mine geologist was in the pit every day surveying and mapping. No new sulphide veins were encountered other than the one reported in 2006 by SRK.

SRK completed an in-pit seep survey in July 2006. During the inspection observations were made indicating that only one area occurred with minor amounts of sulphide minerals (primarily as

chalcopyrite). The sulphide minerals occurred as small discontinuous veinlets along the contact of a small mafic volcanic dike with the granitic rocks. The observed dike was approximately 1.5 meters wide and generally more fractured and altered compared to the more prominent diabase dikes. The total amount of rock from this zone was minor (SRK, 2006).

2.4 Analytical Methods

Testing of waste rock and processed Kimberlite samples was completed at ALS-Chemex Laboratories in Vancouver. Samples were analyzed using the standard Sobek et al. (1978) procedure for acid-base accounting (ABA), including total sulphur, neutralization potential, and paste pH.

Samples analyzed for metal composition were scanned for a suite of 47 parameters by ICP-MS following an aqua regia digestion. In addition, uranium analysis by X-Ray Fluorescence (XRF) and copper analysis by Atomic Absorption (AA) spectrometry was performed on select samples. Table 1 shows the number of samples collected and the number and type of analysis performed for each type of material.

3.0 Results

3.1 Waste Rock and Overburden

Analytical results for all waste rock samples collected in 2006 and 2007 are presented in Appendix A. A statistical summary of each waste rock type (granite, diabase, overburden) is provided in Table 2. A summary of the pre-mine characterization and the 2006 characterization for waste rock are also provided for comparison.

3.1.1 Granitic Samples

The granitic samples had paste pH in the range of 7.7 to 9.6, with a median of 8.7. Total sulphur concentrations were low with a median concentration below the detection limit of 0.01% and maximum concentration of 0.01%. NP's ranged from 2 to 27 kg CaCO₃ eq/tonne, with a median NP value of 6 kg CaCO₃

eq/tonne. The NP/MPA ratio ranged from 9.6 to 172.8 with a median of 32 (Table 2 and Figure 1). The results indicate that granitic rocks have a negligible potential for acid rock drainage (ARD).

Relative to pre-mine characterization, the granite samples collected through 2005 - 2007 monitoring generally had comparable ABA characteristics.

Metal concentrations in the granite samples were generally low and typical of average crustal abundances (Appendix A). One of the 2007 samples collected from the 450 bench had considerably higher Ca, Co, Fe, Mg, Mn, Sr and Zn, and less K than the other granite samples, suggesting the possible inclusion of more mafic materials in the sample (i.e. diabase).

Uranium analysis indicate moderately elevated concentrations (range of 5.6 to 10.3 ppm; median of 7.3 ppm), consistent with the range observed in the pre-mine data (SRK 2005) and the 2006 data (SRK 2007).

3.1.2 Diabase

The diabase samples had paste pH values ranging from 8.0 to 8.6 with a median of 8.25. The average total sulphur content of diabase was 0.02%, with all samples having less than 0.02%. NP's ranged from 11 to 18 kg CaCO₃ eq/tonne with a median value of 14 kg CaCO₃ eq/tonne. NP/MPA ratios were between 24 and 44.8 (Table 2 and Figure 1). The results indicate that diabase is not expected to generate ARD.

Diabase samples had considerably higher Ca, Co, Cu, Fe, Mg, Mn, Ni, P, Sr and Zn and slightly higher Ag, Ba, Cr, Na, Sb and Mo concentrations compared to the granite samples. Concentrations of As, Ba, K, Pb and U were lower in the diabase samples than the granites.

Diabase samples had median uranium concentrations of 1.7 ppm by ICP and median U by XRF concentrations of 4 ppm.

Samples indicated to be composed of a mixture of granite and diabase had ABA and metal results within the range of the granite and diabase samples analyzed between 2005 and 2007.

3.1.3 Overburden

There were no till samples collected during the sampling period. All overburden was removed from the pit area in the previous sampling program and this material was sampled at that time.

As reported in the 2006 Waste Rock Survey Report, the till samples had higher concentrations of As, Ba and Sb compared to either the granite or diabase samples.

Samples composed of mixtures of till and granite generally had ABA characteristics within the range of values observed for each individual rock type.

3.2 Kimberlite and Processed Kimberlite

Analytical results for all Kimberlite and processed Kimberlite samples collected during the sampling period are presented in Appendix B. A statistical summary is provided in Table 3. A summary of the pre-mine characterization of Kimberlite and processed Kimberlite is provided for comparison.

3.2.1 Kimberlite Ore

The ABA results for the ore sample collected in 2007 had a paste pH value of 8.8 and low total sulphur concentrations (0.03%). The NP was 367 CaCO₃ eq/tonne with a corresponding NP/MPA ratio of 391.5 kg CaCO₃ eq/tonne. Results are consistent with pre-mine characterization and analysis conducted in 2006. The results indicate that Kimberlite does not have potential to generate ARD.

3.2.2 Processed Kimberlite

Total maximum sulphur in Coarse Process Kimberlite (CPK) samples was 0.08%, with a median of 0.03%. Paste pH values were between 8.6 and 9.3 with a median of 8.9. NP's ranged from

85 to 382 kg CaCO₃/tonne, with a median of 350 kg CaCO₃/tonne. Resulting NP/MPA ratios ranged from 45.33 to 611.2 with a median of 372.3. The results indicate that, like Kimberlite ore, CPK has very high neutralization potential and is not expected to generate ARD.

Fine Process Kimberlite (FPK) samples had paste pH ranging from 8.4 to 9.0 with a median of 8.8. Total sulphur concentrations were low, ranging from 0.03% to 0.06% with a median of 0.04%. NP's ranged from 306 to 404 kg CaCO₃/tonne, with a median of 373 kg CaCO₃/tonne. Resulting NP/MPA ratios were between 196.8 and 402.1 with a median of 301.6 (Table 3 and Figure 2), indicating the FPK is also not expected to generate ARD.

The ABA results for CPK and FPK are consistent with pre-mine characterization which indicated that the material has no potential to generate acidic drainage. Slight differences in MPA, NP and NP/MPA values between pre-mine and monitoring samples (Table 3) are largely the result of differences in the calculation of acid potential and slight differences in the laboratory procedures for determination of NP (Standard Sobek vs Modified Sobek procedures).

Metal analysis for CPK and FPK were similar to that of the Kimberlite ore in samples collected in 2005-2006, indicating little change in composition due to the processing method. Metals analysis was not conducted on the one Kimberlite ore sample collected in 2007.

In samples collected previous to 2007 Ba, Mo, Ni, Pb, W and Zr showed higher concentrations in the FPK than the CPK and Kimberlite ore, and only Na showed lower concentrations in the FPK than the CPK and Kimberlite ore. Due to the small differences and limited number of metal analysis, it cannot be confidently determined whether the differences are the result of elemental concentration due to the processing method or the result of natural sample variability.

Uranium analysis for CPK and FPK were similar with maximum values of 15.7 and 15.1 ppm respectively and minimum values of

3.4 and 5.1 ppm respectively. Average ICP-MS results for uranium were 8.98 ppm and 9.08 ppm for CPK and FPK respectively. XRF analyses indicated that the CPK and FPK have average uranium concentrations of 8.83 and 10.40 ppm respectively.

Compared to pre-mine characterization, metal analyses showed that the CPK samples had considerably higher Al, Mg, Mn and slightly higher Ag, Ba, Ca, Co, Cr, K, Na, P, Sr, and Zn.

Metal results for the FPK samples were only slightly different than results from pre-mine characterization. Compared to pre-mine samples, FPK had higher average Al, Cd, concentrations and lower average As, Ba, Cr, Cu, Fe, Mn, Ni, P, Pb, Sb, and Zn.

3.2.3 Recovery Rejects

Recovery rejects were characterized for ARD potential during the sampling period. ABA results had a paste pH ranging from 9.2 to 9.9. Total sulphur concentrations ranged between 0.01% to 0.06% and had a median concentration of 0.01%. NP's ranged from 54 to 445 kg CaCO₃/tonne and corresponding NP/MPA ratios ranged from 42.67 to 1424 indicating that the RR is not expected to generate ARD.

As would be expected from the dense medium separation (DMS) concentration process, the RR samples showed that several metals are concentrated in the RR. The RR samples had higher Ag, Al, Cd, Co, Cr, Fe and Mn compared to the corresponding Kimberlite ore and processed Kimberlite samples. Cr and Mn were significantly higher. The solubility of Cr and Mn are however expected to be very low under neutral pH conditions. Parameters that showed lower concentrations in RR than the other Kimberlite samples included As, Ba, K, Mg, Mo, Ni, P, Pb, Sb, Sr, and U.

4.0 Conclusions and Recommendations

Results from geochemical monitoring of waste rock and overburden in 2007 indicated these materials contain low concentrations of sulphur and trace

metals consistent with levels determined in pre-mine characterization. These materials are not expected to generate ARD.

Metal concentrations were generally low and typical of average crustal abundances. Concentrations of several metals, including Ag, Ca, Co, Cu Cr, Fe, Mg, Mn, Mo, Ni and Zn were higher in diabase than the granites. Concentrations of As, Ba and Sb were higher in the till samples than either the granite or diabase samples.

Geochemical monitoring of Kimberlite ore and processed Kimberlite (CPK and FPK) samples indicate that Kimberlite has a negligible potential to generate ARD.

Recovery rejects (RR) did not have pre-mine characterization and geochemical monitoring results indicated slightly higher concentrations of sulphides compared to the other processed Kimberlite, but this is still less than 0.06% total sulphur (median 0.01%). NP/MPA ratios were all greater than 16, indicating that they have a negligible potential for ARD. As expected, the dense media separation process has resulted in higher metal concentrations in the recovery rejects as compared to Kimberlite ore and the other processed Kimberlite materials. In particular, Cr and Mn were significantly higher. The solubility of these metals is expected to be very low under neutral pH conditions.

In general, the results have indicated that waste materials from the Jericho pit have a negligible potential for ARD. The routine acid base accounting tests have proceeded for three years and ARD concerns have not been identified.

Consideration should be given to reducing the sampling frequency from bi-weekly to monthly during normal operations. Regular inspections of the pit walls by a geologist or geological engineer should be completed to ensure that small quantities of sulphidic rock, such as those identified during the seep survey in 2006 are identified and managed appropriately.

Although the results indicate kimberlite ore and processed Kimberlite are non-acid generating, these materials should still be isolated from tundra sediments by placing them on a granitic rock pad to prevent reductive dissolution of iron silicate minerals.

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Tables

Table 1: Summary of Samples Collected and Number of Analysis

Year	Rock Type	# of Samples	Number of Analysis					
			Paste pH	T (S)	NP	Metals (ICP-MS)	U by XRF	Cu by AA
2005	Granite	29	29	29	26	23	12	6
	Diabase	26	26	26	24	25	25	23
	Mixed Granite/Diabase	7	7	7	7	7	2	2
	Mixed Till/Granite	6	6	6	6	6	6	6
2006	Granite	9	9	9	9	2	9	2
	Diabase	2	2	2	2	0	2	0
	Mixed Granite/Diabase	2	2	2	2	1	2	1
	Till	7	7	7	7	3	7	2
	Mixed Till/Granite	6	6	6	6	2	6	2
	Kimberlite Ore	5	5	5	5	2	5	1
	CPK	20	20	20	20	4	6	0
	FPK	20	20	20	20	4	6	0
	RR (Recovery Rejects)	18	18	18	18	3	5	0
2007	Granite	23	23	20	21	4	21	2
	Diabase	3	3	3	3	1	3	0
	Mixed Granite/Diabase	3	3	3	3	2	3	2
	Mixed Till/Granite	5	5	5	5	2	5	0
	Kimberlite Ore	1	1	1	1	0	1	0
	CPK	22	22	22	22	5	5	0
	FPK	21	21	21	21	5	5	0
	RR (Recovery Rejects)	21	21	21	21	5	5	0

Notes: S(T) - Total Sulphur by Leco Furnace
NP - Neutralization Potential
XRF - X-Ray Fluorescence
AA - Atomic Absorption Spectrometry

Table 2: Summary of ABA and Metal Analysis for Waste Rock and Overburden

	Material Type	Statistic	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Ca	Co	Cr	Cu	Cu ⁽¹⁾
				%	CaCO ₂ /tonne				ppm	%	ppm	ppm	%	ppm	ppm	ppm	%
Pre-Mining	Granite	Average	8.8	<0.01	0.4	5	5	11	<0.2	0.68	<5	36	0.29	5	207	32	
		Median	8.8	<0.01	<0.3	3	2	8	<0.2	0.46	<5	30	0.14	3	196	2	
		Minimum	8.4	<0.01	<0.3	2	1	5	<0.2	0.15	<5	<10	0.05	1	74	<1	
		Maximum	9.2	0.07	2.2	21	21	10	<0.2	3.08	<5	140	1.23	25	341	352	
		Count	16	29	16	16	16	7	29	29	29	29	29	29	29	29	
Operational Monitoring 2005 - 2006	Granite	Average	8.5	<0.01	0.4	6	6	15	0.04	7.09	1.6	334	0.67	4.4	47	15.8	<0.01
		Median	8.4	<0.01	<0.3	5	5	16	0.03	7.09	1.4	350	0.52	3	26	11.2	<0.01
		Minimum	7.6	<0.01	<0.3	3	3	8	<0.01	5.25	<0.2	110	0.18	1.1	2	2.7	<0.01
		Maximum	10	0.04	1.3	16	16	51	0.11	8.21	3.7	550	2.33	14.8	172	77.2	0.01
		Count	38	38	38	35	35	35	25	25	25	25	25	25	25	25	8
	Diabase	Average	8.1	0.02	0.5	13	12	22	0.17	7.19	0.6	150	6.13	44.4	52	335.8	0.03
		Median	8.2	0.02	0.6	12	12	26	0.15	7.26	0.6	155	5.99	43.4	49	320.5	0.03
		Minimum	7.4	0.01	0.3	10	10	13	0.12	6.49	<0.2	110	5.06	35.4	24	189.5	0.02
		Maximum	8.7	0.03	0.9	18	17	51	0.28	8.06	1.3	210	7.43	53.2	122	511	0.05
		Count	28	28	28	26	26	26	24	24	24	24	24	24	24	24	23
	Till	Average	8.5	0.02	0.6	11	11	19	0.06	7.17	7.8	487	1.52	14.2	44	33	0.01
		Median	8.2	0.02	0.6	8	8	19	0.05	7.09	5.1	490	1.57	13.8	45	31	0.01
		Minimum	8.1	0.01	0.3	4	4	6	0.04	7.01	2.9	460	1.1	11.6	35	23.8	0.01
		Maximum	9	0.03	0.9	27	26	43	0.08	7.4	15.3	510	1.89	17.1	52	44.3	0.01
		Count	7	7	7	7	7	7	3	3	3	3	3	3	3	3	2
Operational Monitoring 2007	Granite	Average	8.73	0.01	0.21	7.86	7.86	42.06	0.04	6.96	0.40	310.00	0.69	2.85	33.50	4.20	0.01
		Median	8.7	<0.01	<0.3	6	6	32	0.035	7	0.4	320	0.565	1.8	9	4.1	0.005
		Minimum	7.7	<0.01	<0.3	2	2	9.6	0.02	6.68	0.3	270	0.5	1	3	3.5	0.005
		Maximum	9.6	0.01	0.3	27	27	172.8	0.05	7.17	0.5	330	1.11	6.8	113	5.1	0.005
		St. Deviation	0.61	0.00	0.07	5.99	5.99	37.36	0.01	0.23	0.08	27.08	0.29	2.69	53.10	0.74	0.00
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Count	23	20	23	23	23	23	4	4	4	4	4	4	4	4	4
	Diabase	Average	8.28	0.02	0.45	14.33	13.83	32.80	0.10	7.22	0.50	206.67	4.91	37.60	38.67	240.00	0.02
		Median	8.25	0.015	0.45	14.5	14	32.8	0.1	7.18	0.5	180	4.91	37.1	42	200	0.015
		Minimum	8	0.01	0.3	11	11	24	0.06	6.98	<0.2	140	3.36	26.5	29	155	0.01
		Maximum	8.6	0.02	0.6	19	18	44.8	0.13	7.5	0.7	300	6.47	49.2	45	365	0.02
		St. Deviation	0.23	0.01	0.16	2.80	2.40	8.27	0.04	0.26	0.28	83.27	1.56	11.36	8.50	110.57	0.01
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Count	6	6	6	6	6	6	3	3	3	3	3	3	3	3	3
	Till	Average	8.14	0.01	0.30	9.20	9.20	29.44	0.02	6.99	1.70	480.00	0.77	9.25	32.50	20.35	N/A
		Median	8.3	0.01	0.3	9	9	28.8	0.015	6.985	1.7	480	0.77	9.25	32.5	20.35	N/A
		Minimum	7.4	0.01	0.3	4	4	12.8	0.01	6.71	1.5	460	0.75	9.2	32	19.5	N/A
		Maximum	8.5	0.01	0.3	16	16	51.2	0.02	7.26	1.9	500	0.79	9.3	33	21.2	N/A
		St. Deviation	0.46	0.00	0.00	4.44	4.44	14.20	0.01	0.39	0.28	28.28	0.03	0.07	0.71	1.20	N/A
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A
		Count	5	5	5	5	5	5	2	2	2	2	2	2	2	2	0

Note: Pre-Mine characterization values from EIS (Tahera, 2003)

S(T) - Total sulphur by Leco Furnace

MPA - Maximum Potential Acidity, in kg CaCO₃ eq/tonne, calculated from total sulphur

NP - Neutralization Potential in kg CaCO₃ eq/tonne

NNP - Net Neutralization Potential in kg CaCO₃ eq/tonne (NP-MPA)

(1) Copper determined by AA Spectrometry

(2) Uranium determined by X-Ray Fluorescence

*Pre-Mine uranium values from "2004 Characterization of Uranium in Jericho Waste Rock" (SRK, 2005). Analysis was by delayed neutron counting (DNC) method.

Table 2: Summary of ABA and Metal Anal

	Material Type	Statistic	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sr	U	U ₍₂₎	Zn
			%	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Pre-Mining	Granite	Average	1.84	0.2	0.46	236	4	0.06	10	420	9	5	2	10	5.9*		42
		Median	1.36	0.13	0.2	195	4	0.05	6	160	6	5	1	6	5.5*		36
		Minimum	0.36	0.03	0.05	35	<2	0.02	3	30	<2	<5	<1	2	1.4*		1
		Maximum	5.99	0.5	3.42	795	6	0.2	39	4260	46	5	4	48	13.8*		115
		Count	29	29	29	29	29	29	29	29	29	29	29	29	29	30	
Operational Monitoring 2005 - 2006	Granite	Average	1.4	3.32	0.4	177	0.98	2.77	8.9	326	18	0.15	2	102	5.6	5	17
		Median	1.26	3.43	0.32	142	0.8	2.77	7.6	300	16.6	0.13	2	98	4.3	4	16
		Minimum	0.62	1.3	0.14	60	0.38	1.99	1.4	120	9.2	<0.05	1	47	2.0	<4	4
		Maximum	3.4	5.94	0.99	465	2.54	3.47	24.9	1490	42.7	0.43	3	223	12.1	9	35
		Count	25	25	25	25	25	25	25	25	25	25	25	25	25	21	25
	Diabase	Average	10.27	0.72	2.88	1468	1.45	1.93	56.4	1186	3.1	0.33	3	284	1.2	<4	104
		Median	10.38	0.73	2.8	1468	1.53	1.91	57.7	990	2.8	0.07	3	281	130	<4	102
		Minimum	8.05	0.39	2.16	1170	0.97	1.68	35.3	780	1.6	<0.05	2	241	0.4	<4	79
		Maximum	11.7	1.62	3.92	1640	2.21	2.2	77.7	2060	7.1	2.44	4	339	6.2	10	123
		Count	24	24	24	24	24	24	24	24	24	24	24	24	21	24	27
	Till	Average	3.31	2.56	1.34	422	1.02	1.9	33.9	533	15.8	0.61	2	163	2.5	6	58
		Median	3.17	2.62	1.28	415	1.03	1.89	34.3	520	15.4	0.56	2	167	2.6	6	57
		Minimum	2.97	2.39	1.16	342	0.8	1.67	26.1	480	8	0.42	2	148	2.3	<4	37
		Maximum	3.79	2.68	1.59	509	1.24	2.13	41.4	600	23.9	0.85	2	175	2.7	8	80
		Count	3	3	3	3	3	3	3	3	3	3	3	3	3	7	3
Operational Monitoring 2007	Granite	Average	1.04	2.76	0.44	176.50	1.53	2.92	21.58	190.00	18.28	0.05	1.67	79.23	7.58	8.95	21.50
		Median	0.9	2.905	0.245	144	1.535	2.885	4.45	175	17.9	0.055	2	71.4	7.3	9	16
		Minimum	0.79	2	0.19	123	0.99	2.8	2.4	150	16.5	0.025	<1	67.6	5.6	2	11
		Maximum	1.55	3.23	1.09	295	2.06	3.1	75	260	20.8	0.08	2	106.5	10.3	14	43
		St. Deviation	0.36	0.57	0.43	80.68	0.47	0.14	35.64	49.67	1.95	0.02	0.58	18.32	1.56	3.14	14.62
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Count	4	4	4	4	4	4	4	4	4	4	4	4	4	17	4
	Diabase	Average	8.12	1.04	2.41	1116.00	1.66	2.34	48.07	893.33	4.90	0.13	1.67	239.83	2.10	3.60	83.00
		Median	7.62	1.08	2.4	1075	1.3	2.47	48.9	850	5.8	0.13	1	236	1.7	4	77
		Minimum	6.29	0.49	1.86	843	1.03	1.88	34.1	680	2.1	0.11	1	186.5	0.7	<4	58
		Maximum	10.45	1.54	2.98	1430	2.64	2.68	61.2	1150	6.8	0.14	3	297	3.9	5	114
		St. Deviation	2.12	0.53	0.56	295.64	0.86	0.41	13.57	237.98	2.48	0.02	1.15	55.35	1.64	1.52	28.48
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Count	3	3	3	3	3	3	3	3	3	3	3	3	3	6	3
	Till	Average	2.15	2.92	0.97	268.00	0.96	2.08	31.05	365.00	8.00	0.29	2.00	97.85	3.45	6.80	25.00
		Median	2.15	2.915	0.965	268	0.96	2.08	31.05	365	8	0.285	2	97.85	3.45	7	25
		Minimum	2.08	2.8	0.91	264	0.87	2.02	25.8	350	7.6	0.27	2	95.2	3.4	6	24
		Maximum	2.22	3.03	1.02	272	1.05	2.14	36.3	380	8.4	0.3	2	100.5	3.5	8	26
St. Deviation		0.10	0.16	0.08	5.66	0.13	0.08	7.42	21.21	0.57	0.02	0.00	3.75	0.07	0.84	1.41	
Co-Variance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count		2	2	2	2	2	2	2	2	2	2	2	2	2	5	2	

Table 3: Summary of ABA and Metal Analysis for Kimberlite Ore and Processed Kimberlite

	Material Type	Statistic	pH	S(T) %	MPA CaCO ₂ /tonne	NP	NNP	NP/MPA	Ag ppm	Al %	As ppm	Ba ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Cu ⁽¹⁾ %	Fe %
Pr-Mining	Kimberlite Ore	Average	8.8	0.05	0.7*	306	305	385*	<0.2	1.98	2	683	3.72	<0.5	63	815	52		4.3
		Median	8.9	0.05	0.3*	641	339	259*	<0.2	1.44	1	615	3.69	<0.3	72	928	54		4.37
		Minimum	8	0.01	0.3*	29	28	29*	<0.2	0.44	1	270	1.66	<0.3	26	155	22		3.25
		Maximum	9.4	0.1	2.5*	456	455	1132*	<0.2	7.21	<5	1500	7.1	<1	95	1490	77		5.4
		Count	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30
	CPK	Average	9.2	0.05	0.2*	220	220	>1000*	<0.2	0.87	9	508	3.02	<1	50	474	33		4.03
		Median	9.3	0.05	0.0*	251	250	>1000*	<0.2	0.66	5	555	2.99	<1	56	533	32		4.05
		Minimum	9	0.01	0.0*	59	58	6.28*	<0.2	0.58	<5	240	1.26	<1	20	215	22		3.43
		Maximum	9.4	0.1	0.9*	275	275	>1000*	<0.2	1.53	30	70	4.3	<1	59	629	45		4.46
		Count	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6		6
	FPK	Average							0.23	1.93	8	815	4.87	<0.5	75	995	80		5.05
		Median							<0.2	1.55	3	840	4.94	<0.5	78	1088	73		4.85
		Minimum							<0.2	1.09	1	610	3.79	<0.5	46	520	61		4.47
		Maximum							0.4	4.2	24	1000	5.83	<0.5	93	1400	115		5.73
		Count							6	6	6	6	6	6	6	6	6		6
Operational Monitoring 2006	Kimberlite Ore	Average	8.7	0.03	0.9	355	354	378	0.08	2.31	0.7	525	3.82	0.03	71.3	672	33.3	<0.01	4.54
		Median	8.7	0.02	0.6	353	352	550	0.08	2.31	0.7	525	3.82	0.03	71.3	672	33.3		4.54
		Minimum	8.5	0.02	0.6	339	338	240	0.05	2.1	0.7	500	3.57	0.02	69.2	631	29		4.39
		Maximum	9	0.05	1.6	375	373	586	0.1	2.51	0.7	550	4.07	0.03	73.4	713	37.6		4.69
		Count	5	5	5	5	5	5	2	2	2	2	2	2	2	2	2	1	2
	CPK	Average	8.9	0.04	1.2	326	325	282	0.21	2.36	0.5	655	3.79	0.03	68.1	668	39.5		4.54
		Median	8.8	0.03	0.9	343	343	345	0.23	2.32	0.5	655	4.06	0.03	68	624	39		4.57
		Minimum	8.4	0.01	0.3	85	83	45	<0.01	1.82	<0.2	600	2.61	0.03	65.9	522	33		4.29
		Maximum	9.3	0.08	2.5	385	384	1168	0.35	2.99	0.9	710	4.43	0.04	70.5	900	47.1		4.73
		Count	20	20	20	20	20	20	4	4	4	4	4	4	4	4	4	0	4
	FPK	Average	8.6	0.04	1.2	345	344	296	0.27	2.24	0.8	730	4.01	0.04	77	661	44.5		5.08
		Median	8.65	0.04	1.3	347	346	297	0.33	2.16	0.8	750	4	0.04	74.7	642	38.1		4.99
		Minimum	8.2	0.02	0.6	295	294	171	<0.01	1.68	0.3	590	3.43	0.03	69.2	469	31.2		4.47
		Maximum	9	0.06	1.9	385	383	5822	0.43	2.94	1.2	830	4.62	0.04	89.4	889	70.5		5.89
		Count	20	20	20	20	20	20	4	4	4	4	4	4	4	4	4	0	4
	RR	Average	9.5	0.05	1.5	197	195	133	0.46	2.62	0.5	260	3.46	0.05	92.4	4907	29.7		7.74
		Median	9.55	0.02	0.6	202	201	264	0.48	2.69	0.3	300	4.01	0.05	86.9	4630	33.7		7.69
		Minimum	9.1	<0.01	<0.3	59	56	17	0.08	2.13	<0.2	90	1.97	0.05	80.8	3980	7.8		7.53
		Maximum	9.9	0.17	5.3	428	428	1370	0.83	3.03	0.9	390	4.41	0.06	110	6110	47.5		8
		Count	18	18	18	18	18	18	3	3	3	3	3	3	3	3	3	0	3
Operational Monitoring 2007	Kimberlite Ore	Average	8.8	0.03	0.9	367	366	391.5											
		Median	8.8	0.03	0.9	367	366	391.5											
		Minimum	8.8	0.03	0.9	367	366	391.5											
		Maximum	8.8	0.03	0.9	367	366	391.5											
		St. Deviation	N/A	N/A	N/A	N/A	N/A	N/A											
		Co-Variance	N/A	N/A	N/A	N/A	N/A	N/A											
	CPK	Count	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
		Average	8.91	0.03	1.03	336.65	335.52	367.27	0.21	2.45	1.08	536.00	4.17	0.04	65.36	566.40	38.88	N/A	4.48
		Median	8.9	0.03	0.9	350	349	372.3	0.23	2.53	0.95	520	4.33	0.03	62.3	507	36.2	N/A	4.68
		Minimum	8.6	0.02	0.6	85	83	45.33	0.15	1.73	<0.2	480	3.45	0.02	57.6	464	31.7	N/A	3.61
		Maximum	9.3	0.08	2.5	382	381	611.2	0.28	3.27	2.1	620	4.68	0.08	75.6	709	51.9	N/A	4.84
		St. Deviation	0.21	0.01	0.46	57.46	57.62	128.87	0.05	0.67	0.76	53.20	0.48	0.02	8.67	113.43	7.91	N/A	0.50
	FPK	Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A	0
		Count	22	22	22	22	22	22	5	5	5	5	5	5	5	5	5	N/A	5
		Average	8.69	0.04	1.27	365.67	364.43	306.14	0.20	2.14	1.55	636.00	4.48	0.04	71.76	553.60	36.34	N/A	4.48
		Median	8.8	0.04	1.3	373	371	301.6	0.22	2.12	1.6	630	4.62	0.03	70.7	561	35.4	N/A	4.59
		Minimum	8.4	0.03	0.9	306	305	196.8	0.09	1.66	<0.2	590	3.82	0.03	69.6	493	33.9	N/A	3.95
		Maximum	9	0.06	1.9	404	403	402.1	0.23	2.65	2.8	710	4.88	0.06	76.6	603	41.1	N/A	4.68
	RR	St. Deviation	0.20	0.01	0.32	22.85	22.83	64.01	0.06	0.38	1.11	45.61	0.46	0.01	2.88	49.04	2.97	N/A	0.30
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A	0
		Count	21	21	21	21	21	21	5	5	5	5	5	5	5	5	5	0	5
		Average	9.65	0.02	0.68	209.52	208.86	548.25	0.37	4.32	1.00	210.00	4.30	0.06	76.02	3648.75	52.82		7.61
		Median	9.7	0.01	0.3	92	90	281.6	0.32	4.83	0.65	190	4.9	0.07	70.1	4000	30.9		7.73
		Minimum	9.2	0.01	0.3	54	54	42.67	0.11	2.12	<0.2	120	2.14	0.03	55	1495	19.5		6.74
		Maximum	9.9	0.06	1.9	445	445	1424	0.65	6.58	2.5	370	6.2	0.08	98.5	5100	113.5		8.32
		St. Deviation	0.17	0.02	0.56	155.72	156.12	529.74	0.22	1.78	1.02	101.73	1.82	0.02	18.40	1532.90	39.17		0.67
		Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
		Count	21	21	21	21	21	21	5	5	5	5	5	5	5	5	5	0	5

Note:

Pre-mine characterization values from EIS (Tahera, 2003)

S(T) - Total sulphur by Leco Furnace

MPA - Maximum Potential Acidity, in kg CaCO₃/tonne, calculated fro total sulphur

NP - Neutralization Potential in kg CaCO₃/tonne

NNP - Net Neutralization Potential in kg CaCO₃/tonne (NP-MPA)

CPK - Coarse Processed Kimberlite; FPK - Fine Processed Kimberlite; RR - Recovery Rejects

(1) Copper determined by AA Spectrometry

(2) Uranium determined by X-Ray Fluorescence

*MPA values shown here for Pre-Mine characterization are actually Acid Potential (AP) determined by Sulphide Sulphur. The pre-mine NP/MPA values shown are therefore NP/AP

**Pre-mine uranium values from "2004 Characterization of Uranium in Jericho Waste Rock" (SRK, 2005). Analysis was by delayed neutron counting (DNC) method.

	Material Type	Statistic	K	Mn	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sr	U	U ²³⁵	Zn
			%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Pr-Mining	Kimberlite Ore	Average	0.77	13.1	727	<1	0.38	1068	672	5	2.2		307	15.7**		44
		Median	0.58	>15	753	<1	0.22	1263	620	4	0.2		312	3.0**		46
		Minimum	0.12	3.13	420	<1	0.03	147	380	<2	<0.2		128	1.4**		29
		Maximum	2.64	>15	950	2	1.49	1670	1390	20	10		728	76.8**		54
	Count	30	30	30	30	30	30	30	30	30	30	30	30			30
	CPK	Average	0.36	3.7	541	<2	0.05	932	578	17	6		204			37
		Median	0.36	3.7	585	<2	0.04	1082	525	9	5		210			34
		Minimum	0.18	3.7	260	<2	0.03	208	720	2	<5		96			31
		Maximum	0.65	3.7	655	2	0.09	1147	780	62	10		288			54
	Count	6	6	6	6	6	6	6	6	6	6	6			6	
	FPK	Average	0.7	>15	859	2	0.33	1429	630	13	0.4		346			61
		Median	0.62	>15	893	1	0.22	1558	635	15	0.3		334			61
Minimum		0.23	8.64	690	<1	0.12	630	390	6	0.2		214			54	
Maximum		1.42	>15	1040	3	0.8	1815	860	20	1		499			72	
Count	6	6	6	6	6	6	6	6	6	6	6			6		
Operational Monitoring 2006	Kimberlite Ore	Average	0.84	16.7	837	0.62	0.43	1178	585	5.9	0.33	2	252	10.6	15	44
		Median	0.84	16.7	837	0.62	0.43	1178	585	5.85	0.33	1.5	252	10.6	11	44
		Minimum	0.65	16.5	728	0.6	0.25	1160	580	5.4	0.16	<1	181	2.9	<4	43
		Maximum	1.03	16.9	946	0.64	0.61	1195	590	6.3	0.49	2	322	18.3	32	45
	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	5	2
	CPK	Average	0.94	16.4	800	0.51	0.45	1123	703	6.8	0.16	1	272	12.6	16	41
		Median	0.94	16.3	785	0.52	0.46	1118	725	6.8	0.15	1	285	9.4	11	42
		Minimum	0.85	15.7	738	0.37	0.2	1010	580	6.2	0.09	1	118	2.9	4	37
		Maximum	1.03	17.2	891	0.62	0.67	1245	780	7.5	0.24	2	400	28.9	35	44
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	6	4
	FPK	Average	0.85	16.3	928	0.96	0.31	1298	765	8.6	0.25	1	282	13.4	16	47
		Median	0.85	16.4	848	0.95	0.28	1280	730	8.6	0.18	1	272	10.9	11	47
Minimum		0.65	15.3	735	0.62	0.18	1110	520	5.8	0.15	1	165	4.1	6	40	
Maximum		1.05	17.4	1280	1.29	0.49	1520	1080	11.4	0.48	2	421	27.5	32	53	
Count	4	4	4	4	4	4	4	4	4	4	4	4	4	6	4	
RR	Average	0.17	18.9	1342	0.52	0.25	1287	240	2.6	0.37	3	115	2.7	4	49	
	Median	0.14	17.6	1325	0.53	0.33	1120	290	2.7	0.09	3	139	2.4	4	49	
	Minimum	0.08	16.4	1290	0.37	0.1	1010	120	1.9	0.08	2	54	2.3			

	Material Type	Statistic	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sr	U	U ²³⁵	Zn		
			%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Pr-Mining	Kimberlite Ore	Average	0.77	13.1	727	<1	0.38	1068	672	5	2.2		307	15.7**			44	
		Median	0.58	>15	753	<1	0.22	1263	620	4	0.2		312	3.0**			46	
		Minimum	0.12	3.13	420	<1	0.03	147	380	<2	<0.2		128	1.4**			29	
		Maximum	2.64	>15	950	2	1.49	1670	1390	20	10		728	76.8**			54	
		Count	30	30	30	30	30	30	30	30	30	30	30	30				30
	CPK	Average	0.36	3.7	541	<2	0.05	932	578	17	6		204				37	
		Median	0.36	3.7	585	<2	0.04	1082	525	9	5		210				34	
		Minimum	0.18	3.7	260	<2	0.03	208	720	2	<5		96				31	
		Maximum	0.65	3.7	655	2	0.09	1147	780	62	10		288				54	
		Count	6	6	6	6	6	6	6	6	6	6	6				6	
	FPK	Average	0.7	>15	859	2	0.33	1429	630	13	0.4		346				61	
		Median	0.62	>15	893	1	0.22	1558	635	15	0.3		334				61	
Minimum		0.23	8.64	690	<1	0.12	630	390	6	0.2		214				54		
Maximum		1.42	>15	1040	3	0.8	1815	860	20	1		499				72		
Count		6	6	6	6	6	6	6	6	6	6	6				6		
Operational Monitoring 2006	Kimberlite Ore	Average	0.84	16.7	837	0.62	0.43	1178	585	5.9	0.33	2	252	10.6	15		44	
		Median	0.84	16.7	837	0.62	0.43	1178	585	5.85	0.33	1.5	252	10.6	11		44	
		Minimum	0.65	16.5	728	0.6	0.25	1160	580	5.4	0.16	<1	181	2.9	<4		43	
		Maximum	1.03	16.9	946	0.64	0.61	1195	590	6.3	0.49	2	322	18.3	32		45	
		Count	2	2	2	2	2	2	2	2	2	2	2	2	2	5		2
	CPK	Average	0.94	16.4	800	0.51	0.45	1123	703	6.8	0.16	1	272	12.6	16		41	
		Median	0.94	16.3	785	0.52	0.46	1118	725	6.8	0.15	1	285	9.4	11		42	
		Minimum	0.85	15.7	738	0.37	0.2	1010	580	6.2	0.09	1	118	2.9	4		37	
		Maximum	1.03	17.2	891	0.62	0.67	1245	780	7.5	0.24	2	400	28.9	35		44	
		Count	4	4	4	4	4	4	4	4	4	4	4	4	4	6		4
	FPK	Average	0.85	16.3	928	0.96	0.31	1298	765	8.6	0.25	1	282	13.4	16		47	
		Median	0.85	16.4	848	0.95	0.28	1280	730	8.6	0.18	1	272	10.9	11		47	
Minimum		0.65	15.3	735	0.62	0.18	1110	520	5.8	0.15	1	165	4.1	6		40		
Maximum		1.05	17.4	1280	1.29	0.49	1520	1080	11.4	0.48	2	421	27.5	32		53		
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	6		4	
RR	Average	0.17	18.9	1342	0.52	0.25	1287	240	2.6	0.37	3	115	2.7	4		49		
	Median	0.14	17.6	1325	0.53	0.33	1120	290	2.7	0.09	3	139	2.4	4		49		
	Minimum	0.08	16.4	1290	0.37	0.1	1010	120	1.9	0.08	2	54	2.3	4		44		
	Maximum	0.28	22.6	1410	0.67	0.33	1730	310	3.2	0.93	3	154	3.3	5		53		
	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	5		3	
Operational Monitoring 2007	Kimberlite Ore	Average															<4	
		Median															<4	
		Minimum															<4	
		Maximum															<4	
		St. Deviation															N/A	
		Co-Variance															N/A	
	CPK	Count	0	0	0	0	0	0	0	0	0	0	0	0	0	1		0
		Average	0.89	15.72	738.20	0.57	0.44	1085.00	600.00	8.60	0.17	1.40	298.20	8.98	8.83			43.60
		Median	0.79	15.65	758	0.56	0.43	1070	610	7.5	0.15	1	285	9.2	7.5		44	
		Minimum	0.66	12.85	593	0.44	0.22	817	530	6.1	0.12	1	244	3.4	2		36	
		Maximum	1.19	18.15	809	0.78	0.69	1350	650	15.4	0.27	2	381	15.7	17		48	
		St. Deviation	0.24	2.41	85.71	0.13	0.22	251.91	44.72	3.86	0.06	0.55	50.43	5.27	5.85		4.56	
FPK	Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	Average	0.75	15.64	731.60	1.04	0.31	1393.00	552.00	9.90	0.16	1.40	342.20	9.08	10.40			40.80	
	Median	0.71	16.5	752	1.14	0.26	1450	550	8.3	0.14	1	335	6.8	7		42		
	Minimum	0.58	14.35	644	0.75	0.21	1130	520	6.8	0.13	1	245	5.1	6		37		
	Maximum	0.99	16.5	776	1.29	0.46	1640	600	15.7	0.21	2	479	15.1	17		43		
RR	St. Deviation	0.17	1.18	52.73	0.23	0.11	204.19	34.21	3.54	0.04	0.55	85.82	4.45	5.18		2.39		
	Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	Average	0.43	14.85	1388.00	0.62	0.60	1000.40	314.00	2.68	0.13	2.00	130.16	1.44	2.40			55.20	
	Median	0.33	15.4	1350	0.58	0.42	853	220	2.4	0.11	1	96.2	1.1	2		51		
	Minimum	0.12	9.24	1255	0.39	0.16	447	160	1.2	0.09	1	53.8	0.8	2		38		
RR	Maximum	0.87	20.9	1630	0.85	1.18	1750	550	5	0.21	4	246	2.3	4		71		
	St. Deviation	0.31	5.20	146.40	0.20	0.47	591.42	182.57	1.54	0.05	1.41	86.56	0.67	0.89		13.01		
	Co-Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	

Figures

Figure 1: NP vs MPA for Waste Rock Materials

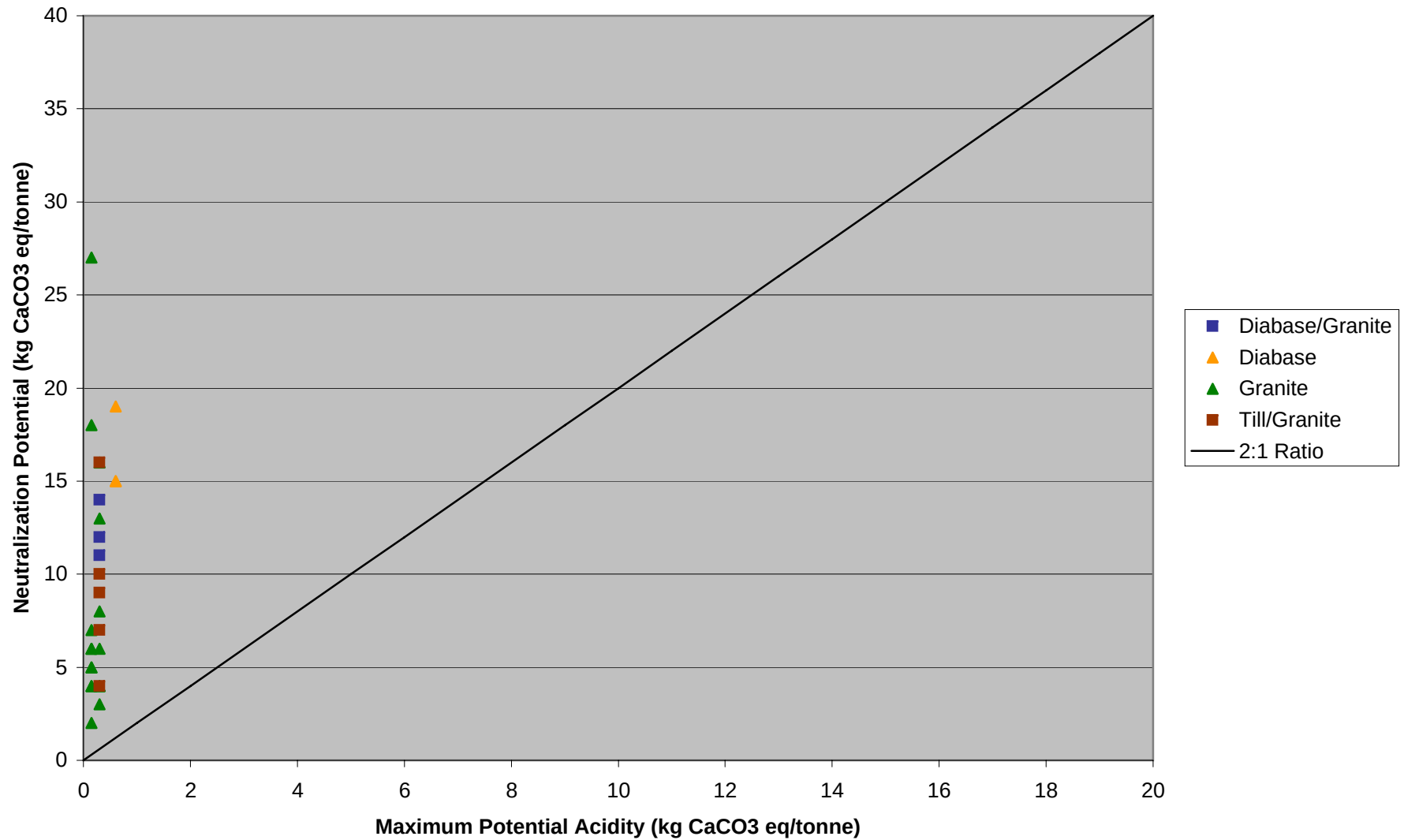
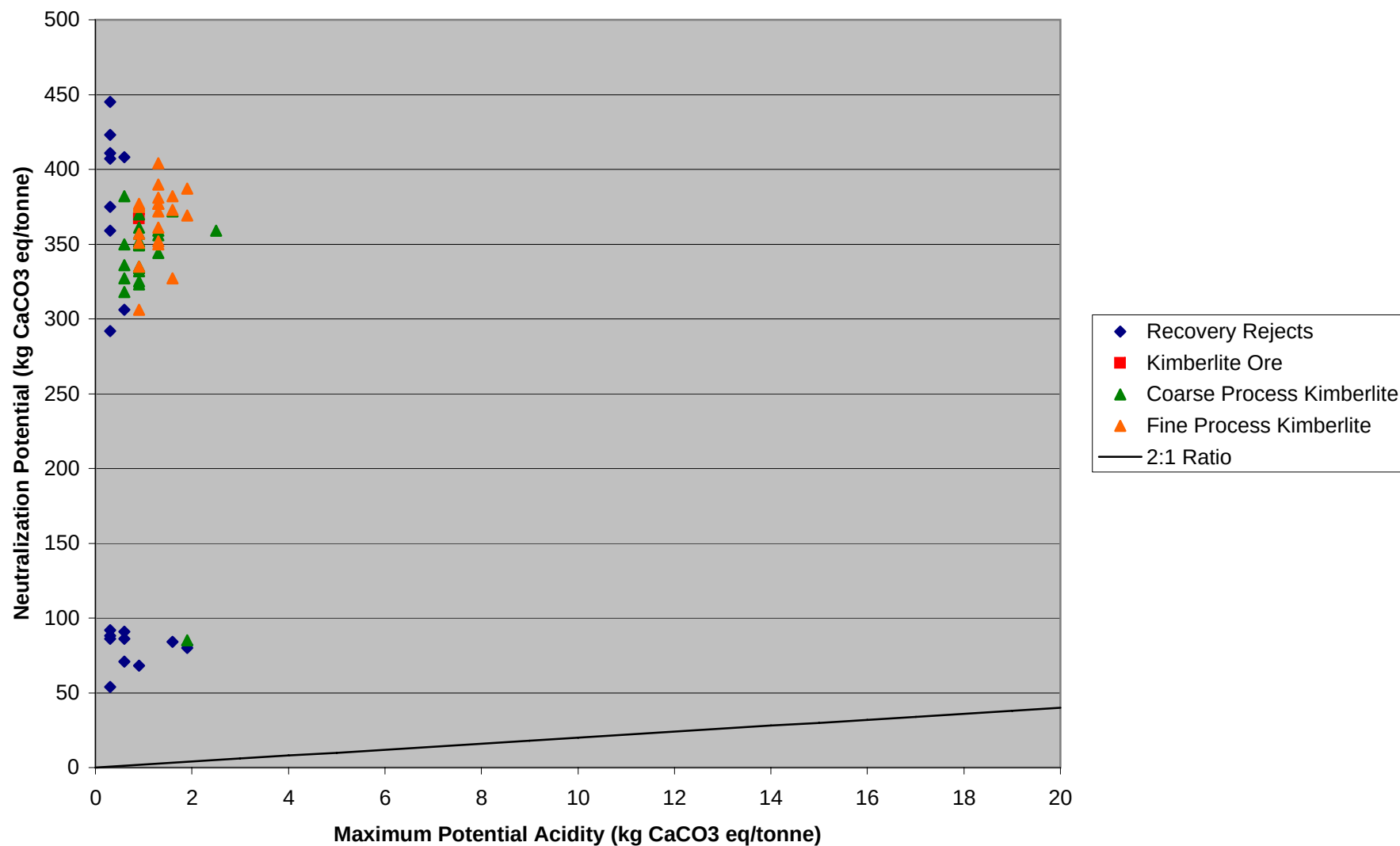


Figure 2: NP vs MPA for Recovery Rejects and Other Kimberlite Materials



Appendix A

Analytical Results for Waste Rock and Overburden Samples

Rock Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
									%	kg CaCO3/tonne				ppm	%0ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
G	25-Jun-05	480	15	H15	DC	G	1	8.5	0.02	0.6	10	9	16	0.05	7.53	2.6	430	1.96	0.16	1.01	0.02	46.6
G	25-Jun-05	480	15	G16	DC	G	1	8.6	0.01	0.3	5	5	16	<0.01	6.95	0.8	310	1.24	0.04	0.18	0.02	10.45
G	25-Jun-05	480	15	F19	DC	G	1	8.1	<0.01	0.3	5	5	16	0.02	6.2	1.7	240	0.95	0.04	0.35	0.02	11.75
G	25-Jun-05	480	15	F18	DC	G	1	9	<0.01	0.3	6	6	19.2	0.03	7.4	1.6	230	0.91	0.05	0.25	<0.02	10.6
G	25-Jun-05	480	15	E17	DC	G	1	8.3	<0.01	0.3	5	5	16	0.05	5.25	2	140	1.36	0.07	0.52	0.03	28.6
G	25-Jun-05	480	15	D17	DC	G	1	8.5	0.01	0.3	6	6	19.2	0.06	6.73	2.6	110	1.51	0.06	0.62	0.03	13.3
G	30-Jun-05	480	20	R31	DC	G	1	7.9	<0.01	0.3	6	6	19.2	0.05	7.01	1.4	410	1.57	0.13	0.99	0.04	25.4
G	30-Jun-05	480	20	R28	DC	G	1	7.6	0.01	0.3	5	5	16	0.06	6.79	2.7	430	1.54	0.24	0.74	0.05	24.3
G	30-Jun-05	480	20	Q29	DC	G	1	8.4	<0.01	0.3	5	5	16	0.05	7.46	1.3	380	1.52	0.17	0.8	0.05	21.4
G	30-Jun-05	480	20	Q28	DC	G	1	8.3	<0.01	0.3	4	4	12.8	0.11	7.62	2.3	350	1.88	0.25	0.82	0.07	15.15
G	30-Jun-05	480	20	O26	DC	G	1	7.8	0.01	0.3	5	5	16	0.06	6.87	3.7	440	1.8	0.39	1.08	0.05	41.1
G	4-Jul-05	480	23	E22	DC	G	1	9	<0.01	0.3	13	13	41.6	0.04	8.21	1.2	540	1.84	0.1	0.87	0.04	16.95
G	4-Jul-05	480	23	F23	DC	G	1	8.5	<0.01	0.3	6	6	19.2	<0.01	7.24	0.6	550	1.17	0.07	0.41	0.02	65.7
G	4-Jul-05	480	23	G22	DC	G	1	8.4	<0.01	0.3	5	5	16	<0.01	7.06	2.1	470	1.54	0.1	0.38	0.02	31.9
G	4-Jul-05	480	23	I23	DC	G	1	8.2	<0.01	0.3	5	5	16	0.02	6.71	1.7	360	1.66	0.17	0.56	0.04	39.7
G	4-Jul-05	480	23	J26	DC	G	1	8.1	<0.01	0.3	6	6	19.2	0.03	7.32	3	340	0.72	0.22	0.87	0.04	34.6
G	4-Jul-05	480	23	K28	DC	G	1	9.1	<0.01	0.3	5	5	16	0.03	6.51	1.2	170	1.03	0.13	0.46	0.03	10.85
G	2-Aug-05	472.5	6	I6	DC	G	1	8.2	0.01	0.3	6	6	19.2	<0.01	7.75	0.9	470	2.25	0.05	1.4	0.03	34
G	12-Aug-05	472.5	9	I14	DC	G	1	8.4	<0.01	0.3	3	3	9.6	0.02	7.43	0.5	130	1.48	0.04	0.26	<0.02	10.2
G	12-Aug-05	472.5	9	H21	DC	G	1	8.1	<0.01	0.3	4	4	12.8	0.02	7.55	1.1	540	1.37	0.12	0.32	0.02	19.45
G	12-Aug-05	472.5	9	H19	DC	G	1	8.5	<0.01	0.3	3	3	9.6	0.02	7.29	1	260	1.24	0.09	0.27	<0.02	12.45
G	12-Aug-05	472.5	9	H16	DC	G	1	8.4	<0.01	0.3	3	3	9.6	0.03	7.07	0.7	250	1.2	0.08	0.25	<0.02	10.05
G	12-Aug-05	472.5	9	F16	DC	G	1	8.5	<0.01	0.3	3	3	9.6		7.09	0.4	130	1.07	0.12	0.48	0.02	7.39
G	13-Sep-05	472.5	19	E21	DC	G		7.9	0.03	0.9												
G	13-Sep-05	472.5	19	E17	DC	G		7.7	0.04	1.3												
G	13-Sep-05	472.5	19	B22	DC	G		8.5	0.04	1.3												
G	24-Oct-05	472.5	31		DC	C	1	8.6	0.02	0.6	12	11	19.2									
G	13-Nov-05	465	8		DC	C	1	9	0.01	0.3	16	16	51.2									
G	20-Nov-05	465	10		DC	C	1	8.4	0.01	0.3	11	11	35.2									
G	10-Mar-06	457.5	1		DC	C	1	8.4	0.02	0.6	7	6	11.2	0.07	7.29	1.6	390	1.88	0.15	0.5	0.04	32.6

