SHEAR DIAMONDS (NUNAVUT) CORP.

2011 ANNUAL SEEPAGE SURVEY REPORT
JERICHO DIAMOND MINE, NUNAVUT

REPORT

NOVEMBER 2011
ISSUED FOR USE
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ACRONYMS & ABBREVIATIONS

CPK	Coarse Processed Kimberlite
DO	Dissolved Oxygen
EC	Electrical Conductivity
FPK	Fine Processed Kimberlite
GMP	General Monitoring Plan
NWB	Nunavut Water Board
MAC	Jericho Water Licence PKCA Discharge Criteria for Maximum Average Concentration
MGC	Jericho Water Licence PKCA Discharge Criteria for Maximum Grab Concentration
Ponding	Topographic low area that accumulated surface runoff and/or precipitation
PHC	Petroleum Hydrocarbons
PKCA	Processed Kimberlite Containment Area
PKMP	PKCA Management Plan
RPD	Relative Percent Difference
Seepage	Any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged from the toe, or as a result of runoff from overburden storage areas, waste rock storage facilities, coarse kimberlite reject areas and ore stockpile areas
Shear	Shear Diamonds (Nunavut) Corp.
SWMP	Site Water Management Plan
TDC	Tahera Diamonds Corporation
TDS	Total Dissolved Solids
TSS	Total Suspended Solids

1.0 INTRODUCTION

1.1 General

The Annual Seepage Survey for Jericho Diamond Mine, described herein, has been conducted to assess any leakage from the dams around the perimeter of the processed kimberlite containment area (PKCA) dams, and to monitor the changes in the chemistry of seeps from the waste rock dumps, ore stock piles, coarse processed kimberlite (CPK) stockpile, and explosives area.

This investigation fulfills requirements in the Jericho Water Licence (2AM-JER0410), Schedule L, Part 3:

a) "To include routine monitoring of all surface storage facilities identified in Table 3;

b) To include the explosives storage and emulsion plant areas;

c) To include seepage chemistry results from any sumps in the plant area;

d) An annual seepage survey from the toe of the recovery plant rejects stockpile should be submitted to the Nunavut Water Board, along with the annual seepage survey results for all other waste and low grade ore stockpile; and

e) To include any seepage at the base of the West Dam and all other dams around the perimeter of the Processed Kimberlite Containment Area (PKCA)."

1.2 Background Information

The Jericho Diamond Mine is located approximately 260 km southeast of Kugluktuk, NU, and 30 km north of Lupin Mine. It was constructed and operated between 2005 and 2008 by Tahera Diamond Corporation (TDC). The mining activities were suspended in February 2008; and the ore processing activities were suspended in April 2008. After the cessation of the operation, the site was placed under care and maintenance. In August 2010, Shear Diamonds (Nunavut) Corp. (Shear) purchased the Jericho Mine and its assets, and assumed the responsibility for the site. Presently, the mine remains under temporary shutdown as Shear evaluates the mineral resources.

Under the previous ownership, formal annual seepage surveys were conducted in 2006 and 2007. According to the 2006 Seepage Survey Report (SRK 2006), seeps were identified and sampled at the northwest side of Low Grade Ore Stockpile (Seep-13) and the north side of Waste Rock Dump 2 (Seep-05). According to the 2007 Seepage Survey Report (TDC 2007), the two seeps identified in 2006 were dry; two additional seeps were identified and sampled at the south side of Waste Rock Dump 2 (Seep-2 and Seep-3). No annual seepage survey reports were submitted for the year 2008, 2009 and 2010. Recently, Shear has recovered a number of analytical results from old site computers, which indicates that additional seepage sampling was conducted in 2007 and 2008. This data does not correspond to the annual seepage reports filed by TDC. There is no reference map or coordinates provided, making it impossible to confirm the locations of these sampling events. Therefore, these additional analytical results are not reviewed. In July 2011, Shear's on-site environmental technicians collected a number of seepage and water ponding samples at the site.

1.3 Objective and Scope

The objectives of the annual seepage survey are to monitor any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste, and to monitor the water qualities of any flows that have emerged from the toe, or as a result of runoff from overburden storage areas, waste rock storage facilities, coarse kimberlite reject areas and ore stockpile areas.

The scope of the 2011 annual seepage survey program includes:

- Visual inspections for seepage from the water retention structures;
- Identifying and sampling of potential seepage exiting from the toe of Waste Rock Dumps, and Ore and CPK Stockpiles;
- Identifying and sampling of potential seepage flowing from the ammonium nitrate storage and emulsion plant area; and
- Prepare the 2011 annual seepage survey report in accordance with the Jericho Water Licence, Schedule L, Part 3.

2.0 SEEPAGE QUALITY GUIDELINES

The Jericho Water Licence Part F, Item 4(d) specifies "*any runoff accumulated and/or seepage that does not meet the effluent quality criteria Part G, Item 6(a) shall be collected and directed to the PKCA (…)*". Therefore, the analytical results of the seepage samples are compared with the criteria for Maximum Average Concentration (MAC) and Maximum Grab Concentration (MGC) listed in Part G, Item 6(a) of the water licence.

3.0 METHODS

3.1 Routine Seepage Monitoring

As part of the Weekly Operational Geotechnical Inspections, Shear is responsible for conducting the routine seepage monitoring and reporting any observed seepages from the water retention structures. Appendix A includes a copy of Shear's Weekly Geotechnical Monitoring Records from June 2 through September 6, 2011. The inspection records are maintained on-site, and are available for review upon request by the inspector.

3.2 Seepage Identification and Collection

As specified in the Jericho Water Licence, Schedule A, seepage is defined as "*any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged from the toe, or as a result of runoff from overburden storage areas, waste rock storage facilities, coarse kimberlite reject areas and ore stockpile areas*".

Mr. William Liu of EBA and Mr. Mathieu Charbonneau of Shear conducted seepage surveying and sampling on September 14 and 15, 2011. The survey included:

- Conducting reconnaissance along the perimeters of waste rock dumps, CPK and ore stockpiles, waste rock pads for the low grade ore stockpiles and the plant site, explosives area, and PKCA dams;
- Documenting any seeps (actively flowing water emerging from the toe of waste rock dumps and pad, and CPK and ore stockpiles) and water pondings (topographic low area that tend to accumulate surface runoff and/or precipitation); and
- Collecting a grab sample from each identified seep that was actively flowing from the toe of the waste rock dumps/pads and the ore/CPK stockpiles.

The quality of the water adjacent or in close proximity to the rock piles can be largely influenced by overland runoff or precipitation, and may not represent the true seepage water quality. Therefore, the ponded water at the site was not sampled.

All identified seeps and ponded water were photographed, and the locations were recorded using a hand-held GPS. Seeps were sampled using laboratory supplied sample containers. Field parameters including temperature, pH, dissolved oxygen (DO), and electric conductivity (EC) for each sample were measured using an YSI 556 multi-parameter meter. This meter was calibrated weekly, as indicated by Shear's environmental technician.

One set of duplicate samples was collected at sample location JER-SPG-01C. One set of field blank samples was prepared in the field on September 14, 2011. One set of trip blank samples was prepared in and delivered from the laboratory, and was placed in the cooler with other water samples during the fieldwork and shipment to the laboratory.

3.3 Sample Preparation and Analysis

All sample bottles, filters, preservatives and coolers were supplied by ALS Laboratory in Yellowknife, NT. During the field sampling program, dissolved metal samples were filtered through 0.45 µm Millipore syringe filters and preserved with nitric acid; total metal samples were preserved with nitric acid; and nutrients samples were preserved with sulphuric acid.

Water bottles containing samples from the same station were placed in a clean plastic bag to avoid cross-contamination with samples from other sample stations, and were stored in a designated fridge or coolers to keep the samples below 4°C before shipment to the laboratory on September 17, 2011. Chain of custody forms were used to track samples. The seepage samples were submitted to ALS Laboratory in Yellowknife, NT, for the analysis of routine water parameters, nutrients, total metals, and dissolved metals.

4.0 FIELD ACTIVITIES AND OBSERVATIONS

4.1 Site Conditions

The *Supplemental Climate and Hydrology Report* (SRK 2003) described the climate at Jericho as having a short and cool summer and cold winter. The mean annual temperature at the nearby Lupin Airport is -11.1°C. July is the warmest month with a mean temperature of 11.5 °C; and January is the coolest month with a mean temperature of -30.4 °C. The mean annual precipitation at Jericho is approximately 330 mm,

with the majority of the precipitation occurring in August and September. The mean annual runoff at Jericho was estimated to be 225 mm, with the peak runoff occurring during freshet in June.

Shear recorded a light snow fall event approximately one week prior to the seepage survey, but there was no snow cover at the site during the survey. There was a light rain on the morning of September 14, 2011. The temperature during the two-day survey was approximately between 5 and 10 °C. Ice was observed at a number of locations near rock pile toes. Shear's Environment Technician indicated that seepage flows during the survey were noticeably greater than those observed in August.

4.2 Field Observations

During the seepage survey, approximately 20 flowing streams and accumulated water ponding were observed at or in close proximity to the assessed areas. EBA field personnel and the Shear environmental technician collected water samples from seven identified active seeps and one stream flowing into the Waste Rock Dump 1. The site plan and sample locations are shown in Figure 1. The physical location and descriptions of the stations where samples were collected are present in Table 1.

Waste Rock Dumps 1 and 2

The Waste Rock Dumps 1 and 2 spanned from the northeast to the southeast of the open pit. Based on the local topography and field observation, seeps that emerge from the waste rock dump generally flow northwest or west towards the pit or Carat Lake. During the survey, three active seeps (JER-SPG-01A, B, and C, see Photos 1 to 3) were identified at the northwest side of the Waste Rock Dump 1, which were flowing towards Carat Lake. Two smaller active seeps (JER-SPG-01D and 02A, see Photos 4 and 5) at the west side of the Waste Rock Dump 1 and the northwest side of the Waste Rock Dump 2 were flowing on, and eventually infiltrating into, the road between the waste rock dumps and the pit. The seepage water is anticipated to either feed into the pit sump or exit from the northwest side of the Waste Rock Dump 1 (approximate location of JER-SPG-01C). A small stream (JER-SPG-INFLOW01, see Photo 6) was also found to flow into Waste Rock Dump 1 from the Ditch C4 Catchment Area (See Figure 1).

In addition, six water pondings were observed along the perimeter of the waste rock dump, of which two relatively large water pondings had accumulated at the south and east side of Waste Rock Dump 2 (see Figure 1, and Photos 7 and 8). These two pondings were isolated at the time of the survey. Based on the observed moisture at the flow path between the ponding at the south side of Waste Rock Dump 2 and Key Lake, excessive water from this pond had flowed towards Key Lake in the past.

Low Grade Ore Pile

The low grade ore piles were placed on a waste rock pad. The approximate perimeter of the waste rock pad is shown in Figure 1. Based on the local topography and field observations, potential seeps emerging from the low grade ore piles and the waste rock pad would flow northwest or north towards Lake C1 or the open pit. During the survey, two active seeps (JER-SPG-08A and 08B, see Photos 9 and 10) were observed at the west side of the waste rock pad flowing towards Lake C1. Six small water pondings near the west and north side of the waste rock pad were also identified. No active seeps or ponded water were observed at the east or south side of the waste rock pad.

Ore and CPK Stockpiles and Plant Site

No seeps were observed the perimeters of the Ore Stockpile, CPK Stockpile or Waste Rock Pad for the Plant Site. One relatively large water ponding was found at the south side of the Ore Stockpile (see Photo 12). The ponded water is anticipated to originate from precipitation and surface runoff.

Ammonium Nitrate Storage Pad, Emulsion Plant and Explosives Magazine

The Ammonium Nitrate Storage Pad is located in close proximity to a wetland area. Ponded water was observed at the east and west side of the pad (see Photos 13 and 14). The ponded water at the west of the pad feed into a small stream flowing in the direction to Lynne Lake. Active flowing water was observed at the time of the survey. As no ammonium nitrate was stored at the pad, no samples were collected during the site visit.