Note: Rock Type: G - Granite; D - Diabase; T - Till
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock
Sampling Method: G - Grab; C - Composite
S(T) - Total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO3 eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO3 eq/tonne
NNP - Net Neutralization Potential in kg CaCO3 eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Rock Type	Sample Date	Bench	Pattern	Co	Cr	Cs	Cu	Cu (AA)	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
				ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
G	25-Jun-05	480	15	10.3	106	4.18	25.1		2.64	19	0.09	3.1	0.034	2.89	22.3	28.1	0.99	314	1.2	2.35	6.9	24.9	440
G	25-Jun-05	480	15	1.6	106	2.28	3.8		0.8	17.15	0.06	0.5	0.015	4.19	5	6.6	0.22	60	1.05	2.92	4	4.4	270
G	25-Jun-05	480	15	3	102	1.35	8.2		1.14	15.8	0.06	0.8	0.009	2.6	5.7	11.4	0.32	124	1.22	2.68	4.9	7.8	140
G	25-Jun-05	480	15	2.6	138	5.34	11.2		0.99	21.6	0.06	1	0.019	5.94	5.3	6.1	0.2	116	1.6	1.99	6.2	8.8	210
G	25-Jun-05	480	15	4.4	172	2.4	20.8		1.56	17.25	0.06	2.5	0.022	1.3	13.1	15.8	0.41	274	1.68	2.37	9.7	11.4	190
G	25-Jun-05	480	15	2.8	139	2.57	16.5		1.36	19.55	0.05	1	0.024	1.8	6.3	12.2	0.32	179	1.38	3.43	8	7.6	160
G	30-Jun-05	480	20	4.6	31	2.99	6.5		1.57	18.75	0.17	1.9	0.019	3.24	12.6	26.1	0.38	251	1.84	2.67	5.6	9.9	400
G	30-Jun-05	480	20	4.8	15	3.38	11.8		1.47	17.55	0.16	1.7	0.028	3.69	12	17.7	0.43	205	0.71	2.33	5.6	10.8	300
G	30-Jun-05	480	20	2.4	23	2.61	5.8		1.11	20.1	0.14	1.6	0.024	3.51	10.8	21.6	0.22	190	1.11		5.7	4.8	240
G	30-Jun-05	480	20	2.8	7	3.15	11.2		1.12	20.2	0.13	1	0.034	3.19	7.8	15.9	0.26	176	0.77	2.97	5.8	5.5	180
G	30-Jun-05	480	20	9.3	49	3.93	16.9		2.06	17.95	0.2	3.4	0.03	2.8	19.4	26.9	0.75	293	1.17	3.11	6.1	23	430
G	4-Jul-05	480	23	1.3	2	2.1	2.7		0.73	21.9	0.14	0.6	0.007	5.05	6.9	6.5	0.14	124	0.45	2.32	5.1	1.4	1490
G	4-Jul-05	480	23	2.8	21	1.52	3.2		1.34	20.3	0.22	4.1	0.021	4.73	28.1	8.7	0.32	142	0.77	3.36	7.4	4.3	390
G	4-Jul-05	480	23	5.5	8	1.84	17.8		1.18	18.85	0.18	3.4	0.013	3.43	15.4	10.4	0.34	107	0.44	2.43	5.3	6.5	400
G	4-Jul-05	480	23	5.1	33	3.29	9.2		1.56	19.1	0.21	2.7	0.022	3.6	19	19.6	0.48	178	1.03	2.9	6.7	12.2	300
G	4-Jul-05	480	23	7.4	20	3.48	12.5		1.92	18.1	0.19	2.2	0.021	2.88	16.4	20.6	0.64	243	0.53	2.44	6.1	17.9	360
G	4-Jul-05	480	23	1.6	5	2.27	4.8		0.72	17.1	0.15	0.6	0.012	3.74	5.2	6.5	0.14	82	0.82	2.76	3.9	3.8	120
G	2-Aug-05	472.5	6	8.1	11	1.36	20	<0.01	2.58	21.7	0.14	2.6	0.021	1.88	17.6	33.3	0.7	314	2.54	2.56	7	14.4	400
G	12-Aug-05	472.5	9	1.2	49	2.94	4.4	<0.01	0.66	20.9	0.1	0.6	0.01	2.85	5.2	12.4	0.25	71	0.56	3.14	4.3	2.3	130
G	12-Aug-05	472.5	9	5	7	2.39	25.9	<0.01	1.59	19.85	0.12	1.5	0.01	3.94	9.9	14.4	0.48	127	0.38	3.47	6.9	4.5	420
G	12-Aug-05	472.5	9	2	50	3.56	6.3	<0.01	0.81	19.8	0.1	1.7	0.007	3.93	6	9.9	0.25	84	0.41	2.77	4.6	2.9	170
G	12-Aug-05	472.5	9	1.4	3	3.71	4.9	<0.01	0.75	19.3	0.1	0.9	0.013	3.61	5	10.2	0.26	73	0.49	2.79	5.3	1.8	150
G	12-Aug-05	472.5	9	1.1	42	3.43	8	<0.01	0.62	18.65	0.09	0.4	0.009	3.77	3.8	6.4	0.15	99	0.7	2.67	3.5	2.5	130
G	13-Sep-05	472.5	19																	2.77			
G	13-Sep-05	472.5	19																				
G	13-Sep-05	472.5	19																				
G	24-Oct-05	472.5	31																				
G	13-Nov-05	465	8																				
G	20-Nov-05	465	10																				
G	10-Mar-06	457.5	1	3.7	5	61.3	61.3	<0.01	1.26	23.6	0.11	2.3	0.02	3.04	18.2	15.4	0.38	141	0.75	3.28	6.9	10.4	400

Rock Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
G	25-Jun-05	480	15	10.3	116	<0.002	0.01	0.43	1	1.9	139.5	0.63	<0.05	8.6	0.251	0.48	3.7		59	1.3	15	31	102
G	25-Jun-05	480	15	12.9	161.5	<0.002	<0.01	0.12	<1	2.6	57.1	0.51	<0.05	4.9	0.032	0.68	3.5		5	0.6	9.6	4	15
G	25-Jun-05	480	15	9.2	89.7	<0.002	<0.01	0.13	<1	2	99.9	0.62	<0.05	3.2	0.083	0.37	2.3		15	1	5.6	11	26.2
G	25-Jun-05	480	15	24.3	250	<0.002	<0.01	0.18	1	3.8	46.9	0.74	<0.05	5.4	0.053	1.3	2		12	1	7.1	8	28.1
G	25-Jun-05	480	15	42.7	61.6	<0.002	<0.01	0.25	1	4.1	56.2	1.23	<0.05	10.5	0.122	0.24	4		27	1.7	14	16	54.1
G	25-Jun-05	480	15	11.8	75.1	<0.002	<0.01	0.17	1	3.8	63.8	0.92	<0.05	4.9	0.106	0.32	4.8		16	1.2	9.8	16	25.9
G	30-Jun-05	480	20	16.3	123	<0.002	<0.01	0.09	2	2.1	133	0.68	<0.05	7.8	0.125	0.57	8.9		23	1.2	10.9	33	55.7
G	30-Jun-05	480	20	17.2	138.5	<0.002	0.01	0.14	2	1.9	136.5	0.55	<0.05	6.8	0.131	0.64	4.2		25	1.4	8.8	24	55.1
G	30-Jun-05	480	20	21.1	128.5	<0.002	<0.01	0.08	3	2.2	109.5	0.53	<0.05	15	0.075	0.58	12.1		10	1.7	12.6	25	47.6
G	30-Jun-05	480	20	20.2	123.5	<0.002	0.01	0.17	3	2.1	108	0.62	<0.05	7.3	0.079	0.57	5.9		12	1.5	8.9	25	28.8
G	30-Jun-05	480	20	15.4	117	<0.002	0.01	0.24	2	2	169	0.66	<0.05	10.9	0.183	0.53	5.1		44	1.8	11.3	34	110.5
G	4-Jul-05	480	23	18.2	167	<0.002	<0.01	<0.05	3	1.8	113.5	0.75	<0.05	5.8	0.04	0.71	12.1		4	0.6	31.8	10	15.9
G	4-Jul-05	480	23	21.8	152	<0.002	<0.01	0.05	3	2.3	97.7	0.84	<0.05	23.3	0.125	0.65	12		9	1.2	10	16	136
G	4-Jul-05	480	23	26.3	120.5	<0.002	<0.01	0.13	3	1.8	97.8	0.43	<0.05	14.4	0.095	0.51	9.6		15	0.8	12.5	12	102
G	4-Jul-05	480	23	18.2	141	<0.002	<0.01	0.24	2	2.2	93.2	0.74	<0.05	15.2	0.133	0.62	7.8		24	1.4	11.8	23	89.3
G	4-Jul-05	480	23	14	117.5	<0.002	<0.01	0.22	2	2.2	142	1.06	<0.05	7.7	0.172	0.52	4.3		39	1	12.3	26	75.2
G	4-Jul-05	480	23	23.6	140	<0.002	<0.01	0.07	2	1.7	66.4	0.5	<0.05	4.4	0.045	0.66	3.4		6	1.8	6	9	16.4
G	2-Aug-05	472.5	6	11	57.8	<0.002	0.01	0.32	1	12.8	223	0.85	<0.05	5.5	0.196	0.22	3.5	5	41	2	13.2	28	58.9
G	12-Aug-05	472.5	9	12.6	105.5	<0.002	<0.01	0.08	1	1.9	60.6	0.7	<0.05	4.6	0.033	0.44	3	<4	4	0.8	9.5	5	10.5
G	12-Aug-05	472.5	9	27.4	133.5	<0.002	<0.01	0.16	1	2	73.2	1.13	<0.05	5.3	0.085	0.52	5.7	7	15	0.5	12.3	9	33.2
G	12-Aug-05	472.5	9	13.2	146	<0.002	<0.01	0.08	1	2.2	64	0.54	<0.05	5.4	0.051	0.62	4.1	5	9	0.5	10.6	7	32.9
G	12-Aug-05	472.5	9	14.3	142	<0.002	<0.01	0.09	1	2.6	52.3	0.74	<0.05	5.3	0.046	0.62	5.8	6	6	1	11.4	6	17
G	12-Aug-05	472.5	9	19.5	140	<0.002	0.01	0.08	1	1.8	53.4	0.53	<0.05	3.2	0.04	0.65	2.1	<4	7	0.9	7.6	8	8.1
G	13-Sep-05	472.5	19															<4					
G	13-Sep-05	472.5	19															<4					
G	13-Sep-05	472.5	19															<4					
G	24-Oct-05	472.5	31															4					
G	13-Nov-05	465	8															7					
G	20-Nov-05	465	10															7					
G	10-Mar-06	457.5	1	16.6	114	<0.002	0.03	0.18	3	2.6	108	0.73	0.06	9.3	0.089	0.49	6.7	7	12	0.9	17	12	66.1

Rock Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
									%	kg CaCO ₃ /tonne				ppm	%0ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
G	23-Jun-06	480	37		DC	C	1	8.3	0.02	0.6	5	4	8	0.04	6.9	<0.2	260	1.81	<0.01	2.33	0.05	40
G	13-Jul-06	450	5		DC	C	1	10	0.01	0.3	3	3	9.6									
G	13-Jul-06	450	5		DC	C	1	9.4	0.01	0.3	3	3	9.6									
G	18-Jul-06	457.5	8		DC	C	1	9.3	0.01	0.3	3	3	9.6									
G	2-Sep-06	480	42		DC	C	1	8.8	<0.01	0.3	4	4	12.8									
G	10-Oct-06	480	6		DC	C	1	8.3	<0.01	0.3	8	8	25.6									
G	5-Mar-06	465	15		DC	C	1	8.2	0.01	0.3	7	7	22.4									
G	31-Mar-06	457.2	2		DC	C	1	8.4	0.01	0.3	7	7	22.4									
G	3-Feb-07	440	10	-	DC	C	1	8.4	0.01	0.3	13	13	41.6									
G	3-Feb-07	450	24	-	DC	C	1	8.3	<0.01	<0.3	7	7	44.8	0.02	6.88	0.4	270	2.07	0.08	0.57	<0.02	24.5
G	24-Mar-07	460	40	-	DC	C	1	8.3	<0.01	<0.3	5	5	32									
G	28-Apr-07	460	43	-	DC	C	1	8.4	0.01	0.3	6	6	19.2									
G	4-May-07	470	8	-	DC	C	1	8.2	<0.01	<0.3	4	4	25.6									
G	12-May-07	430	7	-	DC	C	1	8.2	<0.01	<0.3	4	4	25.6	0.04	6.68	0.3	320	1.66	0.09	0.5	0.05	26.1
G	19-May-07	460	45	-	DC	C	1	8.1	<0.01	<0.3	2	2	12.8									
G	23-May-07	470	19	-	DC	C	1	7.7	0.01	0.3	4	4	12.8									
G	5-Jun-07	440	24	-	DC	C	1	8	0.01	0.3	4	4	12.8									
G	5-Jun-07	440	24	-	DC	C	1	8	0.01	0.3	3	3	9.6									
G	22-Jul-07	460	57	-	DC	C	1	8.2	<0.01	<0.3	5	5	32									
G	28-Jul-07	430	44	-	DC	C	1	9.5	<0.01	<0.3	18	18	115.2									
G	16-Aug-07	450	46	-	DC	C	1	9.5	<0.01	<0.3	27	27	172.8	0.05	7.17	0.5	320	1.74	0.06	1.11	0.04	31.9
G	1-Sep-07	430	15	-	DC	C	1	9.2	<0.01	<0.3	6	6	38.4									
G	15-Sep-07	450	44	-	DC	C	1	9.4	<0.01	<0.3	6	6	38.4									
G	29-Sep-07	450	49	-	DC	C	1	8.7	0.01	0.3	16	16	51.2									
G	13-Oct-07	440	34	-	DC	C	1	9.4		0.3	8	8	25.6	0.03	7.12	0.4	330	1.25	0.1	0.56	<0.02	18.55
G	27-Oct-07	440	37	-	DC	C		9.5														
G	27-Oct-07	440	37	-	DC	C		9.6														
G	10-Nov-07	440	39	-	DC	C	1	9.3	<0.01	<0.3	7	7	44.8									
G	25-Nov-07	420	11	-	DC	C	1	9	<0.01	<0.3	5	5	32									
G	31-Oct-07	430	24	-	DC	C	1	8.8	<0.01	<0.3	7	7	44.8									
G	31-Oct-07	420	12	-	DC	C	1	9.1	<0.01	<0.3	8	8	51.2									

Note: Rock Type: G - Granite; D - Diabase; T - Till
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock
Sampling Method: G - Grab; C - Composite
S(T) - Total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO₃ eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO₃ eq/tonne
NNP - Net Neutralization Potential in kg CaCO₃ eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Rock Type	Sample Date	Bench	Pattern	Co	Cr	Cs	Cu	Cu (AA)	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P		
				ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm		
G	23-Jun-06	480	37	14.8	19	77.2	77.2	<0.01	3.4	20.2	0.09	3.3	0.036	1.46	20.8	9.9	0.95	465	0.8	2.89	8.3	17.5	330		
G	13-Jul-06	450	5																						
G	13-Jul-06	450	5																						
G	18-Jul-06	457.5	8																						
G	2-Sep-06	480	42																						
G	10-Oct-06	480	6																						
G	5-Mar-06	465	15																						
G	31-Mar-06	457.2	2																						
G	3-Feb-07	440	10																						
G	3-Feb-07	450	24	2.3	11	3.17	4.5			19.85	0.08	2.5	0.014	2.63	12.8	14.8	0.29	160	1.33	2.82	6.8	5.6	150		
G	24-Mar-07	460	40																						
G	28-Apr-07	460	43																						
G	4-May-07	470	8																						
G	12-May-07	430	7	1.3	3	2.81	3.5	<0.01	0.8	18.8	0.06	2	0.014	3.23	14.9	10.8	0.2	128	0.99	2.8	5	2.4	160		
G	19-May-07	460	45																						
G	23-May-07	470	19																						
G	5-Jun-07	440	24																						
G	5-Jun-07	440	24																						
G	22-Jul-07	460	57																						
G	28-Jul-07	430	44																						
G	16-Aug-07	450	46	6.8	113	2.94	3.7	<0.01	1.55	19.1	0.05	3.3	0.02	2	17.3	39.5	1.09	295	2.06	3.1	10.7	75	190		
G	1-Sep-07	430	15																						
G	15-Sep-07	450	44																						
G	29-Sep-07	450	49																						
G	13-Oct-07	440	34	1	7	2.39	5.1		0.79	18.75	0.06	1.1	0.014	3.18	9.3	15.7	0.19	123	1.74	2.95	5.4	3.3	260		
G	27-Oct-07	440	37																						
G	27-Oct-07	440	37																						
G	10-Nov-07	440	39																						
G	25-Nov-07	420	11																						
G	31-Oct-07	430	24																						
G	31-Oct-07	420	12																						

Rock Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
G	23-Jun-06	480	37	12.9	51.8	<0.002	0.01	0.05	2	2.1	176.5	0.73	<0.05	5.6	0.402	0.23	3.4	<4	105	4.6	13.7	35	100
G	13-Jul-06	450	5															<4					
G	13-Jul-06	450	5															<4					
G	18-Jul-06	457.5	8															<4					
G	2-Sep-06	480	42															9					
G	10-Oct-06	480	6															4					
G	5-Mar-06	465	15															6					
G	31-Mar-06	457.2	2															4					
G	3-Feb-07	440	10															<4					
G	3-Feb-07	450	24	16.5	115	<0.002	<0.01	<0.05	2	2.6	67.6	0.89	<0.05	7.7	0.063	0.56	5.6	8	7	1.5	7.2	18	61.2
G	24-Mar-07	460	40															6					
G	28-Apr-07	460	43															11					
G	4-May-07	470	8															8					
G	12-May-07	430	7	18.8	128.5	0.002	<0.01	0.05	<1	1.8	73.1	0.58	<0.05	8.8	0.05	0.61	7	9	4	1.4	6.9	14	47.8
G	19-May-07	460	45															9					
G	23-May-07	470	19															6					
G	5-Jun-07	440	24															12					
G	5-Jun-07	440	24															13					
G	22-Jul-07	460	57															11					
G	28-Jul-07	430	44															9					
G	16-Aug-07	450	46	17	90.6	<0.002	<0.01	0.06	1	2.5	106.5	1.01	<0.05	6.1	0.147	0.46	7.6	9	13	1.8	6	43	90.9
G	1-Sep-07	430	15															7					
G	15-Sep-07	450	44															12					
G	29-Sep-07	450	49															<4					
G	13-Oct-07	440	34	20.8	123	<0.002	<0.01	0.08	2	2.3	69.7	0.6	<0.05	6.5	0.035	0.61	10.3	14	2	1.2	9.9	11	26.9
G	27-Oct-07	440	37															11					
G	27-Oct-07	440	37															11					
G	10-Nov-07	440	39														7						
G	25-Nov-07	420	11														8						
G	31-Oct-07	430	24																				
G	31-Oct-07	420	12															9					

Rock Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
									%	kg CaCO3/tonne				ppm	%0ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
D	25-Jun-05	480	15	G23	DC	G	1	8.7	0.01	0.3	16	16	51.2	0.15	7.74	1	110	0.96	0.05	6.8	0.11	35.4
D	22-Jul-05	472.5	3	G19	DC	G	1	8.2	0.01	0.3	11	11	35.2	0.14	7.04	<0.2	110	0.79	0.02	6.49	0.1	29.8
D	22-Jul-05	472.5	3	F17	DC	G	1	8	0.01	0.3	12	12	38.4	0.15	7.25	0.2	140	0.89	0.02	6.2	0.12	31
D	22-Jul-05	472.5	3	E18	DC	G	1	7.9	0.02	0.9	16	15	25.6	0.16	6.98	0.8	150	1.17	0.05	5.71	0.09	48.3
D	22-Jul-05	472.5	3	C16	DC	G	1	7.7	0.02	0.6	11	10	17.6	0.22	6.49	1	130	1.57	0.07	5.73	0.08	76.9
D	22-Jul-05	472.5	3	A14	DC	G	1	7.9	0.03	0.9	12	11	12.8	0.19	7.83	1	180	1.41	0.06	6.04	0.1	56.8
D	25-Jul-05	472.5	4	G23	DC	G	1	8.2	0.02	0.6	12	11	19.2	0.158	7.62	0.2	170	0.97	0.04	6.16	0.09	36.9
D	25-Jul-05	472.5	4	F21	DC	G	1	8	0.01	0.3	11	11	35.2	0.13	7.44	1	160	0.9	0.03	6.15	0.1	33.8
D	25-Jul-05	472.5	4	E22	DC	G	1	8.1	0.01	0.3	12	12	38.4	0.17	6.92	0.3	160	1.09	0.03	5.9	0.09	39.9
D	25-Jul-05	472.5	4	B19	DC	G	1	7.9	0.02	0.6	11	10	17.6	0.18	7.34	0.5	160	1.4	0.05	5.96	0.07	59.7
D	25-Jul-05	472.5	4	A22	DC	G	1	8.1	0.02	0.6	12	11	19.2	0.19	6.98	0.5	160	1.16	0.03	6.01	0.08	45.4
D	30-Jul-05	472.5	5	I15	DC	G	1	8.1	0.01	0.3	12	12	38.4	0.13	6.53	0.2	160	0.93	0.03	5.52	0.09	33.4
D	30-Jul-05	472.5	5	F17	DC	G	1	7.9	0.02	0.6	12	11	19.2	0.26	6.62	0.3	200	1.45	0.04	5.06	0.08	59.7
D	30-Jul-05	472.5	5	D13	DC	G	1	7.9	0.02	0.6	13	12	20.8	0.21	6.81	0.5	180	1.43	0.05	5.47	0.07	57.3
D	30-Jul-05	472.5	5	C12	DC	G	1	8	0.02	0.6	13	12	20.8	0.28	6.73	0.7	180	1.42	0.06	5.7	0.09	61.2
D	30-Jul-05	472.5	5	A19	DC	G	1	8.1	0.01	0.3	12	12	38.4	0.12	7.63	0.3	210	1.2	0.04	5.38	0.08	36.2
D	2-Aug-05	472.5	6	I12	DC	G	1	8.3	0.01	0.3	11	11	35.2	0.14	7.37	0.6	120	0.89	0.07	7.43	0.1	31.1
D	2-Aug-08	472.5	6	H11	DC	G	1	8.6	0.01	0.3	10	10	32	0.14	8.06	0.8	130	0.91	0.05	7.08	0.12	30.8
D	12-Aug-05	472.5	9	M19	DC	G	1	8.4	0.01	0.3	13	13	41.6	0.17	7.66	0.58	120	0.85	0.05	7.02	0.11	31.6
D	12-Aug-05	472.5	9	M14	DC	G	1	8.4	0.01	0.3	13	13	41.6	0.17	7.75	0.6	110	0.89	0.05	7.18	0.1	32.4
D	4-Sep-05	472.5	15	D14	DC	G	1	8.3	0.03	0.9	18	17	19.2	0.14	6.61	1.3	150	2.1	0.08	5.52	0.06	67.5
D	4-Sep-05	472.5	15	C17	DC	G	1	8.3	0.02	0.6	15	14	24	0.13	7.26	1.1	170	1.54	0.12	5.73	0.12	51.7
D	4-Sep-05	472.5	15	C12	DC	G	1	8.2	0.02	0.6	17	16	27.2	0.15	6.53	0.9	140	1.74	0.08	5.9	0.09	59.4
D	4-Sep-05	472.5	15	A16	DC	G	1	8.5	0.02	0.6	14	14	22.4	0.14	7.43	0.6	110	1.02	0.04	7.03	0.11	32.7
D	13-Sep-05	472.5	19	K18	DC	G		8.3	0.02	0.6												
D	13-Sep-05	472.5	19	J16	DC	G		7.4	0.01	0.3												
D	6-Jul-06	480	37		BR	C	1	8.5	0.03	0.9	12	11	12.8									
D	6-Oct-06	480	6		DC	C	1	8.2	0.01	0.3	12	12	38.4									
D	4-May-07	470	8	-	DC	C	1	8	0.02	0.6	15	14	24									
D	24-Mar-07	460	40	-	DC	C	1	8.3	0.02	0.6	15	14	24									
D	31-Oct-07	450	59	-	DC	C	1	8.6	0.02	0.6	19	18	30.4	0.13	6.98	<0.2	140	0.95	0.04	6.47	0.1	41.6

Note: Rock Type: G - Granite; D - Diabase; T - Till
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock
Sampling Method: G - Grab; C - Composite
S(T) - Total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO3 eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO3 eq/tonne
NNP - Net Neutralization Potential in kg CaCO3 eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Rock Type	Sample Date	Bench	Pattern	Co	Cr	Cs	Cu	Cu (AA)	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
				ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
D	25-Jun-05	480	15	48.4	122	1.36	299		10.75	24.4	0.16	4.8	0.09	0.45	14.3	18.2	3.63	1585	1.24	1.96	12.6	73.7	890
D	22-Jul-05	472.5	3	43.7	55	1.22	257	0.02	9.67	21	0.2	4.2	0.085	0.49	12.6	16.8	3.2	1435	1.12	1.75	10.4	66.4	810
D	22-Jul-05	472.5	3	44.7	49	1.55	272	0.03	10.1	22.6	0.19	4.2	0.087	0.79	13.2	16.1	2.99	1435	1	1.89	11	63.9	780
D	22-Jul-05	472.5	3	39.7	46	1.46	319	0.03	9.77	23.2	0.2	6.2	0.092	0.81	20.1	18.6	2.55	1365	1.56	2	15.6	50	1290
D	22-Jul-05	472.5	3	42.8	28	1.1	422	0.04	11.45	25.8	0.27	9.3	0.126	0.65	32.1	22.1	2.46	1580	1.84	2.07	23.3	41.9	2060
D	22-Jul-05	472.5	3	41.4	27	1.38	427	0.04	10.4	26	0.23	7.3	0.104	0.75	24	22.8	2.42	1490	1.81	2.2	18.4	44.3	1470
D	25-Jul-05	472.5	4	42.3	55	1.74	274	0.03	9.53	22.2	0.19	4.7	0.087	0.96	15.8	22	3.03	1425	1.62	1.88	10.9	63.2	880
D	25-Jul-05	472.5	4	42.2	50	1.79	230	0.03	9.26	22	0.18	4.3	0.081	0.79	14.5	18.3	2.98	1315	1.01	1.77	10	65.6	810
D	25-Jul-05	472.5	4	44.7	54	1.74	290	0.03	10.45	21.9	0.22	5.3	0.093	0.78	17.3	19.9	3.03	1485	1.62	1.68	13.2	62.9	980
D	25-Jul-05	472.5	4	39.3	27	1.2	381	0.04	10.1	25.9	0.23	7.5	0.104	0.73	25	22.1	2.33	1390	1.63	2.14	19.7	40.1	1650
D	25-Jul-05	472.5	4	42.9	44	1.4	380	0.04	10.9	23.1	0.22	6	0.101	0.63	18.9	21.4	2.8	1545	1.17	1.82	15.7	53	1290
D	30-Jul-05	472.5	5	39.8	60	1.54	231	0.02	8.51	19.95	0.17	4.2	0.077	0.84	14.5	18.2	2.79	1250	0.97	1.71	10.1	61.7	780
D	30-Jul-05	472.5	5	38.1	24	2.05	425	0.04	10.15	24	0.23	7.2	0.099	0.96	25.8	34.4	2.16	1440	1.5	2	18.2	35.3	1450
D	30-Jul-05	472.5	5	40.4	29	1.44	379	0.04	10.85	24.6	0.25	7.4	0.107	0.94	23.9	24.4	2.49	1570	1.79	2.13	19.3	41.7	1580
D	30-Jul-05	472.5	5	43.4	24	1.51	511	0.05	11.7	25.9	0.25	8.3	0.118	0.77	25.6	27.2	2.53	1640	1.56	2	21.1	70.6	1580
D	30-Jul-05	472.5	5	35.4	49	2.33	189.5	0.02	8.05	22.2	0.18	4.2	0.073	1.62	15.8	18.7	2.51	1170	2.21	2.1	10.4	55.2	780
D	2-Aug-05	472.5	6	53.2	81	1.25	318	0.03	10.85	23.2	0.21	4.4	0.089	0.48	13	19.8	3.92	1590	1.03	1.8	11.8	77.7	950
D	2-Aug-08	472.5	6	45.9	77	1.27	312	0.03	9.83	23.5	0.21	4.3	0.076	0.57	13.1	22.2	3.27	1450	1.08	1.9	11.5	60.2	950
D	12-Aug-05	472.5	9	52.5	67	1.32	322	0.03	11	24.4	0.22	4.9	0.086	0.51	13.2	17	3.49	1550	1.34	1.81	13	68.1	940
D	12-Aug-05	472.5	9	51.7	72	1.23	330	0.03	10.65	24	0.22	4.8	0.088	0.44	13.4	16.6	3.64	1530	1.08	1.83	12.3	71.2	1000
D	4-Sep-05	472.5	15	44	35	1.03	401	0.014	10.55	26	0.18	7.9	0.115	0.64	28.6	24.6	2.37	1445	1.86	2.09	24.1	42.4	1660
D	4-Sep-05	472.5	15	43.3	42	1.27	341	0.03	10.1	24.9	0.21	5.9	0.097	0.75	21.3	24.8	2.42	1440	2.14	1.98	18.4	45.8	1340
D	4-Sep-05	472.5	15	52.4	41	1.28	441	0.04	11.5	25.5	0.2	7.1	0.115	0.55	24.6	25.3	2.75	1595	1.64	1.91	22.4	50	1650
D	4-Sep-05	472.5	15	52.4	90	1.41	307	0.03	10.35	23.6	0.16	4.2	0.092	0.39	13	19	3.47	1515	1.02	1.79	12.2	77.5	890
D	13-Sep-05	472.5	19																				
D	13-Sep-05	472.5	19																				
D	6-Jul-06	480	37																				
D	6-Oct-06	480	6																				
D	4-May-07	470	8																				
D	24-Mar-07	460	40																				
D	31-Oct-07	450	59	49.2	45	1.41	365		10.45	24.9	0.15	5.9	0.083	0.49	17	19.3	2.98	1430	2.64	1.88	16.9	61.2	1150

Rock Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	25-Jun-05	480	15	2.5	17	0.002	0.01	0.14	2	1.5	307	0.82	<0.05	1.4	1.505	0.07	0.6		448	0.4	28.2	114	164.5
D	22-Jul-05	472.5	3	2.3	19.1	<0.002	0.01	<0.05	2	1.1	278	0.74	<0.05	1.5	1.3	0.08	0.5	<4	395	0.6	25.4	98	142
D	22-Jul-05	472.5	3	3.9	28.5	<0.002	0.01	<0.05	3	1.4	281	0.88	<0.05	1.9	1.495	0.13	1.3	4	438	0.5	24.9	112	140
D	22-Jul-05	472.5	3	2.9	29.9	0.002	0.02	0.06	3	1.8	270	1.13	<0.05	2.6	1.525	0.13	1.3	4	367	0.8	33.2	95	207
D	22-Jul-05	472.5	3	2.1	24.7	0.002	0.02	0.12	4	2.5	251	1.64	<0.05	3.8	1.85	0.1	1.3	<4	365	0.9	48.2	91	310
D	22-Jul-05	472.5	3	3.1	28.6	0.002	0.02	0.12	3	2	339	1.3	<0.05	2.8	1.555	0.12	1.2	<4	309	0.8	38.1	109	248
D	25-Jul-05	472.5	4	6.5	37.2	0.002	0.01	<0.05	3	1.4	274	0.8	<0.05	2.8	1.26	0.16	1.1	<4	362	0.7	26.4	100	153.5
D	25-Jul-05	472.5	4	3.2	30.6	<0.002	0.01	<0.05	2	1.2	281	0.75	<0.05	2.4	1.285	0.14	0.8	<4	390	0.5	24.4	94	141
D	25-Jul-05	472.5	4	0.27	32.1	0.002	0.01	<0.05	3	1.4	254	0.97	<0.05	2.6	1.55	0.14	0.9	<4	424	0.6	28.7	103	174
D	25-Jul-05	472.5	4	1.8	28.9	0.002	0.02	<0.05	3	2	302	1.38	<0.05	2.7	1.61	0.11	0.9	<4	331	0.4	40.1	94	257
D	25-Jul-05	472.5	4	2	24.7	0.002	0.01	<0.05	3	1.7	298	1.09	<0.05	2.1	1.675	0.1	6.2	10	403	0.4	33.1	117	205
D	30-Jul-05	472.5	5	3.5	29.7	<0.002	0.01	<0.05	2	1.3	241	0.74	<0.05	2.6	1.19	0.13	1	<4	352	16.8	23.9	89	141.5
D	30-Jul-05	472.5	5	3.8	40.2	0.002	0.01	<0.05	3	2	257	1.36	<0.05	3.7	1.59	0.19	1.6	<4	310	0.6	35.9	98	236
D	30-Jul-05	472.5	5	3.1	37.9	0.002	0.02	0.07	3	2.1	254	1.39	<0.05	3.1	1.755	0.14	1.1	4	351	1	39.1	95	254
D	30-Jul-05	472.5	5	2.8	31.4	0.002	0.02	<0.05	4	2.2	286	1.55	<0.05	3.1	1.905	0.13	1.1	4	372	0.9	42.2	120	267
D	30-Jul-05	472.5	5	6.9	61.1	<0.002	0.01	<0.05	3	1.4	246	0.83	<0.05	3.8	1.12	0.29	2.3	5	325	0.8	24	79	136.5
D	2-Aug-05	472.5	6	2.1	17.6	<0.002	0.02	0.17	2	1.7	296	0.74	<0.05	1.5	1.485	0.07	0.7	<4	470	0.4	27.3	116	135
D	2-Aug-08	472.5	6	3.1	19.7	0.002	0.02	0.15	2	1.7	329	0.74	<0.05	1.7	1.32	0.09	0.6	<4	377	0.4	26	117	129.5
D	12-Aug-05	472.5	9	1.9	18.7	0.002	0.01	0.11	3	1.7	317	0.84	<0.05	1.5	1.635	0.07	0.5	<4	468	0.8	27.9	123	142
D	12-Aug-05	472.5	9	1.6	15.2	0.002	0.01	0.11	2	1.8	320	0.79	<0.05	1.4	1.48	0.06	0.4	<4	427	0.6	28	116	139
D	4-Sep-05	472.5	15	2.5	29.8	0.002	0.02	1.08	3	2.5	266	1.56	0.05	3.1	1.7	0.1	1.3	4	302	1.3	43.6	89	275
D	4-Sep-05	472.5	15	7.1	29.7	0.002	0.02	1.94	3	2	302	1.23	0.05	2.5	1.615	0.12	0.8	4	361	1.5	33.9	99	213
D	4-Sep-05	472.5	15	1.8	23.5	0.002	0.02	0.89	3	2.6	262	1.42	0.05	2.7	1.92	0.09	1	4	405	16.9	42	108	255
D	4-Sep-05	472.5	15	2.2	16.4	0.002	0.01	2.44	3	1.5	307	0.79	0.05	1.3	1.405	0.07	0.4	4	425	1.8	27.4	120	149
D	13-Sep-05	472.5	19															<4					
D	13-Sep-05	472.5	19															8					
D	6-Jul-06	480	37															<4					
D	6-Oct-06	480	6															<4					
D	4-May-07	470	8															<4					
D	24-Mar-07	460	40															<4					
D	31-Oct-07	450	59	2.1	21.5	<0.002	0.02	0.14	3	1.7	297	1.06	0.05	2	1.59	0.08	0.7	<4	422	1.2	32.6	114	203

Rock Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
									%	kg CaCO ₃ /tonne				ppm	%0ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
T	20-Mar-06	480	34		DC	C	1	8.2	0.01	0.3	4	4	12.8									
T	22-May-06	180	36		DC	C	1	8.2	0.01	0	8	8	25.6									
T	17-Jun-06	472.5	36		DC	C	2	8.8	0.02	0.6	27	26	43.2									
T	29-Jul-06	472.5	43		DC	C	1	8.8	0.03	0.9	13	12	13.9	0.08	7.09	15.3	510	2.18	0.27	1.89	0.16	57.1
T	7-Aug-06	472.5	43		DC	C	1	9	0.02	0.6	12	11	19.2	0.05	7.01	5.1	490	1.98	0.23	1.57	0.08	54
T	19-Aug-06	472.5	41		DC	C	1	8.1	0.01	0.3	8	8	25.6	0.04	7.4	2.9	460	1.98	0.14	1.1	0.04	48.1
T	23-Sep-06	472.5	57		DC	C	1	8.1	0.03	0.9	6	5	6.4									
TG	4-Sep-05	472.5	13	Q19	DC	G	1	7.6	0.02	0.6	7	6	11.2	0.04	6.4	1.8	390	1.58	0.04	0.2	0.04	60.1
TG	4-Sep-05	472.5	13	O18	DC	G	2	7.6	0.01	0.3	16	16	51.2	0.03	8.91	0.8	540	2.03	0.03	0.52	0.02	50.8
TG	4-Sep-05	472.5	13	N19	DC	G	1	7.1	0.06	1.9	7	5	3.7	0.06	8.74	1.3	520	1.18	0.03	0.29	0.08	13.15
TG	4-Sep-05	472.5	13	N18	DC	G	1	7.3	0.01	0.3	7	7	22.4	0.02	8.65	0.8	870	1.22	0.04	0.2	0.02	65.7
TG	4-Sep-05	472.5	13	L19	DC	G	1	8.4	0.02	0.6	31	30	49.6	0.04	6.28	2.6	520	1.64	0.26	1.1	0.05	71.7
TG	4-Sep-05	472.5	13	J17	DC	G	3	8.7	0.04	1.3	282	281	225.6	0.11	2.9	2.1	740	0.84	0.07	3.54	0.04	67.9
TG	2-Sep-06	472.5	54		DC	C	1	8.7	0.01	0.3	8	8	25.6									
TG	23-Sep-06	460	1		DC	C	1	8.7	0.01	0.3	2	2	6.4	0.04	7.37	3.5	370	1.91	0.1	0.79	<0.02	37.4
TG	23-Sep-06	460	1		DC	C	1	8.7	0.02	0.6	9	8	14.4	0.03	7.14	3.4	360	1.72	0.12	0.95	0.02	35.3
TG	22-Oct-06	460	8		DC	C	1	8	<0.01	0.3	6	6	19.2									
TG	10-Nov-06	472.5	64		DC	C	1	8.3	0.01	0.3	4	4	12.8									
TG	21-Nov-06	472.5	67		DC	C	1	8.5	0.01	0.3	9	9	28.8									
TG	10-Nov-06	472.5	64	-	DC	C	1	8.3	0.01	0.3	4	4	12.8									
TG	21-Nov-06	472.5	67	-	DC	C	1	8.5	0.01	0.3	9	9	28.8									
TG	28-Apr-07	480	47	-	DC	C	1	8.5	0.01	0.3	10	10	32	0.01	7.26	1.9	500	1.97	0.14	0.79	0.02	45
TG	28-Apr-07	480	47	-	DC	C	1	8	0.01	0.3	16	16	51.2	0.02	6.71	1.5	460	1.87	0.16	0.75	<0.02	41.2
TG	19-Jul-07	480	50	-	DC	C	1	7.4	0.01	0.3	7	7	22.4									
DG	12-Aug-05	472.5	9	K16	DC	G	1	8.4	0.01	0.3	11	11	35.2	0.14	7.45	0.7	150	0.97	0.08	6.31	0.1	34.8
DG	28-Jun-05	480	15	I21	DC	G	1	8.3	0.01	0.3	13	13	41.6	0.11	7.31	0.8	150	1.12	0.05	5.62	0.07	33
DG?	28-Jun-05	480	15	K19	DC	G	1	7.9	0.01	0.3	11	11	35.2	0.04	7.11	2.8	500	1.87	0.13	1.92	0.04	67.5
DG?	28-Jun-05	480	15	K14	DC	G	1	8.3	0.02	0.6	12	11	19.2	0.05	7.21	3.4	490	1.62	0.18	2.52	0.04	53.1
DG?	28-Jun-05	480	15	J15	DC	G	1	8.4	0.02	0.6	10	9	16	0.06	7.06	3.9	440	1.66	1.22	1.54	0.04	51.1
DG?	28-Jun-05	480	15	J13	DC	G	1	7.4	0.01	0.3	7	7	22.4	0.05	7.47	6.2	500	2.12	0.18	1.15	0.04	58.3
DG?	12-Aug-05	472.5	9	L10	DC	G	1	8.7	0.01	0.3	11	11	35.2	0.17	7.84	0.6	130	0.91	0.05	7.26	0.12	32.7
DG	10-Nov-06	472.5	65		DC	C	1	8.2	0.01	0.3	12	12	38.4	0.06	7.5	0.3	300	1.36	0.07	3.36	0.05	44
DG	21-Nov-06	460	21	-	DC	C	1	8.5	0.01	0.3	14	14	44.8									
DG	10-Nov-06	472.5	65	-	DC	C	1	8.2	0.01	0.3	12	12	38.4	0.06	7.5	0.3	300	1.36	0.07	3.36	0.05	44
DG	21-Nov-06	460	21	-	DC	C	1	8.5	0.01	0.3	14	14	44.8									
DG	24-Jun-07	470	22	-	DC	C	1	8.1	0.01	0.3	11	11	35.2	0.1	7.18	0.7	180	1.52	0.08	4.91	0.11	41.5

Note: Rock Type: G - Granite; D - Diabase; T - Till
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock
Sampling Method: G - Grab; C - Composite
S(T) - Total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO₃ eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO₃ eq/tonne
NNP - Net Neutralization Potential in kg CaCO₃ eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Rock Type	Sample Date	Bench	Pattern	Co	Cr	Cs	Cu	Cu (AA)	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
				ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
T	20-Mar-06	480	34																				
T	22-May-06	180	36																				
T	17-Jun-06	472.5	36																				
T	29-Jul-06	472.5	43	17.1	52	4.78	44.3	0.01	3.79	18.2	0.07	3.6	0.048	2.62	27.2	36.4	1.59	509	1.24	1.67	9.5	41.4	600
T	7-Aug-06	472.5	43	13.8	45	4.26	31	0.01	3.17	17.45	0.05	3.6	0.039	2.68	26.3	36.4	1.28	415	1.03	1.89	8.4	34.3	520
T	19-Aug-06	472.5	41	11.6	35	4.46	23.8		2.97	18.55	0.14	3.4	0.034	2.39	25.4	29.2	1.16	342	0.8	2.13	8.6	26.1	480
T	23-Sep-06	472.5	57																				
TG	4-Sep-05	472.5	13	4.2	36	0.84	35.5	0.01	1.78	16.9	0.09	3.1	0.011	1.7	31.6	13.7	0.69	159	0.98	2.9	6.3	4.6	270
TG	4-Sep-05	472.5	13	5.5	36	1.17	9.4	0.01	2.23	19.95	0.1	5	0.013	2.01	24	23.9	1.15	239	0.53	4.74	21.3	7.1	1680
TG	4-Sep-05	472.5	13	2.4	30	3.13	53.7	0.01	0.88	16.75	0.11	0.7	0.01	5.29	6.5	6.8	0.3	169	0.64	3.37	4.5	3	180
TG	4-Sep-05	472.5	13	3.1	18	1.9	11.5	0.01	1.31	16.15	0.14	4	0.015	4.93	30.9	9.4	0.5	121	0.59	3.16	6.6	4.3	410
TG	4-Sep-05	472.5	13	24.1	343	3.28	36	0.01	3.16	15	0.15	3.3	0.034	2.73	39.5	23.6	3.39	565	0.83	1.42	33.6	258	600
TG	4-Sep-05	472.5	13	59.8	760	2.19	57.4	0.01	4.46	7.23	0.15	1.9	0.024	1.25	40.4	12.1	13.4	764	0.73	0.49	53.3	947	730
TG	2-Sep-06	472.5	54																				
TG	23-Sep-06	460	1	7.3	19	2.7	21.7	0.01	2.14	19.2	0.08	3.5	0.026	2.2	21	17	0.75	251	0.68	2.84	6.9	15	310
TG	23-Sep-06	460	1	7.6	18	2.83	17.4	<0.01	2.19	18.5	0.07	2.9	0.029	2.21	19.4	16.1	0.81	272	0.68	2.71	6.6	17	290
TG	22-Oct-06	460	8																				
TG	10-Nov-06	472.5	64																				
TG	21-Nov-06	472.5	67																				
TG	10-Nov-06	472.5	64																				
TG	21-Nov-06	472.5	67																				
TG	28-Apr-07	480	47	9.2	32	3.5	19.5		2.22	18.55	0.11	3.8	0.024	3.03	23.4	21.3	0.91	272	0.87	2.14	6.8	25.8	380
TG	28-Apr-07	480	47	9.3	33	3.23	21.2		2.08	17.6	0.12	3.5	0.022	2.8	20.7	20.7	1.02	264	1.05	2.02	6.8	36.3	350
TG	19-Jul-07	480	50																				
DG	12-Aug-05	472.5	9	47.7	63	1.48	276	0.02	9.91	22.9	0.25	4.6	0.086	0.86	14.7	21.3	3.43	1465	0.93	1.89	11.8	63	990
DG	28-Jun-05	480	15	39.1	106	1.26	206		8.57	21.7	0.13	4.2	0.074	0.76	13.8	20.5	3.05	1290	1.48	2.1	10.2	62.3	750
DG?	28-Jun-05	480	15	17.3	164	3.75	42.5		3.91	16.8	0.12	4.6	0.045	2.66	31.7	32.5	1.65	554	1.42	1.5	7.9	46.4	450
DG?	28-Jun-05	480	15	21.6	157	3.78	43.4		4.53	16.2	0.11	3.6	0.047	2.34	25.4	29.4	2.03	657	1.43	1.55	7.3	61.9	490
DG?	28-Jun-05	480	15	15.3	251	4.16	31.5		3.42	16.3	0.1	3.8	0.039	2.59	24.5	35.7	1.81	458	1.08	1.71	7.3	68.8	530
DG?	28-Jun-05	480	15	13.1	182	5.44	27.3		3.51	17.55	0.12	4.1	0.044	2.69	28.6	36.1	1.35	414	1.24	1.59	8.4	34	510
DG?	12-Aug-05	472.5	9	53	79	1.19	335	0.03	10.95	24.5	0.23	4.7	0.087	0.55	13.6	17.5	3.71	1615	1.03	1.85	12.2	70.9	940
DG	10-Nov-06	472.5	65	26.5	29	1.64	155	0.01	6.29	22.2	0.15	4.2	0.059	1.54	20.5	18	1.86	843	1.03	2.68	11	34.1	680
DG	21-Nov-06	460	21																				
DG	10-Nov-06	472.5	65	26.5	29	1.64	155	0.01	6.29	22.2	0.15	4.2	0.059	1.54	20.5	18	1.86	843	1.03	2.68	11	34.1	680
DG	21-Nov-06	460	21																				
DG	24-Jun-07	470	22	37.1	42	1.31	200	0.02	7.62	23.2	0.12	5.7	0.077	1.08	18.9	13	2.4	1075	1.3	2.47	13	48.9	850

Rock Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
T	20-Mar-06	480	34														7						
T	22-May-06	180	36														8						
T	17-Jun-06	472.5	36														6						
T	29-Jul-06	472.5	43	23.9	106.4	0.002	0.02	0.85	2	2.3	174.5	0.8	<0.05	8.7	0.405	0.47	2.3	5	98	2	15.9	80	135
T	7-Aug-06	472.5	43	15.4	101	<0.002	0.02	0.56	2	2.2	166.5	1.05	<0.05	9	0.325	0.46	2.6	6	76	5.1	13.3	57	128
T	19-Aug-06	472.5	41	8	94.6	<0.002	0.01	0.42	2	2.1	148	0.67	<0.05	8.5	0.275	0.46	2.7	<4	63	1.7	13.5	37	106.5
T	23-Sep-06	472.5	57														4						
TG	4-Sep-05	472.5	13	5.1	60.6	0.002	0.02	4.45	2	2	59.7	0.48	0.05	9.8	0.084	0.26	4	5	11	0.7	12.2	17	99.7
TG	4-Sep-05	472.5	13	2.7	69.7	0.002	0.01	6.54	2	8	57.2	1.38	0.05	5.2	0.821	0.27	11.7	13	67	1.1	26	26	185
TG	4-Sep-05	472.5	13	23.7	153	0.002	0.08	4.11	2	1.1	118.5	0.62	0.05	5.1	0.043	0.94	3.4	4	11	0.4	4.9	14	23.1
TG	4-Sep-05	472.5	13	16.7	127.5	0.002	0.01	2.6	2	2.8	87.2	0.55	0.05	19.4	0.097	0.73	8	8	13	0.3	14.1	12	133
TG	4-Sep-05	472.5	13	11.2	96.4	0.002	0.01	1.47	2	2	135	2.09	0.05	9.6	0.366	0.45	6.5	7	69	1.2	11.1	30	132
TG	4-Sep-05	472.5	13	6.8	58.2	0.002	0.02	2.31	2	0.8	165.5	3.4	0.05	7.4	0.428	0.18	30.5	32	73	0.8	6.9	42	71.5
TG	2-Sep-06	472.5	54														<4						
TG	23-Sep-06	460	1	6	95.4	<0.002	0.01	0.18	1	1.7	116	0.64	<0.05	6.5	0.197	0.39	3	5	37	1.2	10.7	20	115.5
TG	23-Sep-06	460	1	6.3	95.8	<0.002	0.01	0.22	1	1.6	114.5	0.62	<0.05	7.2	0.178	0.41	3	4	36	1.1	10.4	20	95.1
TG	22-Oct-06	460	8															5					
TG	10-Nov-06	472.5	64															8					
TG	21-Nov-06	472.5	67															7					
TG	10-Nov-06	472.5	64															8					
TG	21-Nov-06	472.5	67															7					
TG	28-Apr-07	480	47	8.4	118	<0.002	0.01	0.3	2	1.6	100.5	0.54	<0.05	11.1	0.2	0.52	3.5	6	46	1.4	10.9	26	105
TG	28-Apr-07	480	47	7.6	110	<0.002	0.01	0.27	2	1.5	95.2	0.55	<0.05	9.8	0.206	0.46	3.4	6	46	1.5	10.3	24	98
TG	19-Jul-07	480	50															7					
DG	12-Aug-05	472.5	9	3	30.7	<0.002	0.01	0.16	2	2	278	0.78	<0.05	2.1	1.33	0.12	0.8	<4	391	0.5	26.6	102	133
DG	28-Jun-05	480	15	3.1	30	<0.002	0.01	0.12	1	1.5	247	0.71	<0.05	2	1.195	0.11	1.2		369	0.7	24	88	141
DG?	28-Jun-05	480	15	7.3	95.4	<0.002	0.01	0.53	1	2	144.5	0.69	<0.05	8.4	0.366	0.38	2.4		96	1.3	17.6	44	150.5
DG?	28-Jun-05	480	15	7.8	89.9	<0.002	0.01	0.57	1	1.9	159.5	0.58	<0.05	7.4	0.37	0.35	1.9		118	1.8	15.1	53	124
DG?	28-Jun-05	480	15	10	91.7	<0.002	0.02	0.47	1	1.8	158	0.61	<0.05	7.2	0.304	0.4	3.1		78	1.4	13.1	45	124
DG?	28-Jun-05	480	15	7.8	117	<0.002	0.01	0.68	1	2.3	149	0.73	<0.05	9.1	0.344	0.46	2.1		82	1.7	14.8	43	138.5
DG?	12-Aug-05	472.5	9	2.4	19.1	<0.002	0.01	0.11	3	1.8	319	0.79	<0.05	1.6	1.48	0.08	0.5	<4	438	0.7	28	132	139.5
DG	10-Nov-06	472.5	65	5.8	58.5	<0.002	0.01	0.13	1	2	186.5	0.81	<0.05	4.9	0.835	0.21	1.7	4	191	0.9	20.9	58	139.5
DG	21-Nov-06	460	21															5					
DG	10-Nov-06	472.5	65	5.8	58.5	<0.002	0.01	0.13	1	2	186.5	0.81	<0.05	4.9	0.835	0.21	1.7	4	191	0.9	20.9	58	139.5
DG	21-Nov-06	460	21															5					
DG	24-Jun-07	470	22	6.8	39.8	0.002	0.01	0.11	1	1.9	236	0.96	<0.05	4	1.115	0.16	3.9	5	281	2.2	26	77	163