The Emulsion Plant was constructed on a waste rock pad. No seepage or ponded water was observed along the pad during the survey.

The explosives magazine area consists of a number of intermodal containers on sleds. No seepage or ponded water was observed in this area.

West Dam, Southeast Dam and East Dam

The field personnel conducted visual reconnaissance at the toe of West Dam, Southeast Dam and East Dam of the PKCA (see Photo 15 to 18). No seepage was observed at the time of the survey. This is consistent with the Annual Geotechnical Inspection conducted in July 2011 (EBA 2011a) and the routine seepage monitoring conducted by Shear's on-site personnel.

Table 1: Descriptions of Seepage Sample Stations and Flow Characteristics

Station	Location	Flow Direction and Destination	Sample Collection
JER-SPG-01A	Toe at northwest side of Waste Rock Dump 1	West into Carat Lake	Collected one set of samples (1)
JER-SPG-01B	Toe at northwest side of Waste Rock Dump 1	West into Carat Lake	Collected one set of samples (1)
JER-SPG-01C	Toe at west side of Waste Rock Dump 1 and northeast side of the pit	North into Carat Lake	Collected one set of samples and one set of duplicate samples (1)
JER-SPG-01D	Toe at Southwest side of Waste Rock Dump 1	North on the Haul Road and infiltrate into the road	Collected one set of samples (1)
JER-SPG-02A	Toe of northwest side of Waste Rock Dump 2	North on the Haul Road and into a small ponding at the side of the road	Collected one set of samples (1)
JER-SPG-08A	Toe of west side of Low Grade Ore Stockpile	Northwest into Lake C1	Collected one set of samples (1)
JER-SPG-08B	Near southwest side of Low Grade Ore Stockpile	Northwest into Lake C1	Collected one set of samples (1)

Table 1: Descriptions of Seepage Sample Stations and Flow Characteristics

Station	Location	Flow Direction and Destination	Sample Collection
JER-SPG-INFLOW01	Northeast side of Waste Rock Dump 1	From Ditch C4 Catchment Area at the east and entering the northeast side of Waste Rock Dump 1	Collected one set of samples (2)

Note:

1. Detailed analytical parameters are presented in Appendix B.
2. Flow was too shallow to be measured.
3. Seep sample was collected on September 14, 2011, but the flow ceased at the time of flow measurement on September 15, 2011.

5.0 RESULTS AND DISCUSSION

Eight water samples along with one duplicate sample and two blank samples were submitted to the laboratory for the analysis of routine parameters, nutrients, and total and dissolved metals. The analytical results that exceeded the Water Licence MAC and MGC criteria are highlighted in Table 2.

5.1 Data Quality Review

As a part of the quality assurance and quality control process, the quality of the data is reviewed before being used for data interpretation. This includes comparing the duplicate sample results, reviewing the field and trip blanks sample results, and comparing the field and laboratory measured parameters.

5.1.1 Duplicate Samples

The purpose of the duplicate sampling is to verify the precision of the field sampler and the sampling procedure. One sequential duplicate sample for sample JER-SPG-01C was collected and submitted to the laboratory for the same analysis as the host sample. The relative percent difference (RPD)[1] of each parameter between the sample and its duplicate is calculated and presented in Table 3. Nineteen of 102 analyzed parameters have calculated RPD greater than 15%. Most of the parameters with large RPD values are within the total metals group, where the heterogeneity of the suspended particles in the water may play a major role in causing large RPD values. The sampling procedure of the seepage sampling program is deemed to be accurate and precise.

5.1.2 Blank Samples

Generally, the field blank sample reflect the ambient conditions during the sampling program and are used to measure potential sampling contamination, while the trip blank sample reflect the potential contamination that may occur during the transportation of the samples.

The pH values in the field and trip blank samples are 5.81 and 5.69, below the Water Licence criteria of pH 6. Total and dissolved zinc in both samples are about 30 times of the detection limit, and are higher than

[1] Relative Percent Difference = $\frac{|a-b|}{(a+b)/2}$

the zinc concentration in a number of the seepage samples. As described in Section 3.0, the trip blank sample was prepared in the laboratory, and was placed in a Ziploc plastic bag during shipment. Thus, the potential for cross-contamination during shipment is minimal. An email correspondence from ALS Laboratory indicated "*Over the 6-week period of 15-Aug-2011 thru 29-Sep-2011, de-ionized water supplied through our Yellowknife office for purposes of Trip and Field Blanks may have contained background levels of some trace metals. (…) To date, only zinc appears to have been definitely affected (observed at between 0.0025 and 0.0030 mg/L), but some instances of barium, copper, manganese, molybdenum and sodium have also been noted, albeit at much lower levels (…). pH of stored DIW is typically between 5 and 6, owing to absorption of ambient carbon dioxide, but it would not be considered corrosive since the actual acidity is so low*".

5.1.3 Field and Laboratory Measured Parameters

The field measurement, including temperature, pH, DO, and EC, can provide the true value of the crucial water chemistry parameters, which cannot be obtained or may be altered due to a change in ambient environment.

In comparing field and laboratory pH in the eight samples in Table 2, field pH is, in general, lower than the laboratory pH. This is likely due to reduced carbon dioxide concentration at higher ambient temperature in the laboratory setting. Therefore, the field pH may represent the true pH value in the seepage water.

In comparing, field and laboratory ECs in the eight samples in Table 2, field EC values are generally half of the laboratory EC values, with the exception of sample JER-SPG-08B. As changed ambient temperature and sample shipment cannot significantly alter the EC of the water, the laboratory measured EC is likely to represent the true EC value of the seepage water. The EC calibration of the multi-parameter meter should be checked.

5.2 Laboratory Results Interpretation

5.2.1 Waste Rock Dump 1 and 2

Total Suspended Solids (TSS)

As presented in Table 2, TSS in samples JER-SPG-01A, 01C, and 01D are between 40 mg/L and 45 mg/L; and TSS in sample JER-SPG-02A is 237 mg/L. These values exceeded the Water Licence MGC criterion of 25 mg/L. Due to the snow melt and rainfall event that occurred during the day of the survey, sudden water flows through the rock piles may have disturbed the settled particles along the flow paths and increased the TSS in the seeps.

Seeps JER-SPG-01D and 02A infiltrated into the road along the pit, and may further seep into the pit or exit from the toe at the northwest side of Waste Rock Dump 1. Seeps JER-SPG-01A and 01C flowed through a vegetated area before entering Carat Lake; therefore, TSS concentrations in these two seeps are anticipated to be reduced before reaching Carat Lake.

Visual observations suggest the turbidity of seep JER-SPG-02A would be similar to other seeps; however, the laboratory results indicated the TSS is approximately five times that of other samples. EBA requested that the laboratory retest the sample; however, the laboratory indicated sample retesting cannot be performed due to limited sample remains.

Nitrate

Nitrate concentrations in samples JER-SPG-01D and 02A were 125 mg/L and 58 mg/L, which exceeded the Water Licence MGC criterion of 56 mg/L. These two seeps infiltrated the road. Based on the topography of the original ground, they may further seep into the pit or exit from the toe at the northwest side of Waste Rock Dump 1.

Nitrate in sample JER-SPG-01C was 53.2 mg/L, which was below the Water Licence MGC criterion of 56 mg/L, but exceeded the Water Licence MAC criterion of 28 mg/L. This seep flowed through a vegetated area towards Carat Lake. The water quality monitoring data showed that nitrate at the outlet of Carat Lake (JER-AEM-16) had an increasing trend from 0.05 mg/L to 0.185 mg/L between 2005 and 2009, and decreased to below detection in August 2011. Additional study is required to assess if the elevated nitrate concentration in the seepage water would contribute to the increased nitrate concentration in Carat Lake.

Nitrate in sample JER-SPG-INFLOW01 was 0.347 mg/L. This indicates that the majority of the nitrate in the seeps is from dissolved blast residual (ammonium nitrate) carried by the waste rock. Sample Seep-5 in the 2006 Seepage Survey Report has nitrate concentration (65.9 mg/L) similar to sample JER-SPG-01D and 02A. Comparison of the two sets of results in Table 4 shows, after five years of flushing, that a large quantity of blast residual remains in the waste rock dumps.

5.2.2 Low Grade Ore Stockpile

TSS

TSS in sample JER-SPG-08A and 08B were 7 mg/L and <0.3 mg/L, which were both below the water licence MSC criterion of 25 mg/L.

Nitrate

Nitrate in sample JER-SPG-08A and 08B were 12 mg/L and 3.26 mg/L, which are all below the water licence MSC criterion of 56 mg/L.

6.0 CONCLUSION AND RECOMMENDATIONS

During the 2011 seepage survey, EBA field personnel and Shear's environmental technician conducted visual reconnaissance around the perimeter of Waste Rock Dump 1 and 2, Low Grade Ore Stockpiles, Coarse PK Stockpile, Plant Site Area, Explosives Area, and PKCA dams.

Seven active seeps and one inflow were observed and sampled. These included five seeps and one inflow at Waste Rock Dump 1 and 2, and two seeps from Low Grade Ore Piles. No seeps were observed at the Coarse PK Stockpile or the Plant Site area. One stream was observed from a wet land at the ammonium nitrate storage area. As no ammonium nitrate is currently stored at the site, no sample was collected. No seeps were observed from West Dam, East Dam or Southeast Dam at the time of the site visit.

TSS in four seepage samples from the waste rock dump exceeded the Water Licence MGC criterion. As discussed in Section 5.2.1, elevated TSS in the seepage samples may be attributed to the snow melt and rain event that occurred on the day of the seepage survey.

Nitrate in the two samples flowing between the open pit and waste rock dump exceeded the Water Licence MGC criterion. By the time that the analytical results from the laboratory were received, freeze up had occurred at the site therefore additional samples could not be collected to verify the results or determine the exact fate of the water.

Based the observation made on-site and the laboratory analysis, EBA recommends as the following:

- Implementation of a more detailed seepage survey program in 2012 including:
  - Conducting seasonal seepage surveys starting at freshet to monitor the seasonal variation of the seepage quality and flow rate;
  - Establishing sampling stations in Carat Lake and Lake C1 near the seep inflows to verify the dispersion of the constituents from the seepage water;
  - Collecting water samples from the established stations on a seasonal basis; and
  - Identifying the sources and fates of the identified seeps
- Conducting surface water dispersion models in Carat Lake to predict the potential impact from the seeps during production and at closure; and
- Analyzing and pumping ponded water from the south and east side of Waste Rock Dump 2 to the PKCA (refer to Figure 1) to prevent overflowing into the receiving environment.