Appendix B

Analytical Results for Kimberlite Samples

Appendix B - Analytical Results for Kimberlite Samples

Sample Location/Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NPMPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
									%	kg CaCO ₃ /tonne				ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
Jericho Pit	7-Apr-06	457.5	1		DC	C	3	8.7	0.02	0.6	353	352	564.8	0.05	2.51	0.7	500	0.74	0.05	4.07	0.02	47.9
Jericho Pit	22-Apr-06	457.5	4		DC	C	3	8.5	0.02	0.6	344	343	550.4	0.1	2.1	0.7	550	0.67	0.04	3.57	0.03	50.8
Jericho Pit	24-May-06	457.5	8		BR	C	3	8.5	0.02	0.6	366	365	585.6									
Jericho Pit	29-Jul-06	450	7		DC	C	3	9	0.05	1.6	375	373	240									
Jericho Pit	29-Jul-06	450	6		DC	C	3	8.7	0.04	1.3	339	338	271.2									
Jericho Pit	29-Mar-07	430	4	-	DC	C	3	8.8	0.03	0.9	367	366	391.5									
CPK	23-May-06	-	-	-	PK	G	3	8.4	0.03	0.9	376	375	401.1									
CPK	21-Feb-06	-	-	-	PK	G	3	8.7	0.02	0.6	257	256	411.2	0.21	2.41	0.9	610	0.84	0.06	2.61	0.03	66.5
CPK	3-Mar-06	-	-	-	PK	G	3	8.8	0.04	1.3	320	319	256									
CPK	14-Mar-06	-	-	-	PK	G	3	8.7	0.01	0.3	365	365	1168									
CPK	28-Mar-06	-	-	-	PK	G	3	8.7	0.03	0.9	385	384	410.7									
CPK	11-Apr-06	-	-	-	PK	G	3	8.7	0.02	0.6	259	258	414.4									
CPK	25-Apr-06	-	-	-	PK	G	3	9.1	0.02	0.6	338	337	540.8	<0.01	2.99	0.5	700	0.74	0.03	4.43	0.03	58.9
CPK	9-May-06	-	-	-	PK	G	3	8.7	0.04	1.3	360	359	288									
CPK	6-Jun-06	-	-	-	PK	G	3	8.8	0.01	0.3	348	348	1113.5									
CPK	20-Jun-06	-	-	-	PK	G	3	8.9	0.03	0.9	351	350	374.4									
CPK	4-Jul-06	-	-	-	PK	G	3	9	0.04	1.3	371	370	296.8	0.25	1.82	0.4	600	0.54	0.08	3.84	0.03	52.8
CPK	18-Jul-06	-	-	-	PK	G	3	8.8	0.03	0.9	314	313	334.9									
CPK	14-Aug-06	-	-	-	PK	G	3	9	0.03	0.9	332	331	354.1									
CPK	28-Aug-06	-	-	-	PK	G	3	9.2	0.03	0.9	336	335	358.4									
CPK	12-Sep-06	-	-	-	PK	G	3	9.2	0.07	2.2	309	307	141.25									
CPK	26-Sep-06	-	-	-	PK	G	3	8.5	0.06	1.9	377	375	201.1	0.35	2.22	<0.2	710	0.67	0.04	4.28	0.04	67.4
CPK	10-Oct-06	-	-	-	PK	G	3	9.2	0.04	1.3	350	349	280									
CPK	24-Oct-06	-	-	-	PK	G	3	9.2	0.08	2.5	308	306	123.2									
CPK	8-Nov-06	-	-	-	PK	G	2	9.3	0.06	1.9	85	83	45.33									
CPK	21-Nov-06	-	-	-	PK	G	3	8.7	0.05	1.6	372	370	238.1									
CPK	5-Dec-06	-	-	-	PK	G	3	8.9	0.03	0.9	335	334	357.3	0.23	2.88	2.1	510	0.85	0.06	3.45	0.02	46.3
CPK	19-Dec-06	-	-	-	PK	G	3	8.6	0.03	0.9	357	356	380.8									
CPK	16-Jan-07	-	-	-	PK	G	3	9.1	0.04	1.3	359	358	287.2									
CPK	31-Jan-07	-	-	-	PK	G	3	9.1	0.02	0.6	318	317	508.8									
CPK	12-Feb-07	-	-	-	PK	G	3	9.1	0.04	1.3	344	343	275.2									
CPK	13-Mar-07	-	-	-	PK	G	3	9.1	0.03	0.9	323	322	344.5	0.28	3.27	0.8	620	0.71	0.06	4.68	0.08	67.1
CPK	28-Mar-07	-	-	-	PK	G	3	8.6	0.03	0.9	332	331	354.1									
CPK	25-Apr-07	-	-	-	PK	G	3	9.1	0.03	0.9	352	351	375.5									
CPK	8-May-07	-	-	-	PK	G	3	8.9	0.03	0.9	334	333	356.3									
CPK	31-Jul-07	-	-	-	PK	G	3	8.6	0.08	2.5	359	357	143.6									
CPK	14-Aug-07	-	-	-	PK	G	3	8.6	0.03	0.9	325	324	346.7	0.17	1.82	1.1	550	0.59	0.05	4.33	0.05	52.1
CPK	28-Aug-07	-	-	-	PK	G	3	8.9	0.02	0.6	327	326	523.2									
CPK	11-Sep-07	-	-	-	PK	G	3	8.9	0.03	0.9	350	349	373.3									
CPK	22-Sep-07	-	-	-	PK	G	3	8.8	0.02	0.6	350	349	560									
CPK	9-Oct-07	-	-	-	PK	G	3	9.1	0.02	0.6	392	381	611.2	0.24	1.73	0.3	520	0.45	0.03	3.96	0.03	61.1
CPK	23-Oct-07	-	-	-	PK	G	3	9.1	0.03	0.9	370	369	394.7	0.15	2.53	<0.2	480	0.51	0.06	4.43	0.03	53.9
CPK	6-Nov-07	-	-	-	PK	G	3	8.9	0.03	0.9	361	360	385.1									
CPK	22-Nov-07	-	-	-	PK	G	3	9.2	0.02	0.6	336	335	537.6									
CPK	8-Dec-07	-	-	-	PK	G	3	8.8	0.04	1.3	356	355	284.8									
CPK	18-Dec-07	-	-	-	PK	G	3	8.8	0.03	0.9	349	348	372.3									

Notes: CPK - Coarse Processed Kimberlite; FPK - Fine Processed Kimberlite; RR - Recovery Rejects
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock; PK - Processed Kimberlite
Sampling Method: G - Grab; C - Composite
S(T) - total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO₃ eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO₃ eq/tonne
NNP - Net Neutralization Potential in kg CaCO₃ eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Appendix B - Analytical Results for Kimberlite S

Sample Location/Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Ti	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Jericho Pit	7-Apr-06	457.5	1	5.4	34.9	<0.002	0.01	0.16	<1	0.8	181	2.9	<0.05	5.7	0.393	0.12	18.3	21	62	0.6	5.1	45	34.9
Jericho Pit	23-Apr-06	457.5	4	6.3	60.4	<0.002	0.03	0.49	2	0.6	322	2.87	0.05	6.1	0.35	0.15	2.9	<4	61	0.5	4.7	43	31.7
Jericho Pit	24-May-06	457.5	8															7					
Jericho Pit	29-Jul-06	450	7															11					
Jericho Pit	29-Jul-06	450	6															32					
Jericho Pit	29-Mar-07	430	4															<4					
CPK	23-May-06	-	-																				
CPK	21-Feb-06	-	-	7.5	47.7	<0.002	0.01	0.24	1	0.8	118	4.32	<0.05	7.3	0.473	0.15	28.9	35	66	0.4	5.8	43	41.1
CPK	3-Mar-06	-	-																				
CPK	14-Mar-06	-	-																				
CPK	28-Mar-06	-	-																				
CPK	11-Apr-06	-	-																				
CPK	25-Apr-06	-	-	6.8	55.2	<0.002	0.02	0.09	2	0.8	272	3.07	<0.05	6.9	0.38	0.14	11.1	6	63	0.4	5.8	44	45.5
CPK	9-May-06	-	-																				
CPK	6-Jun-06	-	-															29					
CPK	20-Jun-06	-	-															13					
CPK	4-Jul-06	-	-	6.2	63.7	<0.002	0.03	0.16	1	0.6	297	2.61	<0.05	5.9	0.307	0.15	2.9	4	53	0.5	4	37	26.6
CPK	18-Jul-06	-	-																				
CPK	14-Aug-06	-	-																				
CPK	28-Aug-06	-	-																				
CPK	12-Sep-06	-	-																				
CPK	26-Sep-06	-	-	6.8	47.5	<0.002	0.04	0.14	1	1	400	2.91	<0.05	6.7	0.387	0.15	7.6	8	62	0.5	5.6	41	51.6
CPK	10-Oct-06	-	-																				
CPK	24-Oct-06	-	-																				
CPK	8-Nov-06	-	-																				
CPK	21-Nov-06	-	-																				
CPK	5-Dec-06	-	-	7.6	60.6	<0.002	0.03	0.15	1	0.7	285	2.11	<0.05	5.7	0.279	0.17	3.4	5	48	0.6	5.1	36	42.4
CPK	19-Dec-06	-	-																				
CPK	16-Jan-07	-	-																				
CPK	31-Jan-07	-	-																				
CPK	12-Feb-07	-	-																				
CPK	13-Mar-07	-	-	15.4	67.7	<0.002	0.03	0.18	1	0.8	381	2.63	<0.05	7.3	0.333	0.19	4.2	5	73	0.6	7.8	46	46.7
CPK	28-Mar-07	-	-																				
CPK	25-Apr-07	-	-																				
CPK	8-May-07	-	-																				
CPK	31-Jul-07	-	-																				
CPK	14-Aug-07	-	-	7.5	42.6	0.002	0.03	0.27	1	0.6	284	2.77	<0.05	5.6	0.356	0.12	9.2	10	57	0.6	3.8	48	30.8
CPK	28-Aug-07	-	-																				
CPK	11-Sep-07	-	-																				
CPK	22-Sep-07	-	-																				
CPK	9-Oct-07	-	-	6.4	49.9	<0.002	0.02	0.12	2	0.6	297	3.59	<0.05	6.5	0.376	0.14	15.7	17	57	0.5	4.3	44	38.8
CPK	23-Oct-07	-	-	6.1	50.8	<0.002	0.03	0.13	2	0.7	244	2.78	<0.05	5.9	0.316	0.15	12.4	14	64	0.6	6.2	44	46.7
CPK	6-Nov-07	-	-																				
CPK	22-Nov-07	-	-																				
CPK	8-Dec-07	-	-																				
CPK	18-Dec-07	-	-																				

Appendix B - Analytical Results for Kimberlite Samples

Sample Location/Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	
														kg CaCO3/tonne		ppm		ppm		ppm		ppm	
														%		ppm		ppm		%		ppm	
FPK	23-May-06	-	-	-	PK	G	3	8.2	0.04	1.3	366	365	292.8										
FPK	21-Feb-06	-	-	-	PK	G	3	8.2	0.03	0.9	305	304	325.3	0.42	1.79	1.2	830	0.97	0.12	3.43	0.04	111.5	
FPK	2-Mar-06	-	-	-	PK	G	3	8.2	0.02	0.6	295	294	472										
FPK	13-Mar-06	-	-	-	PK	G	3	8.5	0.03	0.9	345	344	368										
FPK	28-Mar-06	-	-	-	PK	G	3	8.8	0.02	0.6	364	363	582.4										
FPK	11-Apr-06	-	-	-	PK	G	3	8.3	0.02	0.6	312	311	499.2										
FPK	25-Apr-06	-	-	-	PK	G	3	8.8	0.05	1.6	336	334	215	<0.01	2.94	0.8	720	0.79	0.05	3.89	0.04	60.2	
FPK	9-May-06	-	-	-	PK	G	3	8.7	0.06	1.9	385	383	205.3										
FPK	6-Jun-06	-	-	-	PK	G	3	8.9	0.05	1.6	360	358	230.4										
FPK	20-Jun-06	-	-	-	PK	G	3	8.5	0.02	0.6	335	334	536										
FPK	4-Jul-06	-	-	-	PK	G	3	8.9	0.04	1.3	377	376	301.6	0.23	1.68	0.8	590	0.54	0.04	4.11	0.03	46.8	
FPK	18-Jul-06	-	-	-	PK	G	3	8.6	0.03	0.9	349	348	372.3										
FPK	14-Aug-06	-	-	-	PK	G	3	8.9	0.03	0.9	360	359	384										
FPK	28-Aug-06	-	-	-	PK	G	3	9	0.03	0.9	338	337	360.5										
FPK	12-Sep-06	-	-	-	PK	G	3	8.7	0.06	1.9	320	318	170.65										
FPK	26-Sep-06	-	-	-	PK	G	3	8.4	0.04	1.3	364	363	291.2	0.43	2.53	0.3	780	0.72	0.06	4.62	0.03	68	
FPK	10-Oct-06	-	-	-	PK	G	3	9	0.04	1.3	336	335	268.8										
FPK	24-Oct-06	-	-	-	PK	G	3	9	0.04	1.3	324	323	259.2										
FPK	8-Nov-06	-	-	-	PK	G	3	8.5	0.04	1.3	352	351	281.6										
FPK	21-Nov-06	-	-	-	PK	G	3	8.4	0.05	1.6	373	371	238.7										
FPK	5-Dec-06	-	-	-	PK	G	3	8.6	0.04	1.3	377	376	301.6	0.23	2.35	2.8	640	0.6	0.07	3.82	0.03	48.2	
FPK	19-Dec-06	-	-	-	PK	G	3	8.4	0.05	1.6	382	380	244.5										
FPK	16-Jan-07	-	-	-	PK	G	3	8.9	0.04	1.3	381	380	304.8										
FPK	31-Jan-07	-	-	-	PK	G	3	8.8	0.03	0.9	335	334	357.3										
FPK	11-Feb-07	-	-	-	PK	G	3	9	0.03	0.9	351	350	374.4										
FPK	13-Mar-07	-	-	-	PK	G	3	8.8	0.04	1.3	350	349	280	0.23	2.65	2	590	0.64	0.05	4.21	0.06	57.9	
FPK	25-Apr-07	-	-	-	PK	G	3	8.8	0.03	0.9	357	356	380.8										
FPK	8-May-07	-	-	-	PK	G	3	8.7	0.03	0.9	306	305	326.4										
FPK	31-Jul-07	-	-	-	PK	G	3	8.5	0.05	1.6	327	325	209.3										
FPK	14-Aug-07	-	-	-	PK	G	3	8.4	0.04	1.3	361	360	288.8	0.21	2.12	1.2	710	0.59	0.05	4.86	0.04	47.2	
FPK	28-Aug-07	-	-	-	PK	G	3	8.8	0.06	1.9	387	385	206.4										
FPK	11-Sep-07	-	-	-	PK	G	3	8.8	0.03	0.9	376	375	401.1										
FPK	22-Sep-07	-	-	-	PK	G	3	8.7	0.03	0.9	375	374	400										
FPK	9-Oct-07	-	-	-	PK	G	3	8.8	0.04	1.3	390	389	312	0.22	1.66	<0.2	630	0.46	0.04	4.88	0.03	56.5	
FPK	23-Oct-07	-	-	-	PK	G	3	8.8	0.03	0.9	377	376	402.1	0.09	1.9	0.2	610	0.44	0.04	4.62	0.03	49.7	
FPK	6-Nov-07	-	-	-	PK	G	3	9	0.04	1.3	372	371	297.6										
FPK	22-Nov-07	-	-	-	PK	G	3	8.9	0.06	1.9	369	367	196.8										
FPK	8-Dec-07	-	-	-	PK	G	3	8.5	0.04	1.3	404	403	323.2										
FPK	18-Dec-07	-	-	-	PK	G	3	8.4	0.04	1.3	377	376	301.6										

Notes: CPK - Coarse Processed Kimberlite; FPK - Fine Processed Kimberlite; RR - Recovery Rejects
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock; PK - Processed Kimberlite
Sampling Method: G - Grab; C - Composite
S(T) - total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO₃ eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO₃ eq/tonne
NNP - Net Neutralization Potential in kg CaCO₃ eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Appendix B - Analytical Results for Kimberlite S

Sample Location/Type	Sample Date	Bench	Pattern	Co	Cr	Cs	Cu	Cu (AA)	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
				ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
FPK	23-May-06	-	-																				
FPK	21-Feb-06	-	-	89.4	889	2.9	70.5		5.89	5.94	0.21	1.4	0.019	0.65	68.5	22.6	16.95	1280	0.65	0.21	83	1520	1080
FPK	2-Mar-06	-	-																				
FPK	13-Mar-06	-	-																				
FPK	28-Mar-06	-	-																				
FPK	11-Apr-06	-	-																				
FPK	25-Apr-06	-	-	73.2	649	3.04	37.5		5.08	7.31	0.17	1.6	0.016	1.05	37.5	20.5	15.75	887	0.65	0.49	38.6	1210	680
FPK	9-May-06	-	-																				
FPK	6-Jun-06	-	-																				
FPK	20-Jun-06	-	-																				
FPK	4-Jul-06	-	-	76.1	635	1.66	31.2		4.47	5.1	0.21	0.8	0.013	0.86	28.9	10	17.35	735	1.29	0.18	42	1350	520
FPK	18-Jul-06	-	-																				
FPK	14-Aug-06	-	-																				
FPK	28-Aug-06	-	-																				
FPK	12-Sep-06	-	-																				
FPK	26-Sep-06	-	-	69.2	469	2.15	38.7		4.89	8.73	0.15	1.8	0.024	0.83	39.8	24.2	15.3	808	1.24	0.34	43.1	1110	780
FPK	10-Oct-06	-	-																				
FPK	24-Oct-06	-	-																				
FPK	8-Nov-06	-	-																				
FPK	21-Nov-06	-	-																				
FPK	5-Dec-06	-	-	69.6	493	1.83	33.9		3.95	7.05	0.17	1.4	0.018	0.85	28.2	12.4	14.35	644	0.75	0.38	35.9	1245	550
FPK	19-Dec-06	-	-																				
FPK	16-Jan-07	-	-																				
FPK	31-Jan-07	-	-																				
FPK	11-Feb-07	-	-																				
FPK	13-Mar-07	-	-	69.8	514	2.42	37.2		4.56	7.7	0.15	1.5	0.021	0.99	35.5	19.1	14.35	723	1.17	0.46	39.4	1130	520
FPK	25-Apr-07	-	-																				
FPK	8-May-07	-	-																				
FPK	31-Jul-07	-	-																				
FPK	14-Aug-07	-	-	76.6	597	1.73	34.1		4.59	5.19	0.1	1.1	0.017	0.71	28.9	11.2	16.5	763	1.29	0.23	38.9	1640	570
FPK	28-Aug-07	-	-																				
FPK	11-Sep-07	-	-																				
FPK	22-Sep-07	-	-																				
FPK	9-Oct-07	-	-	72.1	603	2.51	41.1		4.6	5.1	0.17	1.1	0.014	0.58	35.3	12	16.5	776	1.14	0.21	46.8	1500	600
FPK	23-Oct-07	-	-	70.7	561	2.45	35.4		4.68	5.2	0.16	1.1	0.017	0.63	32.2	14.3	16.5	752	0.83	0.26	43.1	1450	520
FPK	6-Nov-07	-	-																				
FPK	22-Nov-07	-	-																				
FPK	8-Dec-07	-	-																				
FPK	18-Dec-07	-	-																				

Appendix B - Analytical Results for Kimberlite S

Sample Location/Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Ti	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
FPK	23-May-06	-	-																				
FPK	21-Feb-06	-	-	11.4	44.8	<0.002	0.03	0.48	1	0.9	165	4.96	<0.05	10.6	0.485	0.12	27.5	32	76	1.4	8.4	53	72.7
FPK	2-Mar-06	-	-																				
FPK	13-Mar-06	-	-																				
FPK	28-Mar-06	-	-																				
FPK	11-Apr-06	-	-																				
FPK	25-Apr-06	-	-	7.8	57.3	<0.002	0.03	0.15	1	1	242	2.98	<0.05	7.2	0.406	0.17	10.8	6	68	2.1	7.5	51	55.7
FPK	9-May-06	-	-																				
FPK	6-Jun-06	-	-															9					
FPK	20-Jun-06	-	-															29					
FPK	4-Jul-06	-	-	5.8	54.3	<0.002	0.04	0.15	1	0.7	301	2.84	<0.05	5.1	0.351	0.14	4.1	6	53	1.3	4.1	40	27.6
FPK	18-Jul-06	-	-																				
FPK	14-Aug-06	-	-																				
FPK	28-Aug-06	-	-																				
FPK	12-Sep-06	-	-																				
FPK	26-Sep-06	-	-	9.4	42.6	<0.002	0.05	0.21	2	1.2	421	2.49	0.05	7	0.358	0.16	11	12	61	4.1	7.2	43	66.5
FPK	10-Oct-06	-	-																				
FPK	24-Oct-06	-	-																				
FPK	8-Nov-06	-	-																				
FPK	21-Nov-06	-	-																				
FPK	5-Dec-06	-	-	8.3	51	<0.002	0.03	0.13	1	0.8	307	1.92	<0.05	5.8	0.247	0.19	5.9	7	46	1.3	5	37	44.2
FPK	19-Dec-06	-	-																				
FPK	16-Jan-07	-	-																				
FPK	31-Jan-07	-	-																				
FPK	11-Feb-07	-	-																				
FPK	13-Mar-07	-	-	15.7	58.5	<0.002	0.04	0.21	1	0.9	345	2.57	<0.05	6.3	0.323	0.21	6.8	7	60	1.9	7	42	45.7
FPK	25-Apr-07	-	-																				
FPK	8-May-07	-	-																				
FPK	31-Jul-07	-	-																				
FPK	14-Aug-07	-	-	10.7	43.6	0.002	0.04	0.19	1	0.9	479	2.4	<0.05	5.3	0.326	0.18	5.1	6	52	1.6	4.6	42	36.3
FPK	28-Aug-07	-	-																				
FPK	11-Sep-07	-	-																				
FPK	22-Sep-07	-	-																				
FPK	9-Oct-07	-	-	8	43.2	<0.002	0.04	0.14	2	1	335	3.02	<0.05	5.9	0.295	0.17	15.1	17	47	2.1	4.7	40	40.8
FPK	23-Oct-07	-	-	6.8	43.5	<0.002	0.05	0.13	2	0.7	245	2.6	<0.05	5.4	0.284	0.15	12.5	15	52	1.7	5.1	43	40.6
FPK	6-Nov-07	-	-																				
FPK	22-Nov-07	-	-																				
FPK	8-Dec-07	-	-																				
FPK	18-Dec-07	-	-																				

Appendix B - Analytical Results for Kimberlite Samples

Sample Location/Type	Sample Date	Bench	Pattern	Hole	Sample Matrix	Sampling Method	Fizz Rating	pH	S(T)	MPA	NP	NNP	NP/MPA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
									%	kg CaCO ₃ /tonne				ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
RR	23-May-06	-	-	-	PK	G	2	9.3	0.15	4.7	79	74	16.85									
RR	21-Feb-06	-	-	-	PK	G	3	9.4	0.02	0.6	224	223	358.4	0.48	2.69	0.3	390	0.24	0.02	4.41	0.05	41
RR	3-Mar-06	-	-	-	PK	G	3	9.5	0.02	0.6	180	179	288									
RR	13-Mar-06	-	-	-	PK	G	3	9.4	0.12	3.8	316	312	84.27									
RR	28-Mar-06	-	-	-	PK	G	3	9.5	0.01	0.3	428	428	1369.5									
RR	11-Apr-06	-	-	-	PK	G	2	9.4	0.02	0.6	79	78	126.4									
RR	25-Apr-06	-	-	-	PK	G	2	9.9	<0.01	<0.3	89	89	269.7	0.08	2.13	0.9	90	0.08	0.01	1.97	0.06	12.15
RR	9-May-06	-	-	-	PK	G	2	9.7	0.04	1.3	85	84	68									
RR	6-Jun-06	-	-	-	PK	G	3	9.6	<0.01	<0.3	264	264	880									
RR	20-Jun-06	-	-	-	PK	G	3	9.6	0.01	0.3	297	297	950.4									
RR	19-Jul-06	-	-	-	PK	G	2	9.7	0.17	5.3	88	83	16.56									
RR	14-Aug-06	-	-	-	PK	G	3	9.8	<0.01	<0.3	295	295	983.3									
RR	28-Aug-06	-	-	-	PK	G	3	9.8	0.01	0.3	307	307	982.4									
RR	12-Sep-06	-	-	-	PK	G	2	9.5	0.03	0.9	90	89	96									
RR	26-Sep-06	-	-	-	PK	G	3	9.1	0.02	0.6	266	265	425.6	0.83	3.03	<0.2	300	0.3	0.03	4.01	0.05	24.4
RR	10-Oct-06	-	-	-	PK	G	3	9.6	0.04	1.3	299	298	239.2									
RR	24-Oct-06	-	-	-	PK	G	2	9.6	0.11	3.4	59	56	17.16									
RR	21-Nov-06	-	-	-	PK	G	2	9.2	0.05	1.6	92	90	58.88									
RR	5-Dec-06	-	-	-	PK	G	2	9.4	0.02	0.6	71	70	113.6	0.24	5.11	2.5	240	0.63	0.05	5.64	0.07	29.9
RR	19-Dec-06	-	-	-	PK	G	2	9.3	0.06	1.9	80	78	42.67									
RR	16-Jan-07	-	-	-	PK	G	2	9.7	0.01	0.3	54	54	172.8									
RR	31-Jan-07	-	-	-	PK	G	2	9.8	0.05	1.6	84	82	53.76									
RR	12-Feb-07	-	-	-	PK	G	2	9.7	0.02	0.6	91	90	145.6									
RR	13-Mar-07	-	-	-	PK	G	2	9.7	0.03	0.9	68	67	72.53	0.32	6.58	<0.2	370	0.83	0.11	6.2	0.08	35.5
RR	28-Mar-07	-	-	-	PK	G	2	9.6	0.06	1.9	82	80	43.73									
RR	25-Apr-07	-	-	-	PK	G	2	9.8	0.01	0.3	92	92	294.4									
RR	8-May-07	-	-	-	PK	G	2	9.7	0.01	0.3	88	88	281.6									
RR	31-Jul-07	-	-	-	PK	G	2	9.8	0.01	0.3	86	86	275.2									
RR	14-Aug-07	-	-	-	PK	G	2	9.7	0.02	0.6	86	85	137.6	0.11	4.83	0.7	190	0.25	0.05	4.9	0.07	16.2
RR	28-Aug-07	-	-	-	PK	G	3	9.6	0.02	0.6	408	407	652.8									
RR	11-Sep-07	-	-	-	PK	G	3	9.9	0.01	0.3	445	445	1424									
RR	22-Sep-07	-	-	-	PK	G	3	9.6	0.01	0.3	411	411	1315									
RR	9-Oct-07	-	-	-	PK	G	3	9.7	0.01	0.3	423	423	1353.5	0.51	2.12	0.6	120	0.1	0.01	2.14	0.03	16.15
RR	23-Oct-07	-	-	-	PK	G	3	9.8	0.01	0.3	292	292	934.4	0.65	2.98	0.2	130	0.12	0.02	2.64	0.04	14.8
RR	6-Nov-07	-	-	-	PK	G	3	9.6	0.01	0.3	375	375	1200									
RR	22-Nov-07	-	-	-	PK	G	3	9.8	0.01	0.3	359	359	1149									
RR	8-Dec-07	-	-	-	PK	G	3	9.7	0.01	0.3	407	407	1302.5									
RR	18-Dec-07	-	-	-	PK	G	3	9.5	0.02	0.6	306	305	489.6									

Notes: CPK - Coarse Processed Kimberlite; FPK - Fine Processed Kimberlite; RR - Recovery Rejects
Sample Matrix: DC - Drill Cuttings; BR - Blast Rock; PK - Processed Kimberlite
Sampling Method: G - Grab; C - Composite
S(T) - total sulphur by Leco Furnace
MPA - Maximum Potential Acidity, in kg CaCO₃ eq/tonne, calculated from total sulphur
NP - Neutralization Potential in kg CaCO₃ eq/tonne
NNP - Net Neutralization Potential in kg CaCO₃ eq/tonne (NP-MPA)
All metal results are by ICP-MS analysis unless indicated otherwise

Appendix B - Analytical Results for Kimberlite S

Sample Location/Type	Sample Date	Bench	Pattern	Co	Cr	Cs	Cu	Cu (AA)	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
				ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
RR	23-May-06	-	-																				
RR	21-Feb-06	-	-	86.9	6110	0.47	33.7		7.69	5.45	0.16	1.2	0.028	0.14	27.8	3.8	17.55	1410	0.37	0.33	156.5	1120	290
RR	3-Mar-06	-	-																				
RR	13-Mar-06	-	-																				
RR	28-Mar-06	-	-																				
RR	11-Apr-06	-	-																				
RR	25-Apr-06	-	-	109.5	3980	0.21	7.8		8	3.48	0.19	1	0.02	0.08	7	2.6	22.6	1290	0.67	0.1	109.5	1730	120
RR	9-May-06	-	-																				
RR	6-Jun-06	-	-																				
RR	20-Jun-06	-	-																				
RR	18-Jul-06	-	-																				
RR	14-Aug-06	-	-																				
RR	28-Aug-06	-	-																				
RR	12-Sep-06	-	-																				
RR	26-Sep-06	-	-	80.8	4630	0.75	47.5		7.53	7.04	0.16	1.6	0.034	0.28	14.1	7.6	16.4	1325	0.53	0.33	157.5	1010	310
RR	10-Oct-06	-	-																				
RR	24-Oct-06	-	-																				
RR	21-Nov-06	-	-																				
RR	5-Dec-06	-	-	55	4170	1.09	113.5		7.1	13.4	0.18	2.6	0.051	0.62	14.8	9.5	9.92	1300	0.81	1.03	57.5	447	550
RR	19-Dec-06	-	-																				
RR	16-Jan-07	-	-																				
RR	31-Jan-07	-	-																				
RR	12-Feb-07	-	-																				
RR	13-Mar-07	-	-	64.8	1495	1.87	70.7		8.14	17.4	0.15	2.4	0.064	0.87	18.1	14.2	9.24	1350	0.85	1.18	51.2	472	470
RR	28-Mar-07	-	-																				
RR	25-Apr-07	-	-																				
RR	8-May-07	-	-																				
RR	31-Jul-07	-	-																				
RR	14-Aug-07	-	-																				
RR	28-Aug-07	-	-	70.1	>10000	0.5	19.5		6.74	6.19	0.09	1.1	0.031	0.33	9.1	2.7	15.4	1630	0.39	0.42	87.9	853	220
RR	11-Sep-07	-	-																				
RR	22-Sep-07	-	-																				
RR	9-Oct-07	-	-	98.5	3830	0.48	30.9		7.73	3.79	0.19	0.9	0.02	0.12	9.6	3.6	20.9	1255	0.58	0.16	120.5	1750	170
RR	23-Oct-07	-	-	91.7	5100	0.69	29.5		8.32	5.48	0.2	1.3	0.027	0.21	8.8	3.9	18.8	1405	0.49	0.23	167	1480	160
RR	6-Nov-07	-	-																				
RR	22-Nov-07	-	-																				
RR	8-Dec-07	-	-																				
RR	18-Dec-07	-	-																				

Appendix B - Analytical Results for Kimberlite S

Sample Location/Type	Sample Date	Bench	Pattern	Pb	Rb	Re	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	U (XRF)	V	W	Y	Zn	Zr
				ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RR	23-May-06	-	-																				
RR	21-Feb-06	-	-	1.9	9.3	<0.002	0.02	0.93	3	0.8	138.5	19.45	<0.05	6	3.5	<0.02	3.3	5	313	0.2	5.7	49	35.8
RR	3-Mar-06	-	-																				
RR	13-Mar-06	-	-																				
RR	28-Mar-06	-	-																				
RR	11-Apr-06	-	-																				
RR	25-Apr-06	-	-	3.2	4.7	<0.002	0.01	0.08	2	0.8	53.8	17	<0.05	2.1	2.78	<0.02	2.3	4	215	0.3	4.1	53	28.6
RR	9-May-06	-	-																				
RR	6-Jun-06	-	-															<4					
RR	20-Jun-06	-	-															<4					
RR	18-Jul-06	-	-																				
RR	14-Aug-06	-	-																				
RR	28-Aug-06	-	-																				
RR	12-Sep-06	-	-																				
RR	26-Sep-06	-	-	2.7	18	<0.002	0.03	0.09	3	1.2	154	16.95	0.05	2.1	3.18	0.21	2.4	4	284	0.4	7.1	44	45.2
RR	10-Oct-06	-	-																				
RR	24-Oct-06	-	-																				
RR	21-Nov-06	-	-																				
RR	5-Dec-06	-	-	3.3	29.4	<0.002	0.03	0.11	1	1.1	196.5	5.35	<0.05	2.3	1.43	0.09	1.1	<4	280	0.3	15.2	65	80.7
RR	19-Dec-06	-	-																				
RR	16-Jan-07	-	-																				
RR	31-Jan-07	-	-																				
RR	12-Feb-07	-	-																				
RR	13-Mar-07	-	-	5	40.7	<0.002	0.03	0.21	1	1.1	246	5.87	<0.05	3.8	1.27	0.17	1	<4	238	0.7	16.9	71	70.5
RR	28-Mar-07	-	-																				
RR	25-Apr-07	-	-																				
RR	8-May-07	-	-																				
RR	31-Jul-07	-	-																				
RR	14-Aug-07	-	-	2.4	18.3	0.002	0.01	0.1	1	0.7	96.2	9.6	<0.05	1.5	2.02	0.04	0.8	<4	269	0.3	7.3	38	34
RR	28-Aug-07	-	-																				
RR	11-Sep-07	-	-																				
RR	22-Sep-07	-	-																				
RR	9-Oct-07	-	-	1.2	9.3	<0.002	0.01	0.13	3	1.4	53.8	14.95	<0.05	2.1	2.43	0.08	2	<4	197	0.3	5.7	51	28.5
RR	23-Oct-07	-	-	1.5	14.2	<0.002	0.01	0.09	4	1.1	58.3	20.8	<0.05	1.3	3.46	0.04	2.3	4	270	0.4	6	51	39.7
RR	6-Nov-07	-	-																				
RR	22-Nov-07	-	-																				
RR	8-Dec-07	-	-																				
RR	18-Dec-07	-	-																				

Seepage Survey

Note: The only seepage at Jericho Diamond Mine in 2007 was from the Till Dump and is discussed in the attached letter to INAC Water Resources Officer.

27 July 2007

File: 2AM-JER0410

VIA E-Mail

Indian and Northern Affairs Canada
Building 918, P.O. Box 100
Iqaluit, NU, X0A 0H0

Attention: Mr. Andrew Keim

Dear Mr. Keim,

Reference: Jericho Waste Rock Dump South Side Seepage

Pursuant to a verbal request from yourself during a 30 June 2007 site inspection of the Jericho Diamond Mine, the enclosed provides the proposed management plan for seepage water from the south side of Waste Rock Dump 2.

The till dump (central part of Waste Rock Dump 2) south toe has ponded water against it. Water accumulated from till placed on this side of the dump during the 2005-2006 and 2006-2007 seasons. During the open water season, water is pumped over into the open pit sump and from there to the East Sump (2006) or the PKCA, East Cell (2007). During the 2007 INAC inspection on 30 June 2007, inspectors requested a plan to eliminate water ponding on the south side of the dump. This plan outlines actions to be taken to address the ponding.

Water quality samples were collected from the toe of the waste rock dump and from the south side of the pond June 15. Results are attached in Table 1, together with Jericho Water License discharge criteria. All sample parameters are below the discharge criteria except total suspended solids from the dump toe sample. Most parameters are also below CCME guidelines for protection of freshwater aquatic life.

The purpose of the plan is to provide an outline of actions to be taken and a timetable for environmental control of the ponded water. Figure 1 shows the location.

The till stockpiled on the dump will be required throughout much of the mine life for construction (till plugs; dam core material) and reclamation purposes, thus isolating the till by covering with waste rock is not a viable solution. Alternately, picking up the till with a hoe or loader and depositing it on the north side of Waste Rock Dump 2 is also not economically viable and complete removal may not be possible due to permafrost intrusion into the till. Also note the placement of the till material located on the South side of the Surface mine was due to the till runoff would drain into the mine based on the location of the Water catchement boundaries. Any runoff into the mine is pumped to the Fine PKCA via the dewatering line.

The current management practice of pumping seepage water during the open water season with a small gasoline pump and two inch water line over to the open pit will be continued. To date this approach (with close monitoring) has been successful in preventing any water spilling over the height of land into the Key Lake drainage.

We trust this information meets your requirements. Please contact me should you have additional questions.

Yours truly,

A handwritten signature in black ink, appearing to read 'Bruce Ott', with a stylized flourish at the end.

Bruce Ott
Director of Environment
Jericho Diamond Mine

/bo

C. Licensing Administrator, Nunavut Water Board
R. Jones, G. Missal, C. Wray, Tahera Diamond Corporation

RESULTS OF ANALYSIS

Sample ID	Units	WRD2 Toe	WRD2 S End	Water Licence	CCME
Date Sampled		15-JUN-07	15-JUN-07	Criteria	Guidelines
Time Sampled		09:30	13:30	(30d Avg)	
ALS Sample ID		L518690-4	L518690-5		Freshwater
Matrix		Water	Water	Water	Aquatic Life

Physical Tests

Hardness (as CaCO3)	mg/L	19.6	14.1	
Conductivity	uS/cm	50.3	36.9	
pH		7.01	6.65	
pH		7.40	7.18	6-8.8
Total Dissolved Solids	mg/L	43.0	26.0	2000
Total Suspended Solids	mg/L	35.7	<3.0	15.0
Turbidity	NTU	61.6	9.21	

Anions and Nutrients

Ammonia as N	mg N/L	0.129	0.0197		1
Alkalinity, Bicarbonate (as CaCO3)	mg/L	13.1	8.0		
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1.0		
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0		
Alkalinity, Total (as CaCO3)	mg/L	13.1	8.0		
Chloride (Cl)	mg/L	0.99	1.21	500	
Sulfate (SO4)	mg/L	2.82	2.07		0
Nitrate (as N)	mg N/L	1.45	1.04	28	13
Nitrite (as N)	mg N/L	0.0187	0.0011	2.5	0.06
Ortho Phosphate as P	mg/L	0.0040	0.0013	0.2	
Total Dissolved Phosphate As P	mg/L	0.0097	0.0064		0
Total Phosphate as P	mg/L	0.0562	0.0219		0

Total Metals

Aluminum (Al)-Total	mg/L	1.13	0.324	1.5	0.1
Antimony (Sb)-Total	mg/L	<0.00010	<0.00010		
Arsenic (As)-Total	mg/L	0.00054	0.00024	0.05	0.005
Barium (Ba)-Total	mg/L	0.0196	0.00800		
Beryllium (Be)-Total	mg/L	<0.00050	<0.00050		
Bismuth (Bi)-Total	mg/L	<0.00050	<0.00050		
Boron (B)-Total	mg/L	<0.010	<0.010		
Cadmium (Cd)-Total	mg/L	<0.000050	<0.000050	0.0012	0.000017
Calcium (Ca)-Total	mg/L	4.50	2.96		0.0089
Chromium (Cr)-Total	mg/L	0.00281	0.00081	0.087	
Cobalt (Co)-Total	mg/L	0.00135	0.00026		
Copper (Cu)-Total	mg/L	0.00396	0.00257	0.02	
Iron (Fe)-Total	mg/L	1.30	0.328		
Lead (Pb)-Total	mg/L	0.000836	0.000300	0.01	
Lithium (Li)-Total	mg/L	<0.0050	<0.0050		
Magnesium (Mg)-Total	mg/L	2.53	1.63		
Manganese (Mn)-Total	mg/L	0.169	0.0127		
Mercury (Hg)-Total	mg/L	<0.000050	<0.000050		
Molybdenum (Mo)-Total	mg/L	0.000237	0.000110	0.73	
Nickel (Ni)-Total	mg/L	0.00624	0.00257	0.05	
Potassium (K)-Total	mg/L	1.22	0.69		

Sample ID Date Sampled Time Sampled ALS Sample ID Matrix	Units	WRD2 Toe 15-JUN-07 09:30 L518690-4 Water	WRD2 S End 15-JUN-07 13:30 L518690-5 Water	Water Licence Criteria (30d Avg) Water	CCME Guidelines Freshwater Aquatic Life
Selenium (Se)-Total	mg/L	<0.0010	<0.0010		0.001
Silicon (Si)-Total	mg/L	2.59	1.29		
Silver (Ag)-Total	mg/L	0.000010	0.000010		0.0001
Sodium (Na)-Total	mg/L	1.12	1.06		
Strontium (Sr)-Total	mg/L	0.0172	0.0114		
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010		
Tin (Sn)-Total	mg/L	<0.00010	<0.00060		
Titanium (Ti)-Total	mg/L	0.042	0.011		
Uranium (U)-Total	mg/L	0.00123	0.000406	0.05	
Vanadium (V)-Total	mg/L	0.0022	<0.0010		
Zinc (Zn)-Total		<0.0060	<0.0050	0.25	0.03
Dissolved Metals					
Aluminum (Al)-Dissolved	mg/L	0.0464	0.0704	1.0	
Antimony (Sb)-Dissolved	mg/L	<0.00010	<0.00010		
Arsenic (As)-Dissolved	mg/L	0.00033	0.00018		
Barium (Ba)-Dissolved	mg/L	0.00789	0.00544		
Beryllium (Be)-Dissolved	mg/L	<0.00050	<0.00050		
Bismuth (Bi)-Dissolved	mg/L	<0.00050	<0.00050		
Boron (B)-Dissolved	mg/L	<0.010	<0.010		
Cadmium (Cd)-Dissolved	mg/L	<0.000050	<0.000050		
Calcium (Ca)-Dissolved	mg/L	4.51	3.05		
Chromium (Cr)-Dissolved	mg/L	<0.00050	<0.00050		
Cobalt (Co)-Dissolved	mg/L	0.00030	<0.00010		
Copper (Cu)-Dissolved	mg/L	0.00206	0.00235		0.004
Iron (Fe)-Dissolved	mg/L	0.042	<0.030		
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050		0.001
Lithium (Li)-Dissolved	mg/L	<0.0050	<0.0050		
Magnesium (Mg)-Dissolved	mg/L	2.02	1.56		
Manganese (Mn)-Dissolved	mg/L	0.128	0.00274		
Mercury (Hg)-Dissolved	mg/L	<0.000050	<0.000050		0.000026
Molybdenum (Mo)-Dissolved	mg/L	0.000318	0.000080		
Nickel (Ni)-Dissolved	mg/L	0.00267	0.00168		0.025
Potassium (K)-Dissolved	mg/L	0.83	0.63		
Selenium (Se)-Dissolved	mg/L	<0.0010	<0.0010		
Silicon (Si)-Dissolved	mg/L	0.602	0.747		
Silver (Ag)-Dissolved	mg/L	<0.000010	<0.000010		
Sodium (Na)-Dissolved	mg/L	1.02	1.08		
Strontium (Sr)-Dissolved	mg/L	0.0166	0.0110		
Thallium (Tl)-Dissolved	mg/L	<0.00010	<0.00010		
Tin (Sn)-Dissolved	mg/L	<0.00010	<0.00010		
Titanium (Ti)-Dissolved	mg/L	<0.010	<0.010		
Uranium (U)-Dissolved	mg/L	0.000760	0.000329		
Vanadium (V)-Dissolved	mg/L	<0.0010	<0.0010		
Zinc (Zn)-Dissolved	mg/L	<0.0010	<0.0020		

Sample ID	Units	WRD2 Toe	WRD2 S End	Water Licence	CCME
Date Sampled		15-JUN-07	15-JUN-07	Criteria	Guidelines
Time Sampled		09:30	13:30	(30d Avg)	
ALS Sample ID		L518690-4	L518690-5		Freshwater
Matrix		Water	Water	Water	Aquatic Life
Organic Parameters					
Total Inorganic Carbon	mg/L	2.77	1.36		
Total Organic Carbon	mg/L	4.32	5.49		



Tahera Diamond Corp	
Waste Rock Dump 2 Seepage Pond	
Date: 9/7/2007	
Author: Bott	
Office: Jericho	
Drawing: 001	
Scale: 1:0	Projection: Non-Earth (feet)

APPENDIX E

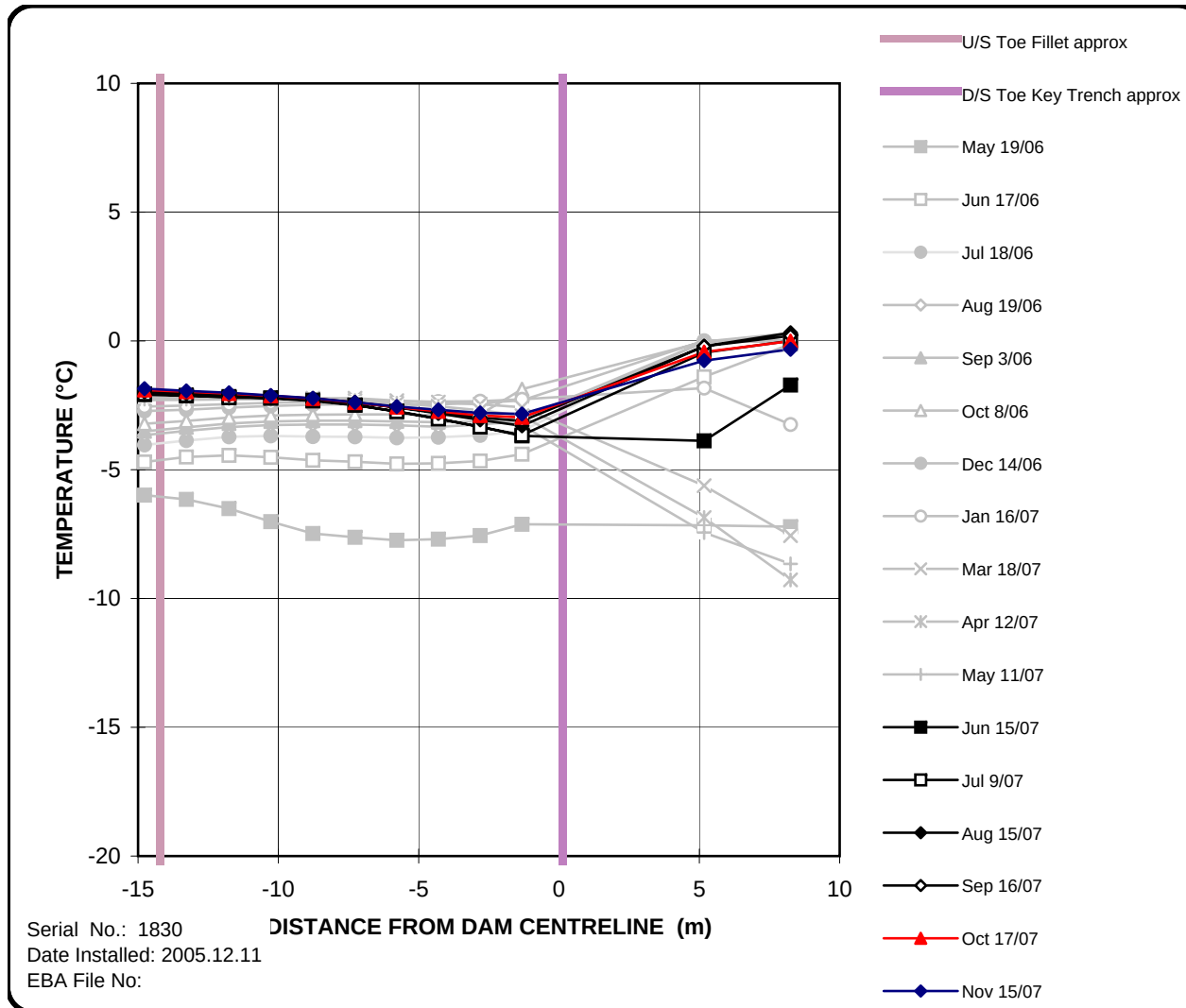


Figure C-2
Horizontal Ground Temperature Distribution
East Dam
Station 0+100, Trench Elevation 517 m

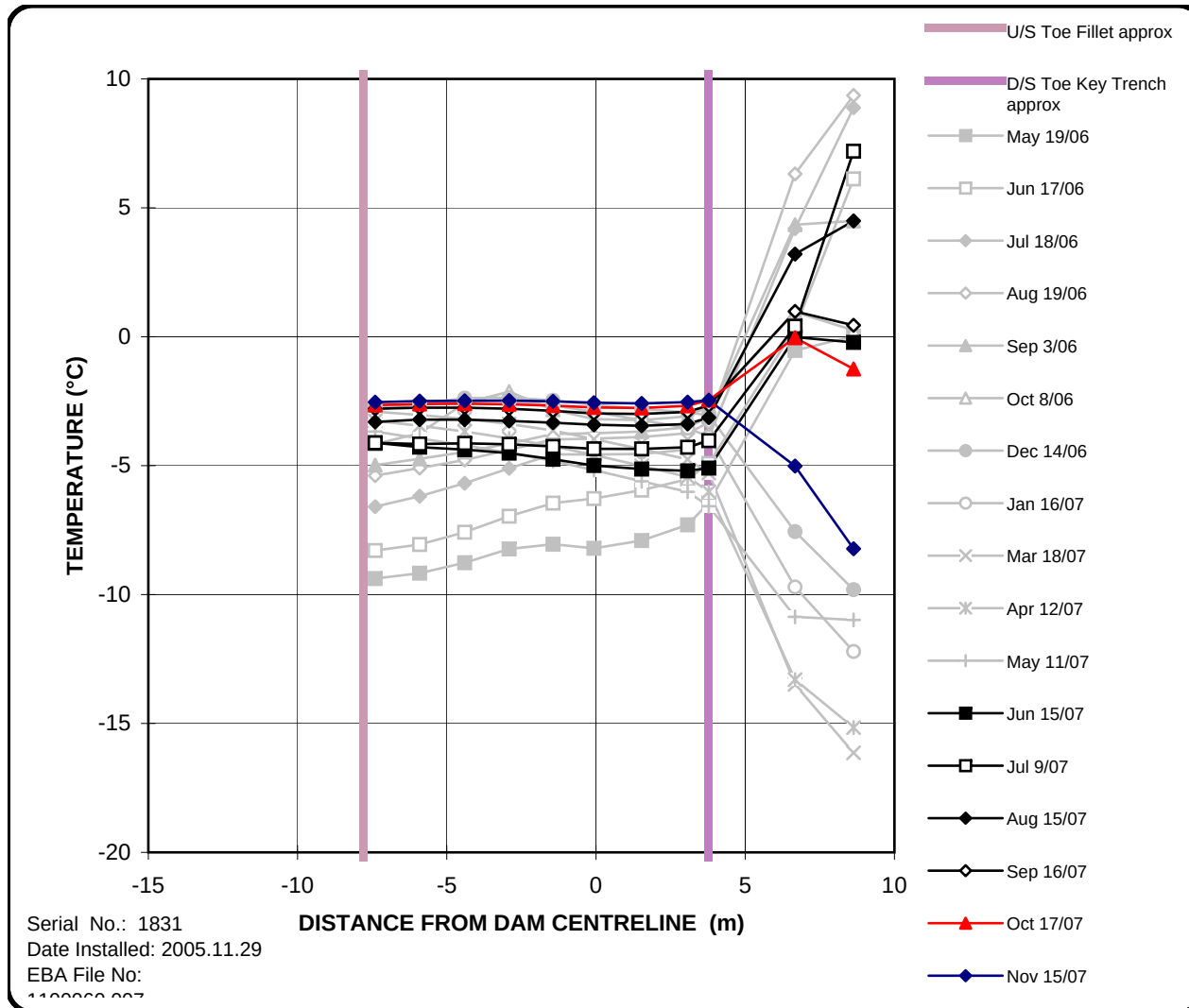


Figure C-3
Horizontal Ground Temperature Distribution
East Dam
Station 0+150, Trench Elevation 515 m