7.0 CLOSURE

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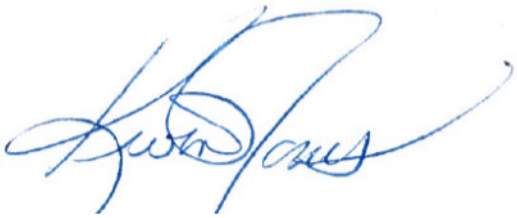

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TABLES

Table 2: Field Measurment and Laboratory Analytical Results

Analyte	Unit	Sample ID			JER-SPG-01A	JER-SPG-01B	JER-SPG-01C	JER-SPG-01D	JER-SPG-02A	JER-SPG-08A	JER-SPG-08B	JER-SPG-INFLOW01	JER-SPG-DUP01	JER-SPG-FB	JER-SPG-TB
		Laboratory ID			L1059935-1	L1059935-2	L1059935-3	L1059935-5	L1059935-6	L1059935-7	L1059935-8	L1059935-9	L1059935-4	L1059935-12	L1059935-13
		Date Sampled			9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/15/2011	9/14/2011	9/14/2011	9/14/2011
		LOR [1]	NWB-WL [2] Max. Avg	NWB-WL [2] Max. Grab											
Coordinates (NAD 27, Zone 12W)															
Northing			-	-	7320042	7319967	7319737	7319301	7319217	7319028	7319112	7319861	Same as JER-SPG-01C	-	-
Easting			-	-	478773	478777	478393	478465	478363	477618	477720	479136		-	-
Field Measurement															
pH (Field)	-		-	-	7.17	7.55	7.70	7.78	8.23	7.41	7.60	7.30	-	-	-
Conductivity (EC, Field)	µS/cm		-	-	191.5	93.0	384.5	824.0	406.6	164.7	219.9	23.5	-	-	-
Dissolved Oxygen (Field)	mg/L		-	-	7.8	11.8	13.3	12.8	12.4	10.2	13.0	13.4	-	-	-
Temperature (Field)	°C		-	-	1.8	1.1	0.3	4.8	7.0	5.3	3.2	2.0	-	-	-
Physical Parameter															
pH (Lab)	pH	0.1	6 - 8.8	6 - 8.8	7.59	7.76	7.93	8.05	8.12	8.03	8.06	7.34	7.94	**5.81**	**5.69**
Conductivity (EC)	uS/cm	0.2	-	-	310	159	658	1240	793	349	251	38.7	645	1.07	0.91
Total Dissolved Solids (Calculated	mg/L	n/a	2,000	4,000	157	96.4	441	911	529	213	139	18.1	408	<1.0	<1.0
Total Suspended Solids	mg/L	3	15	25	**40**	5	**40**	**45**	**237**	7	<3.0	<3.0	**56**	<3.0	<3.0
Turbidity	NTU	0.1	-	-	24.8	2.65	5.04	33.4	231	3.62	0.72	3.2	19.6	<0.10	<0.10
Hardness (as CaCO3)	mg/L	1.3	-	-	116	60	265	513	331	130	104	16.3	259	<1.3	<1.3
Ion Balance (Calculated)	%	n/a	-	-	124	97.1	95.4	90	95.4	95.8	105	Low EC	100	Low TDS	Low TDS
Anions and Nutrients															
Acidity (as CaCO3)	mg/L	5	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0
Alkalinity, Total (as CaCO3)	mg/L	5	-	-	38.5	30.4	78.9	73.4	117	67.3	85.9	14.2	81.7	<5.0	<5.0
Bicarbonate (HCO3)	mg/L	5	-	-	47	37.1	96.3	89.5	143	82.1	105	17.3	99.7	<5.0	<5.0
Carbonate (CO3)	mg/L	5	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Hydroxide (OH)	mg/L	5	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	500	1,000	5.92	1.88	7.03	7.17	10.5	8.38	4.52	<0.50	6.44	<0.50	<0.50
Fluoride (F)	mg/L	0.05	-	-	<0.050	<0.050	0.091	0.088	<0.050	0.057	0.104	<0.050	0.093	<0.050	<0.050
Total Ammonia (as N)	mg/L	0.005	6	12	0.76	0.157	0.489	2.25	0.205	0.306	<0.0050	<0.0050	0.463	<0.0050	<0.0050
Nitrate and Nitrite (as N)	mg/L	0.006	-	-	14.9	9.84	54	126	58	12	3.26	0.347	46.6	<0.0060	<0.0060
Nitrate (as N)	mg/L	0.006	28	56	14.8	9.84	53.2	**125**	**58**	12	3.26	0.347	46	<0.0060	<0.0060
Nitrite (as N)	mg/L	0.002	2.5	5.0	0.099	<0.050	0.722	0.669	0.054	0.056	<0.0020	<0.0020	0.625	<0.0020	<0.0020
Orthophosphate-Dissolved (as P)	mg/L	0.001	-	-	0.0033	<0.0010	<0.0010	<0.0010	0.0656	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.001	0.2	0.4	0.0503	0.0102	0.0361	0.0115	0.176	0.0473	0.008	0.0049	0.0443	<0.0010	<0.0010
Sulfate (SO4)	mg/L	0.05	-	-	12.5	6.48	38.6	102	54.6	50.2	18.9	1.36	39.3	0.065	<0.050
Organic/Inoragnic Carbon															
Total Inorganic Carbon	mg/L	1	-	-	11	7.8	20.7	18.4	29.8	16.7	22.3	4.3	21.1	<1.0	<1.0
Total Organic Carbon	mg/L	1	-	-	7.4	6.3	7	3.4	10.5	13.5	6	6.3	7.5	2.8	<1.0
Total Metals															
Aluminum (Al)-Total	mg/L	0.0002	1.5	3.0	0.0743	0.0901	0.122	0.0277	0.128	0.136	0.037	0.195	0.0791	<0.00020	<0.00020
Antimony (Sb)-Total	mg/L	0.000005	-	-	0.0000821	0.0000727	0.000146	0.000161	0.000348	0.000167	0.000833	0.0000128	0.000165	<0.0000050	<0.0000050
Arsenic (As)-Total	mg/L	0.00002	0.05	0.10	0.00029	0.000322	0.000907	0.000716	0.00108	0.000631	0.000376	0.000186	0.000775	<0.000020	<0.000020
Barium (Ba)-Total	mg/L	0.00002	-	-	0.0434	0.0171	0.0772	0.0647	0.102	0.0443	0.0261	0.0071	0.0777	<0.000020	<0.000020
Beryllium (Be)-Total	mg/L	0.000002	-	-	0.0000181	0.0000161	0.0000127	0.0000025	0.0000105	0.0000146	0.0000054	0.0000405	0.0000084	<0.0000020	<0.0000020
Bismuth (Bi)-Total	mg/L	0.000001	-	-	0.0000014	0.0000021	0.0000045	0.0000012	0.0000075	0.0000032	<0.0000010	0.0000021	0.0000028	<0.0000010	<0.0000010
Boron (B)-Total	mg/L	0.005	-	-	0.0579	0.0449	0.102	0.111	0.0556	0.0483	0.0355	0.0051	0.103	<0.0050	<0.0050
Cadmium (Cd)-Total	mg/L	0.000005	0.0012	0.0024	0.0000094	<0.0000050	<0.000010	<0.000010	0.000111	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	0.03	-	-	26.3	13.5	63.6	130	83.7	29.4	24.7	3.94	62.4	<0.030	<0.030
Cesium (Cs)-Total	mg/L	0.000005	-	-	0.0000819	0.0000471	0.000043	0.000247	0.0000689	0.0000461	0.0000172	0.0000309	0.0000336	<0.0000050	<0.0000050
Chromium (Cr)-Total	mg/L	0.00005	0.087	0.17	0.00029	0.000289	0.000382	0.000104	0.000427	0.000909	0.000241	0.00037	0.000234	<0.000050	<0.000050
Cobalt (Co)-Total	mg/L	0.000005	-	-	0.00145	0.000262	0.00448	0.00149	0.00234	0.0012	0.000185	0.000135	0.00491	<0.0000050	<0.0000050
Copper (Cu)-Total	mg/L	0.00005	0.02	0.04	0.00486	0.00456	0.00442	0.00863	0.0135	0.00549	0.00581	0.00289	0.00446	<0.000050	<0.000050
Gallium (Ga)-Total	mg/L	0.00005	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Total	mg/L	0.01	-	-	0.303	0.119	0.365	0.05	0.209	0.257	0.069	0.17	0.303	<0.010	<0.010
Lead (Pb)-Total	mg/L	0.000005	0.01	0.02	0.000143	0.000228	0.000324	0.0000234	0.000767	0.00046	0.0000966	0.000185	0.000259	<0.0000050	<0.0000050
Lithium (Li)-Total	mg/L	0.0002	-	-	0.00404	0.0031	0.00804	0.011	0.00383	0.00412	0.00278	0.00078	0.00767	<0.00020	<0.00020
Magnesium (Mg)-Total	mg/L	0.03	-	-	13	6.88	29.3	56	34.5	15.6	10	1.65	28.7	<0.030	<0.030
Manganese (Mn)-Total	mg/L	0.000005	-	-	0.253	0.0331	0.935	0.718	0.337	0.481	0.00261	0.00321	1.06	0.0000223	0.000017
Mercury (Hg)-Total	mg/L	0.00005	-	-	<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	0.00001	0.73	1.50	0.00332	0.00318	0.01	0.00592	0.00293	0.00695	0.00405	0.000111	0.00954	0.000012	0.000013
Nickel (Ni)-Total	mg/L	0.00005	0.05	0.10	0.00684	0.00263	0.00823	0.00828	0.0314	0.0121	0.00246	0.000788	0.00849	<0.000050	<0.000050
Phosphorus (P)-Total	mg/L	0.05	-	-	<0.050	<0.050	<0.050	<0.050	0.093	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.05	-	-	2.61	1.7	7.11	11.8	8.19	4.71	4.47	0.366	7.02	<0.050	<0.050
Rhenium (Re)-Total	mg/L	0.000005	-	-	0.0000142	0.0000052	0.0000161	0.000015	0.0000079	0.0000244	0.0000112	<0.0000050	0.0000153	<0.0000050	<0.0000050
Rubidium (Rb)-Total	mg/L	0.000005	-	-	0.00517	0.00281	0.00597	0.00836	0.00916	0.00508	0.00347	0.00094	0.00579	<0.0000050	<0.0000050
Selenium (Se)-Total	mg/L	0.00004	-	-	0.000172	0.000154	0.000513	0.00244	0.00029	0.000511	0.000221	<0.000040	0.000453	<0.000040	<0.000040
Silicon (Si)-Total	mg/L	0.05	-	-	5.29	4.16	5.46	4.45	5.01	5.33	3.65	4.17	5.26	<0.050	<0.050
Silver (Ag)-Total	mg/L	0.000005	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Total	mg/L	0.2	-	-	8.58	4.71	14.5	17.2	16.5	14.3	9.23	1.18	14	<0.20	<0.20
Strontium (Sr)-Total	mg/L	0.00001	-	-	0.139	0.0694	0.325	0.412	0.325	0.123	0.095	0.0116	0.319	<0.000010	<0.000010
Tellurium (Te)-Total	mg/L	0.00001	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	-	-	0.0000137	0.0000077	0.0000174	0.0000273	0.0000237	0.0000123	0.000004	0.0000039	0.0000163	<0.0000010	<0.0000010
Thorium (Th)-Total	mg/L	0.000005	-	-	0.0000585	0.0000637	0.0000674	0.0000073	0.0000415	0.000108	0.0000316	0.0000906	0.0000364	<0.0000050	<0.0000050
Tin (Sn)-Total	mg/L	0.00001	-	-	<0.000010	<0.000010	<0.000010	<0.000010	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Titanium (Ti)-Total	mg/L	0.00005	-	-	0.00106	0.00201	0.00432	0.00159	0.00482	0.00399	0.00114	0.0044	0.00233	<0.000050	<0.000050
Tungsten (W)-Total	mg/L	0.00001	-	-	0.000057	0.000104	0.000199	0.000077	0.000373	0.000466	0.000031	<0.000010	0.000191	<0.000010	<0.000010
Uranium (U)-Total	mg/L	0.000001	0.5	1.0	0.0437	0.0544	0.183	0.123	0.0268	0.0848	0.0421	0.00167	0.168	<0.0000010	<0.0000010
Vanadium (V)-Total	mg/L	0.00001	-	-	0.00034	0.000445	0.000637	0.00197	0.00108	0.000758	0.000333	0.000341	0.000584	<0.000010	<0.000010
Yttrium (Y)-Total	mg/L	0.000005	-	-	0.000616	0.000566	0.000465	0.0000733	0.000674	0.000622	0.000198	0.00133	0.000304	<0.0000050	<0.0000050
Zinc (Zn)-Total	mg/L	0.0001	0.25	0.50	0.00166	0.0199	0.00271	0.00057	0.00211	0.00079	0.00029	0.00119	0.00324	0.00276	0.00251
Zirconium (Zr)-Total	mg/L	0.00001	-	-	0.000337	0.000287	0.000265	0.000038	0.000337	0.000398	0.000173	0.000593	0.000211	<0.000010	<0.000010
Dissolved Metals															
Aluminum (Al)-Dissolved	mg/L	0.0002	1.0	2.0	0.0545	0.0423	0.0193	0.00256	0.00818	0.044	0.0148	0.0899	0.0238	<0.00020	<0.00020
Antimony (Sb)-Dissolved	mg/L	0.000005	-	-	0.0000879	0.000072	0.000149	0.000162	0.000338	0.000164	0.00085	0.0000127	0.000144	<0.0000050	<0.0000050
Arsenic (As)-Dissolved	mg/L	0.00002	-	-	0.000323	0.000289	0.000775	0.000762	0.000979	0.000587	0.000357	0.000166	0.000778	<0.000020	<0.000020
Barium (Ba)-Dissolved	mg/L	0.00002	-	-	0.042	0.0166	0.0783	0.064	0.0979	0.0417	0.0255	0.00582	0.0759	0.000079	<0.000020
Beryllium (Be)-Dissolved	mg/L	0.000002	-	-	0.0000171	0.0000127	0.0000056	<0.0000020	0.0000026	0.0000068	0.0000047	0.0000261	0.0000061	<0.0000020	<0.0000020
Bismuth (Bi)-Dissolved	mg/L	0.000001	-	-	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000015	<0.0000010	<0.0000010	<0.0000010	0.0000011	<0.0000010	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	-	-	0.0611	0.0459	0.102	0.112	0.0535	0.047	0.036	<0.0050	0.105	<0.0050	<0.0050
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	-	0.0000093	<0.0000050	<0.000010	<0.000010	0.000108	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	-	-	26.3	13.5	63.6	129	84.2	29.4	24.4	3.92	63.2	<0.030	<0.030
Cesium (Cs)-Dissolved	mg/L	0.000005	-	-	0.0000779	0.000035	0.0000244	0.000238	0.0000413	0.0000263	0.0000139	0.0000052	0.0000245	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	0.00005	-	-	0.000234	0.000216	0.00013	<0.000050	0.000121	0.000275	0.00018	0.000272	0.000151	<0.000050	<0.000050
Cobalt (Co)-Dissolved	mg/L	0.000005	-	-	0.00138	0.000249	0.00405	0.0014	0.0021	0.000955	0.000149	0.0000822	0.00419	<0.0000050	<0.0000050
Copper (Cu)-Dissolved	mg/L	0.00005	-	-	0.0044	0.00417	0.00359	0.00821	0.012	0.00452	0.00515	0.00255	0.00364	<0.000050	0.000082
Gallium (Ga)-Dissolved	mg/L	0.00005	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	-	-	0.269	0.064	0.213	<0.010	0.022	0.062	0.033	0.078	0.228	<0.010	<0.010
Lead (Pb)-Dissolved	mg/L	0.000005	-	-	0.0000964	0.000112	0.0000884	<0.0000050	0.00047	0.0000944	0.0000592	0.0000328	0.0000933	<0.0000050	<0.0000050
Lithium (Li)-Dissolved	mg/L	0.0002	-	-	0.00406	0.00308	0.00782	0.011	0.00367	0.00392	0.00271	0.00063	0.00749	<0.00020	<0.00020
Magnesium (Mg)-Dissolved	mg/L	0.03	-	-	12.9	6.77	29.2	56.1	34	15.3	9.88	1.63	28.5	<0.030	<0.030
Manganese (Mn)-Dissolved	mg/L	0.000005	-	-	0.247	0.0319	0.873	0.699	0.34	0.425	0.00134	0.00165	0.915	0.0000246	0.0000209
Mercury (Hg)-Dissolved	mg/L	0.00005	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	-	-	0.00341	0.00319	0.0102	0.00588	0.00301	0.00687	0.00405	0.000079	0.00944	0.000012	0.000013
Nickel (Ni)-Dissolved	mg/L	0.00005	-	-	0.00666	0.00248	0.00707	0.00803	0.0282	0.00962	0.00219	0.00073	0.00729	<0.000050	<0.000050
Phosphorus (P)-Dissolved	mg/L	0.05	-	-	<0.050	<0.050	<0.050	<0.050	0.067	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	-	-	2.61	1.64	7.01	11.7	8.14	4.63	4.42	0.322	7.03	<0.050	<0.050
Rhenium (Re)-Dissolved	mg/L	0.000005	-	-	0.000014	0.000005	0.0000159	0.0000151	0.0000079	0.0000243	0.0000109	<0.0000050	0.0000153	<0.0000050	<0.0000050
Rubidium (Rb)-Dissolved	mg/L	0.000005	-	-	0.00511	0.00265	0.00561	0.00834	0.00903	0.0048	0.00341	0.000693	0.00556	<0.0000050	<0.0000050
Selenium (Se)-Dissolved	mg/L	0.00004	-	-	0.000219	0.000164	0.000389	0.00265	0.000329	0.000416	0.000171	<0.000040	0.000461	<0.000040	<0.000040
Silicon (Si)-Dissolved	mg/L	0.05	-	-	5.13	3.94	5.09	4.36	4.82	4.88	3.52	3.92	5.09	<0.050	<0.050
Silver (Ag)-Dissolved	mg/L	0.000005	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	-	-	8.65	4.59	14.3	17	16.5	14.2	9.15	1.17	14.1	<0.20	<0.20
Strontium (Sr)-Dissolved	mg/L	0.00001	-	-	0.135	0.0668	0.321	0.414	0.328	0.124	0.0961	0.0113	0.31	0.000025	<0.000010
Tellurium (Te)-Dissolved	mg/L	0.00001	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	-	-	0.0000134	0.0000072	0.0000162	0.0000272	0.0000241	0.0000111	0.0000037	0.0000026	0.0000163	<0.0000010	<0.0000010
Thorium (Th)-Dissolved	mg/L	0.000005	-	-	0.0000693	0.0000466	0.0000289	<0.0000050	0.0000092	0.0000508	0.0000235	0.0000716	0.000029	<0.0000050	<0.0000050
Tin (Sn)-Dissolved	mg/L	0.00001	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	-	-	0.000555	0.000411	0.000432	<0.000050	0.000187	0.000772	0.000341	0.000583	0.000425	<0.000050	<0.000050
Tungsten (W)-Dissolved	mg/L	0.00001	-	-	0.000058	0.000107	0.000204	0.000078	0.000427	0.000456	0.000026	<0.000010	0.000192	<0.000010	<0.000010
Uranium (U)-Dissolved	mg/L	0.000001	-	-	0.0436	0.0534	0.182	0.121	0.0259	0.0804	0.0426	0.00159	0.166	<0.0000010	<0.0000010
Vanadium (V)-Dissolved	mg/L	0.00001	-	-	0.000301	0.000357	0.0004	0.00182	0.000774	0.000483	0.000273	0.00017	0.000415	<0.000010	<0.000010
Yttrium (Y)-Dissolved	mg/L	0.000005	-	-	0.000552	0.000464	0.000215	0.0000468	0.000413	0.000341	0.000172	0.00117	0.000227	<0.0000050	<0.0000050
Zinc (Zn)-Dissolved	mg/L	0.0001	-	-	0.00241	0.0183	0.00264	0.00027	0.00193	0.00085	0.00064	0.00186	0.00311	0.00339	0.00282
Zirconium (Zr)-Dissolved	mg/L	0.00001	-	-	0.000331	0.000246	0.000132	0.000025	0.000237	0.000218	0.000161	0.000437	0.00015	<0.000010	<0.000010