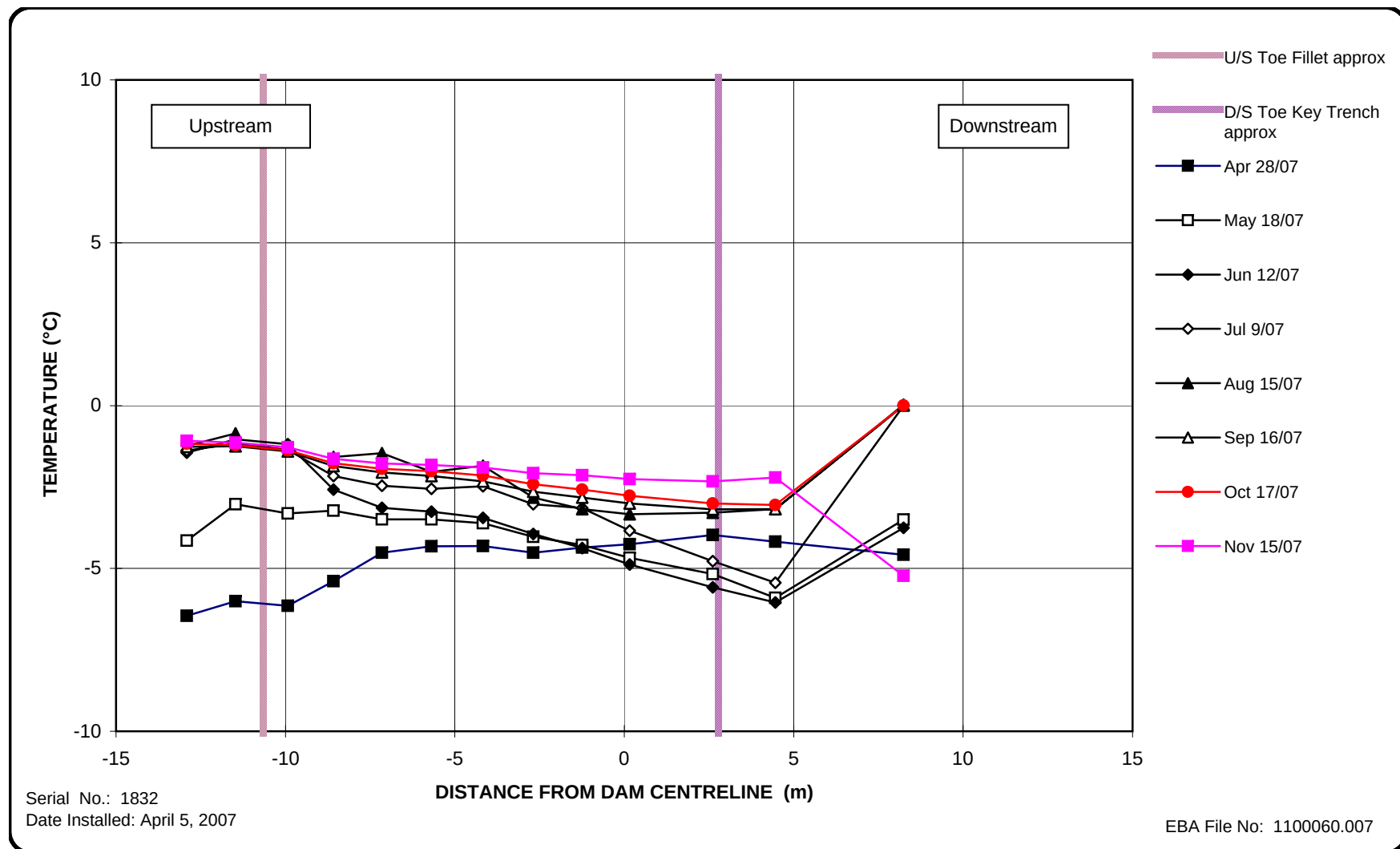


Figure L-1
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+150, Trench Elevation 516 m



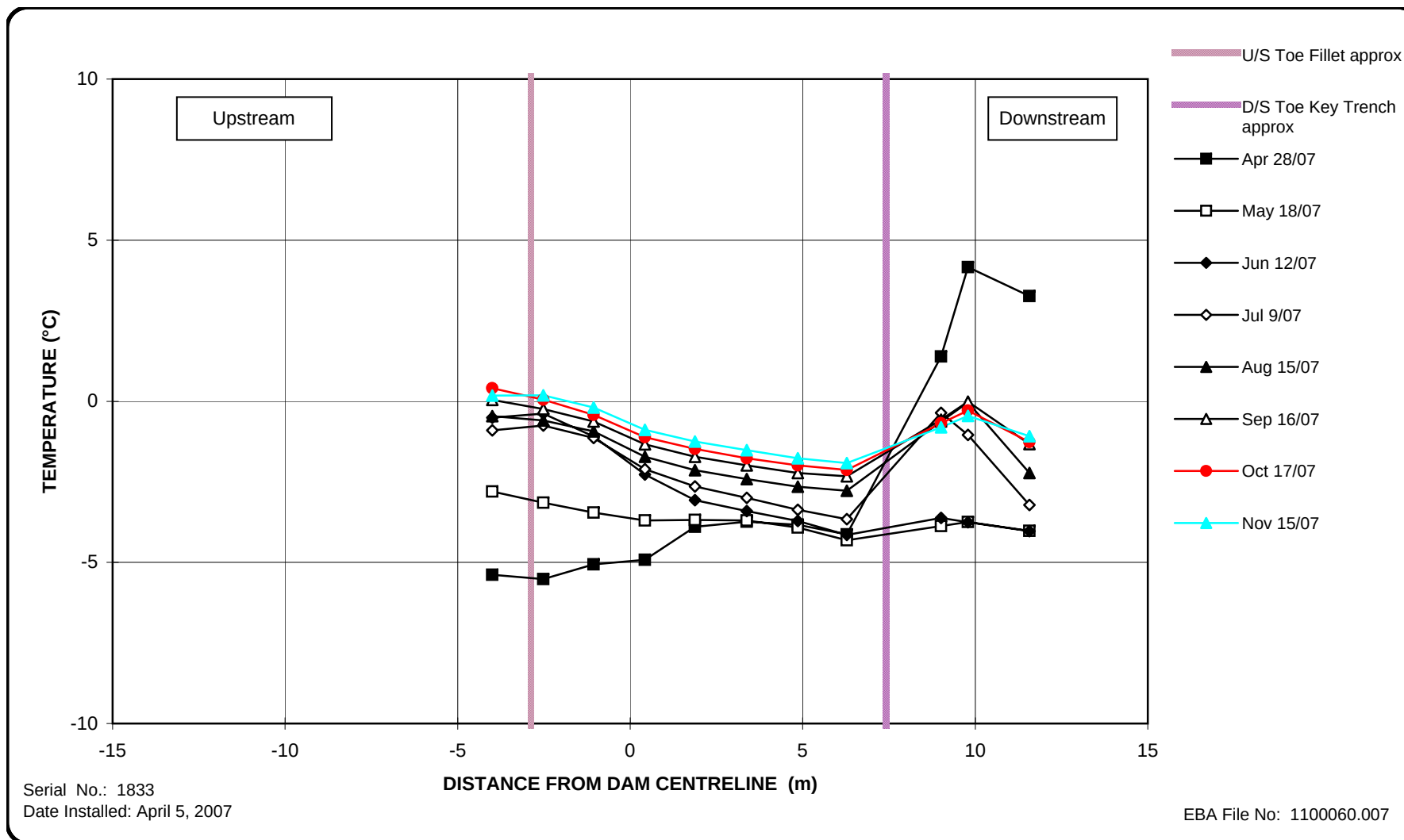


Figure L-2
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+200, Trench Elevation 516 m

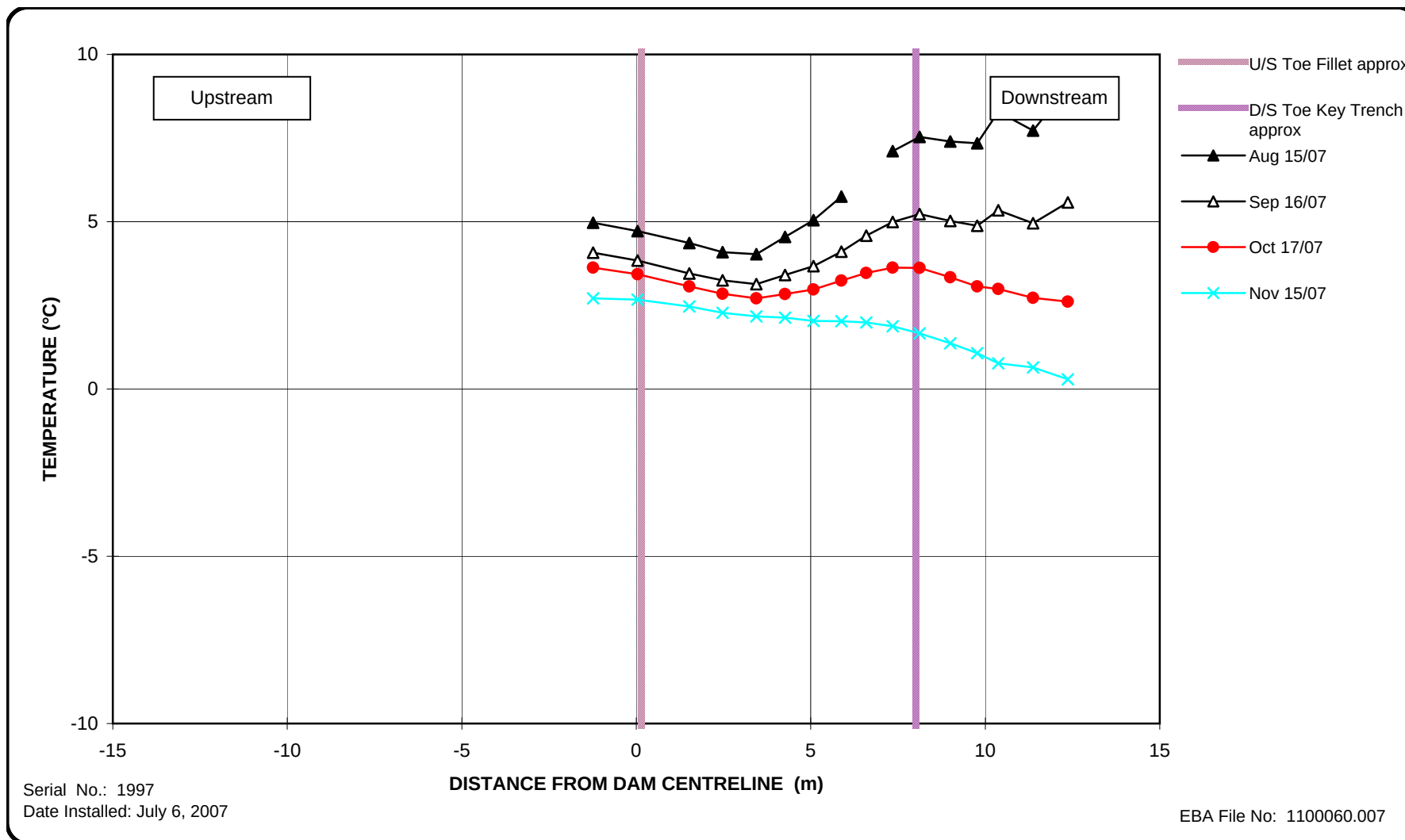


Figure L-3
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+240, Trench Elevation 520 m

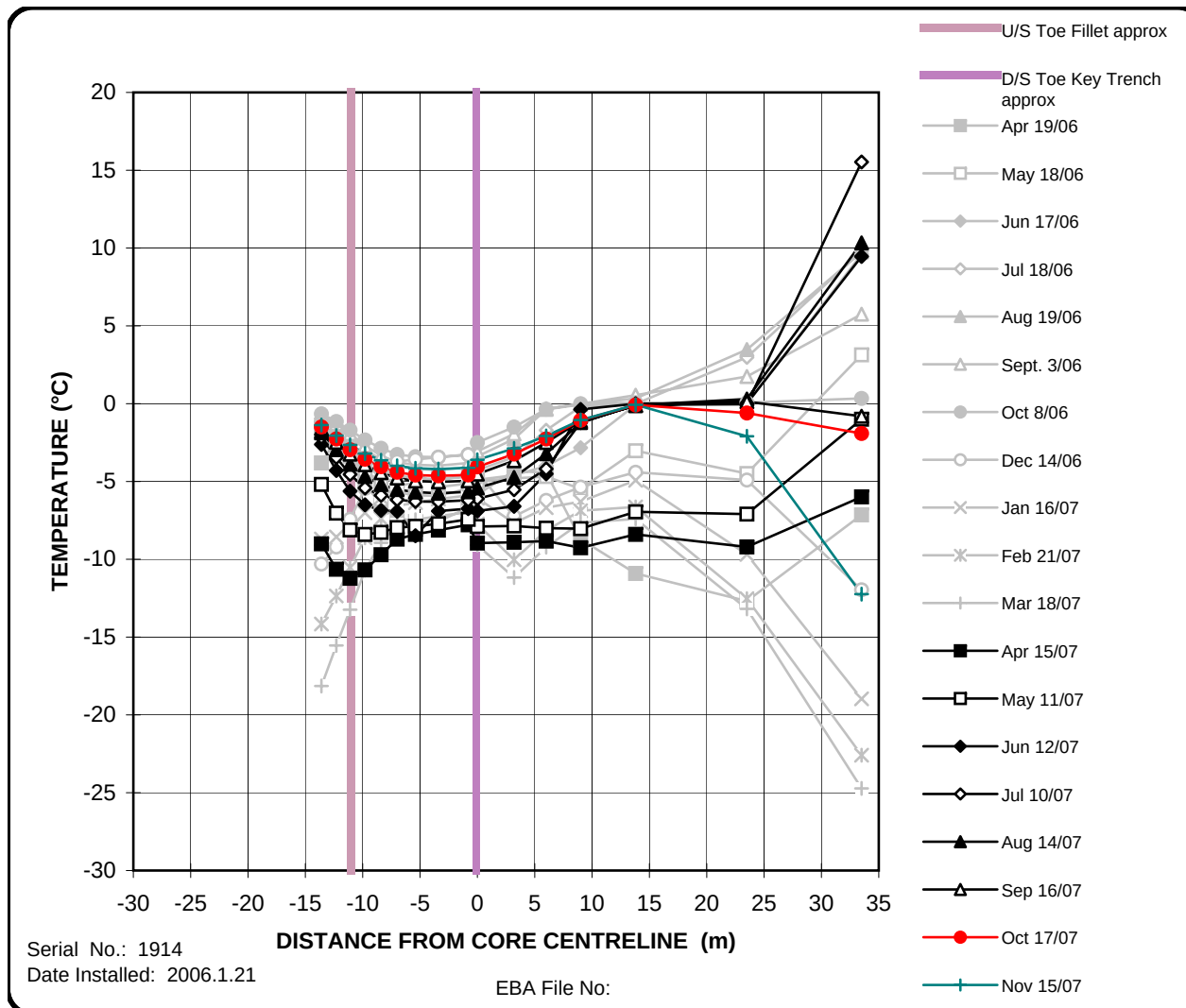


Figure A-2
Horizontal Ground Temperature Distribution
West Dam
Station 0+035, Trench Elevation 513 m

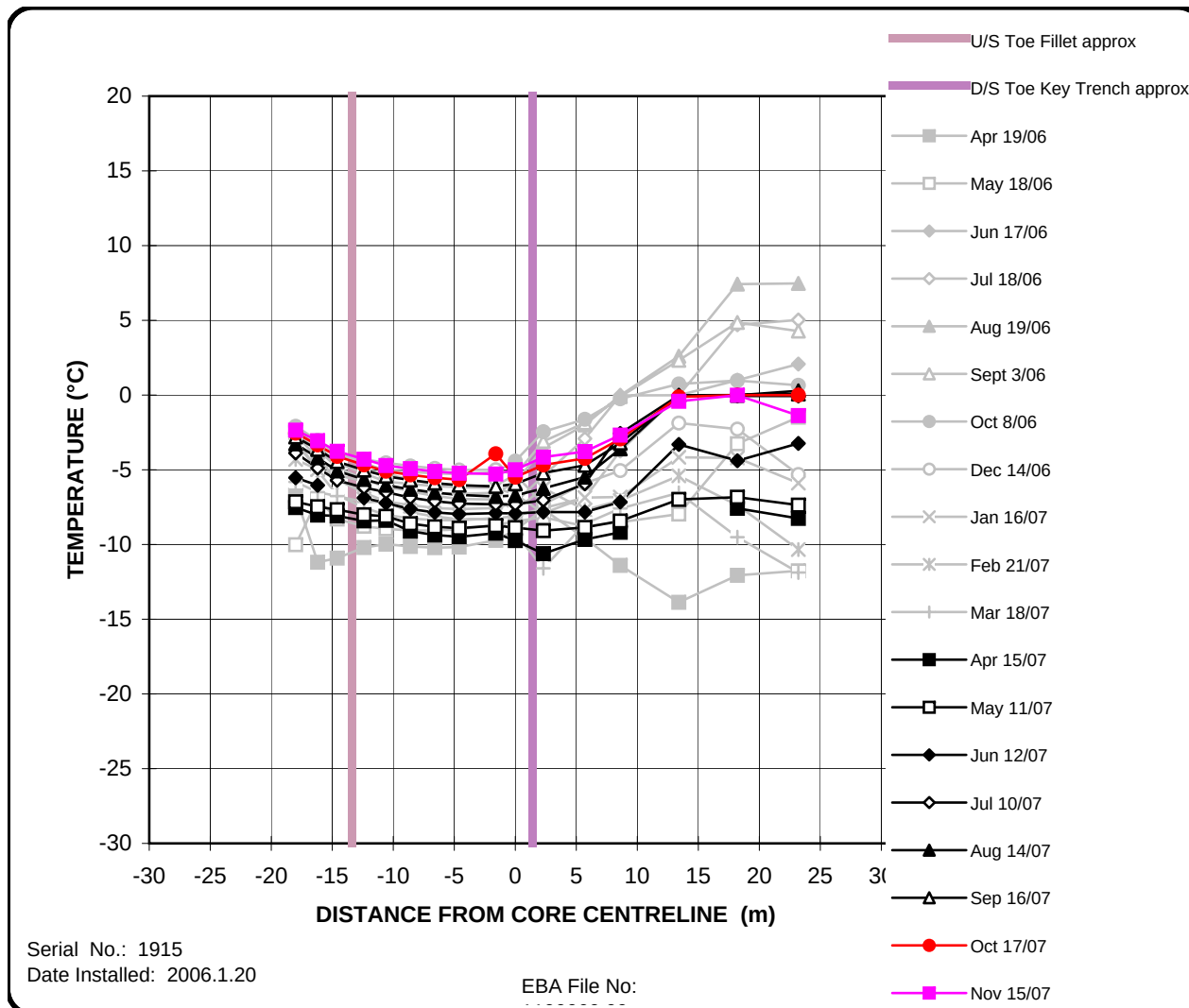


Figure A-3
Horizontal Ground Temperature Distribution
West Dam
Station 0+080, Trench Elevation 514 m

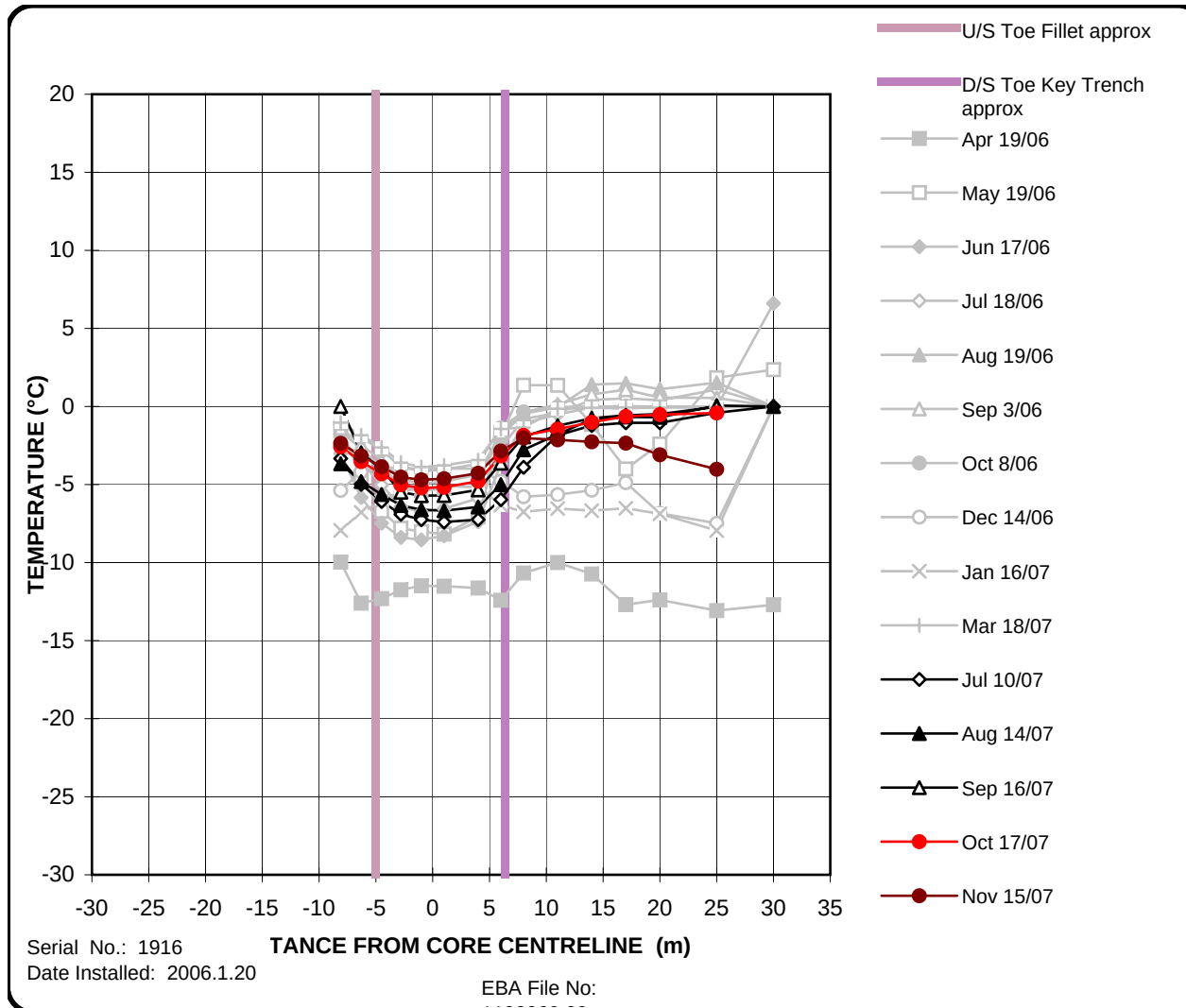


Figure A-4
Horizontal Ground Temperature Distribution
West Dam
Station 0+120, Trench Elevation 518 m

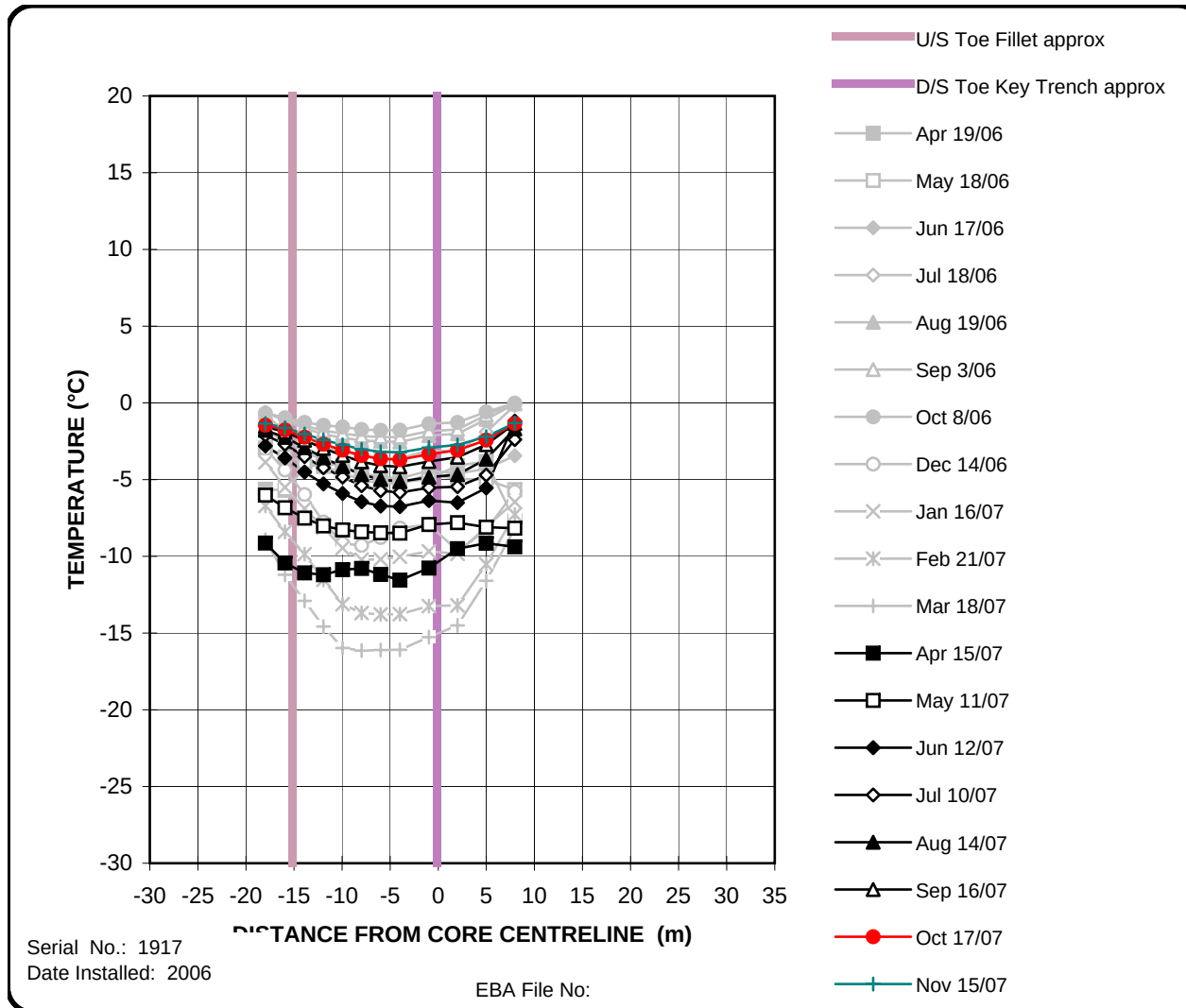


Figure A-5
Horizontal Ground Temperature Distribution
West Dam
Station 0+035, Trench Elevation 516 m

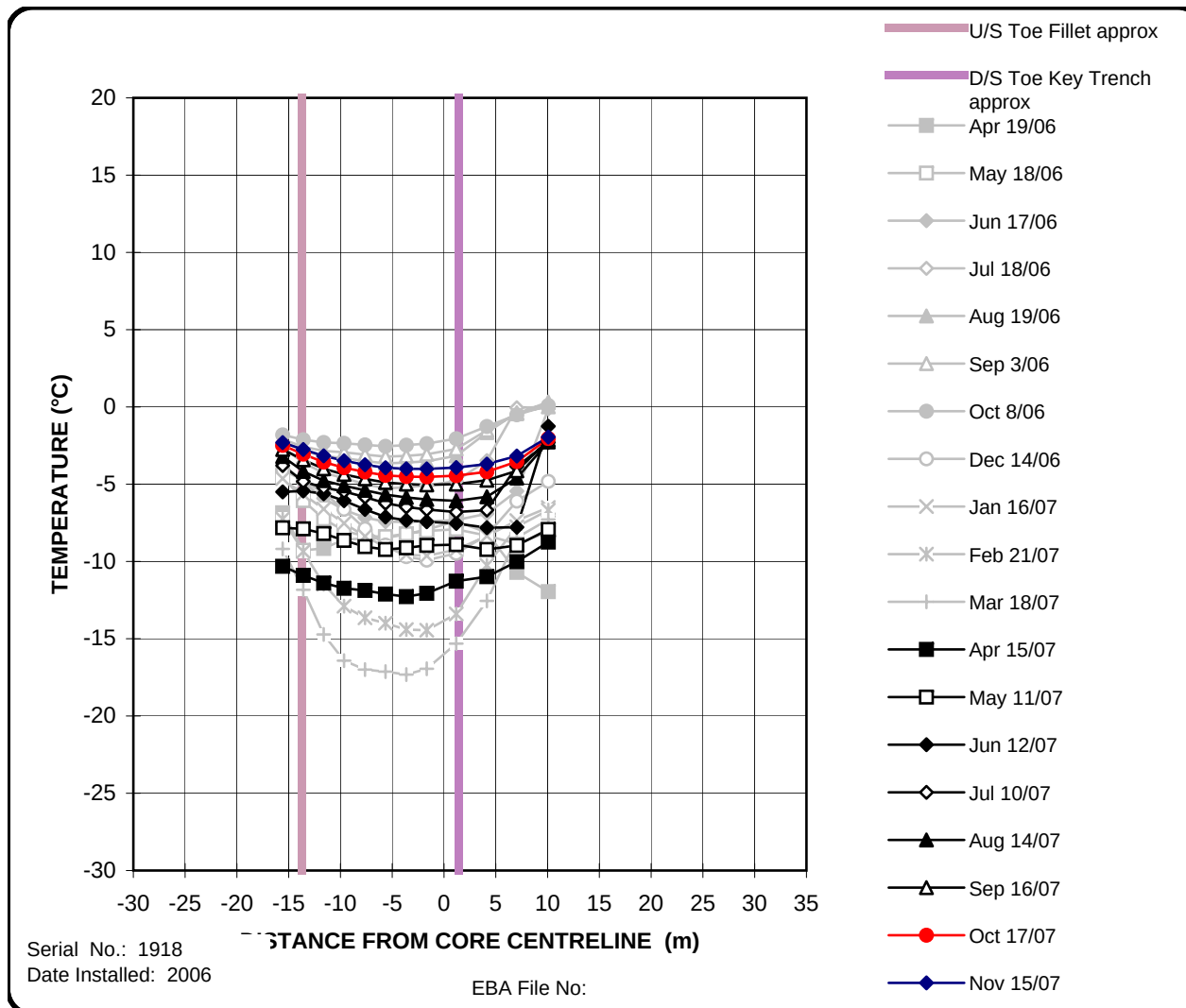


Figure A-6
Horizontal Ground Temperature Distribution
West Dam
Station 0+080, Trench Elevation 518 m

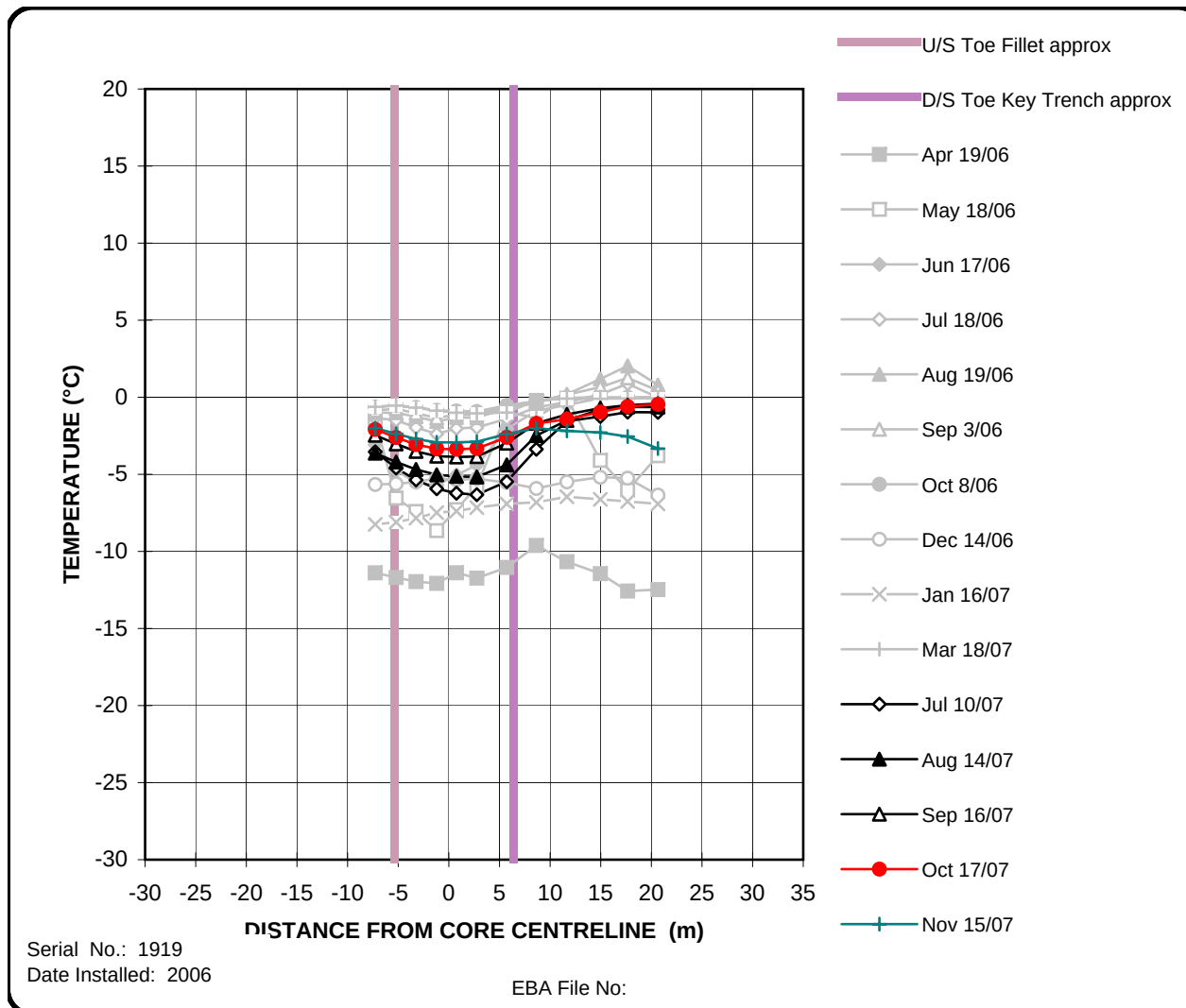


Figure A-7
Horizontal Ground Temperature Distribution
West Dam
Station 0+120, Trench Elevation 520 m

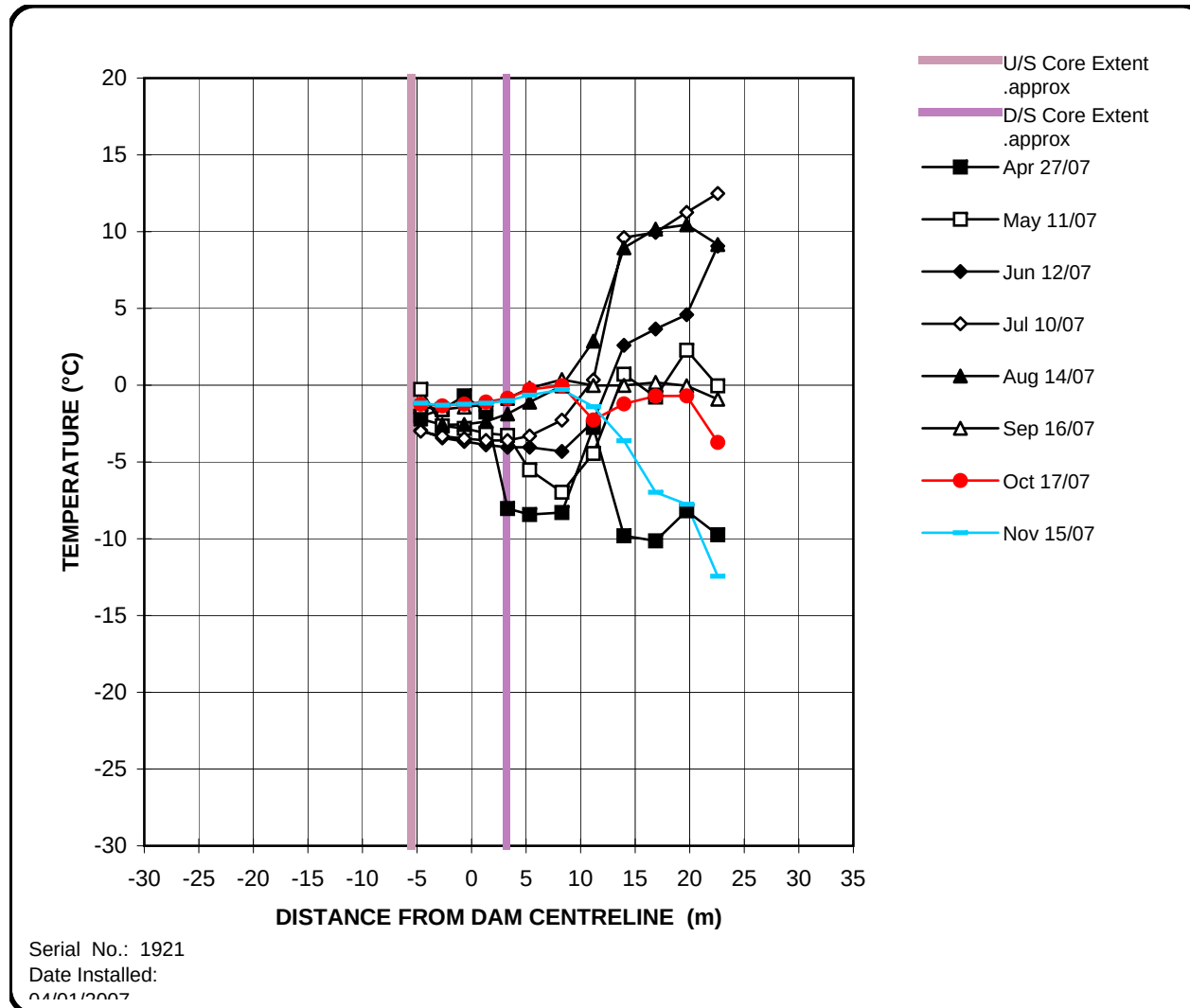


Figure A-8
Horizontal Ground Temperature Distribution
West Dam
Station 0+080, Average Elevation 522 m

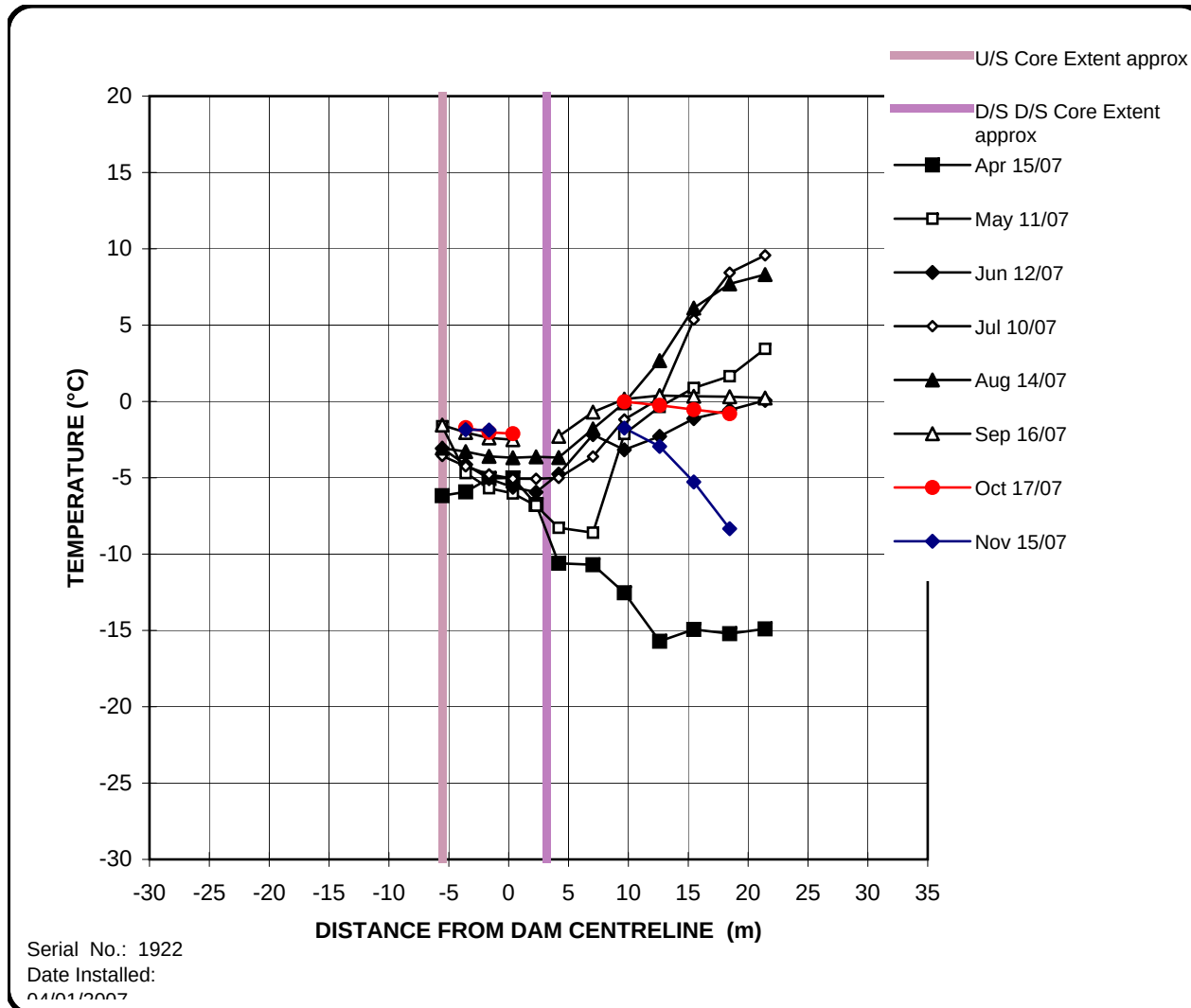


Figure A-9
Horizontal Ground Temperature Distribution
West Dam
Station 0+120, Elevation 522 m

APPENDIX F

Tahera Diamond Corporation

ISSUED FOR REVIEW

JERICO DIAMOND MINE
2007 GEOTECHNICAL INSPECTION

1100060.010

November 2007

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9.0 GENERATOR TANK CONTAINMENT AREA.....	4
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FIGURES

Figure 1 Jericho Mine Site Plan

APPENDICES

- Appendix A West Dam
- Appendix B Divider Dyke A
- Appendix C East Dam
- Appendix D Tank Farm
- Appendix E Landfill
- Appendix F Airstrip Tank Containment Area
- Appendix G Generator Tank Containment
- Appendix H C1 Diversion

1.0 INTRODUCTION

EBA Engineering Consultants Ltd. (EBA) completed the 2007 annual geotechnical inspection of the earth containment structures at the Jericho Mine.

This report presents the observations and recommendations for each structure for consideration by Tahera Diamond Corporation (Tahera). It is understood that Tahera will also use this report to fulfill the water licence requirement for an annual geotechnical inspection of the completed water retaining structures as specified in the Jericho Diamond Mine Water Licence NEWB1JER0410, Part G, Section 4.

The following structures were evaluated:

- Processed Kimberlite Containment Area (PKCA) Dams and Dykes (West Dam, East Dam, Divider Dyke)
- Fuel Containment Facilities
- Landfill
- C1 Diversion

The water licence also requires inspection of waste rock collection ponds and the landfarm. No collection ponds or landfarm has been constructed to date; therefore, no inspection of these facilities was carried out. The Southeast Dam (at the southeast end of the PKCA) was under construction at the time of geotechnical inspection and was not included in the 2007 Geotechnical Inspection.

The East Sump is a natural pond that was previously used to store pit water. The East Sump is no longer being used for this purpose and is therefore not reported on in this document.

2.0 METHODOLOGY FOR INSPECTION

The annual inspection of each structure was completed by Mr. Bill Horne, P.Eng., of EBA on July 11, 2007. The structures and immediate surrounding areas at each site were visually examined for signs of settlement, seepage, cracking, or any other signs of distress. Noteworthy observations were photographed and recorded. Where applicable, ground temperature and settlement data was collected at intervals throughout the year. The data was also reviewed in conjunction with the observations from each site to develop any recommendations presented for each structure.

The subsequent sections of this report briefly summarize the observations and measurements obtained for each of the individual structures. This report documents the results of the July 11, 2007 inspection. Performance following the inspection is

documented in this report. The appendices present site plans, photographs, ground temperature data, and survey data for each of the structures.

3.0 WEST DAM

The West Dam is a frozen core dam at the west end of the PKCA area. The dam was partially constructed during the winters of 2005/2006 and 2006/2007. The core was constructed to its final elevation at the south abutment; however, the center portion of the core was only constructed to approximately 521 m as opposed to its final design elevation of 524 m. The core was covered with a minimum of approximately 4 m of rockfill for thermal protection. Construction is intended to be completed during the winter of 2008/2009.

Results of the inspection are presented in Appendix A. The dam performance is satisfactory.

Horizontal ground temperature cables have been installed through the dam core and downstream shell at base of the key trench, at original ground elevation, and at elevation 522 m. Plots of the ground temperature are presented in Appendix A. The temperature measurements indicate the key trench was below -3°C in the 2007 summer and fall. The core at elevation 522 m warmed to between -1 and -2 °C in the 2007 summer. These temperatures are similar to or colder than assumed in design.

4.0 DIVIDER DYKE A

Divider Dyke A divides the PKCA into two areas. Fine processed kimberlite (fine PK) is deposited upstream of Divider Dyke A. The area downstream of the Divider Dyke is a polishing pond for the PKCA water. The dyke consists of a sand and gravel filter zone, supported by rock fill structure. The filter is protected with a layer of rip-rap on the upstream side.

The dyke was partially constructed in the fall of 2005. The dyke crest elevation at the time of the inspection varied from 519.2 m to 521.6 m. The design elevation of the dyke is 524 m. The dyke was raised to approximately 521 m following the geotechnical inspection.

The inspection report and photos are in Appendix B. Cracks and settlement were observed in the surface of the dyke filter zone during the 2006 inspection. This zone of the filter was removed from the dyke in July 2007. It was to be replaced after the 2007 inspection.

The dyke was performing well at the time of the inspection with turbid water and fine PK upstream and clean water meeting discharge criteria downstream of the dyke. Fines migration was noted in September following the inspection. This is described in detail in a separate letter.

5.0 EAST DAM

The East Dam is a geomembrane lined dam at the east end of the PKCA. It was constructed during the 2005/2006 winter season. The liner is keyed into sand and gravel till permafrost, and bedrock. The upstream shell of the dam is constructed of a thick till layer and a coarse processed kimberlite (coarse PK). Fine PK is deposited off of the upstream face of the dam. A layer of rockfill was placed on the dam crest in the summer 2006 as described in EBA 2007.

Two ground temperature cables were installed in the key trench at the base of the geomembrane liner. The base of the key trench was between -2°C and -3°C during the summer and fall of 2007.

No significant signs of settlement or cracking were noted.

Settlement has been monitored at four points on the dam crest. The settlement was less than 1 cm between October 2006 and July 2007. A small pond was noted in a low lying area at the downstream dam toe. No seepage from the dam was noted.

The inspection report and photos are in Appendix C. The East Dam is performing well with no signs of distress.

6.0 TANKFARM

The primary tankfarm for the site is located at the Jericho plant site area. The tankfarm has two sections: Phase 1 and Phase 2. Phase 1 was constructed in winter 2004/2005 during the construction of the Jericho plant site. Phase 2 was constructed between May and October 2005. Phase 1 consists of eight 500,000 litre tanks, and Phase 2 consists of four 1,500,000 litre tanks.

Both tankfarm containment areas are lined with a 60 mil HDPE liner for secondary containment. It is understood that the base of the Phase 1 area was constructed of frozen esker fill. The base of the Phase 2 tankfarm was constructed of run of mine rockfill.

Settlement of the tanks has been measured on a regular basis using survey prisms on the top of the tanks. The vertical tank movement is shown in Figure D-2 in Appendix D.

Significant settlement (up to 390 mm since being monitored) has occurred in the Phase 1 tank farm. The majority of the settlement occurred between the spring of 2005, and September 2006. The settlement of the tanks in the Phase 1 tanks varied between 5 mm and 40 mm between September 2006 and July 2007. There is a 50 mm high gap between some of the tank bottoms and soil under the tank.

Minimal vertical movement of the tanks in Phase 2 has been measured between September 2006 and July 2007; however, settlement under the edge of Tank 9 is apparent. There is a 25 mm high gap between the Tank 9 bottom and the soil under the tank.

The settlement of the tanks should continue to be monitored. It is recommended that the tank manufacturer be requested to evaluate the integrity of the Phase 1 tanks. It is also recommended that the integrity of the secondary containment liner in Phase 1 be evaluated.

7.0 LANDFILL

The waste from the mine operations are currently landfilled within the till dump area. Metal debris is separated and stockpiled in a separate area. Domestic wastes are burned and placed in a small pit, which is ultimately capped with till from the open pit mine. Food wastes are not placed in the landfill; they are incinerated separately from the domestic waste. Surface and subsurface drainage from the landfill area flows towards the open pit.

The inspection report and photos are in Appendix E. The landfill appears to be performing adequately.

8.0 AIRSTRIP TANK CONTAINMENT AREA

Two 64,000 litre fuel tanks are located adjacent to the airstrip apron. The tanks are contained by a lined containment area.

The secondary containment liner is covered with a layer of crushed gravel. No signs of berm instability were noted. The inspection report and photos are in Appendix F. The containment area appears to be satisfactory.

It is understood that there was a fuel spill within the tankfarm area in the winter of 2006/2007. Stained soil is present inside the base of the tank farm containment area. The current inspection deals only with the geotechnical issues of the tankfarm and does not address the fuel spill.

9.0 GENERATOR TANK CONTAINMENT AREA

One 64,000 litre fuel tank is located adjacent to the generator area at the plant site. The tanks are contained by a lined containment area. The secondary containment liner is covered with a layer of crushed gravel. The inspection report and photos are in Appendix G.

There appear to be low spots in the north berm. It is recommended that the as-built information be reviewed to determine where the liner is located. The low areas should be hand excavated to determine the liner elevation in this area. The capacity of the secondary containment should be reviewed if the liner is lower than the designed/as-built configuration.

10.0 C1 DIVERSION

The C1 Diversion was constructed to divert water from the natural C1 stream around the open pit. It consists of a cut off area lined with a HDPE liner keyed into bedrock, a rock

cut channel (Reach A), a transition zone to natural ground (Reach B), and two berms that contain the diverted stream (Reach C), which redirects the water back to the original stream bed.

The rock cut was constructed in the summer of 2005, and the cut off and berms were constructed in the winter 2005/2006. Water first flowed through the diversion in the spring of 2006. It is understood that some additional fish habitat structures may be added to Reach C.

The inspection report and photos of the channel are in Appendix H.

The water flows were relatively small at the time of the inspection. Wet areas were noted adjacent to the south diversion berm, but no seepage through the diversion berms was noted. The C1 diversion works are performing as intended.

11.0 CLOSURE

EBA trusts that this report satisfies your present requirements. Should you require any additional information, please contact us.

EBA Engineering Consultants Ltd.

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/jnc

This Issued for Review report is provided solely for the purposes of client review and presents our findings and recommendations to date. Our findings and recommendations are related only through an "Issued for Use" report, which will be issued subsequent to this review. You should not rely on the interim recommendations made herein. Once our report is issued for use, the "Issued for Review" report should be either returned to EBA or destroyed.