Note:
1. LOR - Limit of Reporting
2. NWB-WL - Criteria taken from *Jericho Diamond Mine Water Licence (Licence No. 2AM-JER0410), Part G, Item 6a.* by Nunavut Water Board (NWB), December 2004
3. Values exceeding the NWB-WL Maximum Average Concentration (MAC) limits are highlighted in ORANGE; values exceeding the NWB-WL Maximum Grab Concentration (MGC) limits are BOLD and UNDERLINED.

Table 3: RPD Calculation for Duplication Samples

Analyte	Unit		JER-SPG-01C	JER-SPG-DUP01	RPD
			L1059935-3	L1059935-4	
			9/14/2011	9/14/2011	
Physical Parameter		**LOR** [1]			
pH (Lab)	pH	0.1	7.93	7.94	0.1%
Conductivity (EC)	uS/cm	0.2	658	645	2.0%
Total Dissolved Solids (Calculated)	mg/L	n/a	441	408	7.8%
Total Suspended Solids	mg/L	3	40	56	33.3%
Turbidity	NTU	0.1	5.04	19.6	118.2%
Hardness (as CaCO3)	mg/L	1.3	265	259	2.3%
Anions and Nutrients					
Acidity (as CaCO3)	mg/L	5	<5.0	<5.0	< 5x of LOR
Alkalinity, Total (as CaCO3)	mg/L	5	78.9	81.7	3.5%
Bicarbonate (HCO3)	mg/L	5	96.3	99.7	3.5%
Carbonate (CO3)	mg/L	5	<5.0	<5.0	< 5x of LOR
Hydroxide (OH)	mg/L	5	<5.0	<5.0	< 5x of LOR
Chloride (Cl)	mg/L	0.5	7.03	6.44	8.8%
Fluoride (F)	mg/L	0.05	0.091	0.093	2.2%
Total Ammonia (as N)	mg/L	0.005	0.489	0.463	5.5%
Nitrate and Nitrite (as N)	mg/L	0.006	54	46.6	14.7%
Nitrate (as N)	mg/L	0.006	53.2	46	14.5%
Nitrite (as N)	mg/L	0.002	0.722	0.625	14.4%
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	< 5x of LOR
Phosphorus (P)-Total	mg/L	0.001	0.0361	0.0443	20.4%
Sulfate (SO4)	mg/L	0.05	38.6	39.3	1.8%
Organic/Inoragnic Carbon					
Total Inorganic Carbon	mg/L	1	20.7	21.1	1.9%
Total Organic Carbon	mg/L	1	7	7.5	6.9%
Total Metals					
Aluminum (Al)-Total	mg/L	0.0002	0.122	0.0791	42.7%
Antimony (Sb)-Total	mg/L	0.000005	0.000146	0.000165	12.2%
Arsenic (As)-Total	mg/L	0.00002	0.000907	0.000775	15.7%
Barium (Ba)-Total	mg/L	0.00002	0.0772	0.0777	0.6%
Beryllium (Be)-Total	mg/L	0.000002	0.0000127	0.0000084	40.8%
Bismuth (Bi)-Total	mg/L	0.000001	0.0000045	0.0000028	46.6%
Boron (B)-Total	mg/L	0.005	0.102	0.103	1.0%
Cadmium (Cd)-Total	mg/L	0.000005	<0.000010	<0.000010	< 5x of LOR
Calcium (Ca)-Total	mg/L	0.03	63.6	62.4	1.9%
Cesium (Cs)-Total	mg/L	0.000005	0.000043	0.0000336	24.5%
Chromium (Cr)-Total	mg/L	0.00005	0.000382	0.000234	48.1%
Cobalt (Co)-Total	mg/L	0.000005	0.00448	0.00491	9.2%
Copper (Cu)-Total	mg/L	0.00005	0.00442	0.00446	0.9%
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	< 5x of LOR
Iron (Fe)-Total	mg/L	0.01	0.365	0.303	18.6%
Lead (Pb)-Total	mg/L	0.000005	0.000324	0.000259	22.3%
Lithium (Li)-Total	mg/L	0.0002	0.00804	0.00767	4.7%
Magnesium (Mg)-Total	mg/L	0.03	29.3	28.7	2.1%
Manganese (Mn)-Total	mg/L	0.000005	0.935	1.06	12.5%
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	< 5x of LOR
Molybdenum (Mo)-Total	mg/L	0.00001	0.01	0.00954	4.7%
Nickel (Ni)-Total	mg/L	0.00005	0.00823	0.00849	3.1%
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	< 5x of LOR
Potassium (K)-Total	mg/L	0.05	7.11	7.02	1.3%
Rhenium (Re)-Total	mg/L	0.000005	0.0000161	0.0000153	5.1%
Rubidium (Rb)-Total	mg/L	0.000005	0.00597	0.00579	3.1%
Selenium (Se)-Total	mg/L	0.00004	0.000513	0.000453	12.4%
Silicon (Si)-Total	mg/L	0.05	5.46	5.26	3.7%
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	< 5x of LOR
Sodium (Na)-Total	mg/L	0.2	14.5	14	3.5%
Strontium (Sr)-Total	mg/L	0.00001	0.325	0.319	1.9%
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	< 5x of LOR
Thallium (Tl)-Total	mg/L	0.000001	0.0000174	0.0000163	6.5%
Thorium (Th)-Total	mg/L	0.000005	0.0000674	0.0000364	59.7%
Tin (Sn)-Total	mg/L	0.00001	<0.000010	<0.000010	< 5x of LOR
Titanium (Ti)-Total	mg/L	0.00005	0.00432	0.00233	59.8%
Tungsten (W)-Total	mg/L	0.00001	0.000199	0.000191	4.1%
Uranium (U)-Total	mg/L	0.000001	0.183	0.168	8.5%
Vanadium (V)-Total	mg/L	0.00001	0.000637	0.000584	8.7%
Yttrium (Y)-Total	mg/L	0.000005	0.000465	0.000304	41.9%
Zinc (Zn)-Total	mg/L	0.0001	0.00271	0.00324	17.8%
Zirconium (Zr)-Total	mg/L	0.00001	0.000265	0.000211	22.7%
Dissolved Metals					
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0193	0.0238	20.9%
Antimony (Sb)-Dissolved	mg/L	0.000005	0.000149	0.000144	3.4%
Arsenic (As)-Dissolved	mg/L	0.00002	0.000775	0.000778	0.4%
Barium (Ba)-Dissolved	mg/L	0.00002	0.0783	0.0759	3.1%
Beryllium (Be)-Dissolved	mg/L	0.000002	0.0000056	0.0000061	8.5%
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010	0.0000011	< 5x of LOR
Boron (B)-Dissolved	mg/L	0.005	0.102	0.105	2.9%
Cadmium (Cd)-Dissolved	mg/L	0.000005	<0.000010	<0.000010	< 5x of LOR
Calcium (Ca)-Dissolved	mg/L	0.03	63.6	63.2	0.6%
Cesium (Cs)-Dissolved	mg/L	0.000005	0.0000244	0.0000245	0.4%
Chromium (Cr)-Dissolved	mg/L	0.00005	0.00013	0.000151	14.9%
Cobalt (Co)-Dissolved	mg/L	0.000005	0.00405	0.00419	3.4%
Copper (Cu)-Dissolved	mg/L	0.00005	0.00359	0.00364	1.4%
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	< 5x of LOR
Iron (Fe)-Dissolved	mg/L	0.01	0.213	0.228	6.8%
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000884	0.0000933	5.4%
Lithium (Li)-Dissolved	mg/L	0.0002	0.00782	0.00749	4.3%
Magnesium (Mg)-Dissolved	mg/L	0.03	29.2	28.5	2.4%
Manganese (Mn)-Dissolved	mg/L	0.000005	0.873	0.915	4.7%
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	< 5x of LOR
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.0102	0.00944	7.7%
Nickel (Ni)-Dissolved	mg/L	0.00005	0.00707	0.00729	3.1%
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	< 5x of LOR
Potassium (K)-Dissolved	mg/L	0.05	7.01	7.03	0.3%
Rhenium (Re)-Dissolved	mg/L	0.000005	0.0000159	0.0000153	3.8%
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.00561	0.00556	0.9%
Selenium (Se)-Dissolved	mg/L	0.00004	0.000389	0.000461	16.9%
Silicon (Si)-Dissolved	mg/L	0.05	5.09	5.09	0.0%
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	< 5x of LOR
Sodium (Na)-Dissolved	mg/L	0.2	14.3	14.1	1.4%
Strontium (Sr)-Dissolved	mg/L	0.00001	0.321	0.31	3.5%
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	< 5x of LOR
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000162	0.0000163	0.6%
Thorium (Th)-Dissolved	mg/L	0.000005	0.0000289	0.000029	0.3%
Tin (Sn)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	< 5x of LOR
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000432	0.000425	1.6%
Tungsten (W)-Dissolved	mg/L	0.00001	0.000204	0.000192	6.1%
Uranium (U)-Dissolved	mg/L	0.000001	0.182	0.166	9.2%
Vanadium (V)-Dissolved	mg/L	0.00001	0.0004	0.000415	3.7%
Yttrium (Y)-Dissolved	mg/L	0.000005	0.000215	0.000227	5.4%
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00264	0.00311	16.3%
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000132	0.00015	12.8%

Note:
1. LOR - Limit of Reporting
2. Relative Percent Difference is highlighted in yellow if the value is larger than 15%

Table 4: Comparison with the 2006 Seepage Survey Results

Analyte	Unit	NWB-WL[3] Max. Avg	NWB-WL[3] Max. Grab	JER-SPG-01D L1059935-5 9/14/2011	JER-SPG-02A L1059935-6 9/14/2011	Seep-05 06-9507 7/25/2006	JER-SPG-08A L1059935-7 9/14/2011	JER-SPG-08B L1059935-8 9/14/2011	Seep-13 06-9508 7/25/2006
Physical Parameter									
pH (Lab)	pH	6 - 8.8	6 - 8.8	8.05	8.12	7.9	8.03	8.06	7.31
Conductivity (EC)	uS/cm	-	-	1240	793	921	349	251	236
Total Dissolved Solids (Calculated	mg/L	2,000	4,000	911	529	616	213	139	212
Total Suspended Solids	mg/L	15	25	**45**	**237**	4	7	<3.0	21
Turbidity	NTU	-	-	33.4	231	8	3.62	0.72	11
Hardness (as CaCO3)	mg/L	-	-	513	331	348	130	104	93.4
Ion Balance (Calculated)	%	-	-	90	95.4	0.92	95.8	105	1.08
Anions and Nutrients									
Acidity (as CaCO3)	mg/L	-	-	<5.0	<5.0	4	<5.0	<5.0	19
Alkalinity, Total (as CaCO3)	mg/L	-	-	73.4	117	86	67.3	85.9	77
Bicarbonate (HCO3)	mg/L	-	-	89.5	143	105	82.1	105	94
Carbonate (CO3)	mg/L	-	-	<5.0	<5.0	<1	<5.0	<5.0	<1
Hydroxide (OH)	mg/L	-	-	<5.0	<5.0	<1	<5.0	<5.0	<1
Chloride (Cl)	mg/L	500	1,000	7.17	10.5	56.6	8.38	4.52	18.6
Fluoride (F)	mg/L	-	-	0.088	<0.050	0.22	0.057	0.104	0.05
Total Ammonia (as N)	mg/L	6	12	2.25	0.205	**2.23**	0.306	<0.0050	1.04
Nitrate (as N)	mg/L	28	56	**125**	**58**	**65.9**	12	3.26	<0.05
Nitrite (as N)	mg/L	2.5	5.0	0.669	0.054	**1.89**	0.056	<0.0020	**1.91**
Orthophosphate-Dissolved (as P)	mg/L	-	-	<0.0010	0.0656	<0.20	0.0018	<0.0010	<0.20
Phosphorus (P)-Total	mg/L	0.2	0.4	0.0115	0.176	-	0.0473	0.008	-
Sulfate (SO4)	mg/L	-	-	102	54.6	41	50.2	18.9	4.9
Organic/Inoragnic Carbon									
Total Inorganic Carbon	mg/L	-	-	18.4	29.8	9	16.7	22.3	35.1
Total Organic Carbon	mg/L	-	-	3.4	10.5	12.3	13.5	6	23.8
Dissolved Metals									
Aluminum (Al)-Dissolved	mg/L	1.0	2.0	0.00256	0.00818	0.015	0.044	0.0148	0.226
Antimony (Sb)-Dissolved	mg/L	-	-	0.000162	0.000338	0.00072	0.000164	0.00085	0.00023
Arsenic (As)-Dissolved	mg/L	0.05	0.10	0.000762	0.000979	0.0018	0.000587	0.000357	0.0015
Barium (Ba)-Dissolved	mg/L	-	-	0.064	0.0979	0.194	0.0417	0.0255	0.0624
Beryllium (Be)-Dissolved	mg/L	-	-	<0.0000020	0.0000026	<0.0001	0.0000068	0.0000047	<0.0001
Boron (B)-Dissolved	mg/L	-	-	0.112	0.0535	0.029	0.047	0.036	0.017
Cadmium (Cd)-Dissolved	mg/L	0.0012	0.0024	<0.000010	0.000108	<0.00005	<0.0000050	<0.0000050	0.00008
Calcium (Ca)-Dissolved	mg/L	-	-	129	84.2	80.3	29.4	24.4	22.9
Chromium (Cr)-Dissolved	mg/L	0.087	0.17	<0.000050	0.000121	0.0099	0.000275	0.00018	0.0087
Cobalt (Co)-Dissolved	mg/L	-	-	0.0014	0.0021	0.00113	0.000955	0.000149	0.0193
Copper (Cu)-Dissolved	mg/L	0.02	0.04	0.00821	0.012	0.0032	0.00452	0.00515	0.0147
Iron (Fe)-Dissolved	mg/L	-	-	<0.010	0.022	<0.10	0.062	0.033	<0.10
Lead (Pb)-Dissolved	mg/L	0.01	0.02	<0.0000050	0.00047	<0.00005	0.0000944	0.0000592	0.00035
Lithium (Li)-Dissolved	mg/L	-	-	0.011	0.00367	0.0094	0.00392	0.00271	<0.0010
Magnesium (Mg)-Dissolved	mg/L	-	-	56.1	34	0.187	15.3	9.88	0.049
Manganese (Mn)-Dissolved	mg/L	-	-	0.699	0.34	35.7	0.425	0.00134	8.8
Mercury (Hg)-Dissolved	mg/L	-	-	<0.000050	<0.000050	<0.00005	<0.000050	<0.000050	<0.00005
Molybdenum (Mo)-Dissolved	mg/L	0.73	1.50	0.00588	0.00301	0.0329	0.00687	0.00405	0.0074
Nickel (Ni)-Dissolved	mg/L	0.05	0.10	0.00803	0.0282	0.00494	0.00962	0.00219	0.00718
Phosphorus (P)-Dissolved	mg/L	-	-	<0.050	0.067	0.022	<0.050	<0.050	0.107
Potassium (K)-Dissolved	mg/L	-	-	11.7	8.14	8.1	4.63	4.42	1.4
Selenium (Se)-Dissolved	mg/L	-	-	0.00265	0.000329	0.0017	0.000416	0.000171	0.0006
Silicon (Si)-Dissolved	mg/L	-	-	4.36	4.82	4.2	4.88	3.52	14.6
Silver (Ag)-Dissolved	mg/L	-	-	<0.0000050	<0.0000050	<0.00005	<0.0000050	<0.0000050	<0.00005
Sodium (Na)-Dissolved	mg/L	-	-	17	16.5	27	14.2	9.15	13.4
Strontium (Sr)-Dissolved	mg/L	-	-	0.414	0.328	0.206	0.124	0.0961	0.0807
Thallium (Tl)-Dissolved	mg/L	-	-	0.0000272	0.0000241	<0.00005	0.0000111	0.0000037	<0.00005
Tin (Sn)-Dissolved	mg/L	-	-	<0.000010	<0.000010	0.0028	<0.000010	<0.000010	<0.0001
Titanium (Ti)-Dissolved	mg/L	-	-	<0.000050	0.000187	0.002	0.000772	0.000341	0.0024
Uranium (U)-Dissolved	mg/L	0.5	1.0	0.121	0.0259	0.101	0.0804	0.0426	0.00674
Vanadium (V)-Dissolved	mg/L	-	-	0.00182	0.000774	0.0047	0.000483	0.000273	0.0052
Zinc (Zn)-Dissolved	mg/L	0.25	0.50	0.00027	0.00193	0.001	0.00085	0.00064	0.007

Note:

1. NWB-WL - Criteria taken from *Jericho Diamond Mine Water Licence (Licence No. 2AM-JER0410), Part G, Item 6a.* by Nunavut Water Board (NWB), December 2004

2. Values exceeding the NWB-WL Maximum Average Concentration limits are highlighted in **ORANGE**; values exceeding the NWB-WL Maximum Grab Concentration limits are **BOLD** and UNDERLINED.

FIGURES

LEGEND:

- CATCHMENT AREA BOUNDARY
- EXISTING ROAD
- PROPOSED INFRASTRUCTURE
- EXISTING ORE/PK STOCKPILE
- FUTURE ORE/PK STOCKPILE
- CURRENT WASTE ROCK DUMP PERIMETER
- SEEPAGE FLOW DIRECTION

CARAT LAKE
CAUSEWAY FOR FRESHWATER INTAKE
TO AIRSTRIP
Lake C4
JER-SPG-01A
JER-SPG-01B
JER-SPG-INFLOW01
C1 DIVERSION
STREAM C1
JER-SPG-01C
AMMONIUM NITRATE STORAGE PAD
OPEN PIT (MAXIMUM EXTENT)
WASTE DUMP SITE 1
EXPLOSIVE MAGAZINES
EMULSION PLANT
Lake C1
Lake C2
JER-SPG-01D
JER-SPG-02A
CURRENT WASTE ROCK DUMP FOOTPRINT
JER-SPG-08A
TANK FARM
JER-SPG-08B
LOW GRADE STOCKPILE AREA
WASTE DUMP SITE 2
Lynne Lake
PROCESSING PLANT
NORTH DAM (FUTURE)
COARSE PK STOCKPILE 3 (FUTURE)
PONDED WATER
RECLAIM PIPELINE
EAST SUMP
Key Lake
CELL C
WEST DAM
CELL B
ORE STOCKPILE
COARSE PK STOCKPILE 4
WEST DAM ACCESS ROAD
DIVIDER DYKE B (FUTURE)
FINE PK CELL A
DIVIDER DYKE A
COARSE PK STOCKPILE 2
PONDED WATER
EAST DAM
Ash Lake
COARSE PK STOCKPILE 1 (FUTURE)
SOUTHEAST DAM

NOTES:

1. LAYOUTS ARE APPROXIMATE, AND MAY NOT REFLECT ACTUAL SIZE AND LOCATIONS
2. FOOTPRINT OF CURRENT WASTE ROCK DUMP ARE PLOTTED BASED ON SURVEY DATA AND HANDHELD GPS TRACKS IN 2011

MONITORING LOCATIONS:

- 2011 SEEPAGE SURVEY SAMPLE LOCATION

0 500
Scale: 1: 10 000 (metres)

STATUS
ISSUED FOR USE

CLIENT
shear diamonds

2011 ANNUAL SEEPAGE SURVEY JERICHO DIAMOND MINE, NUNAVUT

CATCHMENT AREAS AND SAMPLE LOCATIONS

eba A TETRA TECH COMPANY

PROJECT NO.	DWN	CKD	REV
E14101140	DBD/TK	WL	0

OFFICE	DATE
EBA-EDM	October 2011

Figure 1

PHOTOGRAPHS

Photo 1: Seep JER-SPG-1A Flowing into Carat Lake
Western aspect
Photo taken on September 14, 2011

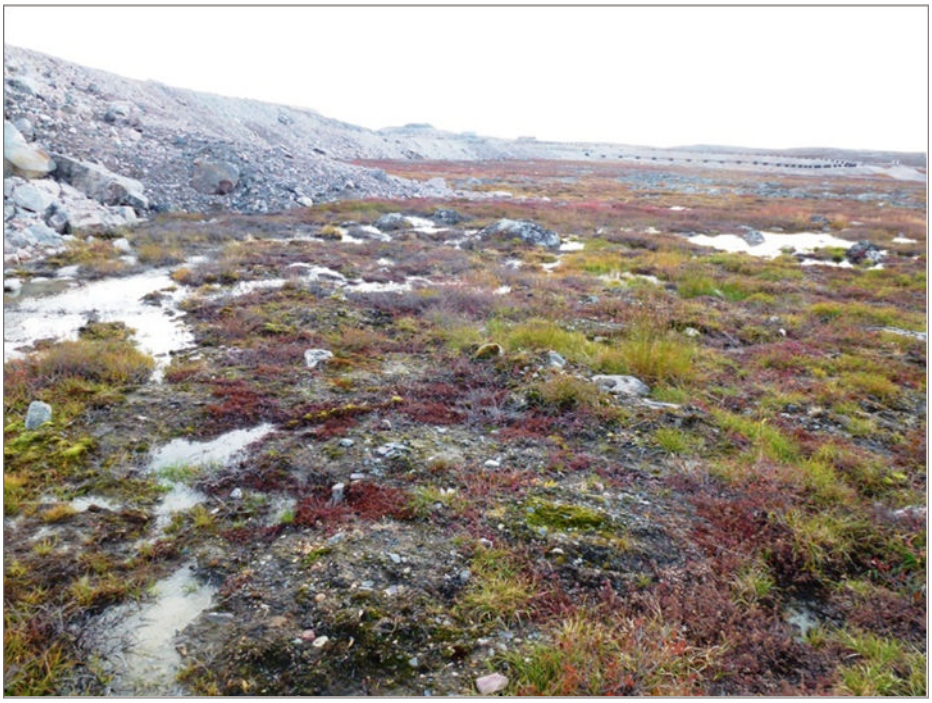

Photo 2: Seep JER-SPG-1B Emerging from West Side of Waste Rock Dump 1
Southern aspect
Photo taken on September 14, 2011

Photo 3: Seep JER-SPG-1C Flowing North into Carat Lake
Northern aspect
Photo taken on September 14, 2011

Photo 4: Seep JER-SPG-01D Flowing North on Haul Road
Northern aspect
Photo taken on September 14, 2011

Photo 5: Seep JER-SPG-02A Flowing into a Small Pond on Side of Haul Road
Southeastern aspect
Photo taken on September 14, 2011

Photo 6: Stream JER-SPG-INFLOW01 Flowing West into Waste Rock Dump 1
Western aspect
Photo taken on September 15, 2011

Photo 7: Ponding South of Waste Rock Dump 2
Eastern aspect
Photo taken on September 15, 2011

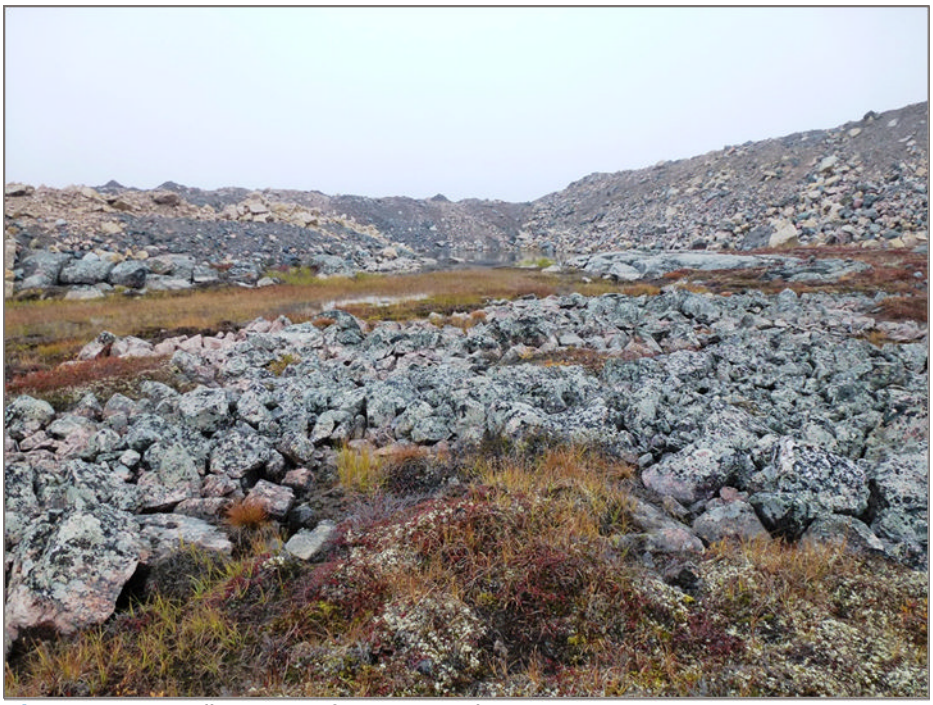

Photo 8: Ponding East of Waste Rock Dump 2
Northwestern aspect
Photo taken on September 15, 2011

Photo 9: Seep JER-SPG-08A Emerging from West Side of Low Grade Ore Stockpile
Eastern aspect
Photo taken on September 14, 2011

Photo 10: Seep JER-SPG-08B at Southwest Side of Low Grade Ore Stockpile
Southeastern aspect
Photo taken on September 14, 2011

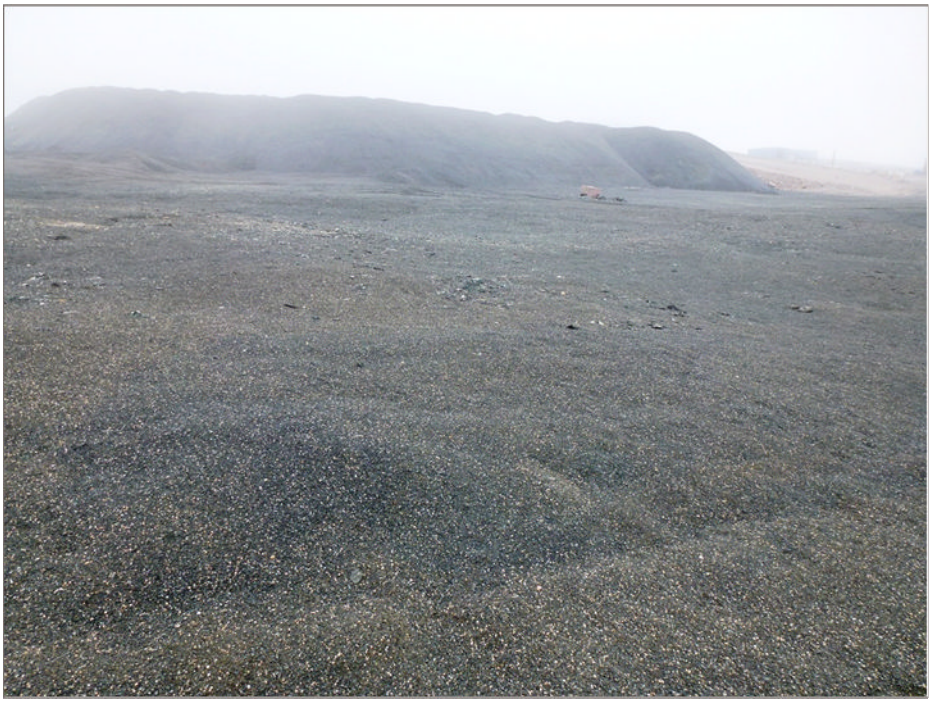

Photo 11: Northwest Side of Coarse PK Stockpile
Southeastern aspect
Photo taken on September 15, 2011

Photo 12: Water Ponding at South Side of Ore Stockpile
Western aspect
Photo taken on September 15, 2011

Photo 13: Water Ponding and Wetland at East Side of Ammonia Nitrate Storage Pad
Northeastern aspect
Photo taken on September 15, 2011

Photo 14: Water Ponding at West Side of Ammonia Nitrate Storage Pad
Western aspect
Photo taken on September 15, 2011

Photo 15: North Portion of the West Face of West Dam
Northern aspect
Photo taken on September 15, 2011

Photo 16: South Portion of the West Face of West Dam
Southern aspect
Photo taken on September 15, 2011

Photo 17: Southeast Face of Southeast Dam
Northeastern aspect
Photo taken on September 15, 2011

Photo 18: East Face of East Dam
Western aspect
Photo taken on September 15, 2011

APPENDIX A

APPENDIX A WEEKLY GEOTECHNICAL INSPECTION RECORDS

(P) = Photo taken.

EKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: THURSDAY JUNE 2ND 2011 **Weather:** overcast, N/NW wind, ~-5°C.