REFERENCES

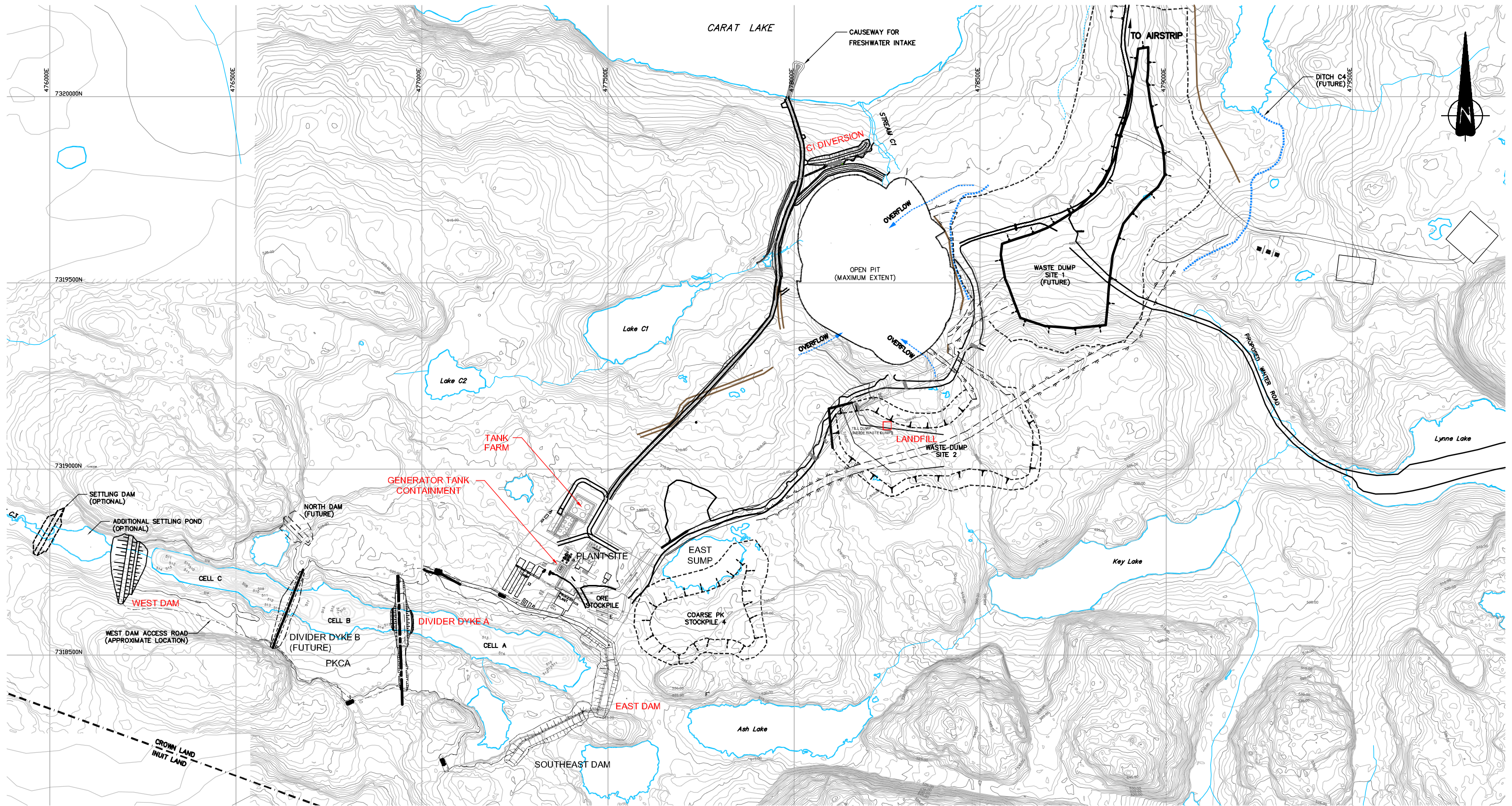
- EBA Engineering Consultants Ltd. 2006. Jericho Diamond Mine, 2006 Geotechnical Inspection. September 2006. EBA File No.: 1100060.010.
- EBA Engineering Consultants Ltd. 2007. Construction Record Report, East and Southeast Dams, Jericho Diamond Mine. October 2007. EBA File No. 1100060.015



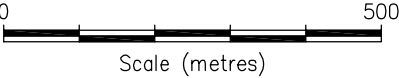
FIGURES



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LEGEND:
AREAS EVALUATED 2007 GEOTECHNICAL INSPECTION



CLIENT		Jericho Project 2007 Geotechnical Inspection				
Tahera Diamond Corporation		Jericho Mine Site Plan				
EBA Engineering Consultants Ltd. 		PROJECT NO./FILE NO. 1100060.010 1100060010M01a.dwg	DWN MM	CKD BH	REV 1	FIGURE 1
		OFFICE EBA-EDM	DATE November 15, 2007			



APPENDIX

APPENDIX A WEST DAM



GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
 Facility: **West Dam**
 Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
 EBA Engineering Consultants Ltd.

OPERATING CONDITION

Minimum Crest Elevation	525 (approximate – varies 525 to 527.5 m)
Top of Core or Liner	521.0 - (minimum elevation – varies from 524 to 521 m)
Water Levels - Upstream	517.8
Water Levels - Downstream	515.3 (approx)
Discharge	Ongoing at time of inspection

OBSERVED CONDITION

Features:	Present (Yes/No)	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted	None noted		Dam construction and regrading May 2007 – no settlement in and cracking noted.	
Settlement	None noted	None noted			
Seepage	None noted				
Other Features					

THERMAL SUMMARY:

Dam Core Frozen – Ground temperature measurements in attached Figures A-2 to A-9

RECOMMENDATIONS AND CONCLUSIONS:

Inspect and possibly strip top layer of frozen core when construction recommences.

Dam performance is satisfactory.

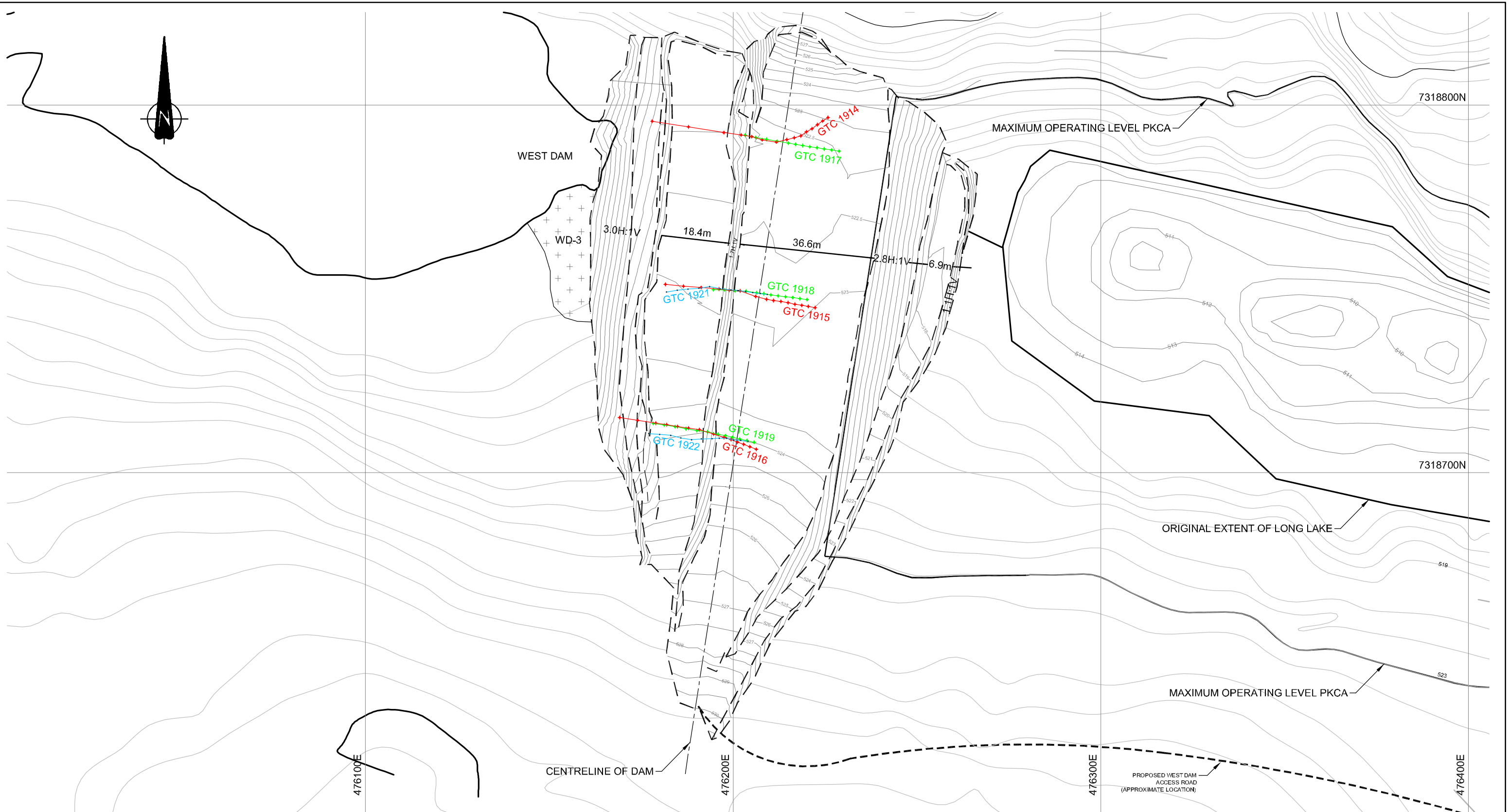
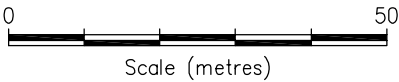


FIGURE BASED ON 2006 SURVEY. DAM WAS RAISED SINCE THE SURVEY.

NOTE:
GROUND TEMPERATURE CABLES 1914, 1915 AND 1916
IN BASE OF CORE KEY TRENCH.
GROUND TEMPERATURE CABLES 1917, 1918 AND 1919
AT ORIGINAL GROUND LEVEL IN CORE ZONE.
GROUND TEMPERATURE CABLES 1921 AND 1922
AT ELEVATION 522 m.



CLIENT Tahera Diamond Corporation		Jericho Project 2007 Geotechnical Inspection				
		West Dam 2007 Geotechnical Inspection				
EBA Engineering Consultants Ltd. 	PROJECT NO./FILE NO. 1100060.010 1100060010M02a.dwg		DWN MM	CKD BH	REV 1	FIGURE A-1
	OFFICE EBA-EDM		DATE November 15, 2007			

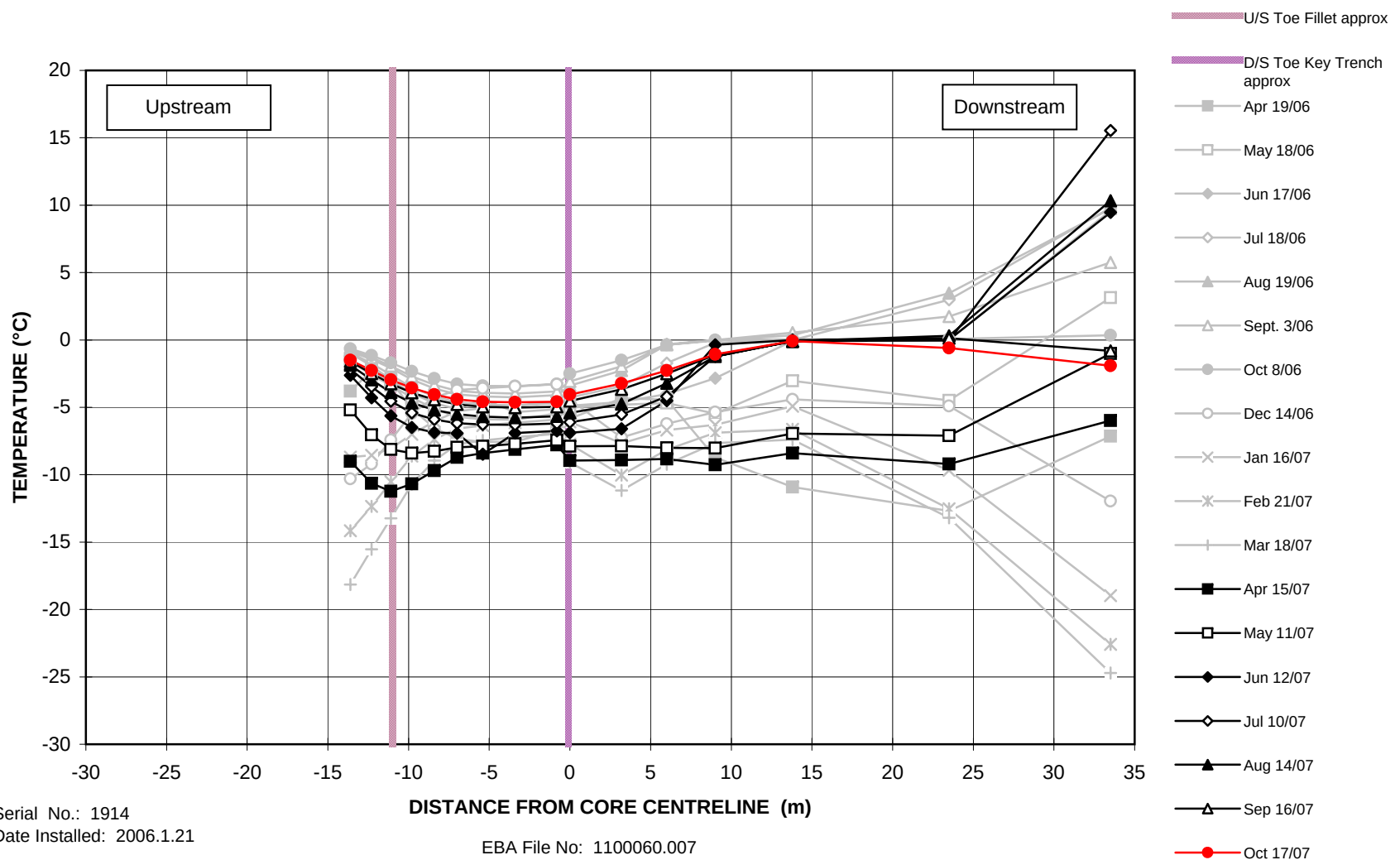


Figure A-2
Horizontal Ground Temperature Distribution
West Dam
Station 0+035, Trench Elevation 513 m

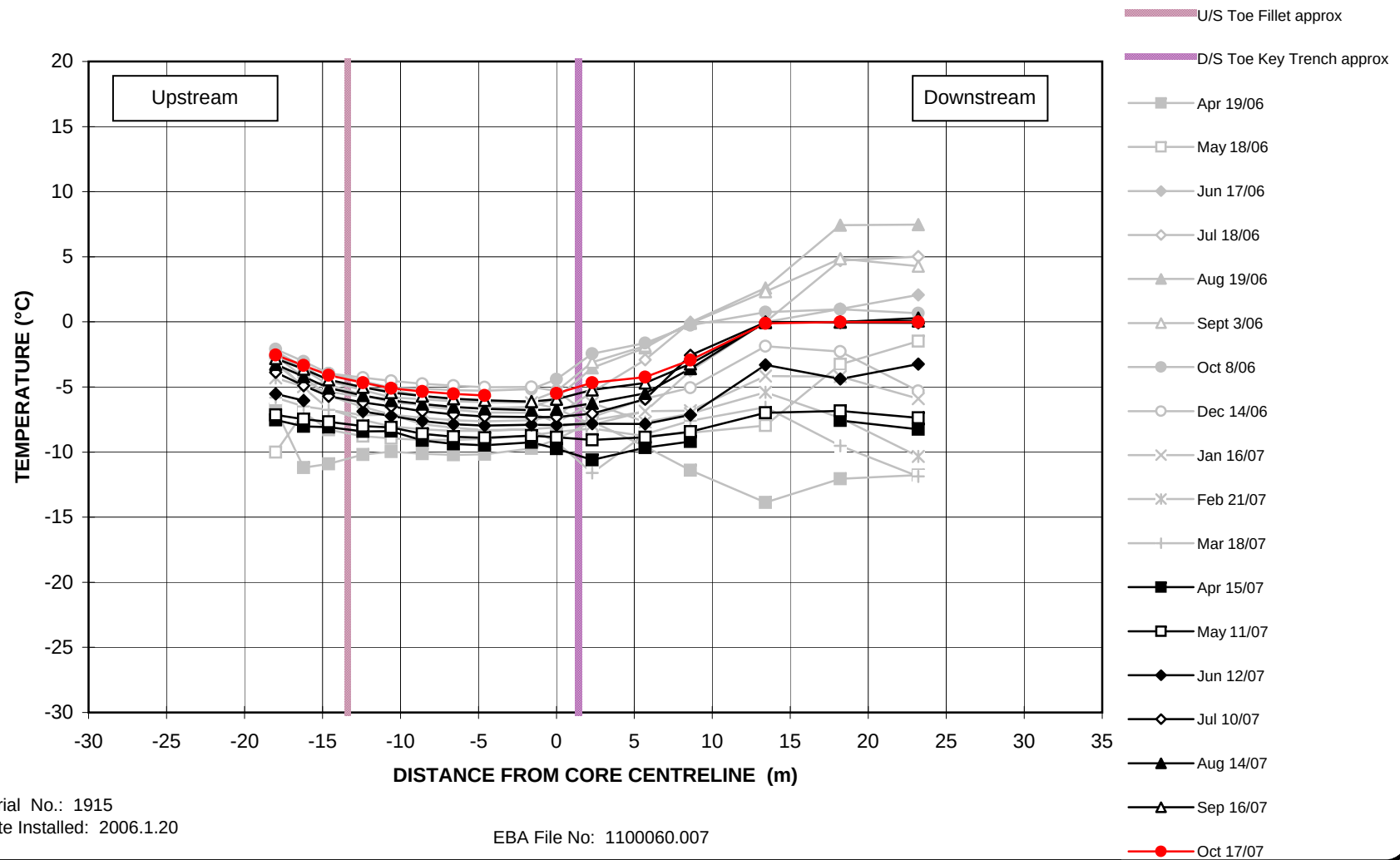


Figure A-3
Horizontal Ground Temperature Distribution
West Dam
Station 0+080, Trench Elevation 514 m

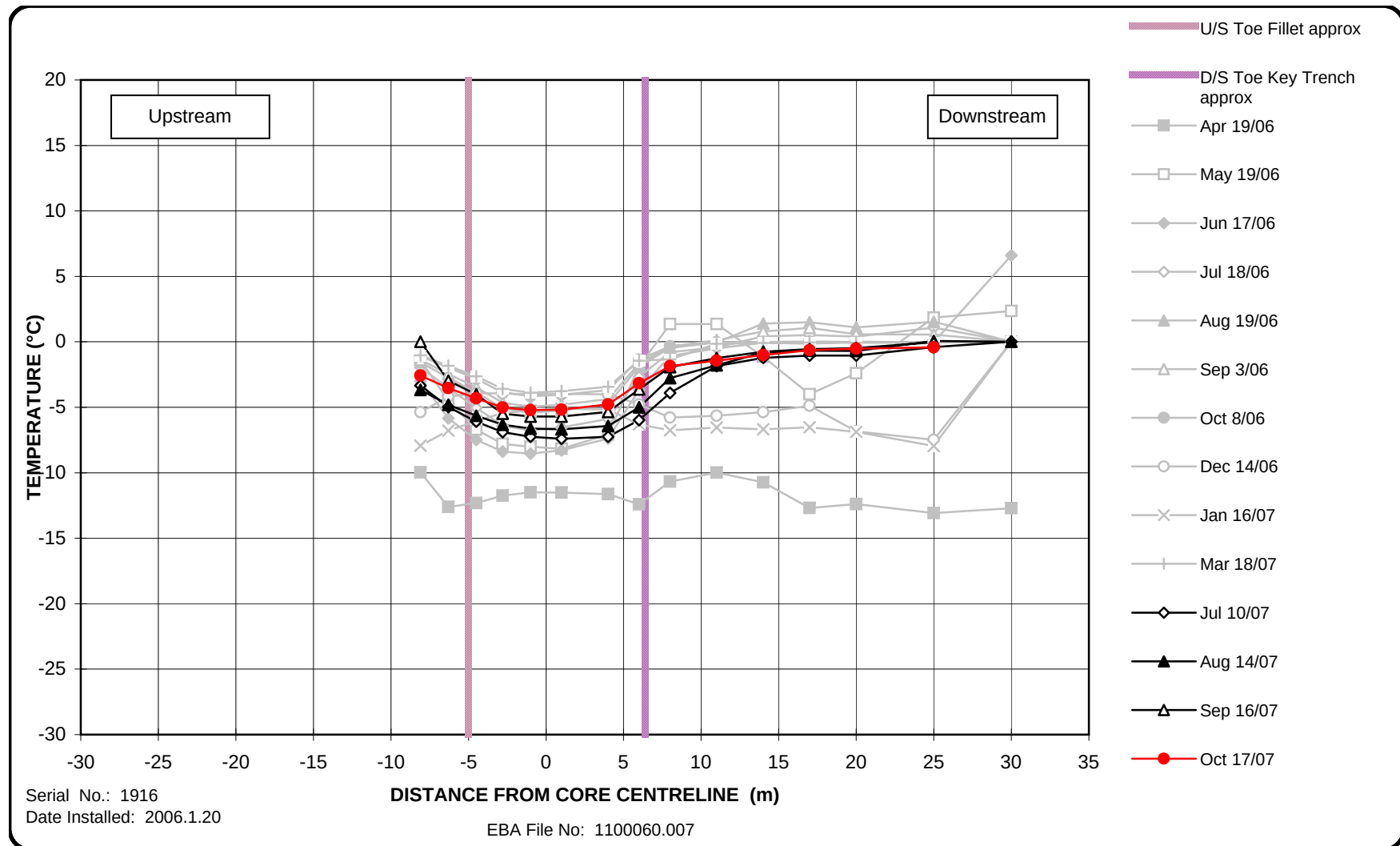


Figure A-4
Horizontal Ground Temperature Distribution
West Dam
Station 0+120, Trench Elevation 518 m

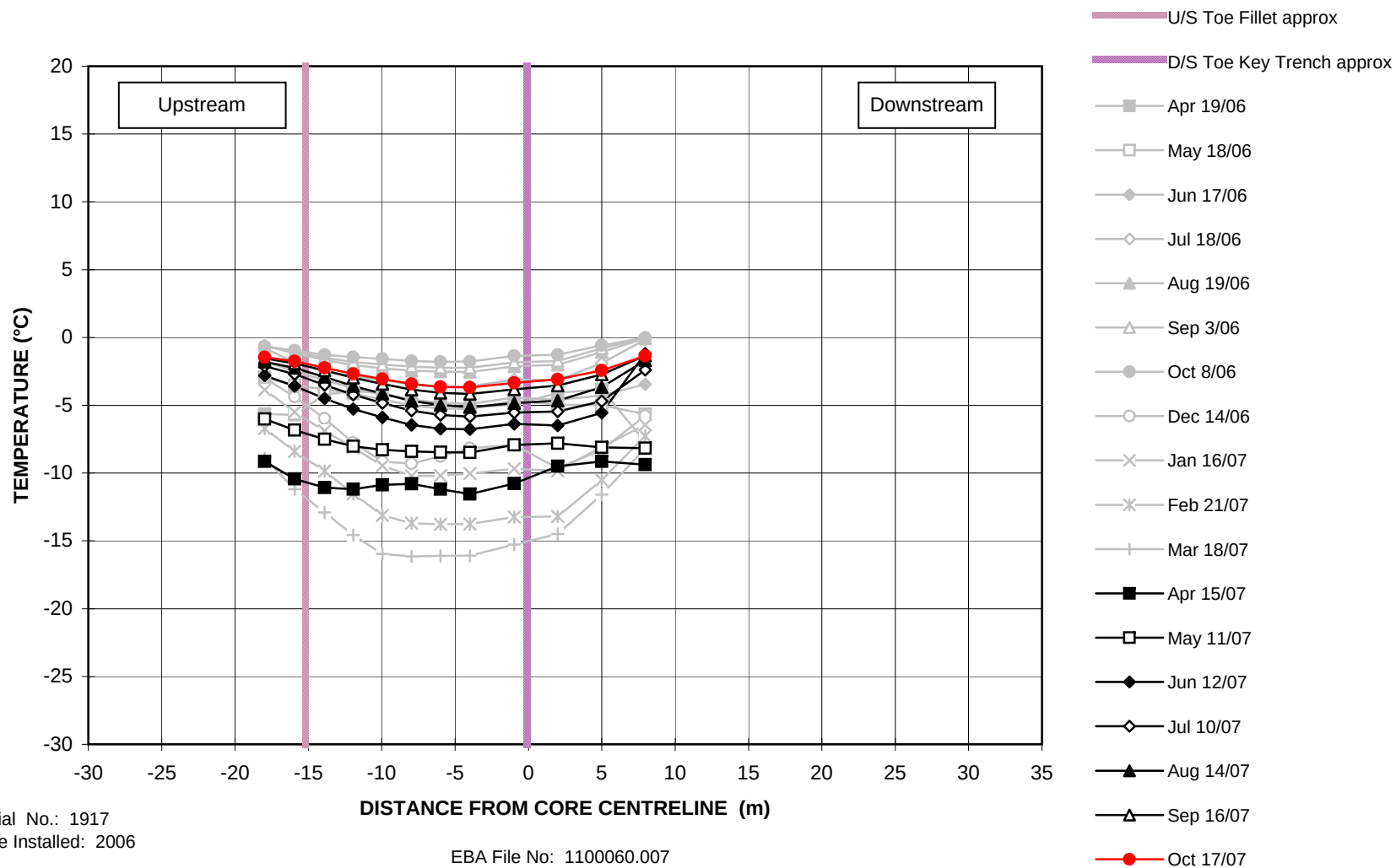


Figure A-5
Horizontal Ground Temperature Distribution
West Dam
Station 0+035, Trench Elevation 516 m

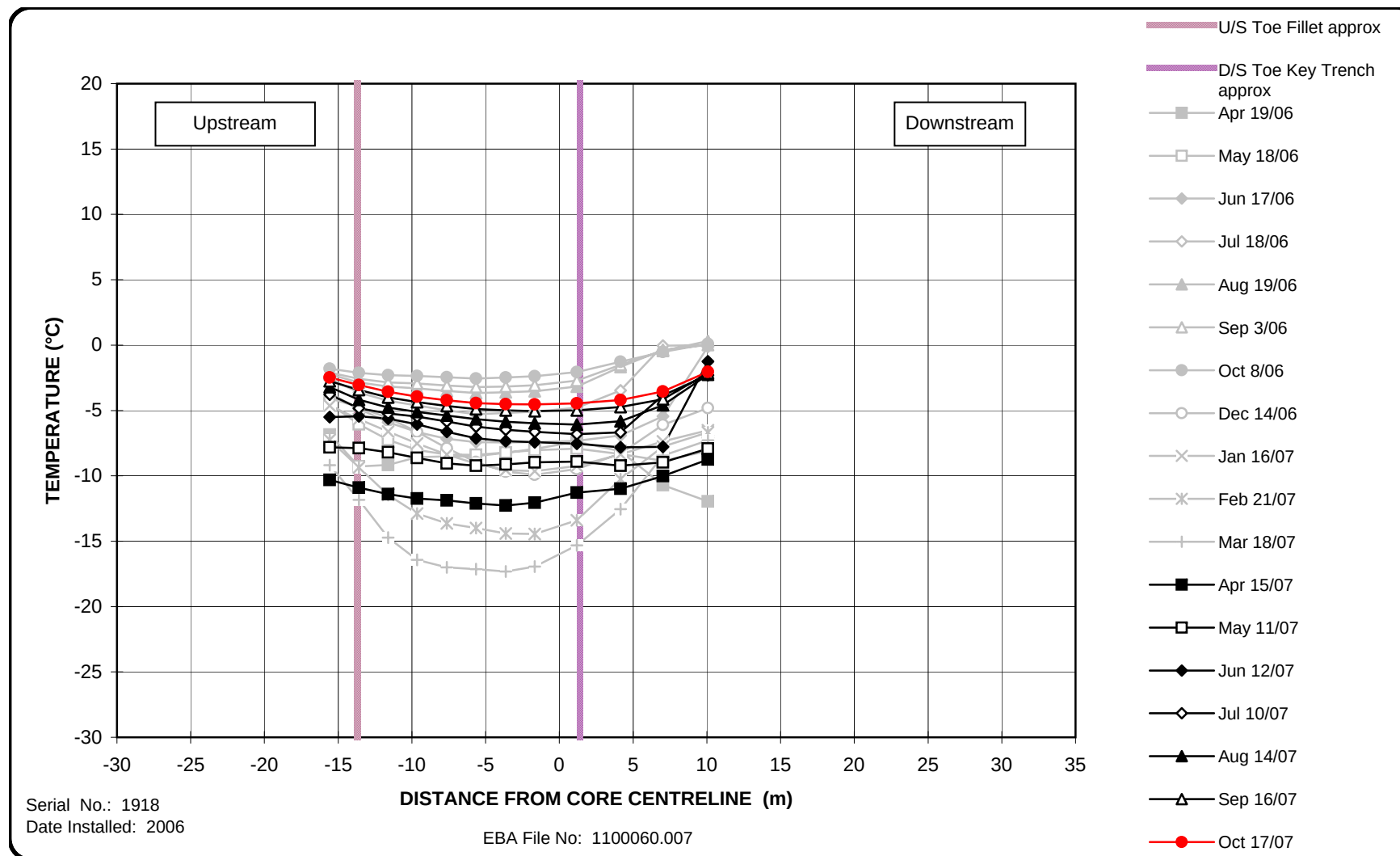
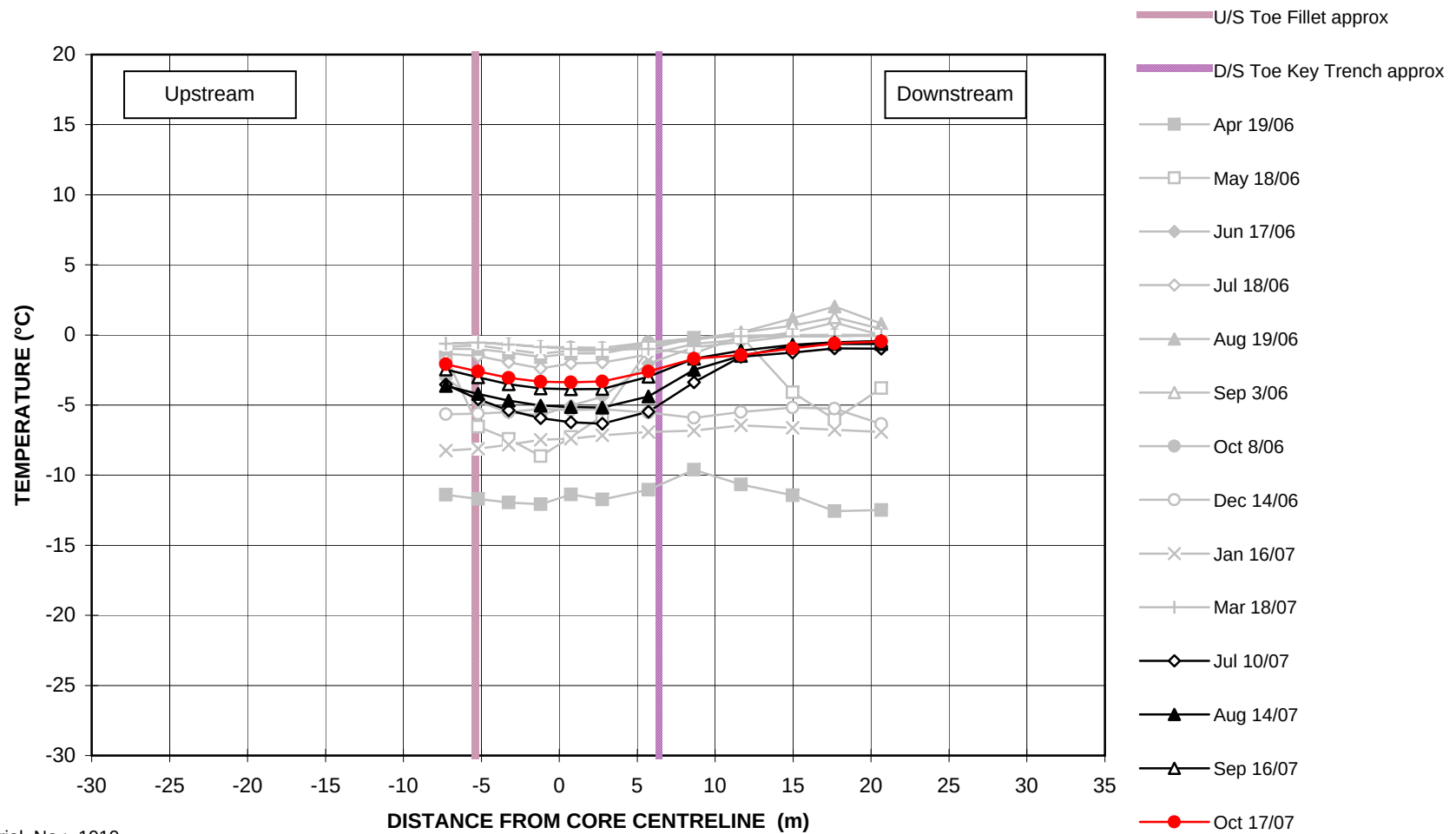


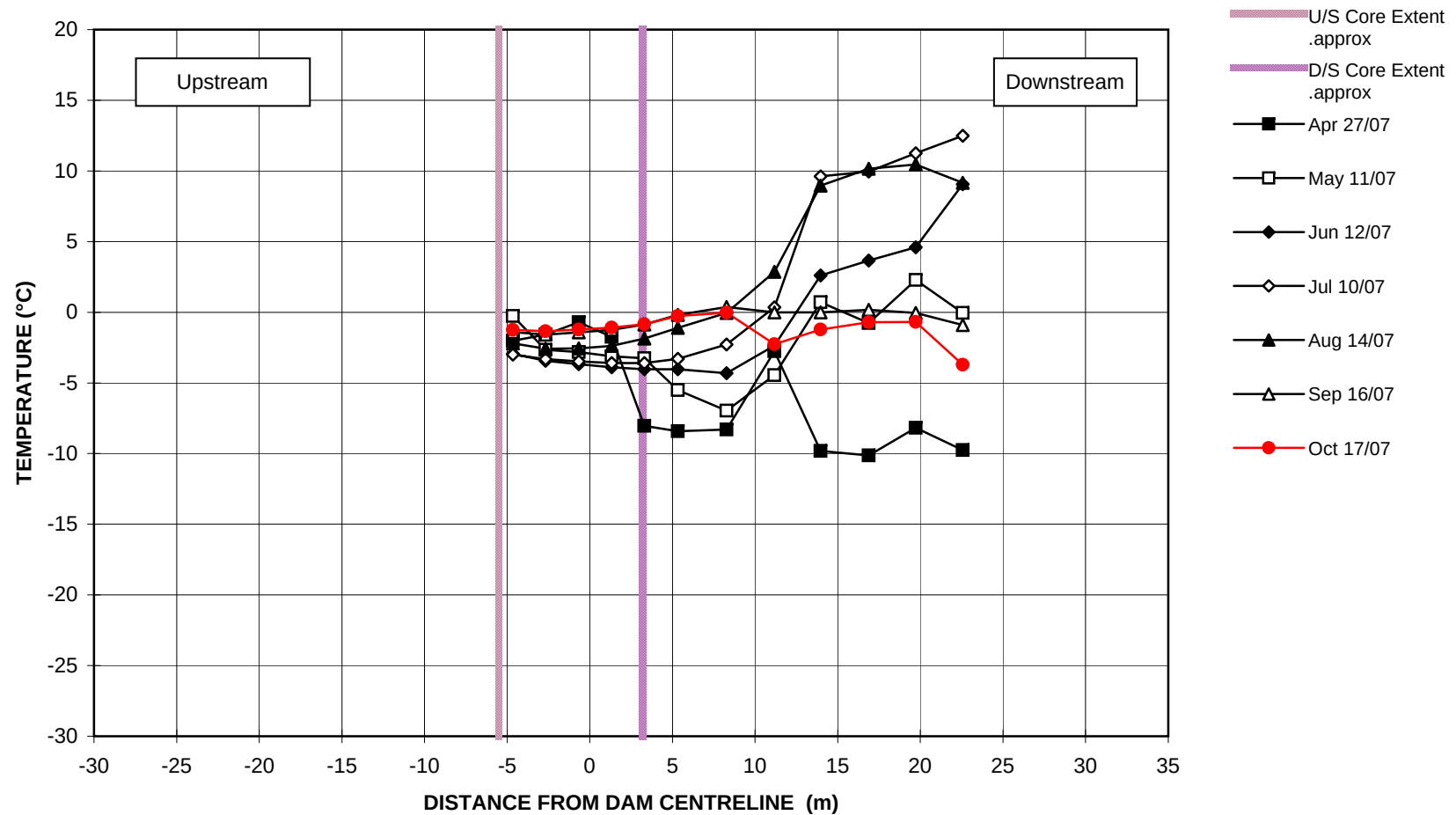
Figure A-6
Horizontal Ground Temperature Distribution
West Dam
Station 0+080, Trench Elevation 518 m



Serial No.: 1919
Date Installed: 2006

EBA File No: 1100060.007

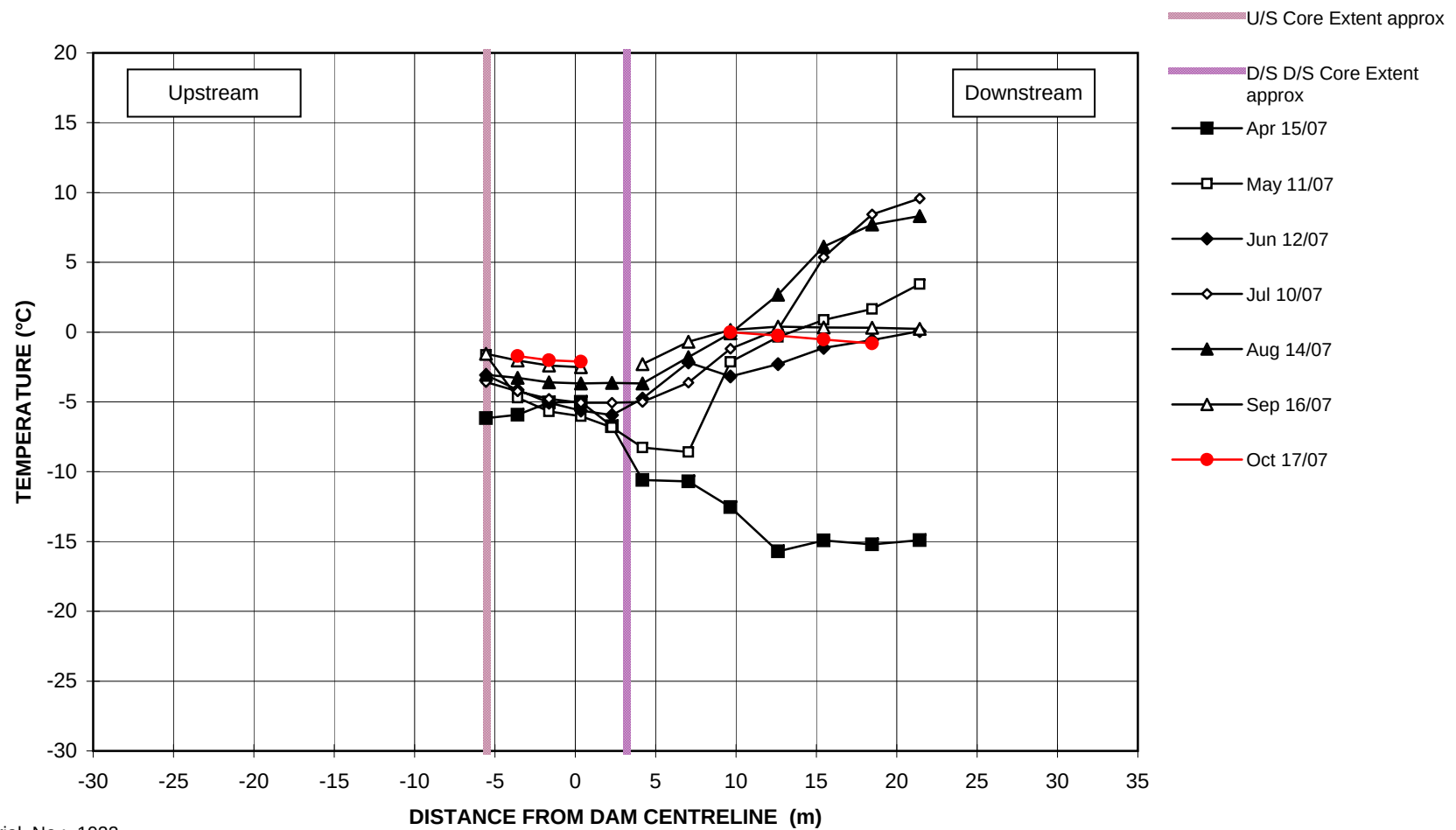
Figure A-7
Horizontal Ground Temperature Distribution
West Dam
Station 0+120, Trench Elevation 520 m



Serial No.: 1921
Date Installed: 04/01/2007

EBA File No: 110060.007

Figure A-8
Horizontal Ground Temperature Distribution
West Dam
Station 0+080, Average Elevation 522 m



Serial No.: 1922
Date Installed: 04/01/2007

EBA File No: 110060.007

Figure A-9
Horizontal Ground Temperature Distribution
West Dam
Station 0+120, Elevation 522 m



Photo A.1
West Dam: Upstream slope, looking northwest.



Photo A.2
West Dam: Downstream slope, looking east.



Photo A.3
West Dam: Discharge downstream of the dam.



Photo A.4
West Dam: Downstream slope, looking north.



Photo A.5
West Dam: Downstream slope, looking north.



Photo A.6
West Dam: Upstream slope, looking north.



Photo A.7
West Dam: Crest, looking south.



Photo A.8
West Dam: Pond at downstream dam toe.



APPENDIX

APPENDIX B DIVIDER DYKE A



GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
 Facility: **Divider Dyke A**
 Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
 EBA Engineering Consultants Ltd.

OPERATING CONDITION:

Minimum Crest	524
Top of Filter	518.8 (approximate elevation)
Water Levels - Upstream	515.0
Water Levels - Downstream	517.8
Discharge	Ongoing – through filter dyke

OBSERVED CONDITION:

Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted			Cracking noted in 2006 – area was recently excavated so material could be reworked and recompact.	
Settlement	None noted				
Seepage	None noted			No visible seepage, but seepage is ongoing	
Other Features	None noted				

THERMAL SUMMARY:

No ground temperature measurements in the dyke.

RECOMMENDATIONS AND CONCLUSIONS:

Larger differential in head than noted in 2006. The filter must be slowing seepage down or portions of the dyke have frozen.

Dyke is performance is satisfactory.

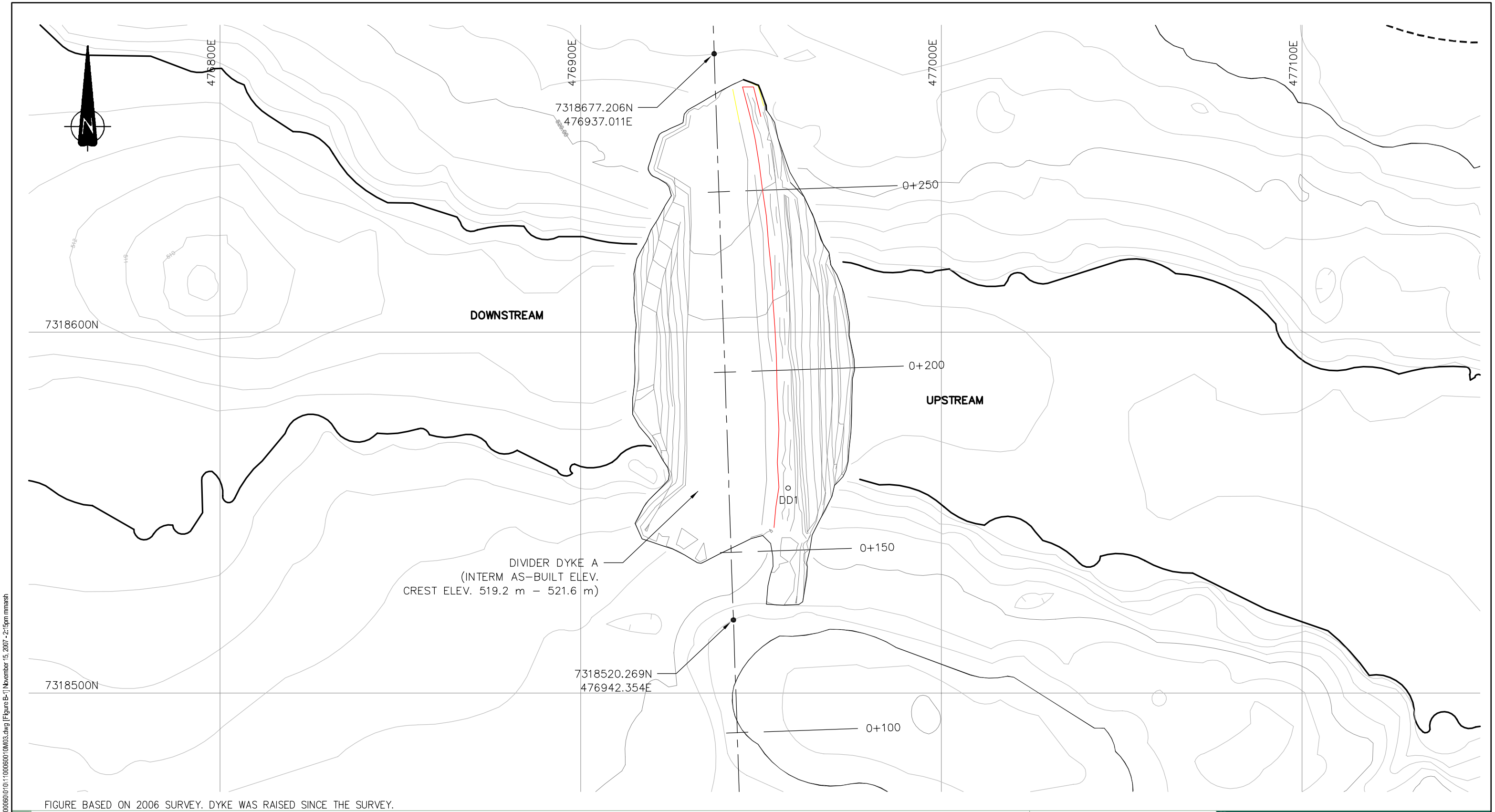
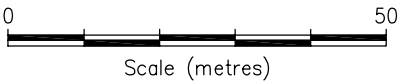


FIGURE BASED ON 2006 SURVEY. DYKE WAS RAISED SINCE THE SURVEY.



CLIENT Tahera Diamond Corporation		Jericho Project 2007 Geotechnical Inspection			
		Divider Dyke A 2007 Geotechnical Inspection			
EBA Engineering Consultants Ltd. 	PROJECT NO./FILE NO. 1100060.010 1100060010M03a.dwg		DWN MM	CKD BH	REV 1
	OFFICE EBA-EDM		DATE November 15, 2007		

FIGURE B-1



Photo B.1
Divider Dyke A: Upstream side, looking west across process kimberlite deposition area.



Photo B.2
Divider Dyke A: Downstream side, looking east across Cell B.



Photo B.3
Divider Dyke A: Upstream slope. Rip-rap, turbid water in Cell A.



Photo B.4
Divider Dyke A: Downstream slope. Run of mine.



Photo B.5
Divider Dyke A: Dyke Crest. Filter zone excavated prior to replacement.

APPENDIX

APPENDIX C EAST DAM

GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
 Facility: **East Dam**
 Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
 EBA Engineering Consultants Ltd.

OPERATING CONDITION:	
Minimum Crest Elevation	527 (approx.)
Top of Core or Liner	523.3
Processed Kimberlite - Upstream	522.5 to 521 (varies)
Water Levels - Downstream	517.5 (approx.)
Discharge	No discharge

OBSERVED CONDITION:					
Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Settlement	None noted				
Seepage	None noted				
Other Features	ED-1 Wet area at dam toe	10 m by 6 m		Wet area in natural low area at dam toe Approximate Elev. 517.50 m	C4, C5

THERMAL SUMMARY:

Ground temperature measurements in attached Figures C.2 and C.3. Base of key trench $<-2^{\circ}\text{C}$.

RECOMMENDATIONS AND CONCLUSIONS:

Settlement data indicates dam crest has settled vertically less than 1 mm.

Dam performance is satisfactory.

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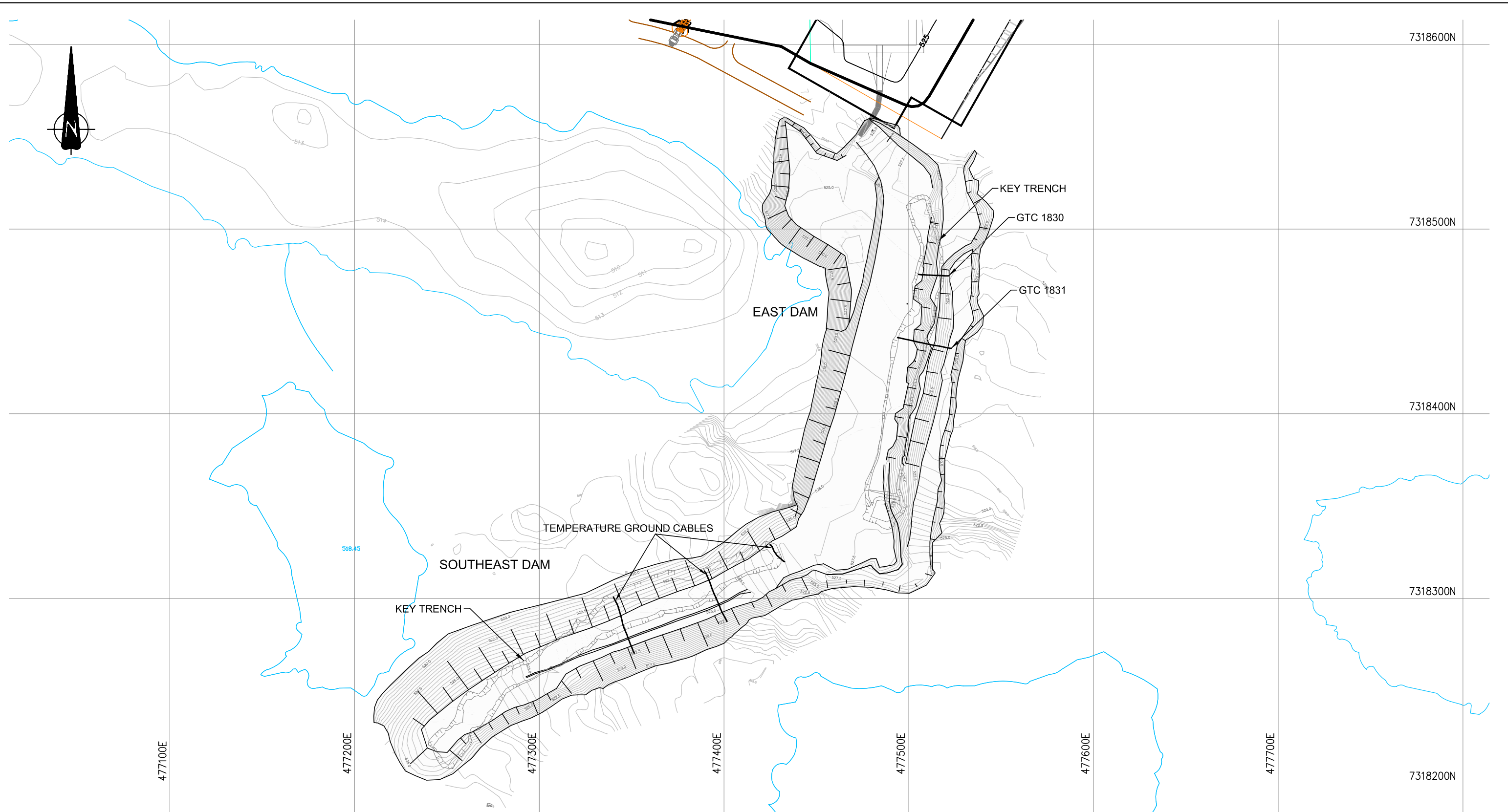
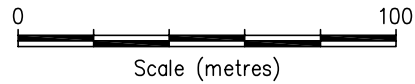


FIGURE BASED ON 2007 RECORD DRAWINGS.

LEGEND:
GROUND TEMPERATURE CABLES (APPROXIMATE LOCATION)
CABLES AT BASE OF LINER IN KEY TRENCH



CLIENT Tahera Diamond Corporation	Jericho Project 2007 Geotechnical Inspection				
	East Dam 2007 Geotechnical Inspection				
EBA Engineering Consultants Ltd. 	PROJECT NO./FILE NO. 1100060.010 1100060010M04b.dwg	DWN MM	CKD BH	REV 1	FIGURE C-1
	OFFICE EBA-EDM	DATE November 15, 2007			



Photo C.1
PKCA, East Dam, Southeast Dam, Divider Dyke, looking east.



Photo C.2
East Dam: Upstream slope, looking north.



Photo C.3
East Dam: Downstream slope, looking west.



Photo C.4
East Dam: Downstream slope. Ponded water and dam toe.



Photo C.5
East Dam: Downstream slope. Ponded water at dam toe.



Photo C.6
East Dam: Dam crest.



Photo C.7
East Dam: Downstream slope. Settlement monument is yellow pipe.



APPENDIX

APPENDIX D TANK FARM



GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
 Facility: **Tankfarm**
 Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
 EBA Engineering Consultants Ltd.

OPERATING CONDITION:

Phase 1 (southern portion) Eight 500,000 litre tanks	Tanks 1, 2, 3, 4 75% full, Tanks 5, 6, 7, 8 empty
Phase 2 (northern portion) Four 1,500,000 litre tanks	Tank 9, 50% full Tanks 10, 11 12, greater than 75% full

OBSERVED CONDITION:

Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Settlement	Settlement within Phase 1 Tankfarm	Uneven surface throughout the southern half of the tank farm Gaps up to 50 mm high under several of the tanks. The gap closes up within about 300 mm in from outer edge of the tanks. See plots for settlement monitoring.	Throughout the tankfarm.	Settlement apparent under tanks. New flexible pipe connections have been installed to accommodate the settlement.	D2

OBSERVED CONDITION:					
Features:	Present	Dimensions	Extent	Description	Photographic Records
Settlement	Settlement with Phase 2 Tankfarm	Gap under edge of Tank 9 - up to 25 mm.	Only noted on Tank 9	Settlement has resulted in a gap under edge of the tank	D9
Seepage	None noted				
Other Features	Stained Soil	Numerous large stain areas	Sporadic, most at valve locations	Hydrocarbon stained soil on inside surface of tankfarm base	D3, D4, D7
	Ponded Water – Phase 1	10 m by 2 m	Isolated	Along the east side of the tank farm	D5
	Sheen on ponded water – Phase 1	1 m diameter	Isolated	Between tanks 7 and 8 – small pond with hydrocarbon sheen	D4

THERMAL SUMMARY:

Not applicable

RECOMMENDATIONS AND CONCLUSIONS:

Continue monitoring to determine if settlement is ongoing. Obtain clarification from tank engineer to determine if the tanks are safe to fill with petroleum products. Confirm geomembrane liner integrity.

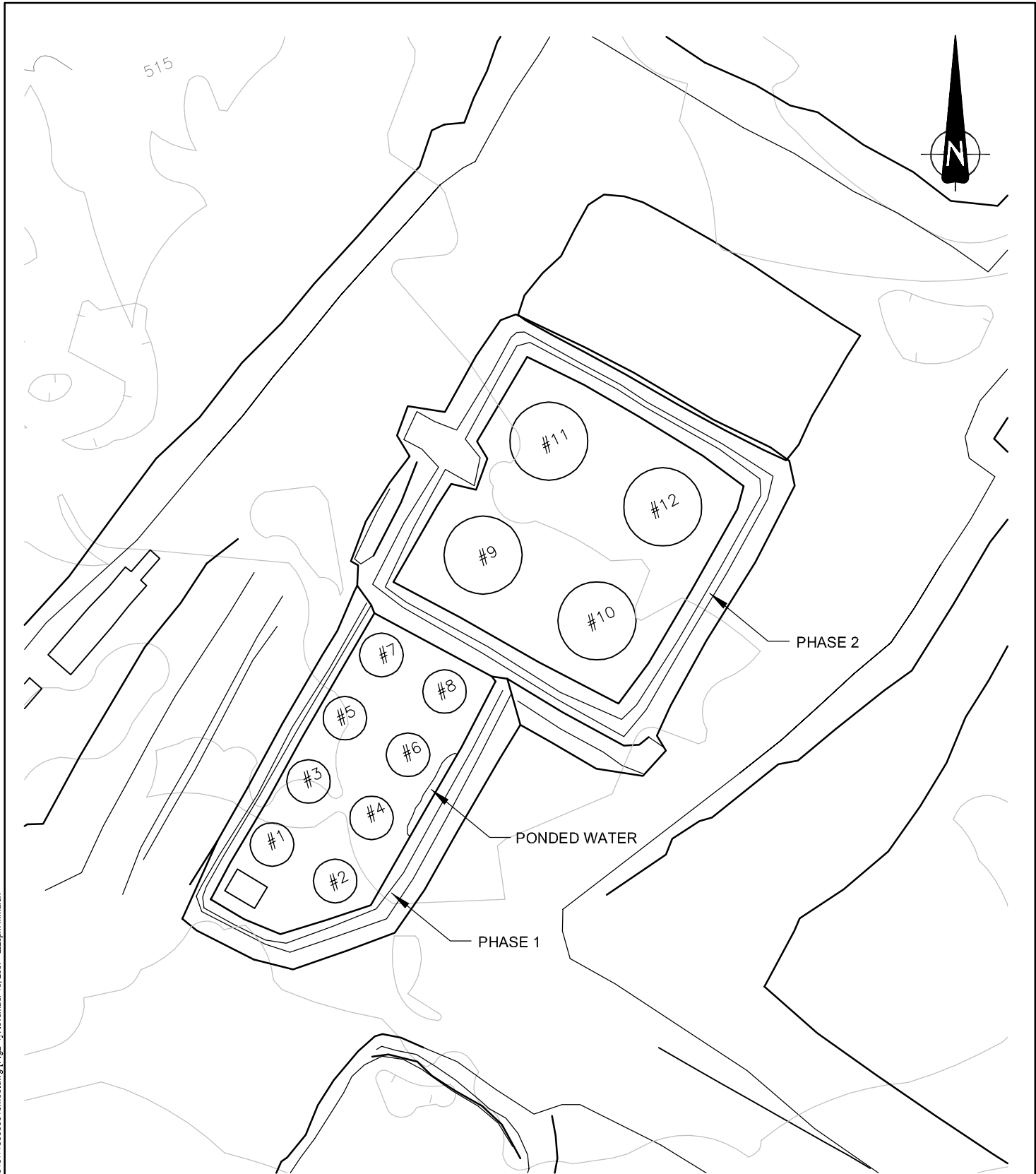


FIGURE BASED ON 2006 SURVEY.

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**Jericho Project
2007 Geotechnical Inspection**

**Tank Farm
2007 Geotechnical Inspection**

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FIGURE D-1

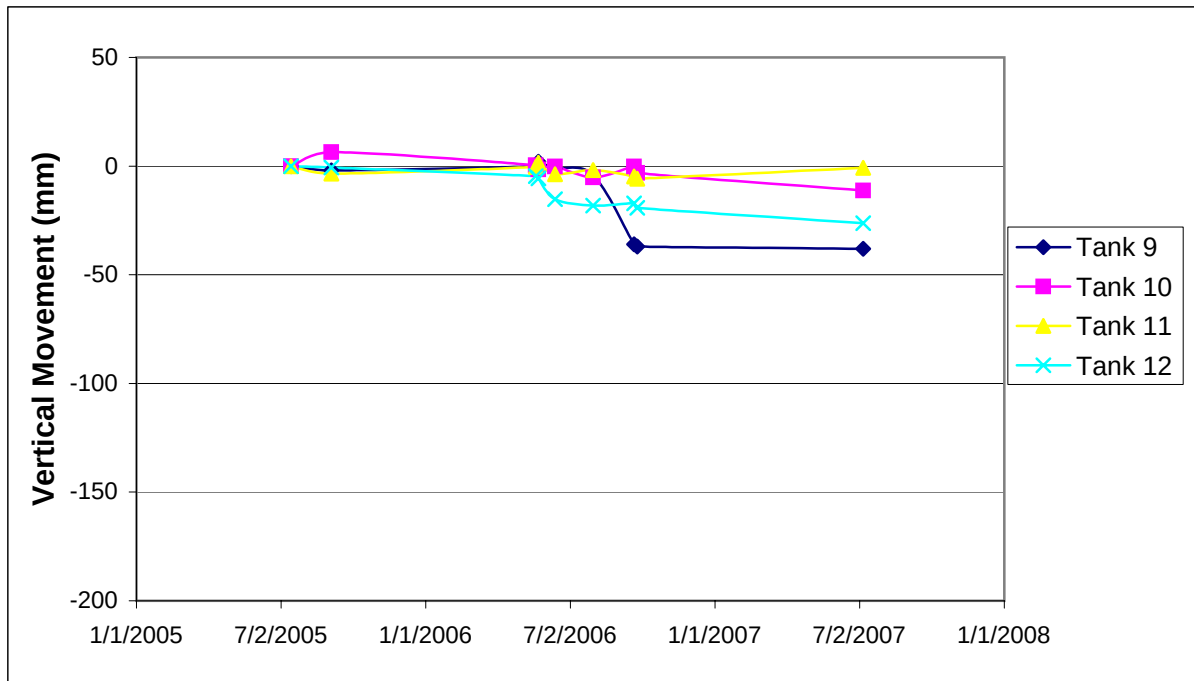
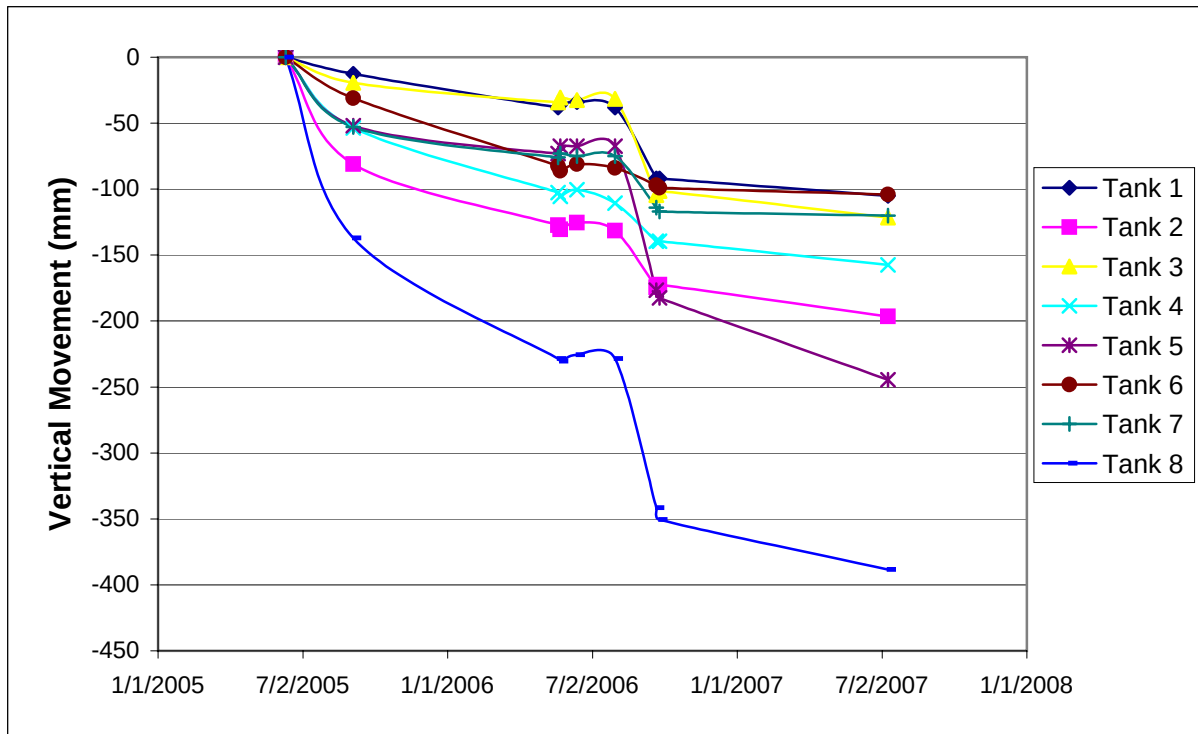


Figure D-2

Tank Farm Settlement Monitoring



Photo D.1
Phase 1 Tankfarm: Eight 500,000 litre tanks, looking southwest.



Photo D.2
Phase 1 Tankfarm: Tank 5. Settlement under tank edge.



Photo D.3
Phase 1 Tankfarm: Stained soil adjacent Tank 7.



Photo D.4
Phase 1 Tankfarm: Pond with sheen on it between Tank 7 and Tank 8.



Photo D.5
Phase 1 Tankfarm: Pond along east side of tankfarm.



Photo D.6
Phase 1 Tankfarm: New flex connections (photo taken at Tank 5).



Photo D.7
Phase 1 Tankfarm: 64,000 litre tank. Stained soil in tankfarm base.



Photo D.8
Phase 2 Tankfarm: Four 1,500,000 litre tanks, looking north.



Photo D.9
Phase 2 Tankfarm: Tank 9 settlement under tank edge.



Photo D.10
Phase 2 Tankfarm: Looking south between the tanks.



Photo D.11
Phase 2 Tankfarm: South berm, looking west.



Photo D.12
Phase 2 Tankfarm: North berm, looking west.



APPENDIX

APPENDIX E LANDFILL



GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
Facility: **Landfill**
Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
EBA Engineering Consultants Ltd.

OBSERVED CONDITION:					
Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Settlement	None noted				
Seepage	None noted				
Other Features	None noted				
Erosion	None noted				

THERMAL SUMMARY:

Not applicable

RECOMMENDATIONS AND CONCLUSIONS:

The landfill is constructed within the center of the till dump. Incinerated debris is covered over with till. Metallic debris and non-burnable debris is separated from the burnable debris.

Overall satisfactory condition.

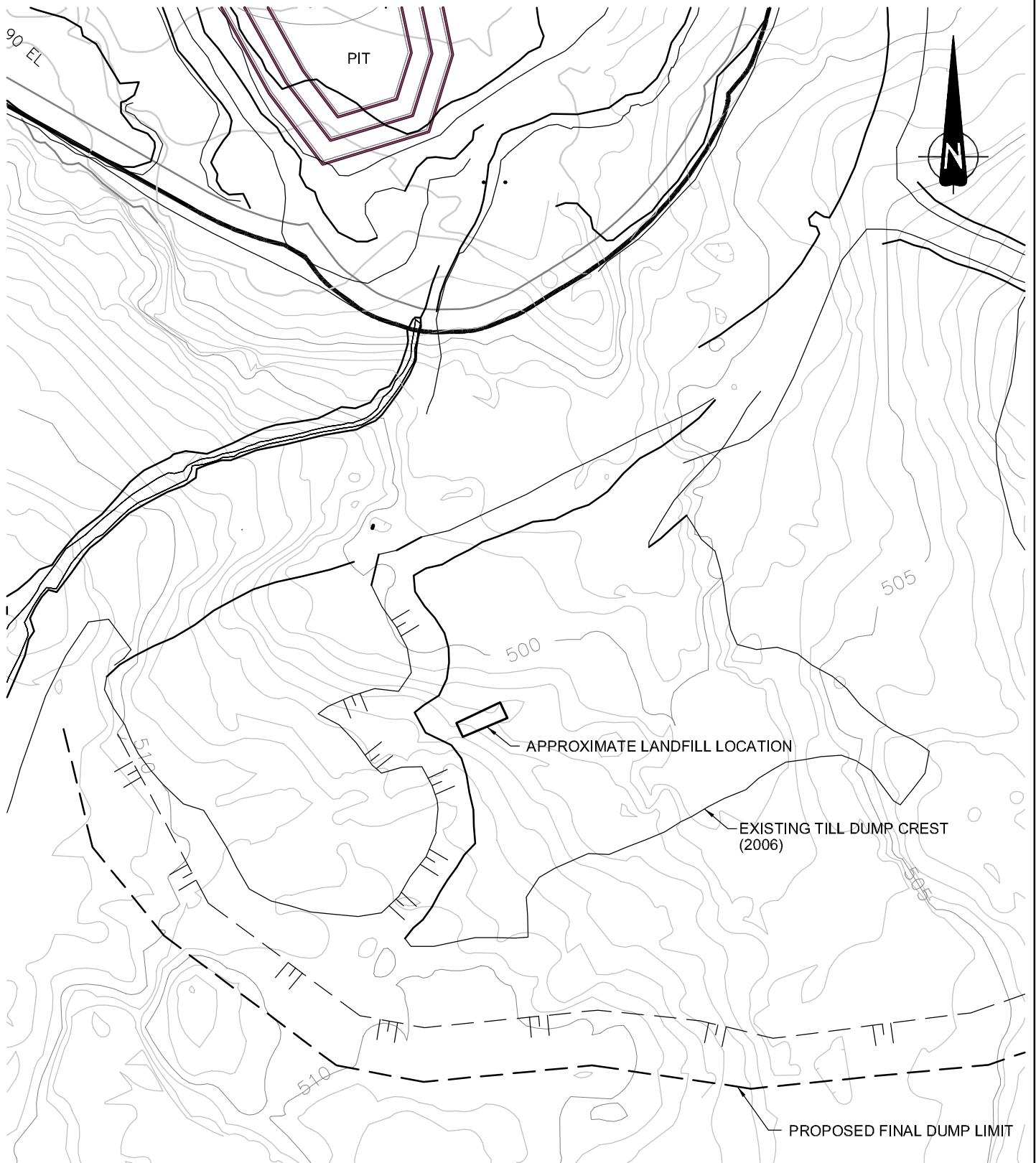
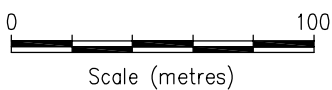


FIGURE BASED ON 2006 SURVEY.



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**Jericho Project
2007 Geotechnical Inspection**

Landfill Area

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FIGURE E-1



Photo E.1
Landfill Location: Within the till waste dump adjacent to the Jericho Open Pit, looking north.



Photo E.2
Incinerator next to Landfill.



Photo E.3
Landfill burn pit.



Photo E.4
Till available for landfill cover.



Photo E.5
Landfill waste pit.



Photo E.6
Landfill Area.

APPENDIX

APPENDIX F AIRSTRIP TANK CONTAINMENT AREA

GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
Facility: **Airstrip Tank Containment Area**
Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
EBA Engineering Consultants Ltd.

OBSERVED CONDITION:

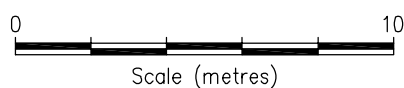
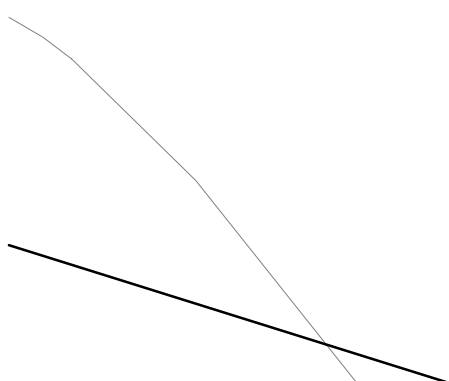
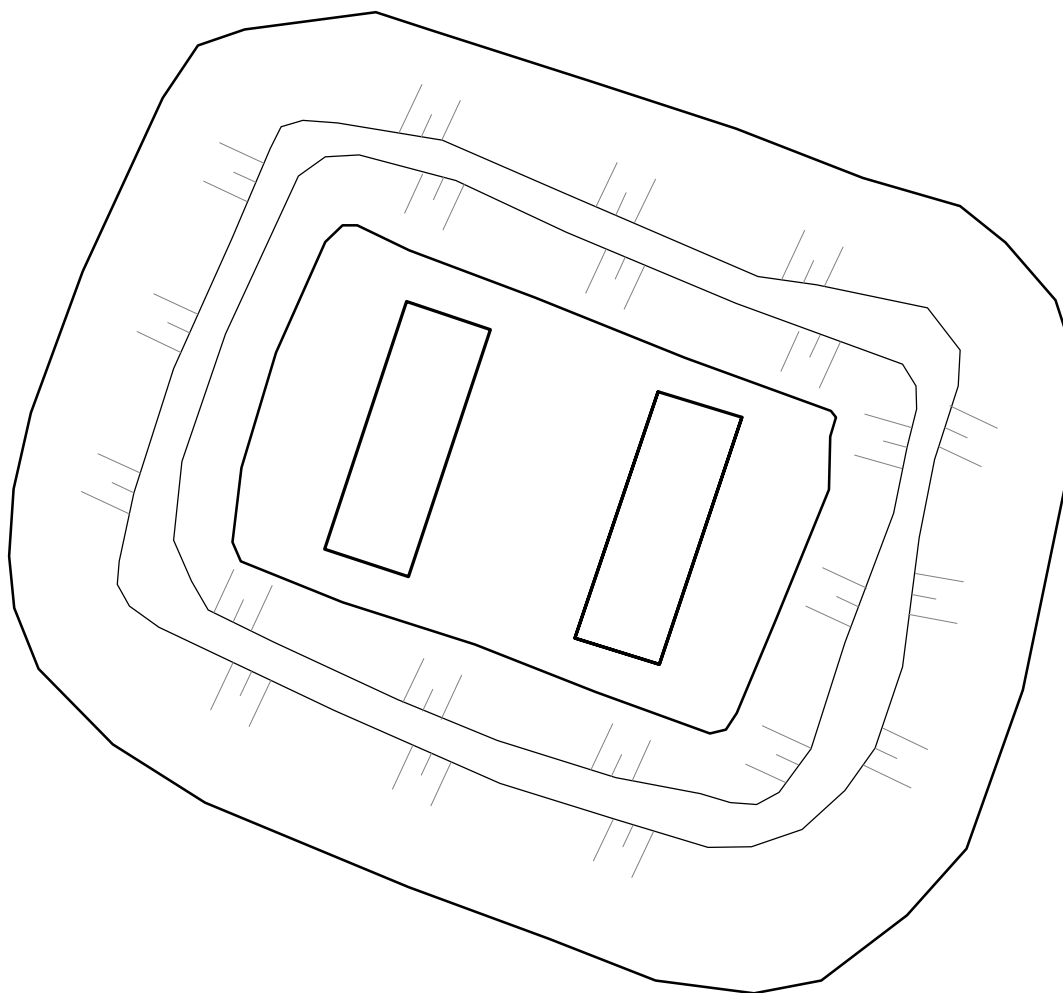
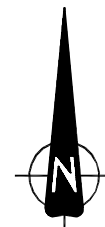
Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Settlement	None noted				
Seepage	None noted				
Other Features	Stained area	Throughout the base of tankfarm			F2, F3, F4

THERMAL SUMMARY:

Not applicable

RECOMMENDATIONS AND CONCLUSIONS:

Satisfactory performance.



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**Jericho Project
2007 Geotechnical Inspection**

**Airstrip Tank Farm
2007 Geotechnical Inspection**

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FIGURE F-1



Photo F.1
Airstrip Fuel Tank.



Photo F.2
Airstrip Fuel Tank: Stained area, exposed liner.



Photo F.3
Airstrip Fuel Tank: Stained area within tank farm.



Photo F.4
Airstrip Fuel Tank: Stained area. Sheen on water.



Photo F.5
Airstrip Fuel Tank: Containment Berm Crest.



Photo F.6
Airstrip Fuel Tank: Containment Berm Crest.

APPENDIX

APPENDIX G GENERATOR TANK CONTAINMENT

GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
 Facility: **Generator Tank Containment**
 Observation Date: **July 11th, 2007**

Inspected by: William T. Horne, P.Eng.
 EBA Engineering Consultants Ltd.

OBSERVED CONDITION:

Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Settlement	None noted				
Seepage	None noted				
Other Features	Low area in 20 mm crush berm	Berm is approximately 0.4 m low along the north berm			G2

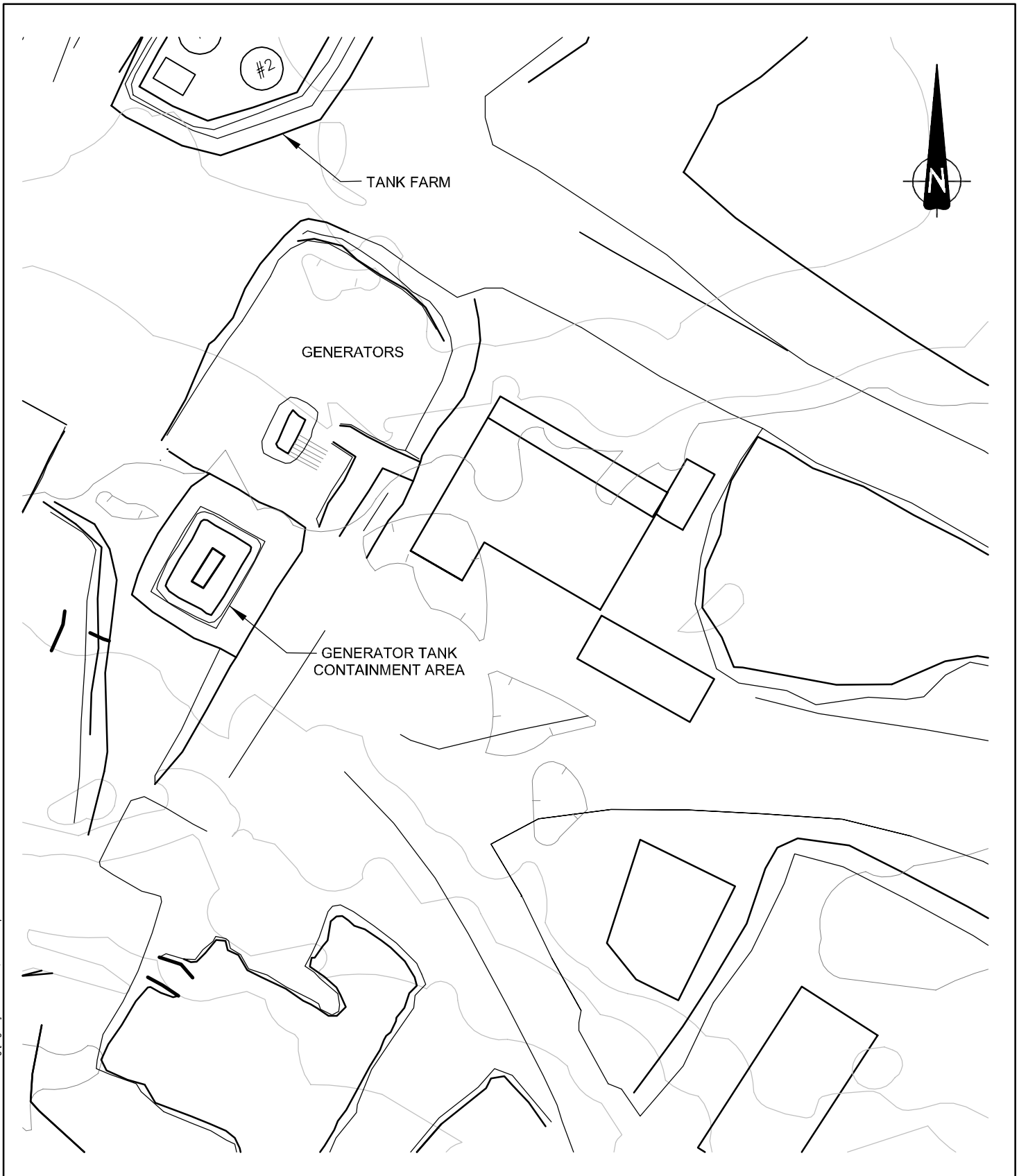
THERMAL SUMMARY:

Not applicable

RECOMMENDATIONS AND CONCLUSIONS:

Low spot in the 20 mm crush berm – berm supported by 150 mm crush berm. Record drawings should be reviewed to determine where the liner is located to determine if there is a low area in the liner along the north berm. If so, the containment capacity should be reviewed to determine if berm modifications are required.

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Scale (metres)

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**Jericho Project
2007 Geotechnical Inspection**

Generator Tank Containment Area

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FIGURE G-1



Photo G.1
Generator Tank and Containment berm.



Photo G.2
Generator Tank: Low spot in West Berm.



Photo G.3
Generator Tank: Stain in bottom of containment area.



Photo G.4
Generator Tank: East Berm. Exposed liner.



APPENDIX

APPENDIX H C1 DIVERSION



GEOTECHNICAL INSPECTION SUMMARY

Location: **Jericho Mine**
 Facility: **C1 Diversion**
 Observation Date: **July 11, 2007**

Inspected by: William T. Horne, P.Eng.
 EBA Engineering Consultants Ltd.

OPERATING CONDITION:

Flow	Low flow – maximum water depth in culvert approximately 35 mm.
------	--

OBSERVED CONDITION:

Features:	Present	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Seepage	None noted				
Settlement	None noted	3 m by 2 m by 0.5 m 3 m by 2 m by 0.6 m	Isolated	Settlement in Reach A fill	H4, H6
Other Features	Slough in road fill on south berm.	5 m by 3 m	Isolated	Slough in fill. Does not impact C1 Channel	H18

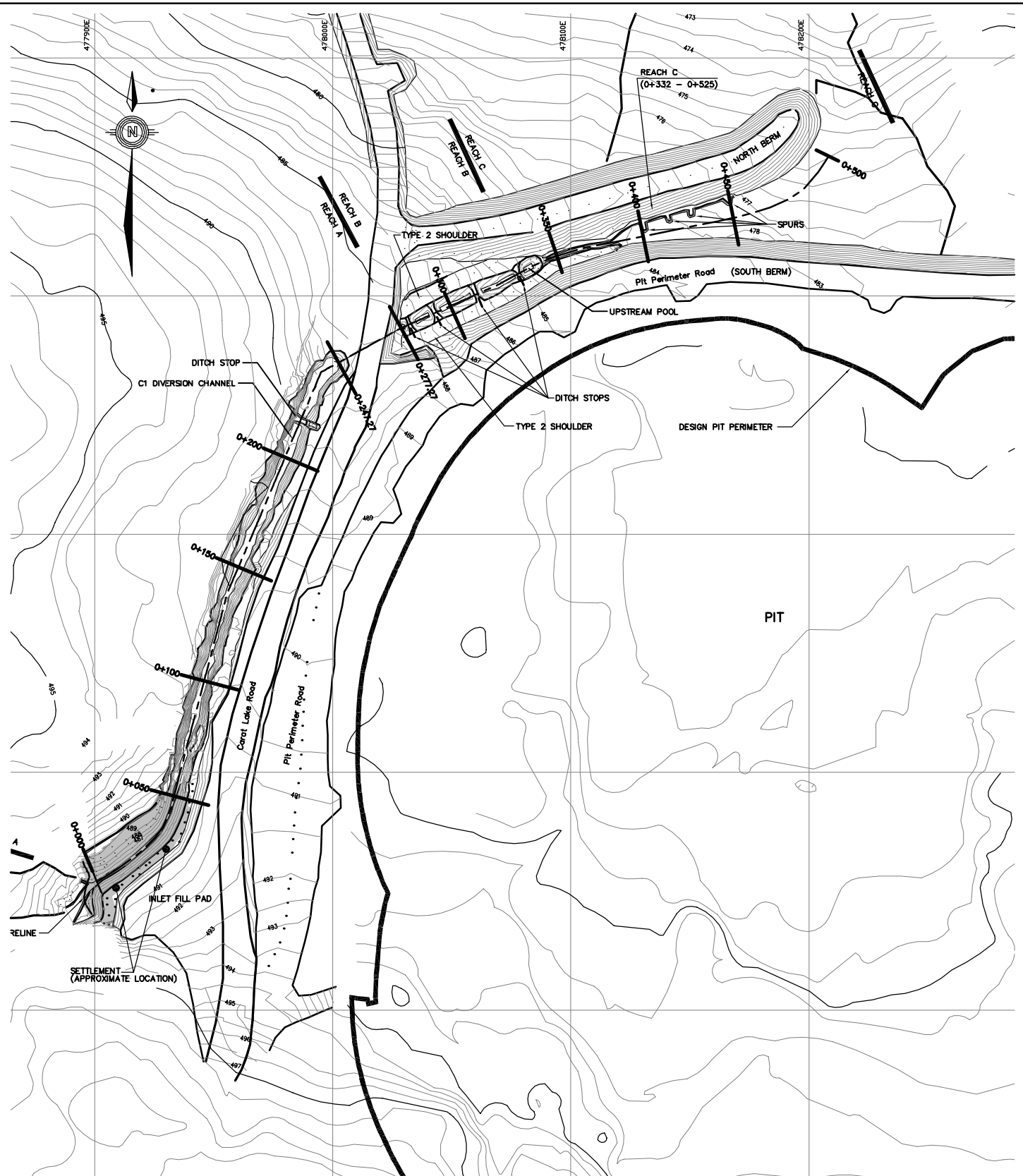
THERMAL SUMMARY:

Not applicable

RECOMMENDATIONS AND CONCLUSIONS:

C1 Diversion structure performance is satisfactory.

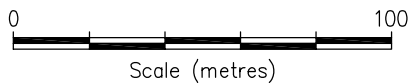
Q:\Edmonton\Drafting\DIVISIONS\07\01\Projects\11000600\01\11000600\10M06.dwg [Fig-H-1] November 15, 2007 - 3:12pm mmash



DRAWING BASED ON 2006 AS BUILT

LEGEND:

- - FEATURE IDENTIFIED 2007 GEOTECHNICAL INSPECTION



CLIENT

Tahera Diamond Corporation

EBA Engineering Consultants Ltd.



Jericho Project
2007 Geotechnical Inspection

Diversion Channel
2007 Geotechnical Inspection

PROJECT NO./FILE NO.
1100060.010
1100060010M06a.dwg

OFFICE
EBA-EDM

DWN
MM

CKD
BH

REV
1

DATE
November 15, 2007

FIGURE H-1



Photo H.1
C1 Diversion Channel - Inlet of C1 Channel: Minimal inflow to channel.



Photo H.2
C1 Diversion Channel - Reach A: Reach Ainlet.



Photo H.3
C1 Diversion Channel - Reach A: Upstream portion.



Photo H.4
C1 Diversion Channel - Reach A: Settled fill in Reach A on berm.



Photo H.5
C1 Diversion Channel - Reach A: Lower reach.



Photo H.6
C1 Diversion Channel - Reach A: Settled fill.



Photo H.7
C1 Diversion Channel - Reach A: Outlet. Ponded water.



Photo H.8
C1 Diversion Channel - Reach A: Culvert outlet. Low water flow.



Photo H.9
C1 Diversion Channel - Reach B: Ponded water and coarse rock section.



Photo H.10
C1 Diversion Channel - Reach C: Vegetated channel, spurs along north berm.



Photo H.11
C1 Diversion Channel - Reach C: Ponded water along spurs.



Photo H.12
C1 Diversion Channel - Reach C: Flow adjacent to north berm.



Photo H.13
C1 Diversion Channel - Reach C: Outlet. Ponded water.



Photo H.14
C1 Diversion Channel - Reach C: Outlet. Ponded water.



Photo H.15
C1 Diversion Channel - Reach C: Looking upstream.



Photo H.16
C1 Diversion: Flow below Reach C to Carot Lake.



Photo H.17
C1 Diversion - Downstream north berm.



Photo H.18
C1 Diversion - South Berm. Pit Perimeter Road. Slough in road fill.

APPENDIX G

EXPLORATION CAMP SOIL SAMPLE GRID FOR SOILS TESTS

North

50

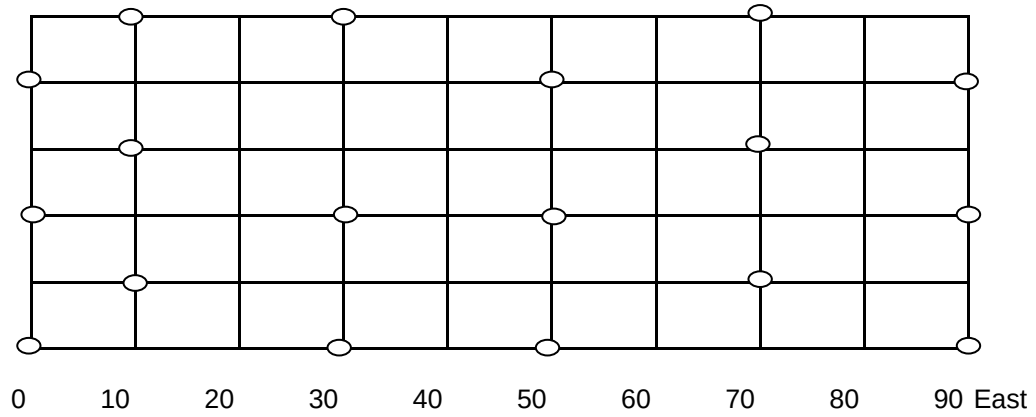
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Grid spacing is 10 m x 10 m



Environmental Division

ANALYTICAL REPORT

TAHERA DIAMOND CORPORATION

ATTN: ENVIIRONMENT DEPARTMENT

BOX 2341

YELLOWKNIFE NT X1A 2P7

Reported On: 01-AUG-07 04:19 PM

Lab Work Order #: **L529819**

Date Received: **13-JUL-07**

Project P.O. #: JDM-EN-79

Job Reference: JERICH0

Legal Site Desc:

CofC Numbers: JDM-EN-79

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-1	L529819-2	L529819-3	L529819-4	L529819-5
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07
		Sampled Time					
		Client ID	0N0E	20N0E	40N0E	50N10E	10N10E
Grouping	Analyte						
SOIL							
Physical Tests	% Moisture (%)		0.2	0.3	0.2	0.2	0.1
	pH (pH)		6.75	6.82	6.78	6.34	7.35
Metals	Antimony (Sb) (mg/kg)		<10	<10	<10	<10	<10
	Arsenic (As) (mg/kg)		5.5	<5.0	<5.0	10.0	<5.0
	Barium (Ba) (mg/kg)		27.6	30.9	29.4	31.0	25.2
	Beryllium (Be) (mg/kg)		<0.50	<0.50	<0.50	<0.50	<0.50
	Cadmium (Cd) (mg/kg)		<0.50	<0.50	<0.50	<0.50	<0.50
	Chromium (Cr) (mg/kg)		16.1	19.7	19.9	19.1	19.1
	Cobalt (Co) (mg/kg)		5.5	6.3	5.9	6.8	5.7
	Copper (Cu) (mg/kg)		9.2	11.4	13.5	14.1	9.8
	Lead (Pb) (mg/kg)		<30	<30	<30	<30	<30
	Mercury (Hg) (mg/kg)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Molybdenum (Mo) (mg/kg)		<4.0	<4.0	<4.0	<4.0	<4.0
	Nickel (Ni) (mg/kg)		12.3	13.9	13.5	13.4	13.3
	Selenium (Se) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<3.0
	Silver (Ag) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Thallium (Tl) (mg/kg)		<1.0	<1.0	<1.0	<1.0	<1.0
	Tin (Sn) (mg/kg)		<5.0	<5.0	<5.0	<5.0	<5.0
	Vanadium (V) (mg/kg)		18.7	22.6	27.2	30.0	18.4
	Zinc (Zn) (mg/kg)		27.0	31.7	26.0	26.6	25.9
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Acenaphthylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benz(a)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(a)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(b)fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(g,h,i)perylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(k)fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Chrysene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Dibenz(a,h)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Fluorene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	2-Methylnaphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Naphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Phenanthrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Pyrene (mg/kg)		0.015	<0.010	<0.010	<0.010	<0.010
	Surrogate: d8-Naphthalene (SS) (%)		80	90	87	91	100

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-6	L529819-7	L529819-8	L529819-9	L529819-10
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07
		Sampled Time					
		Client ID	30N10E	0N30E	20N30E	50N30E	0N50E
Grouping	Analyte						
SOIL							
Physical Tests	% Moisture (%)		0.2	0.3	0.2	0.1	0.2
	pH (pH)		6.22	6.58	6.84	6.66	5.75
Metals	Antimony (Sb) (mg/kg)		<10	<10	<10	<10	<10
	Arsenic (As) (mg/kg)		5.1	<5.0	<5.0	5.3	<5.0
	Barium (Ba) (mg/kg)		30.0	23.3	33.5	28.3	30.0
	Beryllium (Be) (mg/kg)		<0.50	<0.50	<0.50	<0.50	<0.50
	Cadmium (Cd) (mg/kg)		<0.50	<0.50	<0.50	<0.50	<0.50
	Chromium (Cr) (mg/kg)		17.1	16.6	18.6	20.1	17.7
	Cobalt (Co) (mg/kg)		5.3	4.8	5.9	5.8	4.9
	Copper (Cu) (mg/kg)		8.6	8.7	11.0	11.0	9.5
	Lead (Pb) (mg/kg)		<30	<30	<30	<30	<30
	Mercury (Hg) (mg/kg)		<0.0050	<0.0050	<0.0050	<0.0050	0.0095
	Molybdenum (Mo) (mg/kg)		<4.0	<4.0	<4.0	<4.0	<4.0
	Nickel (Ni) (mg/kg)		11.8	11.9	13.7	13.4	12.1
	Selenium (Se) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Silver (Ag) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Thallium (Tl) (mg/kg)		<1.0	<1.0	<1.0	<1.0	<1.0
	Tin (Sn) (mg/kg)		<5.0	<5.0	<5.0	<5.0	<5.0
	Vanadium (V) (mg/kg)		20.8	17.2	29.5	20.8	22.2
	Zinc (Zn) (mg/kg)		22.8	22.9	26.4	27.0	26.0
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Acenaphthylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benz(a)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(a)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(b)fluoranthene (mg/kg)		<0.010	0.013	<0.010	<0.010	<0.010
	Benzo(g,h,i)perylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(k)fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Chrysene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Dibenz(a,h)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Fluorene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	2-Methylnaphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Naphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Phenanthrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Pyrene (mg/kg)		<0.010	0.011	<0.010	<0.010	<0.010
	Surrogate: d8-Naphthalene (SS) (%)		94	77	94	101	89

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-11	L529819-12	L529819-13	L529819-14	L529819-15
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07
		Sampled Time					
		Client ID	20N50E	40N50E	10N70E	30N70E	50N70E
Grouping	Analyte						
SOIL							
Physical Tests	% Moisture (%)		0.2	0.1	0.2	0.1	0.1
	pH (pH)		6.19	6.77	6.16	5.46	5.89
Metals	Antimony (Sb) (mg/kg)		<10	<10	<10	<10	<10
	Arsenic (As) (mg/kg)		<5.0	<5.0	<5.0	5.6	5.3
	Barium (Ba) (mg/kg)		24.6	24.7	26.8	27.0	29.4
	Beryllium (Be) (mg/kg)		<0.50	<0.50	<0.50	<0.50	<0.50
	Cadmium (Cd) (mg/kg)		<0.50	<0.50	<0.50	<0.50	<0.50
	Chromium (Cr) (mg/kg)		16.2	19.4	19.5	19.3	20.1
	Cobalt (Co) (mg/kg)		5.4	5.5	5.4	6.9	6.6
	Copper (Cu) (mg/kg)		9.9	8.6	7.4	13.6	13.7
	Lead (Pb) (mg/kg)		<30	<30	<30	<30	<30
	Mercury (Hg) (mg/kg)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Molybdenum (Mo) (mg/kg)		<4.0	<4.0	<4.0	<4.0	<4.0
	Nickel (Ni) (mg/kg)		12.7	13.1	12.2	15.1	14.1
	Selenium (Se) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Silver (Ag) (mg/kg)		<2.0	<2.0	<2.0	<2.0	<2.0
	Thallium (Tl) (mg/kg)		<1.0	<1.0	<1.0	<1.0	<1.0
	Tin (Sn) (mg/kg)		<5.0	<5.0	<5.0	<5.0	<5.0
	Vanadium (V) (mg/kg)		19.3	19.9	19.4	24.4	25.2
	Zinc (Zn) (mg/kg)		27.0	32.8	29.0	26.6	28.7
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Acenaphthylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benz(a)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(a)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(b)fluoranthene (mg/kg)		<0.010	0.010	<0.010	<0.010	<0.010
	Benzo(g,h,i)perylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Benzo(k)fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Chrysene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Dibenz(a,h)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Fluoranthene (mg/kg)		<0.010	0.015	<0.010	<0.010	<0.010
	Fluorene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	2-Methylnaphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Naphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Phenanthrene (mg/kg)		<0.010	0.014	<0.010	<0.010	<0.010
	Pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	0.011
	Surrogate: d8-Naphthalene (SS) (%)		91	96	90	89	95

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-16	L529819-17	L529819-18	L529819-19	
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	
		Sampled Time					
		Client ID	0N90E	20N90E	40N90E	JER-G-460-056	
Grouping	Analyte						
SOIL							
Physical Tests	% Moisture (%)		0.1	0.2	0.1	1.3	
	pH (pH)		5.14	6.10	6.18	8.14	
Metals	Antimony (Sb) (mg/kg)		<10	<10	<10	<10	
	Arsenic (As) (mg/kg)		<5.0	10.3	5.8	<5.0	
	Barium (Ba) (mg/kg)		22.5	36.1	30.9	10.9	
	Beryllium (Be) (mg/kg)		<0.50	<0.50	<0.50	<0.50	
	Cadmium (Cd) (mg/kg)		<0.50	<0.50	<0.50	<0.50	
	Chromium (Cr) (mg/kg)		15.0	19.4	21.4	3.0	
	Cobalt (Co) (mg/kg)		4.3	8.0	6.3	<2.0	
	Copper (Cu) (mg/kg)		5.8	13.0	10.5	1.9	
	Lead (Pb) (mg/kg)		<30	<30	<30	<30	
	Mercury (Hg) (mg/kg)		0.0068	<0.0050	<0.0050	<0.0050	
	Molybdenum (Mo) (mg/kg)		<4.0	<4.0	<4.0	<4.0	
	Nickel (Ni) (mg/kg)		9.9	16.7	15.3	<5.0	
	Selenium (Se) (mg/kg)		<2.0	<2.0	<2.0	<2.0	
	Silver (Ag) (mg/kg)		<2.0	<2.0	<2.0	<2.0	
	Thallium (Tl) (mg/kg)		<1.0	<1.0	<1.0	<1.0	
	Tin (Sn) (mg/kg)		<5.0	<5.0	<5.0	<5.0	
	Vanadium (V) (mg/kg)		15.2	20.4	21.9	6.1	
	Zinc (Zn) (mg/kg)		24.8	25.1	25.8	23.8	
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Acenaphthylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Benz(a)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Benzo(a)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Benzo(b)fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Benzo(g,h,i)perylene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Benzo(k)fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Chrysene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Dibenz(a,h)anthracene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Fluoranthene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Fluorene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	2-Methylnaphthalene (mg/kg)		<0.010	0.018	<0.010	<0.010	
	Naphthalene (mg/kg)		<0.010	<0.010	<0.010	<0.010	
	Phenanthrene (mg/kg)		<0.010	0.012	<0.020	<0.010	
	Pyrene (mg/kg)		0.015	<0.010	0.043	<0.010	
	Surrogate: d8-Naphthalene (SS) (%)		99	82	94	105	

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-1	L529819-2	L529819-3	L529819-4	L529819-5
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07
		Sampled Time					
		Client ID	0N0E	20N0E	40N0E	50N10E	10N10E
Grouping	Analyte						
SOIL							
Polycyclic Aromatic Hydrocarbons	Surrogate: d10-Acenaphthene (SS) (%)	81	92	92	89	98	
	Surrogate: d10-Phenanthrene (SS) (%)	88	83	78	90	85	
	Surrogate: d12-Chrysene (SS) (%)	82	84	78	97	87	
Extractable Hydrocarbons	F2 (C10-C16) (mg/kg)	<5	<5	<5	<5	<5	
	F3 (C16-C34) (mg/kg)	140	76	<5	<5	83	
	F4 (C34-C50) (mg/kg)	33	34	7	<5	22	
	F2-Naphth (mg/kg)	<5	<5	<5	<5	<5	
	Surrogate: 2-Bromobenzotrifluoride (%)	100	66	113	58	104	
	F3-PAH (mg/kg)	140	76	<5	<5	83	
	Surrogate: Hexatriacontane (%)	95	82	90	89	99	
	Chromatogram to baseline at nC50	NO	NO	NO	YES	NO	

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-6	L529819-7	L529819-8	L529819-9	L529819-10
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07
		Sampled Time					
		Client ID	30N10E	0N30E	20N30E	50N30E	0N50E
Grouping	Analyte						
SOIL							
Polycyclic Aromatic Hydrocarbons	Surrogate: d10-Acenaphthene (SS) (%)	91	82	95	97	87	
	Surrogate: d10-Phenanthrene (SS) (%)	83	77	87	93	85	
	Surrogate: d12-Chrysene (SS) (%)	86	79	96	96	89	
Extractable Hydrocarbons	F2 (C10-C16) (mg/kg)	<5	<5	<5	<5	<5	
	F3 (C16-C34) (mg/kg)	11	65	61	<5	140	
	F4 (C34-C50) (mg/kg)	<5	<5	18	<5	45	
	F2-Naphth (mg/kg)	<5		<5	<5	<5	
	Surrogate: 2-Bromobenzotrifluoride (%)	66	78	122	122	125	
	F3-PAH (mg/kg)	11		61	<5	140	
	Surrogate: Hexatriacontane (%)	101	99	114	102	111	
	Chromatogram to baseline at nC50	YES	YES	NO	YES	NO	

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-11	L529819-12	L529819-13	L529819-14	L529819-15
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07
		Sampled Time					
		Client ID	20N50E	40N50E	10N70E	30N70E	50N70E
Grouping	Analyte						
SOIL							
Polycyclic Aromatic Hydrocarbons	Surrogate: d10-Acenaphthene (SS) (%)	88	90	86	82	89	
	Surrogate: d10-Phenanthrene (SS) (%)	86	92	85	84	83	
	Surrogate: d12-Chrysene (SS) (%)	88	93	91	90	86	
Extractable Hydrocarbons	F2 (C10-C16) (mg/kg)	<5	<5	<5	<5	<5	
	F3 (C16-C34) (mg/kg)	520	11	50	<5	44	
	F4 (C34-C50) (mg/kg)	46	<5	13	<5	<5	
	F2-Naphth (mg/kg)	<5	<5	<5	<5	<5	
	Surrogate: 2-Bromobenzotrifluoride (%)	143	129	123	123	119	
	F3-PAH (mg/kg)	520	11	50	<5	44	
	Surrogate: Hexatriacontane (%)	121	101	112	103	96	
	Chromatogram to baseline at nC50	NO	YES	NO	YES	YES	

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L529819-16	L529819-17	L529819-18	L529819-19	
		Description					
		Sampled Date	07-JUL-07	07-JUL-07	07-JUL-07	07-JUL-07	
		Sampled Time					
		Client ID	0N90E	20N90E	40N90E	JER-G-460-056	
Grouping	Analyte						
SOIL							
Polycyclic Aromatic Hydrocarbons	Surrogate: d10-Acenaphthene (SS) (%)	91	76	87	101		
	Surrogate: d10-Phenanthrene (SS) (%)	93	77	87	91		
	Surrogate: d12-Chrysene (SS) (%)	95	82	95	98		
Extractable Hydrocarbons	F2 (C10-C16) (mg/kg)	<5	<5	12	<5		
	F3 (C16-C34) (mg/kg)	120	24	140	150		
	F4 (C34-C50) (mg/kg)	52	15	<5	100		
	F2-Naphth (mg/kg)	<5	<5	12	<5		
	Surrogate: 2-Bromobenzotrifluoride (%)	121	120	135	127		
	F3-PAH (mg/kg)	120	24	140	150		
	Surrogate: Hexatriacontane (%)	123	70	102	139		
	Chromatogram to baseline at nC50	NO	NO	YES	NO		

Reference Information

Qualifiers for Individual Parameters Listed:

Qualifier	Description
RAMB	Result Adjusted For Method Blank

Samples with Qualifiers for Individual Parameters as listed above:

Sample Number	Client Sample ID	Qualifier
L529819-1	0N0E	RAMB
L529819-2	20N0E	RAMB
L529819-3	40N0E	RAMB
L529819-4	50N10E	RAMB
L529819-5	10N10E	RAMB
L529819-6	30N10E	RAMB
L529819-7	0N30E	RAMB
L529819-8	20N30E	RAMB
L529819-9	50N30E	RAMB
L529819-10	0N50E	RAMB
L529819-11	20N50E	RAMB
L529819-12	40N50E	RAMB
L529819-13	10N70E	RAMB
L529819-14	30N70E	RAMB
L529819-15	50N70E	RAMB
L529819-16	0N90E	RAMB
L529819-17	20N90E	RAMB
L529819-19	JER-G-460-056	RAMB

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ETL-TEH-CCME-ED	Soil	CCME Total Extractable Hydrocarbons	CCME CWS-PHC Dec-2000 - Pub# 1310

ETL-TVH,TEH-CCME-ED Soil CCME Total Hydrocarbons CCME CWS-PHC Dec-2000 - Pub# 1310

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

HG-CCME-CVAFS-VA Soil CVAFS Hg in Soil (CCME) CCME

This analysis is carried out using procedures from CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001, and procedures adapted from "Test Methods for Evaluating Solid Waste", SW-846 Method 3050B United States Environmental Protection Agency (EPA). The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve, and a representative subsample of the dry material is weighed. The sample is then digested at 90 degrees Celsius for 2 hours by block digester using a 1:1 ratio of concentrated nitric and hydrochloric acids. Instrumental analysis is by atomic fluorescence spectrophotometry (EPA Method 7000 series).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

MET-CSR-FULL-ICP-VA Soil Metals in Soil by ICPOES (CSR SALM) BCMELP CSR SALM METHOD 8

This analysis is carried out using procedures from CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001, and procedures adapted from "Test Methods for Evaluating Solid Waste", SW-846 Method 3050B United States Environmental Protection Agency (EPA). The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve, and a representative subsample of the dry material is weighed. The sample is then digested at 90 degrees Celsius for 2 hours by block digester using a 1:1 ratio of concentrated nitric and hydrochloric acids. Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

PAH-LL-ASE-MS-VA Soil PAH-Low Level by ASE with GCMS EPA 3540 & 8270

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3545 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses an automated system (Accelerated Solvent Extractor - ASE) to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analysed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation.