Time (Start/Finish): 8:35 - 18:00 **Inspected by:** CJP / RAK.

West Dam

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Instruments Read (June 1/11)

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment Thermister casing @ #1916 damaged.

Notes: (Location/description, extent, dimensions of feature)

- trace seepage - frozen - probably meltwater
- minor slope erosion (~5m) on S side of transition zone on D/S side (P)
- snow on D/S side of toe.
- water @ U/P side toe.

(Y/N) Require Inspection by Engineer RAK (EBS) present.

East Dam

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Instruments Read (May 31/11)

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- U/S side ~~mino~~ erosion typically near T-joints (P) - particularly at most S/E end.
- (P) ponding D/S side - likely meltwater. + liner should be adjusted under pipe?

(Y/N) Require Inspection by Engineer RAK onsite.

S[illegible]heast Dam

(Y/N) Seepage NO. (Y/N) Cracking (Y/N) Erosion (Y/N) Instruments Read (June 2/11)

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- (P) erosion as at East Dam. should be fixed. - Crack forming beside erosion @ SE end.
- (P) HDPE liner under SE outflow T-joint should be fixed.
- D/S snow limiting inspection

(Y/N) Require Inspection by Engineer RAK onsite.

Divider Dyke A

(Y/N) Downstream Turbidity (Y/N) Cracking (Y/N) Erosion Cell B/C water level

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment n/a. m

Notes: (Location/description, extent, dimensions of feature)

- cell B/C side frozen + snow covered. (P)
- visible surfaces look good.

(Y/N) Require Inspection by Engineer RAK onsite.

Fuel Tank Farm

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Evidence of Spillage

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- (P) Small amount of settlement on N side/outside wall - minor.
- (P) S side top of berm slightly damaged by equipment - should be fixed.
- (P) S side discoloration + evidence of spill.

(Y/N) Require Inspection by Engineer RAK onsite

Generator Containment Area

(P)

MINOR on top of E side

Y/N Seepage — Y/N Cracking — Y/N Erosion — Y/N Evidence of Spillage

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- elevation of berm on W side should be improved.
- water should be pumped out to facilitate volume for potential spill.

Y/N Require Inspection by Engineer

Airstrip Containment Area

(P)

Y/N Seepage — Y/N Cracking — Y/N Erosion — Y/N Evidence of Spillage

Y/N Settlement or Slumping — Y/N Ponded Water — ? Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- Small depressions on E side holding ponded water. Discolouration and evidence of spill. Liner needs to be investigated when thawed to assess why its showing there.
- HOLES should be filled if okay

Y/N Require Inspection by Engineer

Landfill

Y/N Seepage — Y/N Cracking — Y/N Erosion

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- landfill mostly covered and inactive.

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage — Y/N Cracking — Y/N Erosion

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- In process of pumping out ponded water - analytical results available.
- Many issues with liner in W cell - must be fixed - on ALL sides.
- Some damage in E cell - must be fixed - mostly N + W sides.
- Holes, breaks likely by equipment.

Y/N ? Require Inspection by Engineer

C1 Diversion Channel

(P)

Y/N Water Flowing — Y/N Cracking — Y/N Erosion/Sloughing — Y/N Culverts Open

Y/N Settlement or Slumping (not visible) — Y/N Ponded Water — Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

- rock in UPS side of culvert deemed minor by RK. ~300mm stone.
- most of trib is snow covered.

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion N/A m

Notes: (Location/description, extent, dimensions of feature)

- ice covered.
- ~~no~~ v. minor erosion along PK - No action necessary.

Y/N Require Inspection by Engineer

Collector Ditches and Culverts - surveyed 7 culverts along airport Rd. See below.

Y/N Water Flowing Y/N Cracking Y/N Erosion Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Culverts #id from N to S. starting with culvert nearest HWTA. (all ephemeral)

Y/N Require Inspection by Engineer

Additional Notes:

1. perched culvert on D/S side. flowing.
2. not flowing, blocked. (ephemeral)
3. flowing, this system should be improved for future freshets
4. flowing
5. blocked - currently actively pumping US ponded water.
6. is there supposed to be a culvert at this marker?
7. v. small flow -

Photo List:

(P) = indicates Photos taken @ site.

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: 12-June-11 **Weather:** A bit of rain / snow

Time (Start/Finish): 15:00-17:30 **Inspected by:** Carolyn & Tatiana

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | NA

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | * Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* minor upstream side

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity NA | Y/N Cracking | * a bit in cell A Y/N Erosion | Cell B/C water level

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | _____ m

need

Notes: (Location/description, extent, dimensions of feature)

* there seem to be a flow from cell A to cell B-C. Pictures taken (see daily)

Y/N Require Inspection by Engineer maybe

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage historical

Y/N Settlement or Slumping historical | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage Y/N Cracking Y/N Erosion Y/N Evidence of Spillage

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Ponded Water from winter

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage Y/N Cracking Y/N Erosion Y/N Evidence of Spillage

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Ponded Water small

Evidence of Spillage historic

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Landfill

Y/N Seepage Y/N Cracking Y/N Erosion

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

N/A

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Waste Transfer Area (Area 1 + HWTA)

Y/N Seepage Y/N Cracking Y/N Erosion

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- Area 1 secondary containment needs to be fixed

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing Y/N Cracking Y/N Erosion/Sloughing Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion ____ m

NOT ESTABLISHED YET

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing Y/N Cracking Y/N Erosion (+ a bit) Y/N Culverts Open (NOT ALL.)

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Culvert work needed on Airport Road.

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

EEKLY GEOTECHNICAL INSPECTION SUMMARY

(Printed 19 June)

Observation Date: 18-June-2011 **Weather:** Cloudy & windy. No rain.

Time (Start/Finish): **Inspected by:** TATIANA LECLERC, JIM KANE

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

DONE MAY 31.

Notes: (Location/description, extent, dimensions of feature)

There is a small depression at the top of the dam (pond BC) (P) confirmed: it is there for a reason.

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Mirror upstream side
* PK fine downstream (historical.) (P)

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Mirror erosion upstream
* T joint, HDPE liner has to be fixed (P)

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | [ ] m

Notes: (Location/description, extent, dimensions of feature)

* Lots of dirt downstream side
* Ice melted on shore
* No flow side BC, still a flow side A

From water to pin = 23.5"

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Lots of water that has to be cleaned prior to discharge. Algae.
* Historical large spill.

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Sand missing on the rims. Liner exposed. (P)
* Ponded water historical.

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage & historical.
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Ponded water Contaminated (P)
* Erosion at the bottom (exterior) due to melted snow.

Y/N Require Inspection by Engineer

NA

Landfill

Y/N Seepage | Y/N Cracking | Y/N Erosion
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment (P)

Notes: (Location/description, extent, dimensions of feature)

* liner exposed to the rims
* ponded water Contaminated.
* tarp was to be put back on W. cell.

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow (P)

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion [ ] m

Notes: (Location/description, extent, dimensions of feature)

NA

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

being taken care of.

Y/N Water Flowing Y/N Cracking Y/N Erosion Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

One has to be reconstructed. Need DFO approval.

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Additional Notes:

Emulsion plant

No seepage
No settlement
No cracking
YES ponded water.
YES spills.

Photo List:

EEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: 24-June-2011 **Weather:** Sunny. Windy.

Time (Start/Finish): 4:00 PM – 5:30 PM **Inspected by:** TATIANA LECLERC
8:00 PM – 9:00 PM

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

READ MAY 31

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Minor erosion down upstream
* PKCA downstream.

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

* Minor

Notes: (Location/description, extent, dimensions of feature)

* HDPE liner has to be fixed.

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | ____ m

Notes: (Location/description, extent, dimensions of feature)

* a bit upstream.

* From water to pin = 47.5cm. (.475m)

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Historical.

*

Y/N Require Inspection by Engineer

Generator Containment Area

Y/(N) Seepage Y/(N) Cracking Y/(N) Erosion Y/(N) Evidence of Spillage

Y/(N) Settlement or Slumping (Y)/N Ponded Water Y/(N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* liner a bit exposed on rims.

Y/(N) Require Inspection by Engineer

Airstrip Containment Area

Y/(N) Seepage Y/(N) Cracking (Y)/N Erosion (Y)/N Evidence of Spillage historical.

Y/(N) Settlement or Slumping (Y)/N Ponded Water historical Y/(N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Erosion at the bottom.
* liner exposed.

Y/N Require Inspection by Engineer

Landfill

Y/N Seepage Y/N Cracking Y/N Erosion

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Landfill is inactive. operations working

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/(N) Seepage Y/(N) Cracking Y/(N) Erosion

(Y)/N Settlement or Slumping Y/(N) Ponded Water (Y)/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Ponded water dried.
* liner exposed and damaged by equipment
* temp ~~fence~~ berm constructed on west cell but not permanent

Y/(N) Require Inspection by Engineer

C1 Diversion Channel

(Y)/N Water Flowing Y/(N) Cracking Y/(N) Erosion/Sloughing (Y)/N Culverts Open

Y/(N) Settlement or Slumping Y/(N) Ponded Water Y/(N) Free of Snow almost

* a rock into the culvert but doesn't keep water from flowing

Notes: (Location/description, extent, dimensions of feature)

* some snow left down south.

Y/(N) Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion NA m

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing Y/N Cracking Y/N Erosion Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

* Erosion repaired this week.
* Some culverts are closed waiting for Site Approval.

Y/N Require Inspection by Engineer

Additional Notes:

Emulsion plant

* Some spills (historical, minors) water in secondary containment

Photo List:

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: July 6 / 2011 **Weather:** clear, no wind, clouds / sun.

Time (Start/Finish): 14:00 17:45. **Inspected by:** CJP / CS

West Dam

Y/N Seepage — Y/N Cracking — Y/N Erosion — Y/N Instruments Read

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature) as was found originally on westside historic. See notes.

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage — Y/N Cracking — Y/N Erosion → historic downshm. — Y/N Instruments Read

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Southeast Dam

Seepage — Y/N Cracking — Y/N Erosion as reported — Y/N Instruments Read

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

liner repair as previously reported.

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity — Y/N Cracking — Y/N Erosion — Cell B/C water level

Y/N Settlement or Slumping minor upstrm — Y/N Ponded Water — Y/N Damage by equipment — 0.591 m

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage — Y/N Cracking — Y/N Erosion as historic — Y/N Evidence of Spillage

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature) as historic

evidence of 'DRIP' from joint from pipe to tank laid spill pads down. See Chris Investigate

? Y/N Require Inspection by Engineer

? follow up.

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

↳ should be pumped once remed cut in place.

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion (some - not extreme.) | Y/N Evidence of Spillage (historical.)

Y/N Settlement or Slumping | Y/N Ponded Water (as usual) | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- liner exposed - on list to be fixed.

Y/N Require Inspection by Engineer

Landfill

INACTIVE - LANDFILL HAS BEEN COVERED.

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- Problems has inspected & reported historically.
- No new issues - ongoing.
- Sand down spill pad @ one drum.

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion N/A m

Notes: slight against PK
(Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing Y/N Cracking Y/N Erosion (historic) Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- will be rebuilt with DFO guidance
- Biologists in next week.

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

EEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: JULY 14 2011 **Weather:** Sunny Clear Light Winds ~16°C

Time (Start/Finish): 13:00 - 16:30 **Inspected by:** CJP / TL

West Dam

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Instruments Read

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

? data forwarded to Geotech.

Notes: (Location/description, extent, dimensions of feature)

- @ SE side - historic and appears stable.

Happening this week ? RARY COOP.

(Y/N) Require Inspection by Engineer

East Dam

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Instruments Read

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

v. Major on PCKA side

Notes: (Location/description, extent, dimensions of feature)

- erosion typically near 'T' joints
- Liner should be adjusted under pipe.

(Y/N) Require Inspection by Engineer

Southeast Dam

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Instruments Read

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

Minor under pipes

Notes: (Location/description, extent, dimensions of feature)

- erosion issues as @ east dam.
- HDPE liner under SE outflow should be fixed.