PH-1:2-VA Soil CSR pH by 1:2 Water Leach BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the BC WLAP method: pH, Electrometric, Soil and Sediment. The procedure involves mixing the dried (at <60°C) and sieved (10 mesh/2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

PREP-MOISTURE-ED Soil % Moisture Oven dry 105C-Gravimetric

TL-CSR-MS-VA Soil ICPMS TI in Soil by CSR SALM BCMELP CSR SALM Method 8

This analysis is carried out using procedures from CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001, and procedures adapted from "Test Methods for Evaluating Solid Waste", SW-846 Method 3050B United States Environmental Protection Agency (EPA). The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve, and a representative subsample of the dry material is weighed. The sample is then digested at 90 degrees Celsius for 2 hours by either hotplate or block digester using a 1:1 ratio of concentrated nitric and hydrochloric acids. Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
ED	ALS LABORATORY GROUP - EDMONTON, ALBERTA, CANADA	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

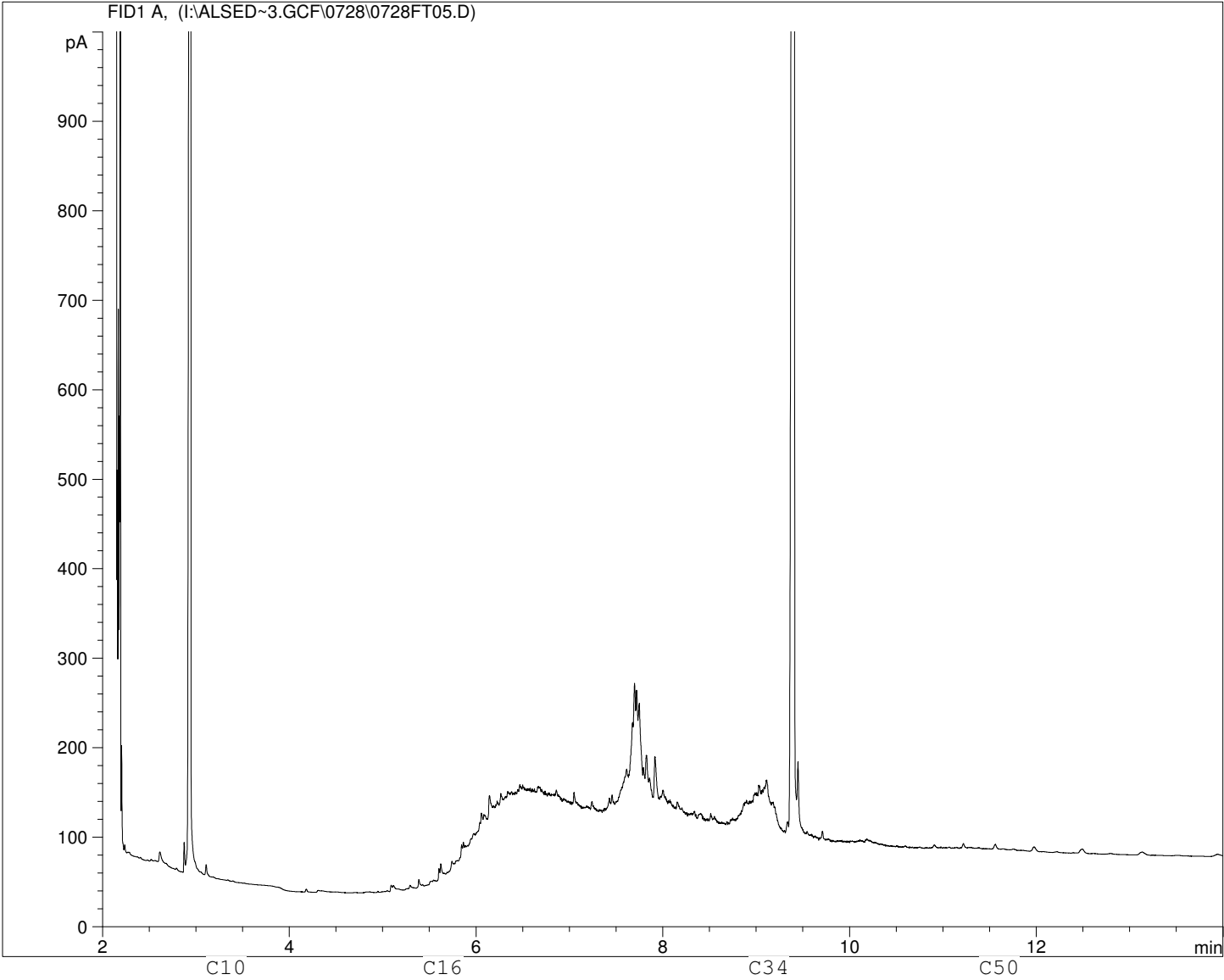
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

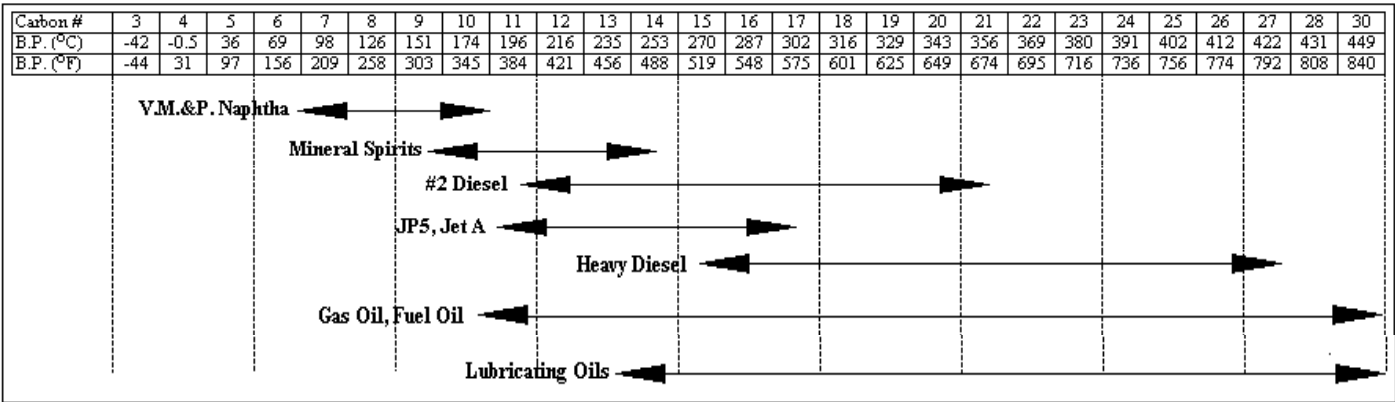
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Instrument: 6890



Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

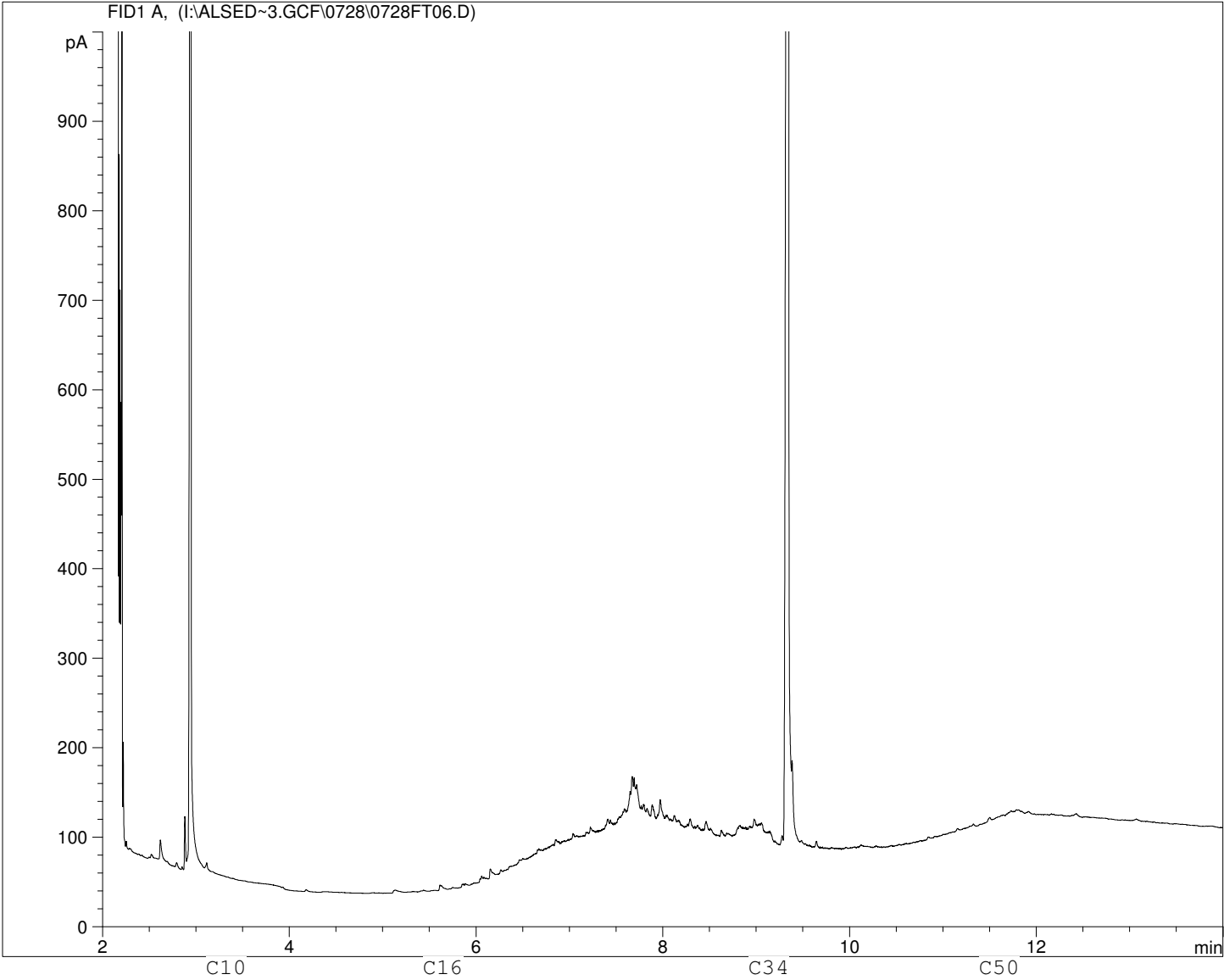


Adapted from: Drews, A.W., ED. Manual on Hydrocarbon Analysis, 4th ed.; American Society for Testing and Materials: Philadelphia, PA., 1989: p XVIII

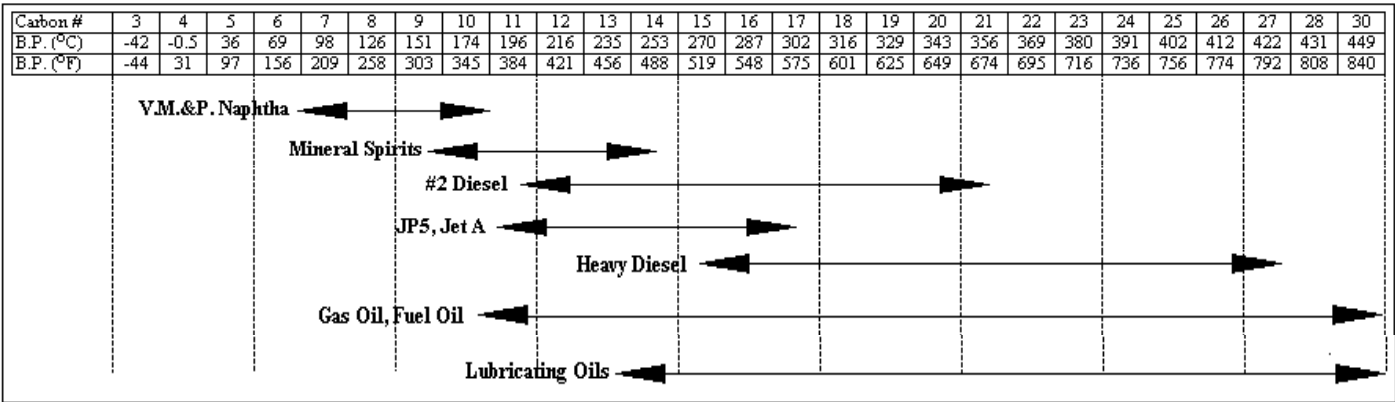
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

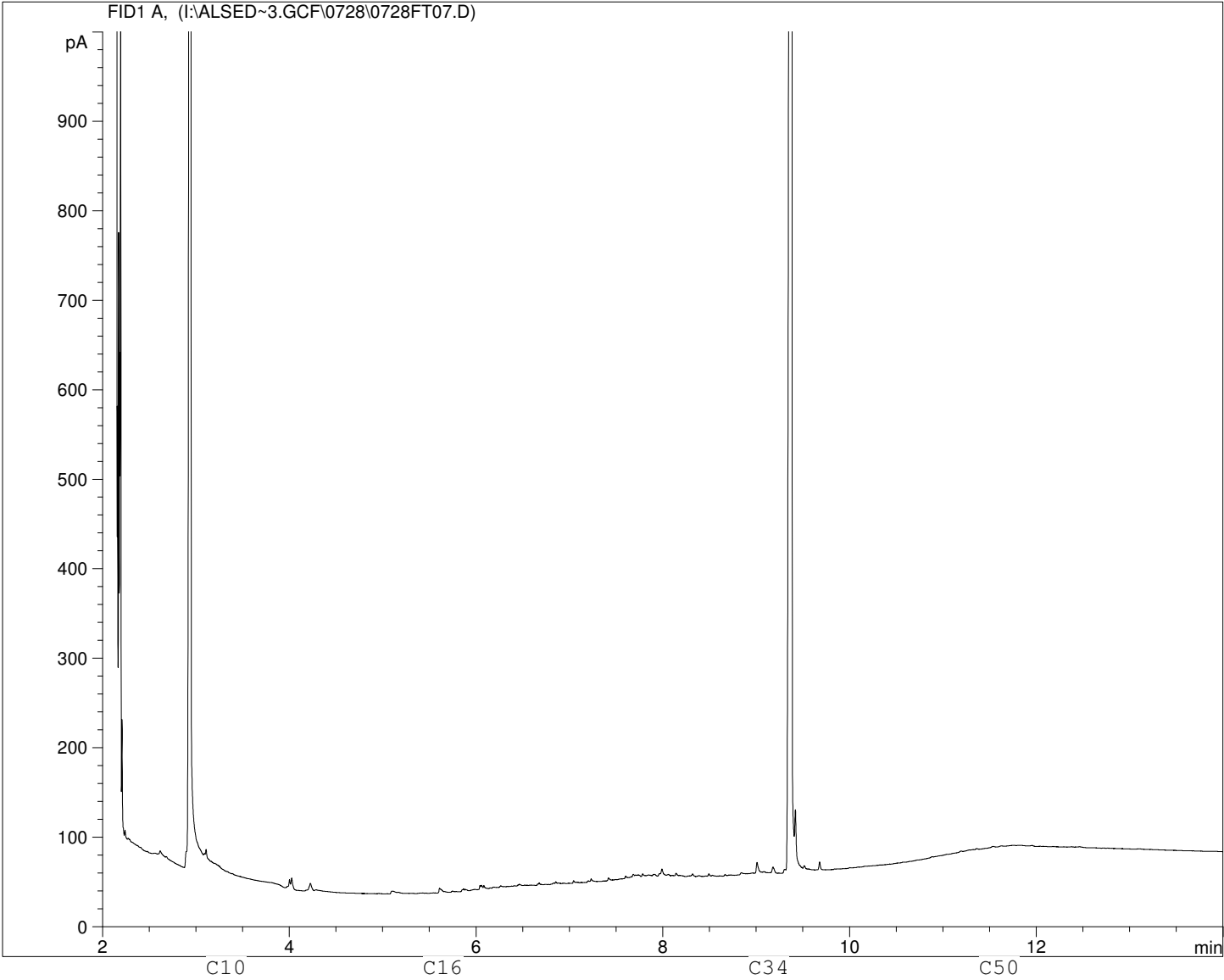


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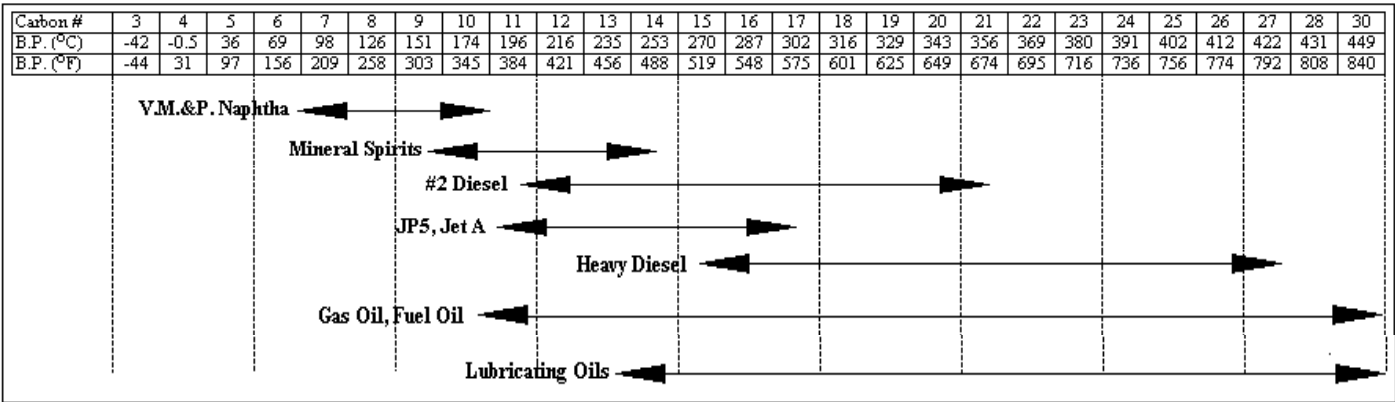
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

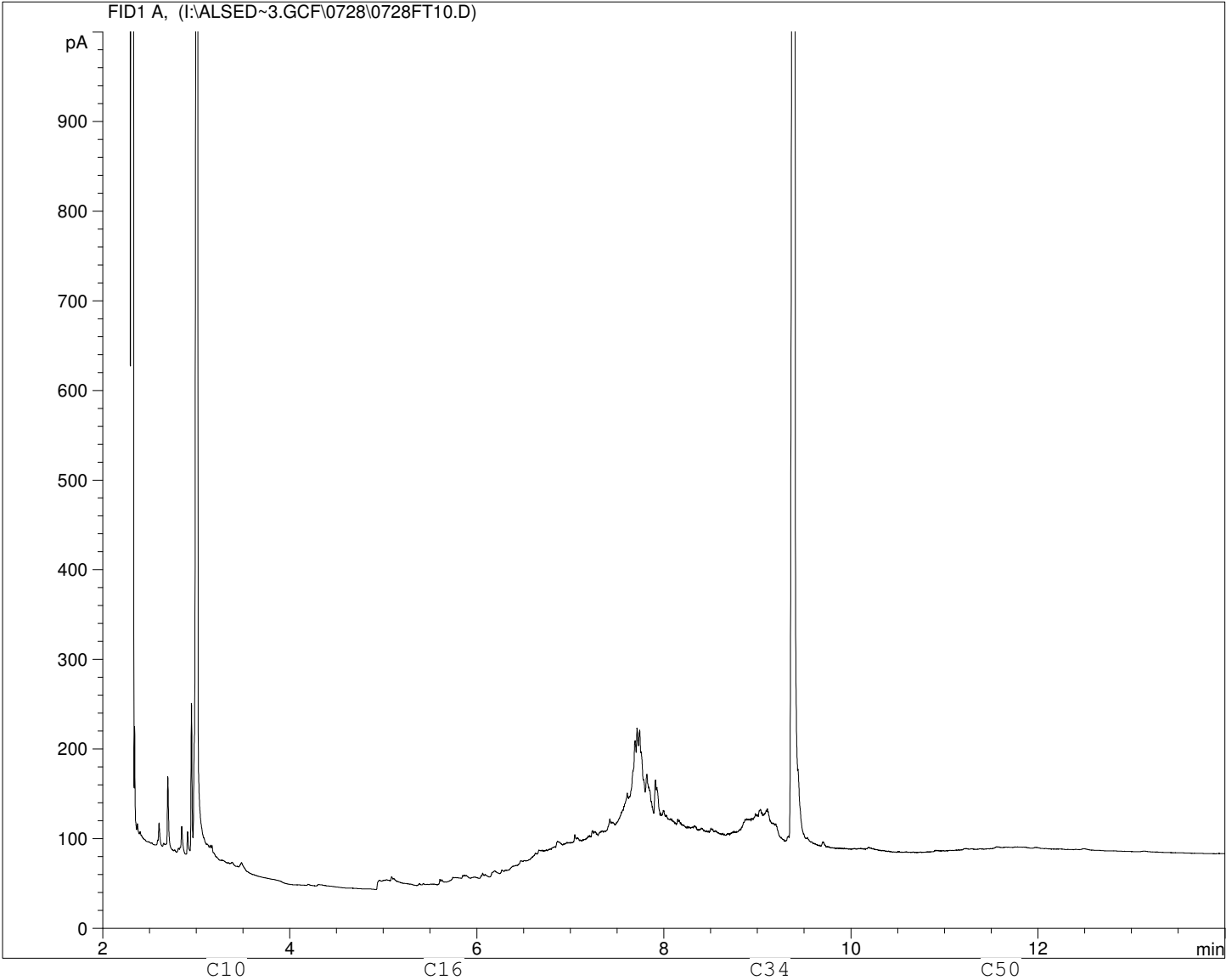


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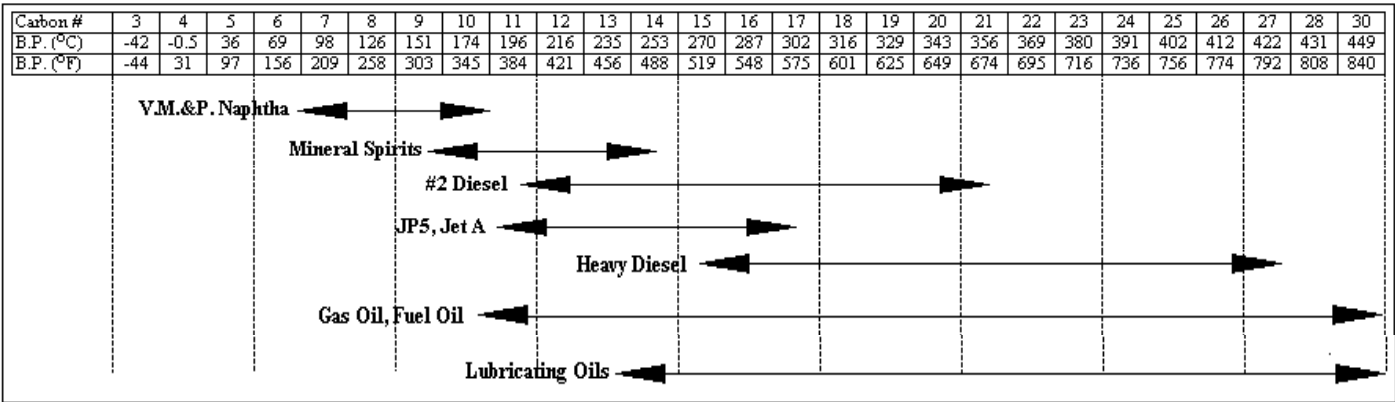
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

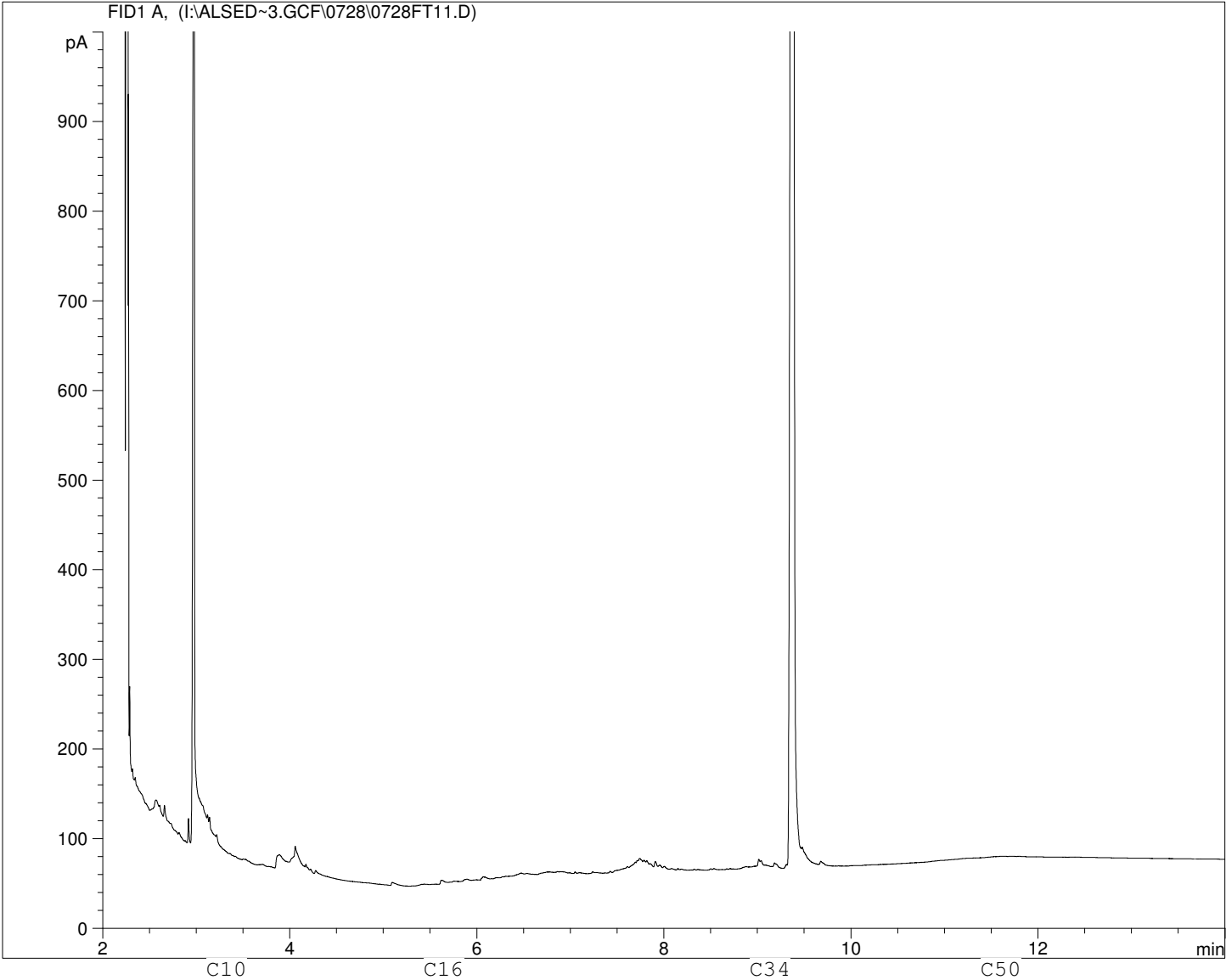


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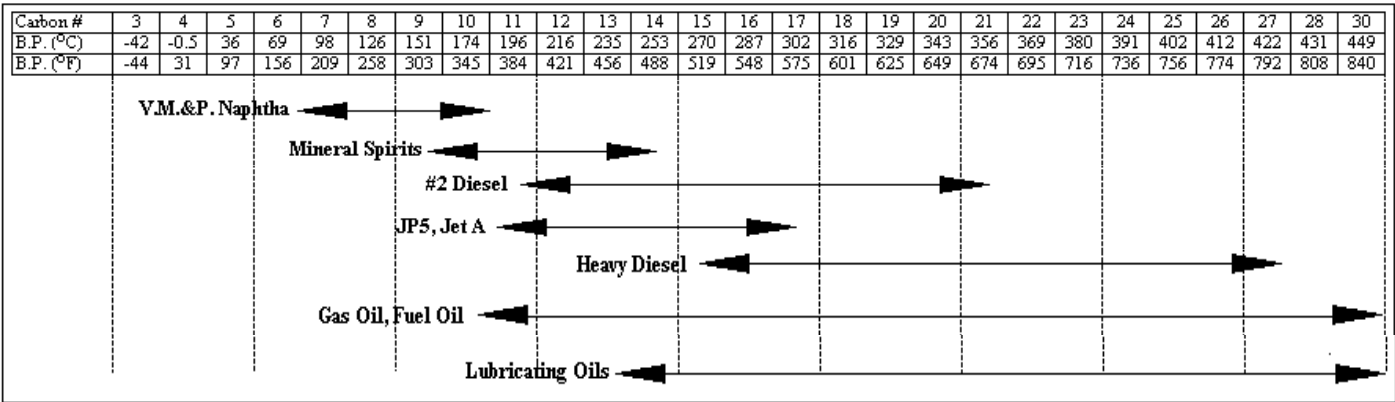
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

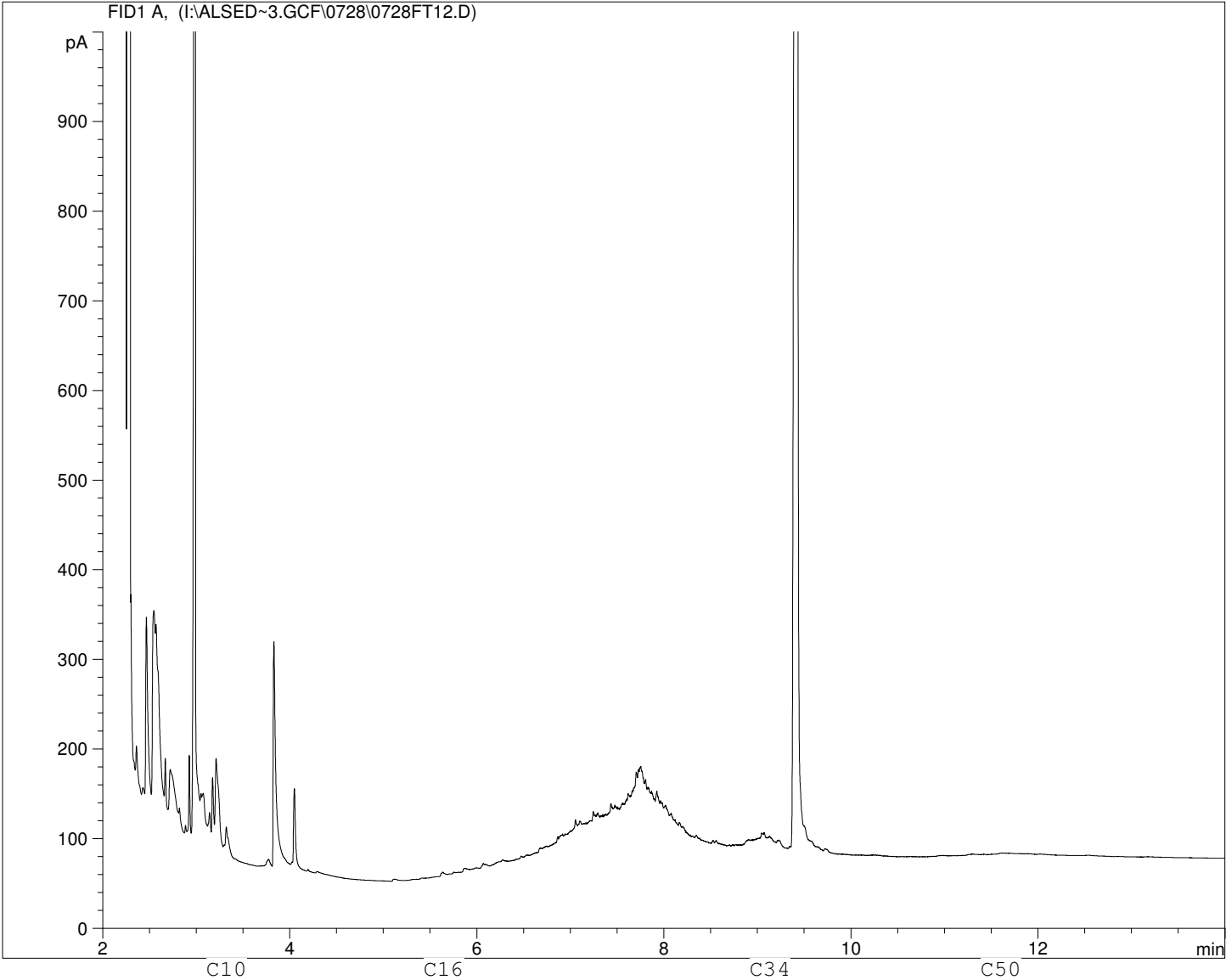


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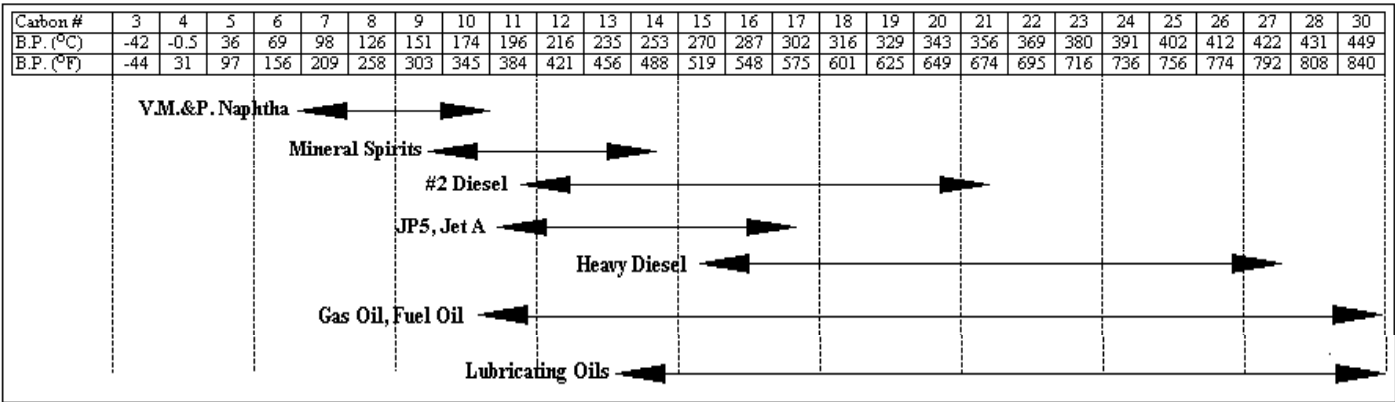
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

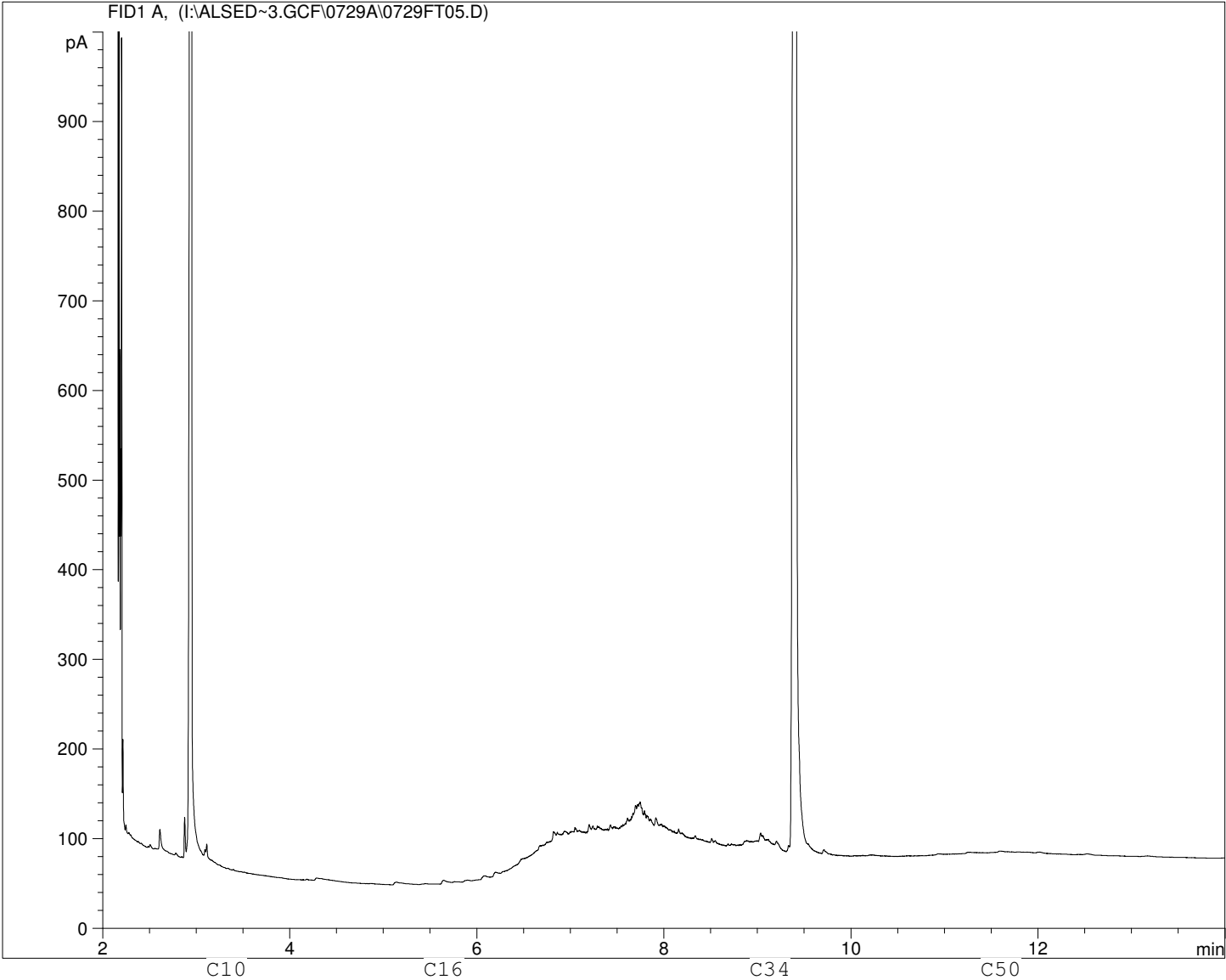


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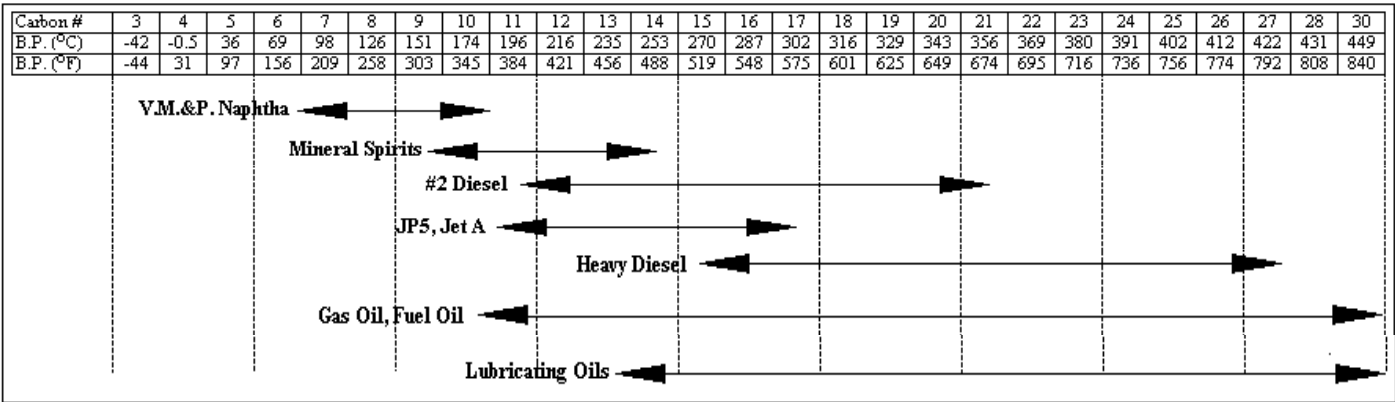
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Instrument: 6890



Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

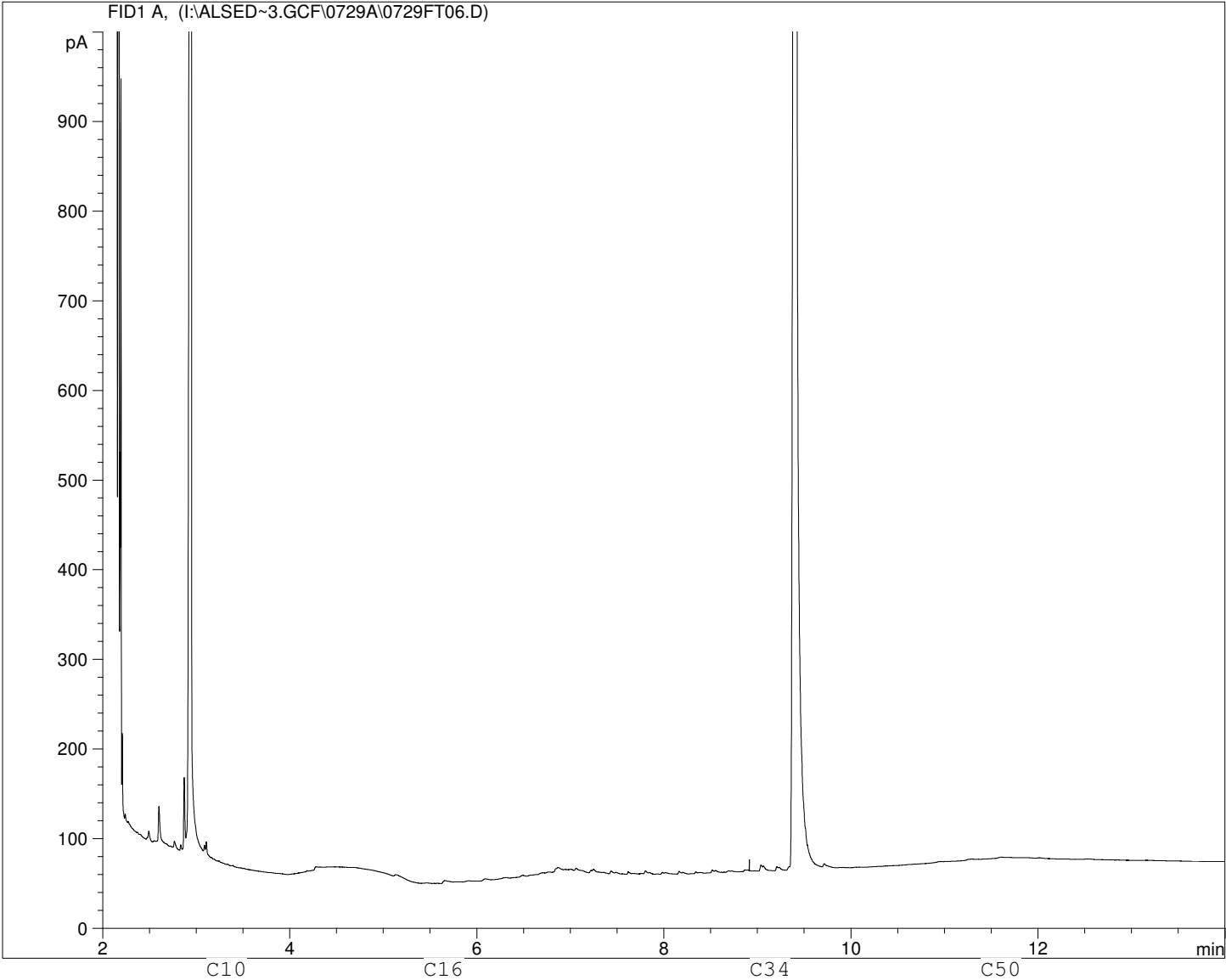


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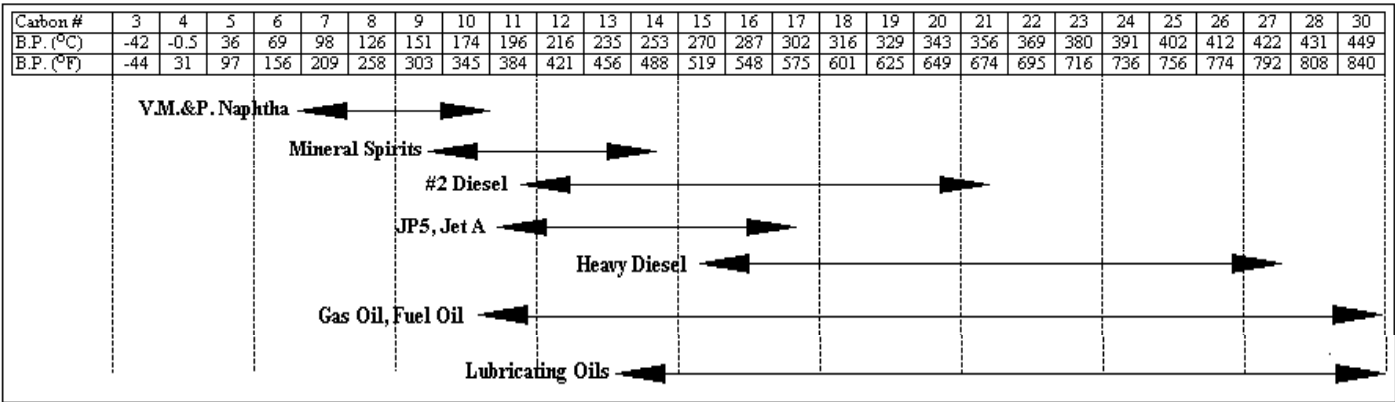
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

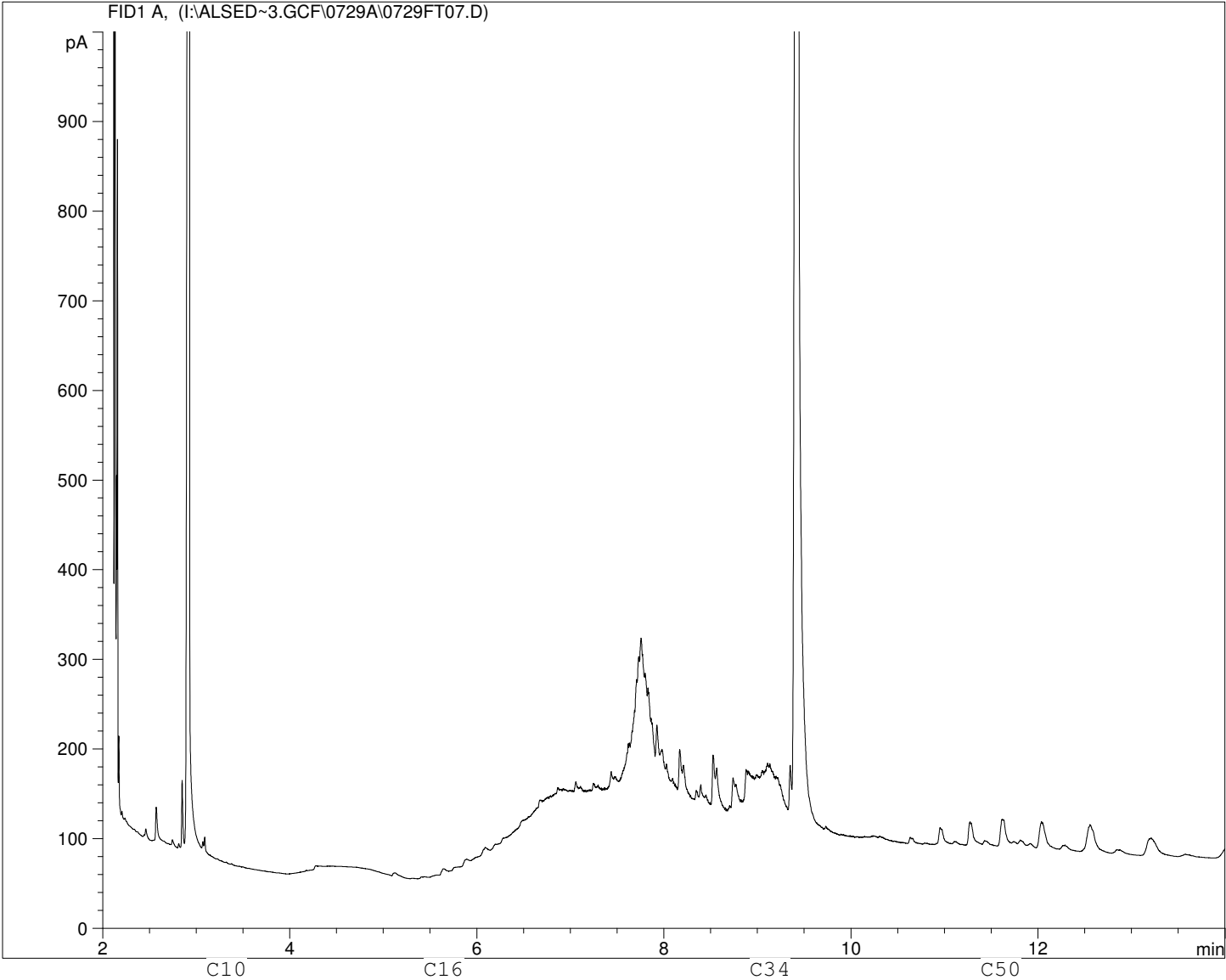


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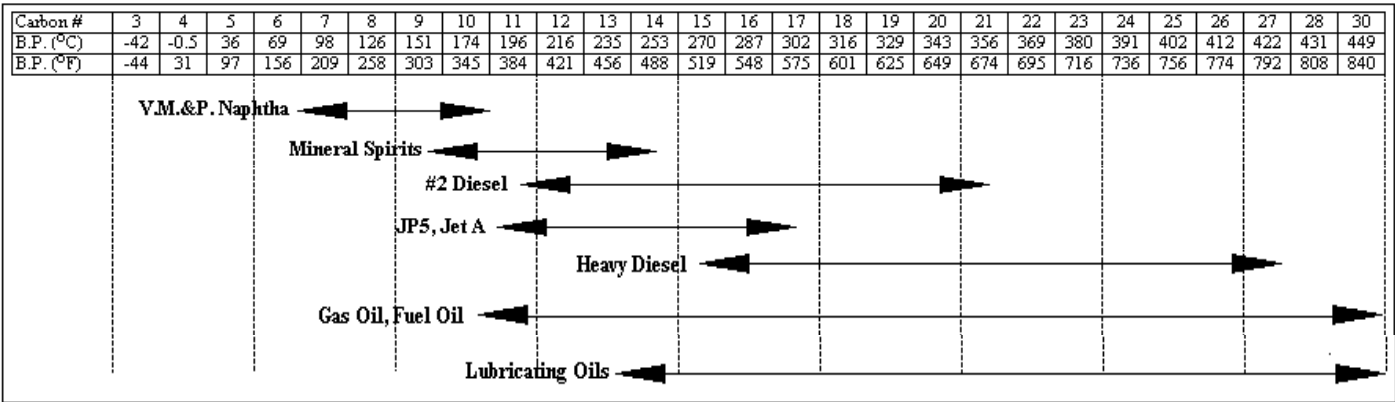
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

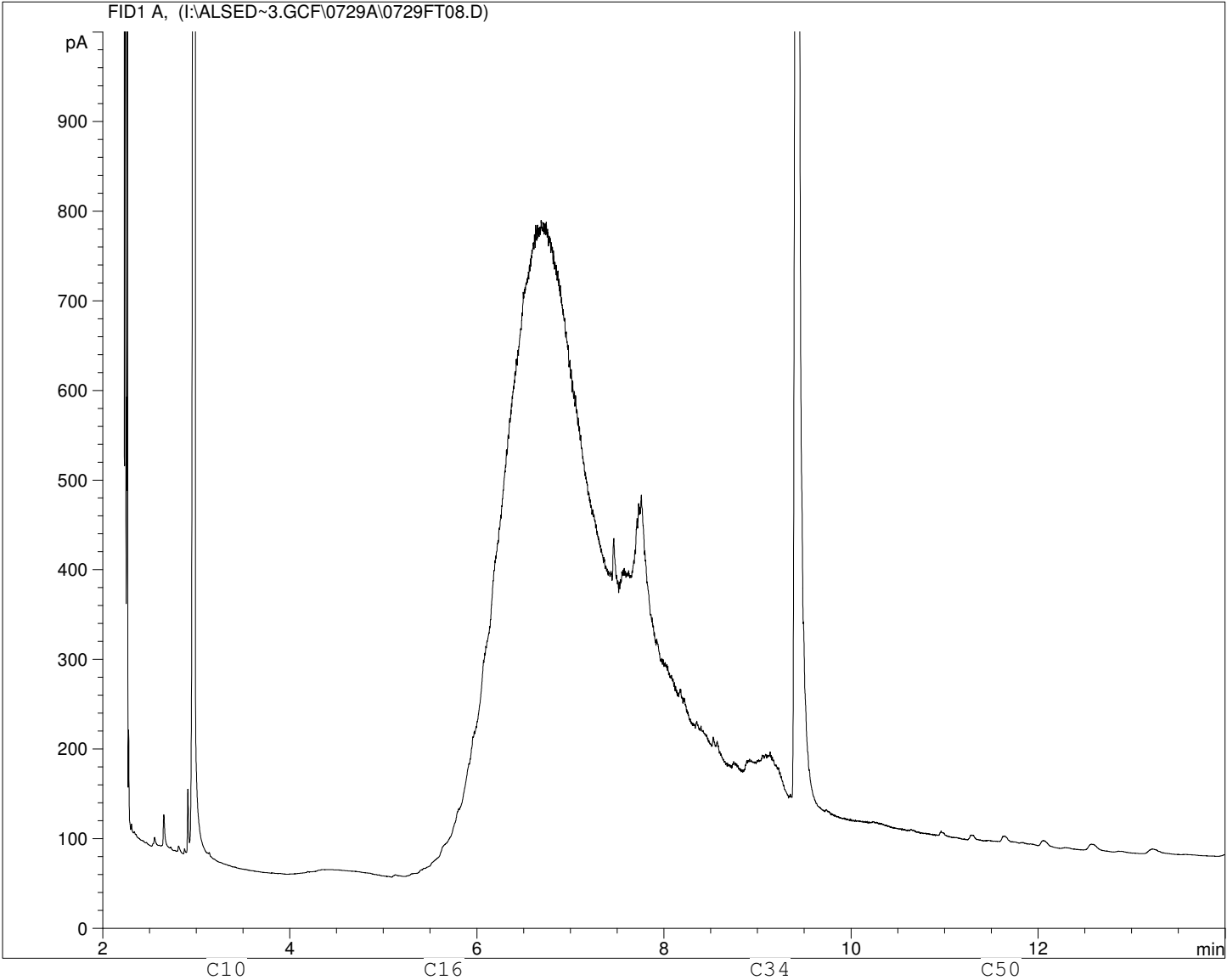


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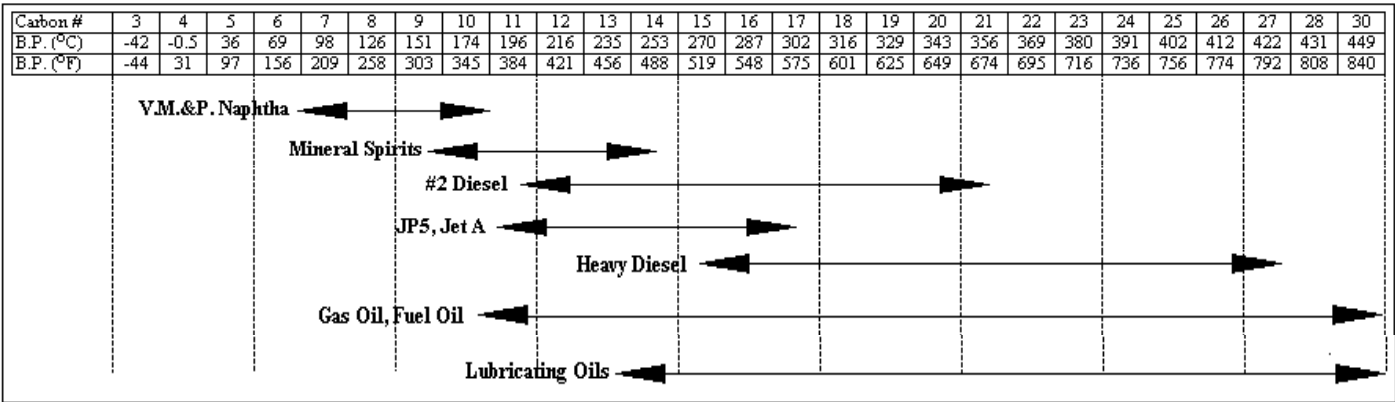
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

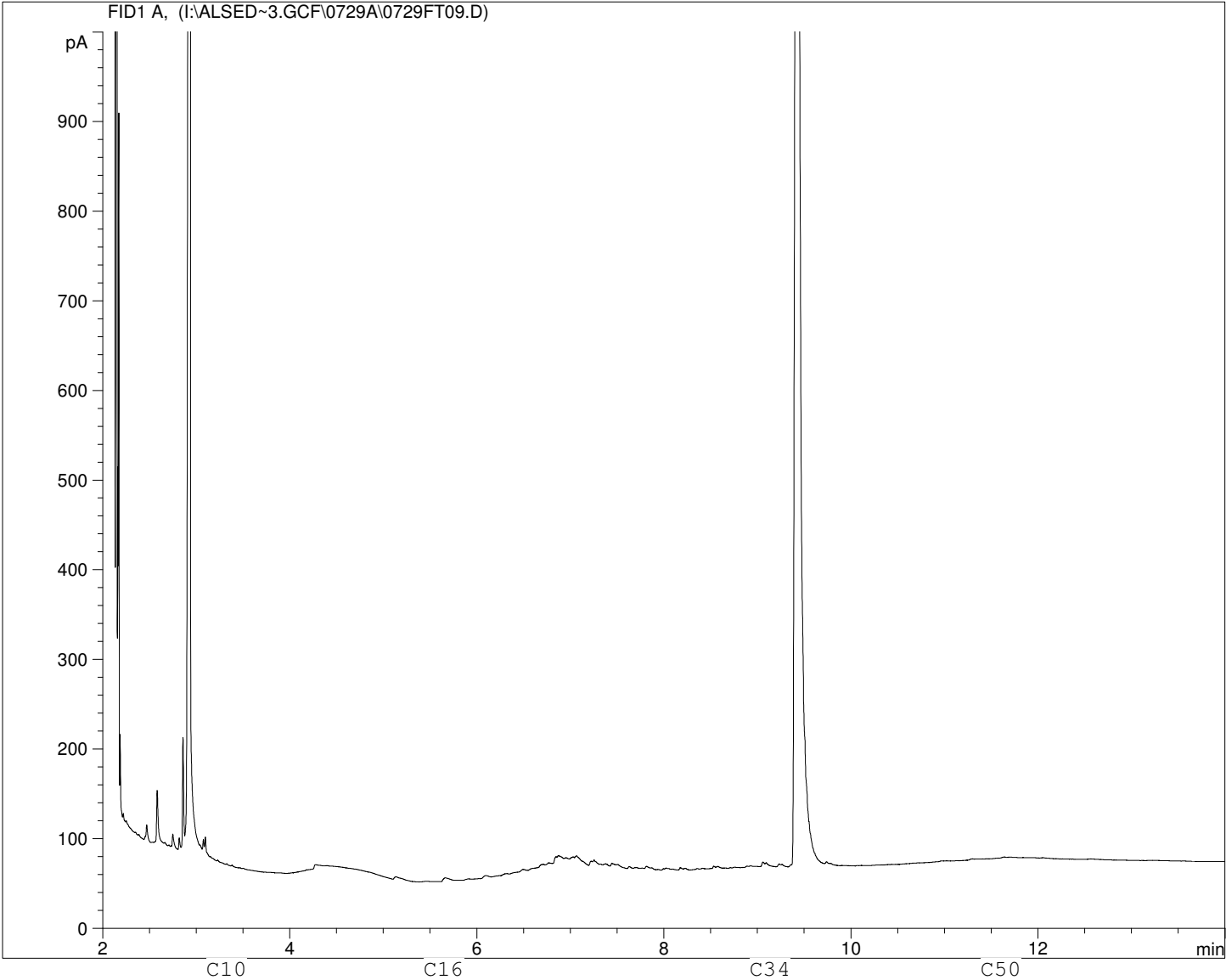


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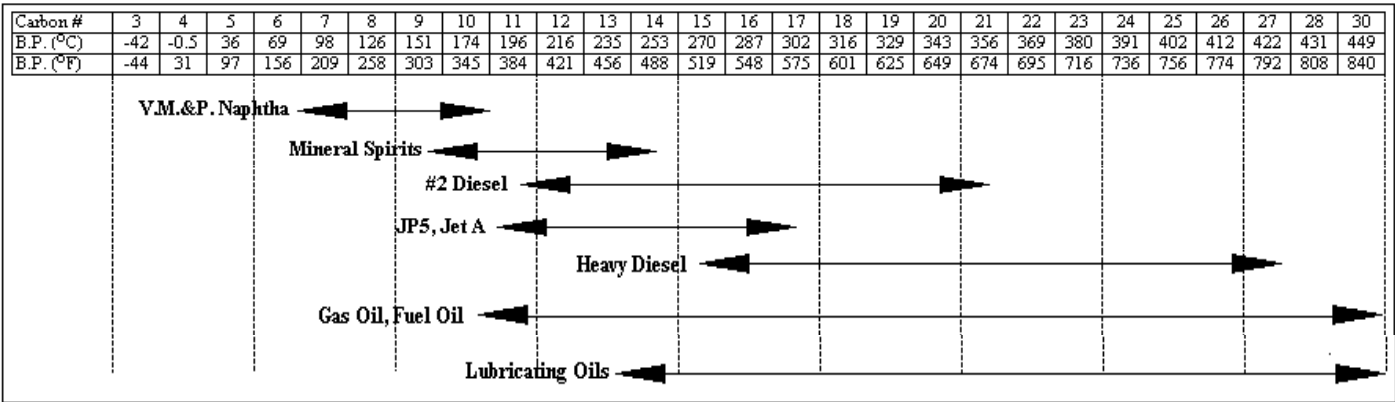
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

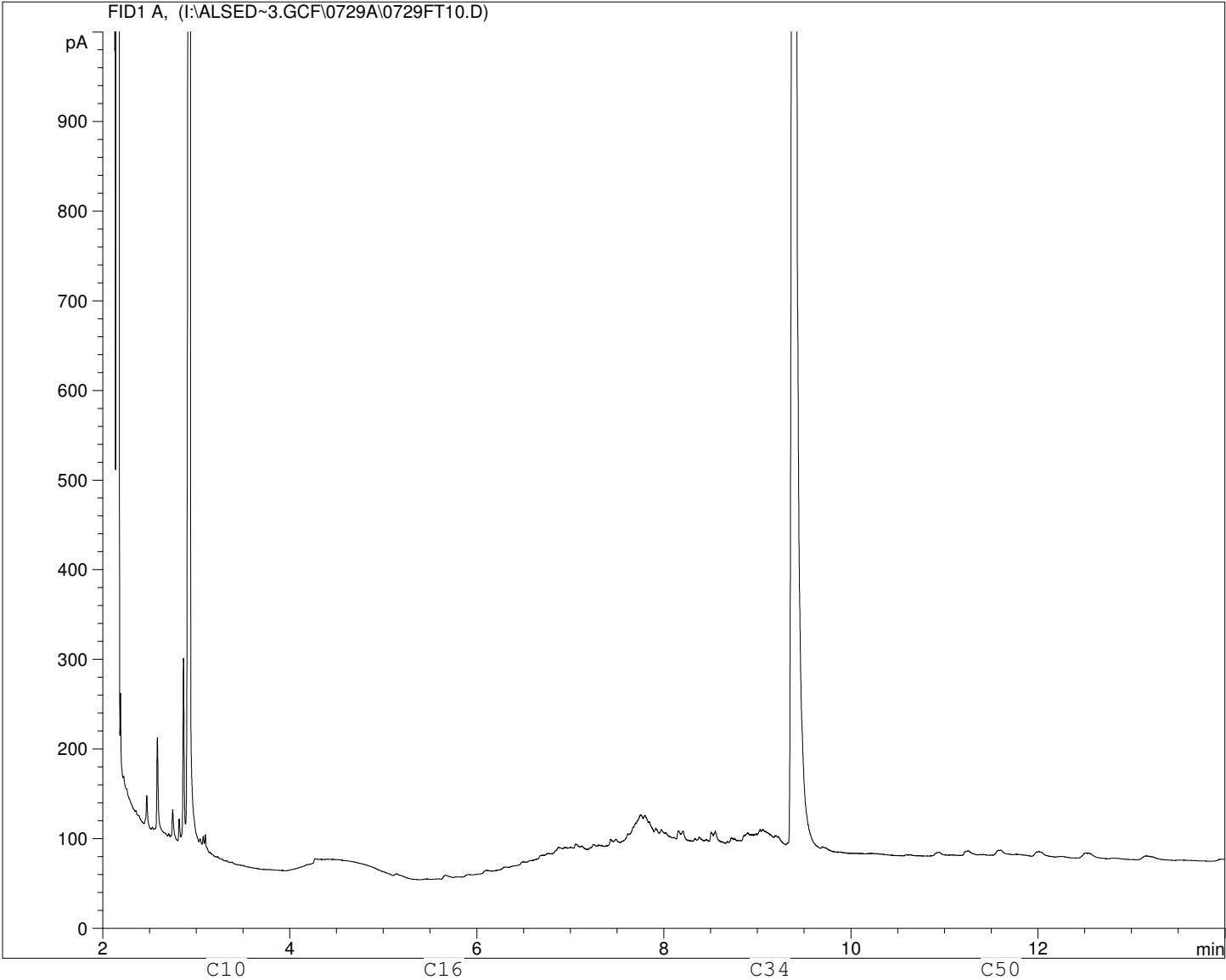


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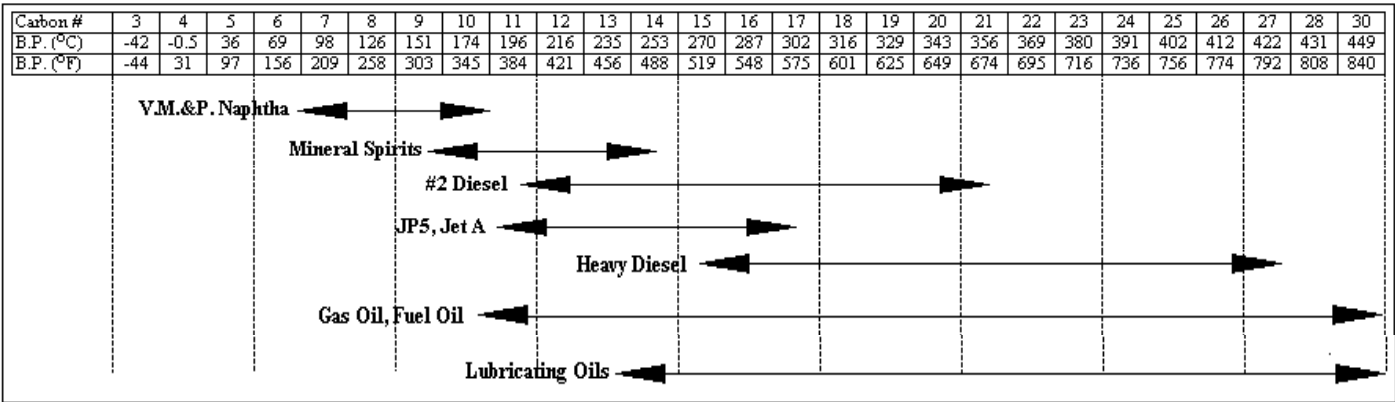
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

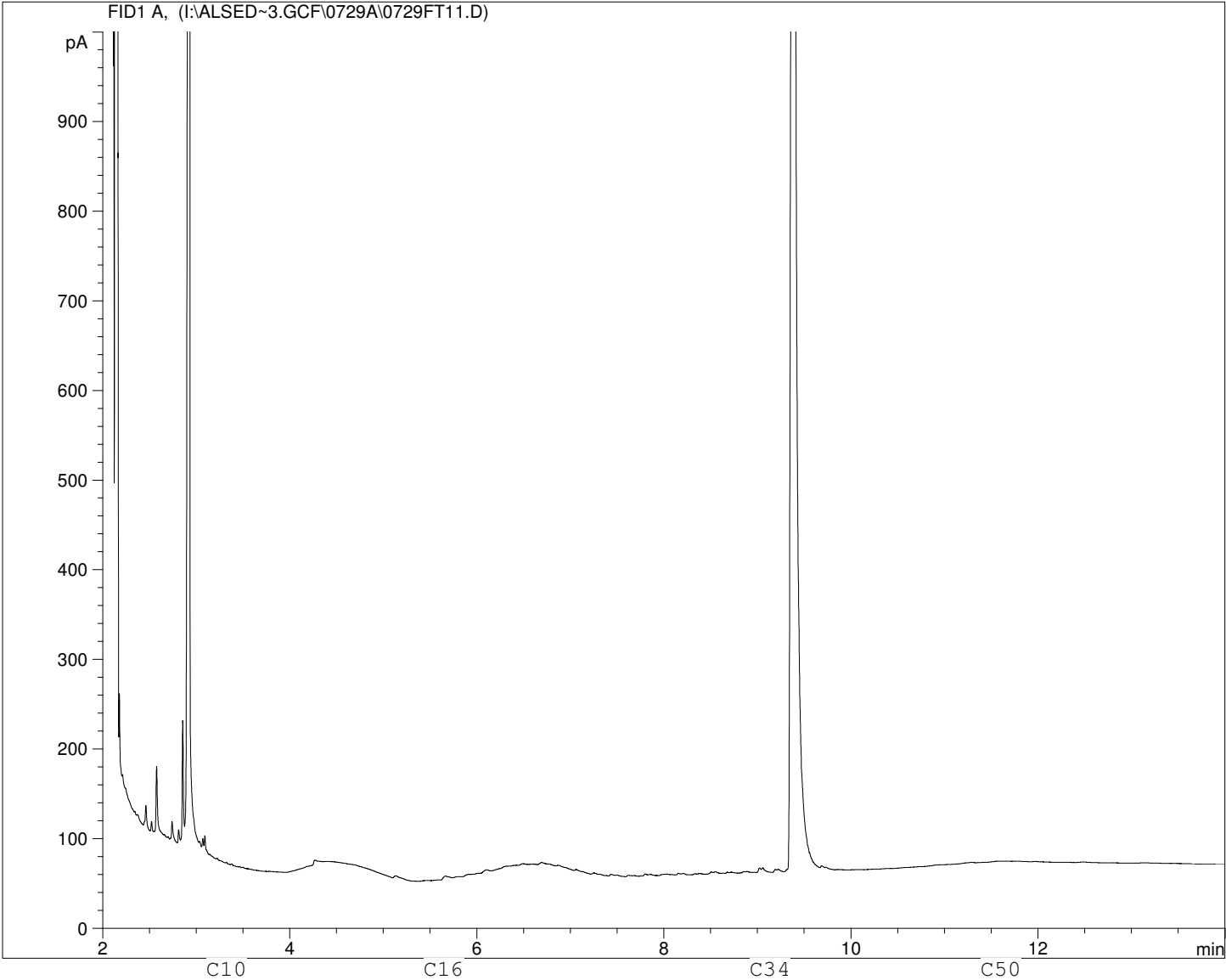


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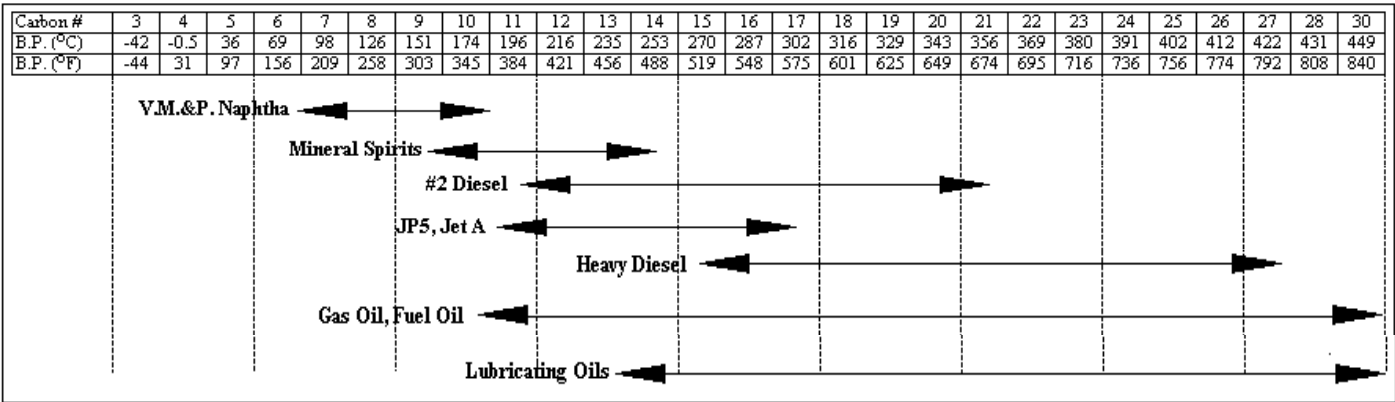
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

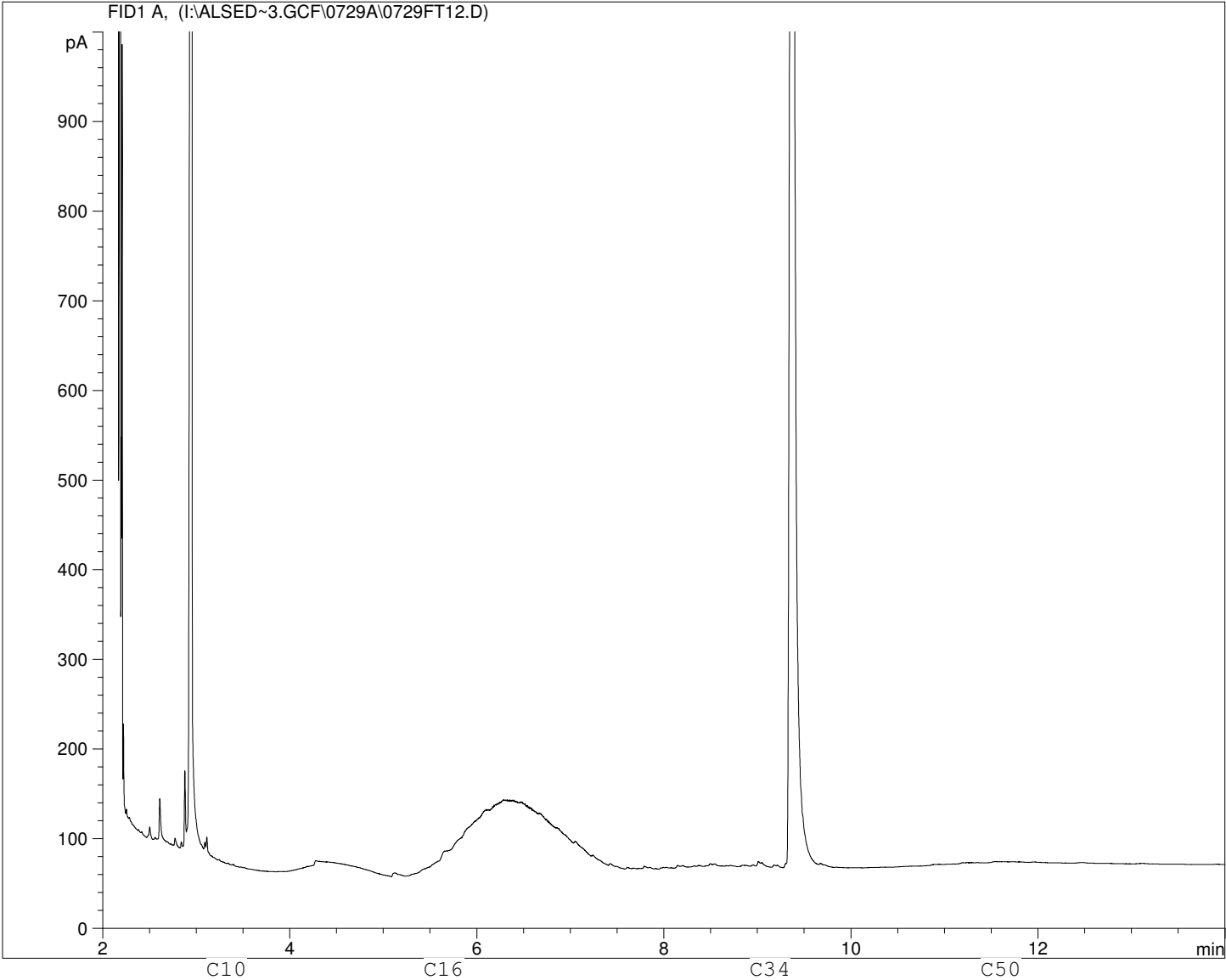


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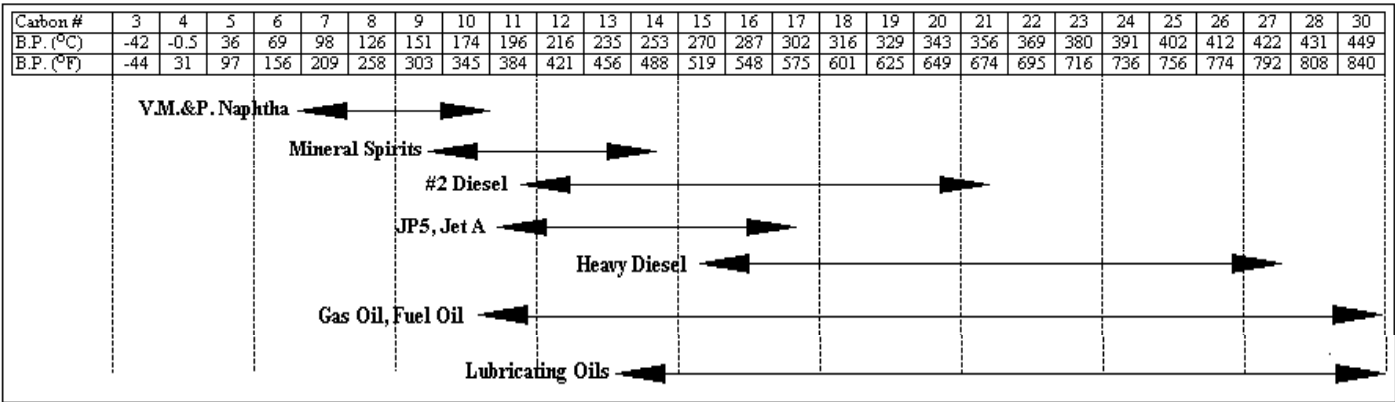
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

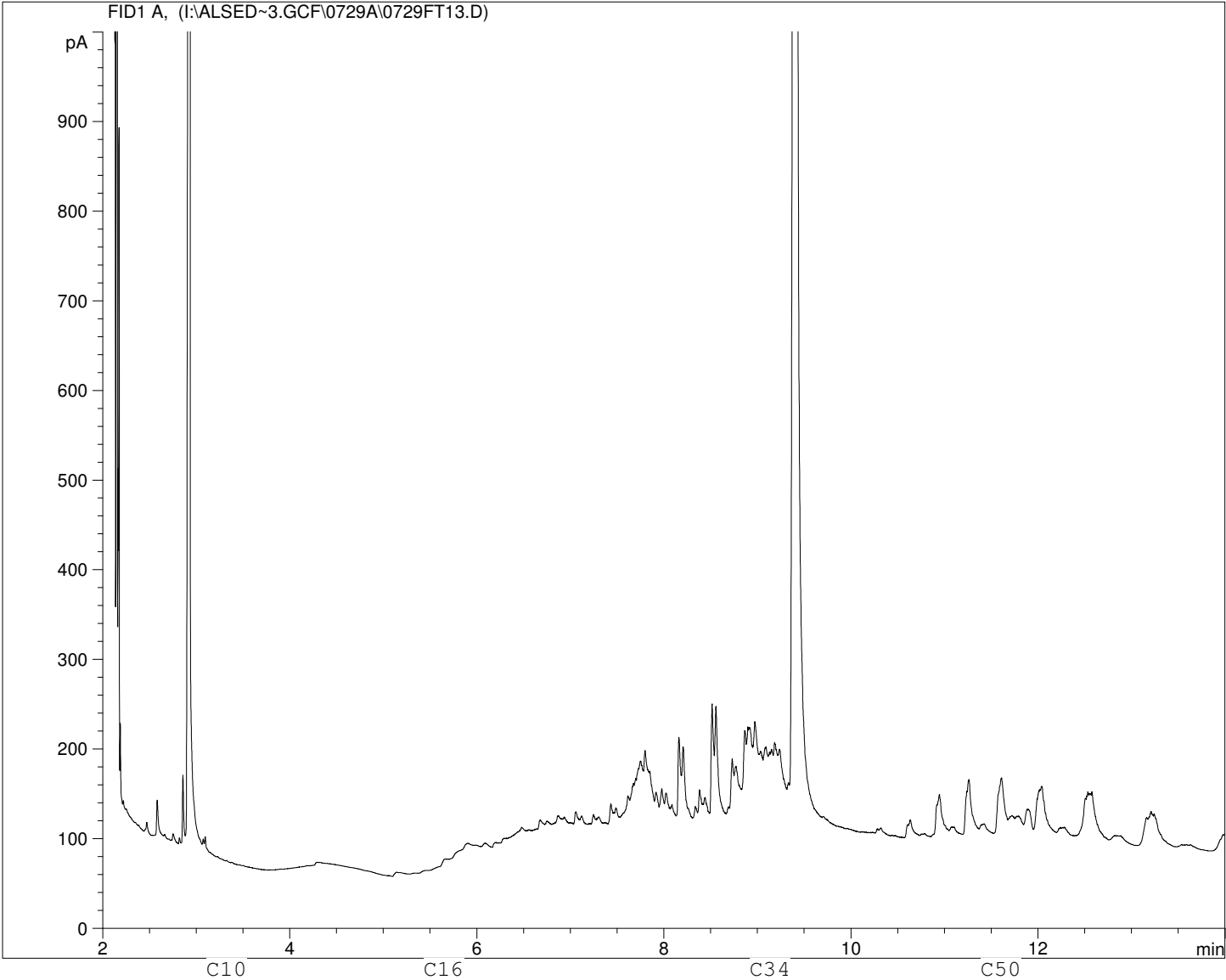


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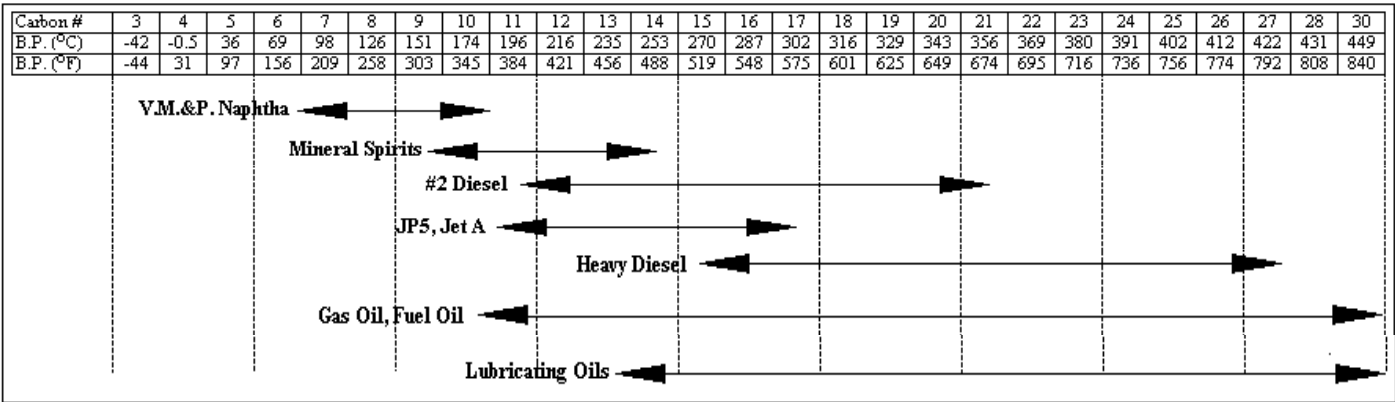
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

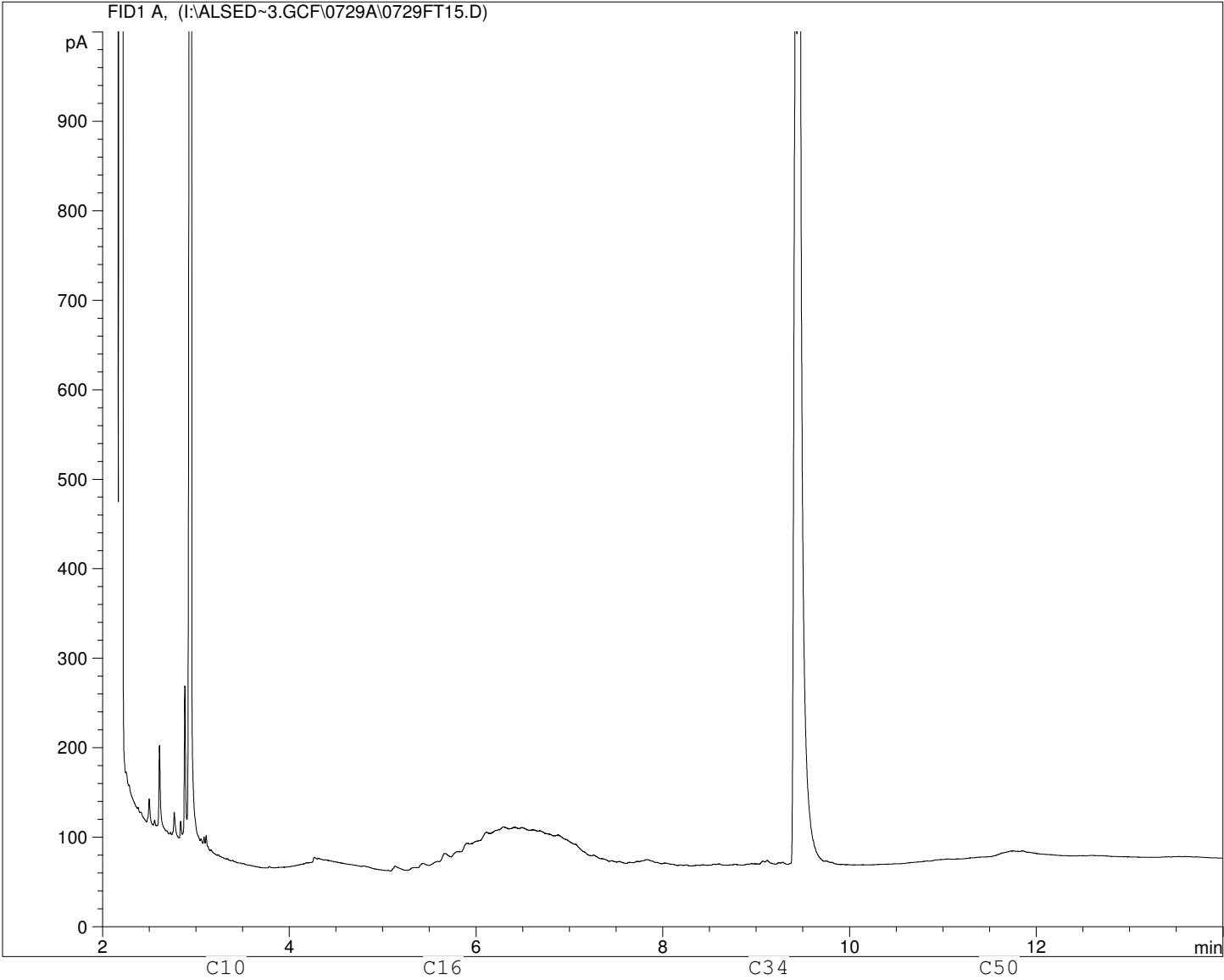


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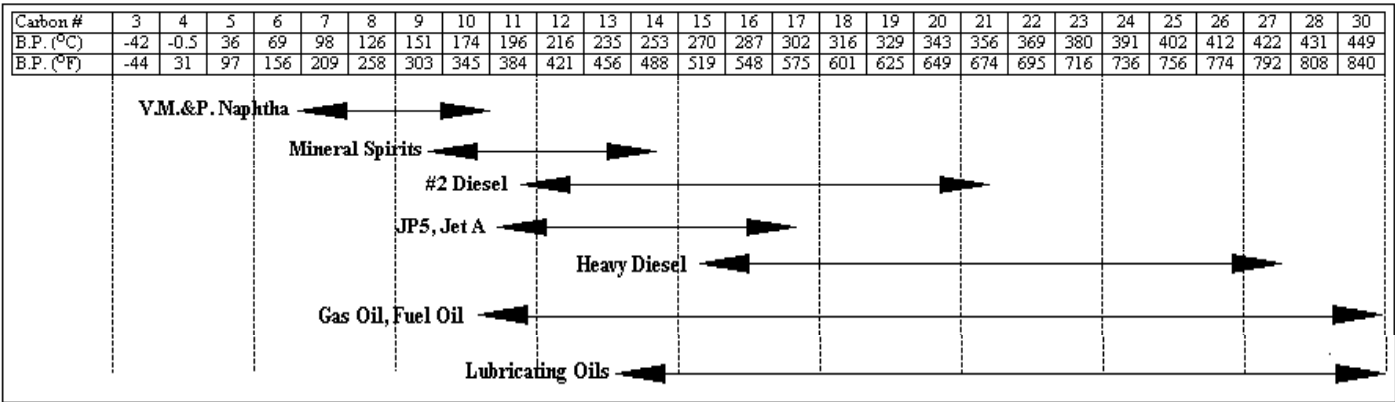
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Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

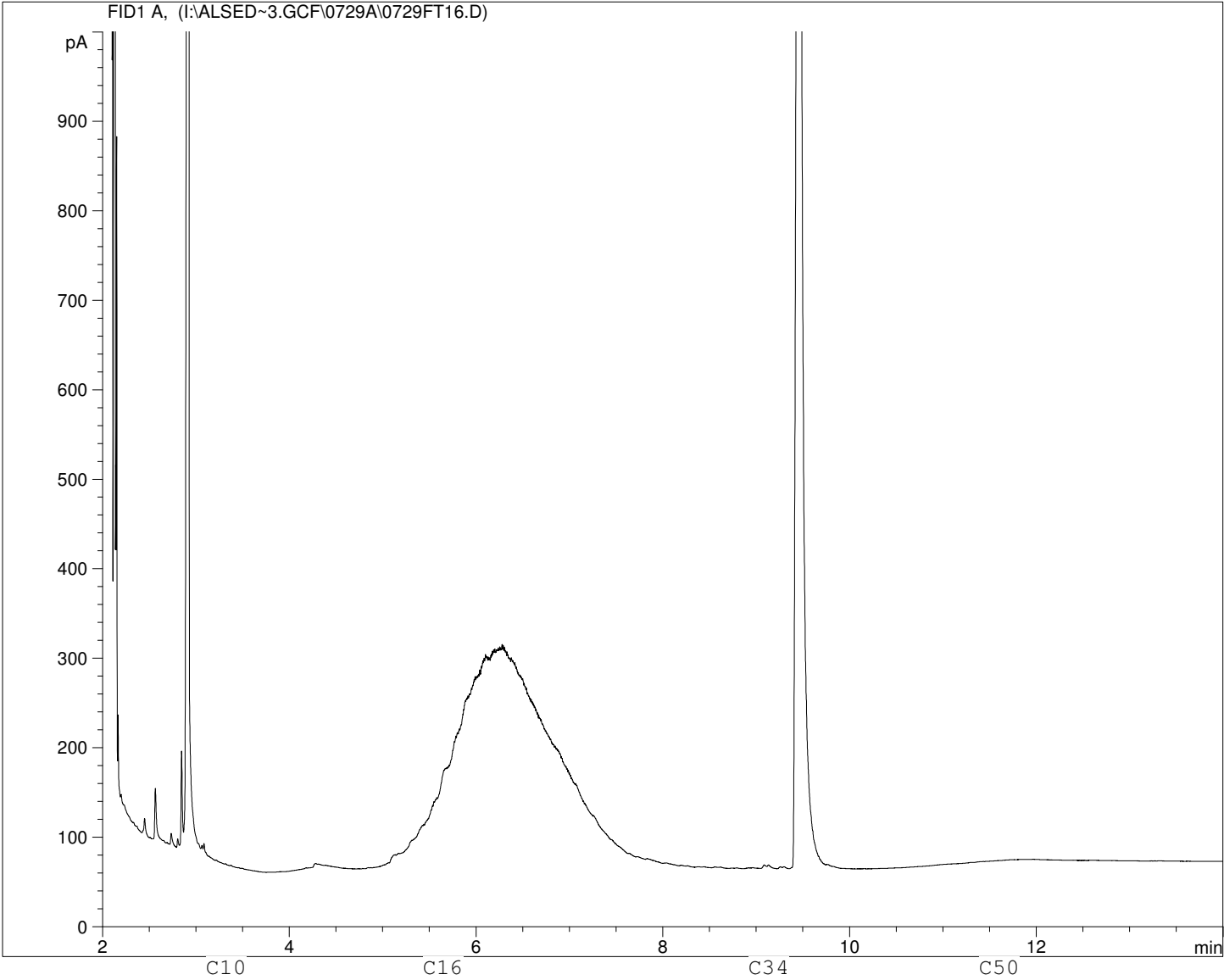


Adapted from: Drews, A.W., ED. Manual on Hydrocarbon Analysis, 4th ed.; American Society for Testing and Materials: Philadelphia, PA., 1989: p XVIII

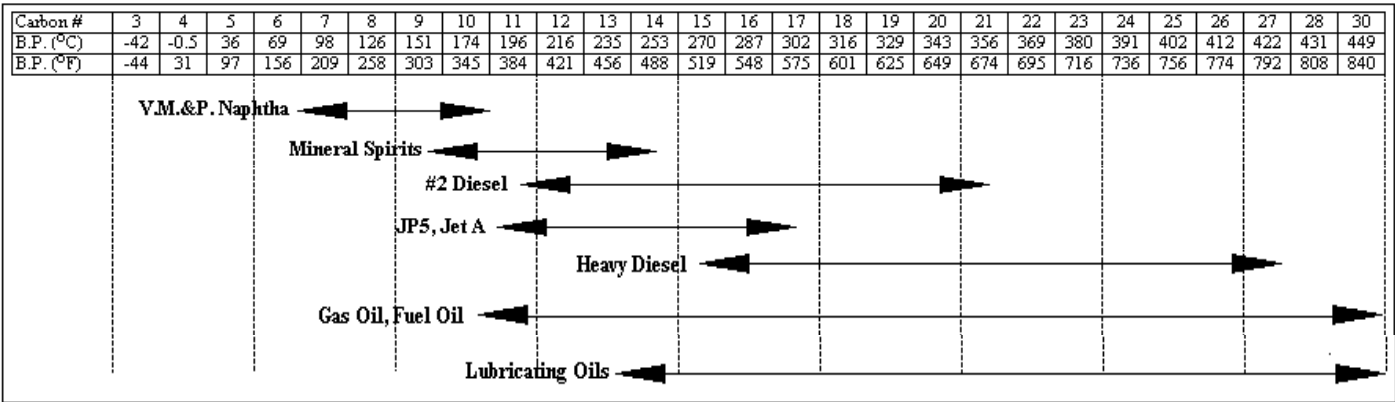
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Sample ID: L529819-18 4
Injection Date: 7/29/07 7:10:11 PM
Instrument: 6890



Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products

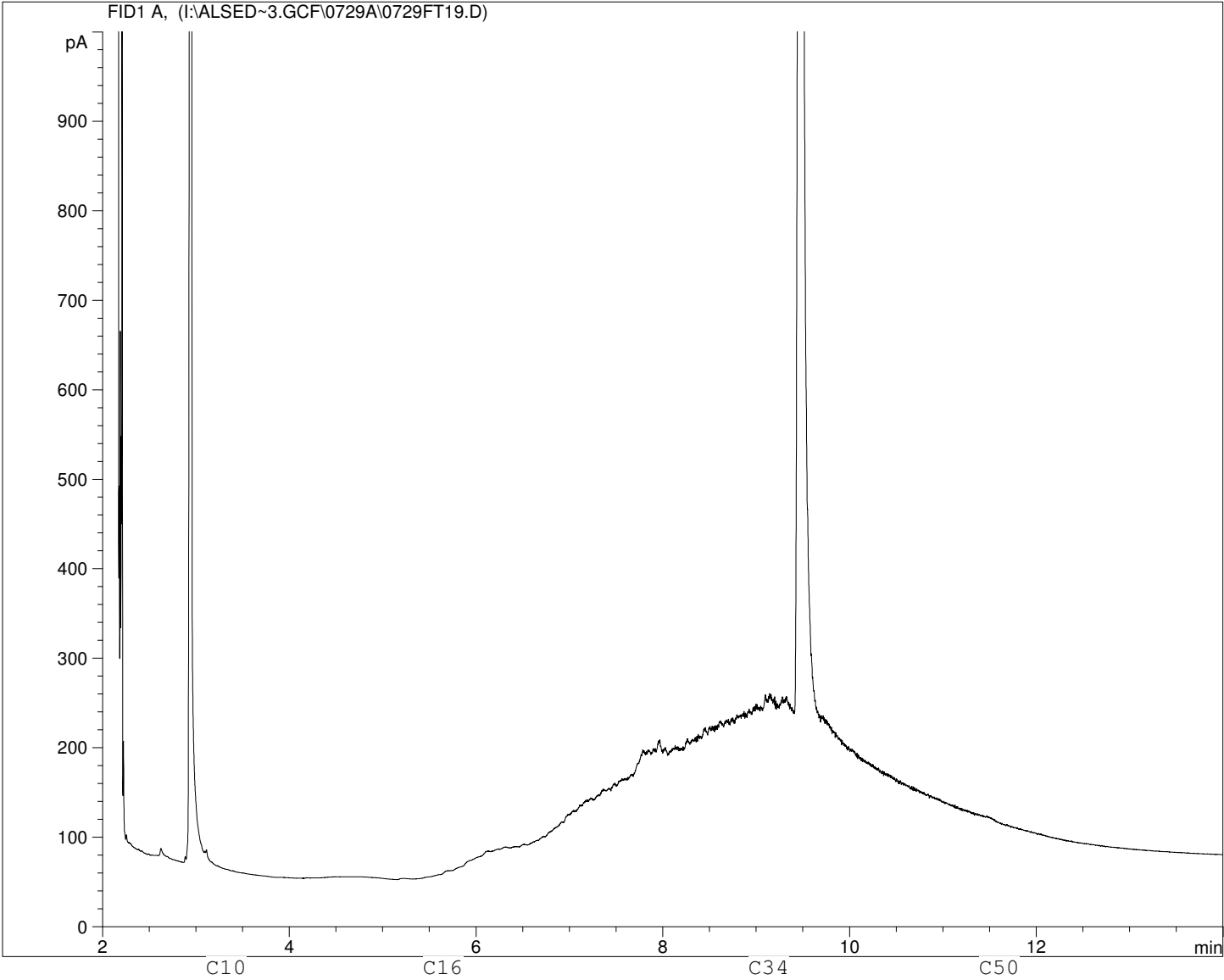


Adapted from: Drews, A.W., ED. Manual on Hydrocarbon Analysis, 4th ed.; American Society for Testing and Materials: Philadelphia, PA., 1989: p XVIII

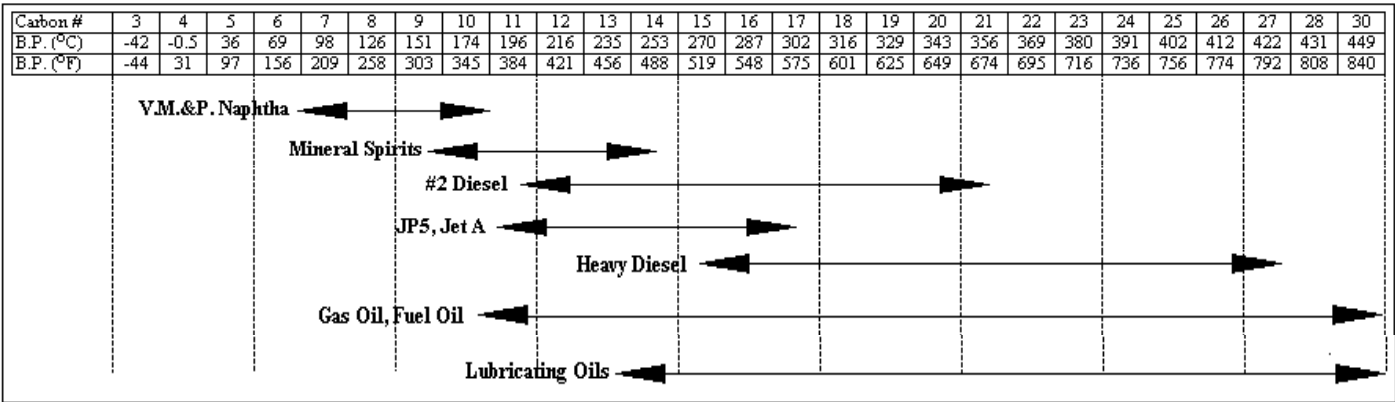
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Sample ID: L529819-19 4
Injection Date: 7/29/07 8:29:11 PM
Instrument: 6890



Total Extractable Hydrocarbons



Boiling Point Distribution Range of Petroleum Based Fuel Products



Adapted from: Drews, A.W., ED. Manual on Hydrocarbon Analysis, 4th ed.; American Society for Testing and Materials: Philadelphia, PA., 1989: p XVIII



L529819

SEND REPORT TO:

CHAIN OF CUSTODY FORM

PAGE 1 OF

COMPANY:		Tahera Diamond Corporation		ATTN:		Environment									
ADDRESS:		Box 2341													
CITY:	Yellowknife	PROV:		POSTAL CODE:	X1A 2P7										
TEL:	780 644-9129	FAX:	780 644-9181	SAMPLER:	B. Ott										
PROJECT NAME AND NO.:		Jericho		QUOTE NO.											
PO NO.:	JDM-EN-79	ALS CONTACT:		Andre Langlais											
REPORT FORMAT:		☐ HARD COPY ☒ EMAIL - ADDRESS: environment@tahera.com ☒ FAX ☒ EXCEL ☒ PDF ☐ OTHER:													
FOR LAB USE ONLY	WO#	SAMPLE IDENTIFICATION		DATE / TIME COLLECTED		Routine	Nutrients	Dissolved Metals-non filtered	Total Metals (CP CCME)	TOC	Fecal Coliforms	Oil and Grease	BOD	TPH (CCME)	PAH (CCME)
				YYYY-MM-DD	TIME										
		Grid Coordinates (18 samples)		2007-07-07											
TURN AROUND REQUIRED:		☒ ROUTINE ☐ RUSH SPECIFY DATE: _____ (surcharge may apply)		RELINQUISHED BY:		DATE: 11 Jul 07		RECEIVED BY: [Signature]		DATE: 13/JUL/07					
SEND INVOICE TO:		☐ SAME AS REPORT ☒ DIFFERENT FROM REPORT (provide details below)		Jericho		TIME: 12:00		TIME: 9:37							
INVOICE FORMAT:		☐ HARD COPY ☐ PDF ☒ FAX		RELINQUISHED BY:		DATE:		RECEIVED BY:		DATE:					
SPECIAL INSTRUCTIONS:		Invoice To: Tahera Diamond Corporation Suite 1900, 130 Adelaide Street West, Toronto On, M5H 3P5 Fax 416 777 1898		FOR LAB USE ONLY		Cooler Seal Intact? Yes ☒ No ☐ N/A		Sample Temperature: 22°C Frozen? Yes ☒ No ☐		Cooling Method? Icepacks ☐ Ice ☒ None					