(Y/N) Require Inspection by Engineer

04 517.01 - 12.00 505.01

05 517.66 - 83.80 433.86

Divider Dyke A

(Y/N) Downstream Turbidity (Y/N) Cracking (Y/N) Erosion Cell B/C water level

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment ____ m

v. Small on E side

Notes: (Location/description, extent, dimensions of feature)

SAS 05 = 33 in = 83.8 cm.

SAS 04 = 43/4 = 12 cm.

(Y/N) Require Inspection by Engineer

Fuel Tank Farm

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (Y/N) Evidence of Spillage

(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

minor Historic on south side

Notes: (Location/description, extent, dimensions of feature)

- small amount of ~~erosion~~ settlement on N side / outside wall
- S side - Top of berm slightly damaged by equipment.
- S side historical spill

(Y/N) Require Inspection by Engineer

- ponded water in S cell. being remediated w new unit.

SHEAR DIAMONDS LTD. eba A TETRA TECH COMPANY

Generator Containment Area

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (v. minor) (Y/N) Evidence of Spillage
(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- water to be pumped.

(Y/N) Require Inspection by Engineer

Airstrip Containment Area

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion (v. minor) (Y/N) Evidence of Spillage (historic)
(Y/N) Settlement or Slumping (Y/N) Ponded Water (v. minor) (Y/N) Damage by equipment (inside ~~THRE~~ FLOOR)

Notes: (Location/description, extent, dimensions of feature)

- small depressions on E side floor of containment to be filled. SHOULD investigate liner prior to assume integrity of floor.

(Y/N) Require Inspection by Engineer

Landfill ~~N/A~~

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion
(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

(from landfill area to road?)

Notes: (Location/description, extent, dimensions of feature)

Landfill closed.

(Y/N) Require Inspection by Engineer

Waste Transfer Area

(Y/N) Seepage (Y/N) Cracking (Y/N) Erosion
(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Damage by equipment

Notes: (Location/description, extent, dimensions of feature) As noted on previous inspections these cells require major repair - however no current water or evidence of contaminants leaving containment.

(Y/N) Require Inspection by Engineer

C1 Diversion Channel

(Y/N) Water Flowing (Y/N) Cracking (Y/N) Erosion/Sloughing (Y/N) Culverts Open
(Y/N) Settlement or Slumping (Y/N) Ponded Water (Y/N) Free of Snow

Notes: (Location/description, extent, dimensions of feature)

- rock in upstrm side of culvert -

(Y/N) Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level N/A m

Y/N Settlement or Slumping Y/N Erosion

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing Y/N Cracking minor at some Y/N Erosion Y/N* Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

~~Some~~ culverts with flow Yes
culverts with no water supply ~~NO~~ are mostly damaged.

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: FRIDAY JULY 22/11 **Weather:** overcast, mod wind.

Time (Start/Finish): 15:00 **Inspected by:** C Paterson

West Dam

SOUTH/EAST SIDE - HISTORIC; APPEARS STABLE

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Leak in upper part of discharge hose creating small pool of water on middle bench on west side of dam. Some siltation, but remedied immediately. NO FURTHER ACTION.

Y/N Require Inspection by Engineer

East Dam

minor on West side.

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- erosion typically near 'T' joints
- Liner should be adjusted under discharge pipes before any discharge happens.

Y/N Require Inspection by Engineer

Southeast Dam

under discharge lines.

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level 0.33 m SAS-04

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

very small amt upstrm side - and evaporating quickly.

Y/N Require Inspection by Engineer

Fuel Tank Farm

minor - mostly from walking over banks.

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage HISTORIC / nothing new.

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment on south side.

Notes: (Location/description, extent, dimensions of feature)

- some settlement on N side, outside wall - historic not serious
- South side - historical spill
- ponded water in S cell being pumped to OTEC

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion (v. minor) | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)
- water slated to be pumped to OZTEC.

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion (v. minor) | Y/N Evidence of Spillage
↳ historic.

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)
↳ very small amt - evaporating quickly.

Y/N Require Inspection by Engineer

Landfill (OLD LANDFILL)

Y/N Seepage Sampled July 15th | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)
HWTA in process of investigation and repair this weekend.

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)
↳ but very low flow -

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping — Y/N Cracking — Y/N Damage by equipment — Pond water level N/A m

Y/N Settlement or Slumping — Y/N Erosion

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing — in C-2 only. — Y/N Cracking — evidence from freshet. — Y/N Erosion — Y/N Culverts Open — yes and no on some.

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

minor at some culverts — slated for repair

EBA & DFO was here this week

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: 08-AUGUST-11 **Weather:** Sunny, calm

Time (Start/Finish): 18:00 - 19:30 **Inspected by:** TATIANA

West Dam

x historic, stable

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ Erosion, T-joints, liner under pipes need adjustment

→ PK fine on East side (historical)

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ Erosion, liner unadjusted under T joints

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | m

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ Spill historical

→ ponded water being remediated via OZTEC

→

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ H_2O will be treated prior to discharge.
→ liner a bit visible.

Y/N Require Inspection by Engineer

Airstrip Containment Area

→ a bit at bottom / north side

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage
↳ historical
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ ponded water dry (evaporation)

Y/N Require Inspection by Engineer

Landfill

* SAMPLED JULY 15

Y/N Seepage | Y/N Cracking | Y/N Erosion
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ liners broken & exposed => pictures & field notes sent to EA & A

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level N/A m

Y/N Settlement or Slumping Y/N Erosion

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

road repaired

C-2 Y/N Water Flowing Y/N Cracking Y/N Erosion Y/N Culverts Open

Some need repair, C-2 opened

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Some culverts need repair

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: 16-AUGUST-2011. **Weather:** Windy (East) Rainy, Cool <10°C.

Time (Start/Finish): 13:00 **Inspected by:** CJP + MC.

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

→ photo - slump area noted - photo taken, not new - has been there since May, but may be deeper now? will compare with photo taken today in later inspections

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

only slight on dwnstrm side as noted in previous inspect.

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

erosion under T joints & discharge pipes - as noted previously

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Cell B/C water level 0.21 m below SAS 04.

Notes: (Location/description, extent, dimensions of feature)

very little water on upstrm side.

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

still a lot of ponded water on N section

evidence present, but from old spills/leaks previously recorded.

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Covers most of the base of the secondary containment.

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

ponded water ~~att~~ under & on the S side of fuel tank #20

slight smell & appearance of hydrocarbon in pooled water (appears old)

Y/N Require Inspection by Engineer

Landfill N/A - CLOSED.

Y/N Seepage | Y/N Cracking | Y/N Erosion
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

~~slight pools in tire tracks (faint, deep)~~

Cracks in lining, not on berms.

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

slight pooling present

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open
Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow

bit damaged.

Notes: (Location/description, extent, dimensions of feature)

- at base of culvert
- culvert appears damaged

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping — Y/N Cracking — Y/N Damage by equipment — Pond water level n/a m

Y/N Settlement or Slumping — Y/N Erosion

Notes: (Location/description, extent, dimensions of feature)

No markers

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing — Y/N Cracking — Y/N Erosion — Y/N Culverts Open

Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

- some culverts appear fully damaged & should be replaced
- still has water flowing

Notes: (Location/description, extent, dimensions of feature)

Very damaged towards airport road. slight damage @ 1 diversion stream.

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

1. Slump @ West Dam.
2. " " "

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: Aug 23rd, 2011 **Weather:** Slight E wind, Cool (~9°C) no rain

Time (Start/Finish): (10:55 am / **Inspected by:** MC.

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

slight slump on west side of Dam.

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking (very little near T joints) | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

o

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level 516.65 m (ASL)

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

no significant water on East side of Dyke.

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Still a lot of ponded water in S section of Farm (Down significantly from the previous week)

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage — Y/N Cracking — Y/N Erosion — Y/N Evidence of Spillage
Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

lots of water present due to continuous rain. will need to be drained & cleaned in Oztec

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage — Y/N Cracking — Y/N Erosion — Y/N Evidence of Spillage
Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

old spill present, no new incidents found.

Notes: (Location/description, extent, dimensions of feature)

pooling near fuel tank #2

Y/N Require Inspection by Engineer

Landfill

N/A

Y/N Seepage — Y/N Cracking — Y/N Erosion
Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Land fill is closed.

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage — Y/N Cracking — Y/N Erosion
Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

slight pooling in tracks on N end of N section.

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing — Y/N Cracking — Y/N Erosion/Sloughing — Y/N Culverts Open (slight damage)
Y/N Settlement or Slumping — Y/N Ponded Water — Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

at base of ~~the~~ culvert (culvert is slightly above water level).

Y/N Require Inspection by Engineer

East Sump

Y/(N) Seepage/Over topping Y/(N) Cracking Y/(N) Damage by equipment Pond water level n/a m (no marker)

Y/(N) Settlement or Slumping Y/(N) Erosion

Notes: (Location/description, extent, dimensions of feature)

Y/(N) Require Inspection by Engineer

Collector Ditches and Culverts

(Y)/N Water Flowing Y/(N) Cracking (Y)/N Erosion Y/(N) Culverts Open (some are collapsed, should be replaced or fixed @ some point).

Y/(N) Settlement or Slumping Y/(N) Ponded Water (Y)/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

- fair damage done to those near Area 1
- slight cave in @ culvert at pump at the west cell (PKCA)

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

No photos taken as there is little to no change from previous weeks.

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: Aug 30, 2011 **Weather:** Sunny, no clouds, 11°C

Time (Start/Finish): 9:00am - 12:00pm **Inspected by:** MC/WA

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Slight slump noted previously

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

outside of dam covered in FPK

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | m

Notes: (Location/description, extent, dimensions of feature)

East side of Dam
(in PKCA)

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

- past spill
- slight diesel in ponded water.

Notes: (Location/description, extent, dimensions of feature)

minimal
(no action required)

Y/N Require Inspection by Engineer

Landfill

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Not OPEN

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Settled waste in N section (near tire ruts).

lots of exposed / damaged liner.

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion [ ] m

no benchmark

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing Y/N Cracking Y/N Erosion Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Additional Notes:

Photo List:

WEEKLY GEOTECHNICAL INSPECTION SUMMARY

Observation Date: 06Sept2011 **Weather:** foggy, mild, ~9°C

Time (Start/Finish): 9-11am **Inspected by:** WA

West Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

slumping previously noted

Y/N Require Inspection by Engineer

East Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

outside of wall covered in FPL

Y/N Require Inspection by Engineer

Southeast Dam

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Instruments Read

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

erosion at drainage troughs
one trough out of place

Y/N Require Inspection by Engineer

Divider Dyke A

Y/N Downstream Turbidity | Y/N Cracking | Y/N Erosion | Cell B/C water level

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment | 516.42 m

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Fuel Tank Farm

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

lots of ponded water
depression of berm near tank #8

Y/N Require Inspection by Engineer

Generator Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Airstrip Containment Area

Y/N Seepage | Y/N Cracking | Y/N Erosion | Y/N Evidence of Spillage

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Landfill

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

N/A - not in use

Y/N Require Inspection by Engineer

Waste Transfer Area

Y/N Seepage | Y/N Cracking | Y/N Erosion

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

exposed berm

Y/N Require Inspection by Engineer

C1 Diversion Channel

Y/N Water Flowing | Y/N Cracking | Y/N Erosion/Sloughing | Y/N Culverts Open

Y/N Settlement or Slumping | Y/N Ponded Water | Y/N Free of Snow

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

East Sump

Y/N Seepage/Over topping Y/N Cracking Y/N Damage by equipment Pond water level

Y/N Settlement or Slumping Y/N Erosion [ ] m

no benchmark

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Collector Ditches and Culverts

Y/N Water Flowing Y/N Cracking Y/N Erosion Y/N Culverts Open

Y/N Settlement or Slumping Y/N Ponded Water Y/N Damage by equipment

Notes: (Location/description, extent, dimensions of feature)

Y/N Require Inspection by Engineer

Additional Notes:

Photo List: