



shear
diamonds

TYPE A WATER LICENSE

2AM-JER1119

Jericho Diamond Mine

Monthly Report

Month being reported: May 2012

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1 INTRODUCTION

This Monthly Report is prepared as per Part B, Section 2 of the Type A Water License 2AM-JER1119, made effective by the Nunavut Water Board (NWB) on February 07 2012, to Shear Diamonds (Nunavut) Corp., a wholly owned subsidiary of Shear Diamonds Ltd.

Shear Diamonds Ltd. applied for a renewal application in February 2011. The NWB held a public hearing related to that application on November 30, 2011 and December 1, 2011 in Kugluktuk, NU. License 2AM-JER1119 replaced 2AM-JER0410, which was originally granted to Benachee Resources Inc.

2 MONTHLY AND ANNUAL QUANTITIES OF WATER OBTAINED FROM CARAT LAKE, LYNNE LAKE AND CONTWOYTO LAKE (Schedule B, Item 1a)

Freshwater was drawn from Carat Lake for domestic water use in the accommodations complex, offices, maintenance complex, dust control, airstrip compaction and the operation of the process plant. Table 2.1 provides the monthly and annual quantity of freshwater used. A total of 944.0m³ of water was drawn from Carat Lake since the beginning of 2012.

There has not been a winter road to the Jericho site since 2008. Accordingly, no water has been obtained from either Lynne Lake or Contwoyto Lake since that time.

Table 2.1- CARAT LAKE - Freshwater Use January – May 2012 (m3)

MONTH	Roadway and Airstrip Use	DOMESTIC WATER USE	PROCESS PLANT	CUMULATIVE TOTALS
January		71.1	50.0	121.1
February		57.6	11.0	68.6
March		90.0	21.0	110.0
April		109.6	79.0	188.6
May	148.9	186.0	119.8	454.7
June		N/A	N/A	N/A
July		N/A	N/A	N/A
August		N/A	N/A	N/A
September		N/A	N/A	N/A
October		N/A	N/A	N/A
November		N/A	N/A	N/A
December		N/A	N/A	N/A
ANNUAL TOTALS	148.9	514.3	280.8	944.0

Daily values can be found in Appendix A

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

While operating under Temporary Closure, no recycled water was used from the PKCA. Water pumped from Carat Lake into the Process Plant does get recycled within the Plant for a length of time prior to being discharged into the PKCA.

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

East Sump

No water was pumped to or from the east sump in 2012, as of the end May 2012.

Sewage Treatment Plant

Refer to section 7.

Open Pit

Refer to section 6.

Oztek Unit

Refer to Section 9.

Seepage

The seepage survey began May 29 and lasted until June 6. The results of the survey will be reported as soon as it is completed.

During Temporary Closure activities, production of fine PK was, and will continue to be limited to a small amount produced during the evaluation of the process plant using stockpiled material. Cell A has sufficient capacity for this evaluation work.

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

Discharge from the PKCA has not taken place yet in 2012.

A total of 0 m³ of water was discharged from the PKCA into the receiving environment.

Table 5.1 – Volume of Supernatant Discharge to Receiving Environment

MONTH	VOLUME DISCHARGED FROM THE PKCA (m ³)
January	0
February	0
March	0
April	0
May	0
June	N/A
July	N/A
August	N/A
September	N/A
October	N/A
November	N/A
December	N/A
ANNUAL TOTAL	0

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

Table 6.1 summarizes the monthly and annual volumes of water pumped from the Jericho pit. As of May 2012, there has not been any volume pumped from the pit into the PKCA.

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

MONTH	VOLUME PUMPED FROM PIT TO PKCA (m³)
January	0
February	0
March	0
April	0
May	0
June	N/A
July	N/A
August	N/A
September	N/A
October	N/A
November	N/A
December	N/A
TOTAL VOLUME PUMPED (m³)	0

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

Table 7.1 summarizes the monthly and annual volumes of treated effluent discharged from the Wastewater Treatment Facility – Sewage Treatment Plant (STP). All discharges of treated effluent from the STP in 2012 were deposited into the PKCA. A total of 314.8m³ of treated sewage effluent was discharged from the STP to the PKCA in 2012 as of May.

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

MONTH	Volume Treated – WWTP Treated Effluent (m³)
January	48.0
February	17.4
March	70.5
April	112.9
May	66.0
June	N/A
July	N/A
August	N/A
September	N/A
October	N/A
November	N/A
December	N/A
TOTAL VOLUME PUMPED (m³)	314.8

Daily values can be found in Appendix B

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

The removal of sewage solids from the Wastewater Treatment Facility has not been required on a regular basis while operating under Temporary Closure conditions. Settled solids were removed from the aeration tank as required based on camp population in order to maintain efficient functioning of the Sewage Treatment Plant. Settled solids are collected using a vacuum truck and deposited into a designated basin located on the till dump. Table 8.1 summarizes the volume of sewage solids removed from the Wastewater Treatment Facility. A total of 0 m³ of settled sludge was deposited into the designated basin on the till dump in May of 2012.

Table 8.1 Sewage Solids Removed January – December 2012

MONTH	SEWAGE SOLIDS REMOVED (m ³)
January	0
February	0
March	0
April	4.5
May	0
June	N/A
July	N/A
August	N/A
September	N/A
October	N/A
November	N/A
December	N/A
TOTAL	3.5

9 MONTHLY AND ANNUAL QUANTITIES OF TREATED EFFLUENT DISCHARGED FROM THE HYDROCARBON CONTACT WATER REMEDIATION UNIT (Schedule B, Item 1h)

In 2011 Shear Diamonds Ltd. assisted in the design of a mobile hydrocarbon contact water remediation unit (Oztek). This unit is used to treat water that is pumped from secondary containment areas. Prior to discharge to the PKCA, water is treated, sampled and pumped to the PKCA. Table 9.1 summarizes the volumes of treated and discharged from the Oztek to the PKCA. So far, there has not been any remediated water processed by the Oztek in 2012.

Table 9.1 Volumes of treated effluent discharged from Oztek to PKCA (m³)

MONTH	VOLUMES OF EFFLUENT DISCHARGED (m ³)
January	0
February	0
March	0
April	0
May	0
June	N/A
July	N/A
August	N/A
September	N/A
October	N/A
November	N/A
December	N/A
TOTAL	0

10 ANNUAL QUANTITIES OF OVERBURDEN, WASTE ROCK, ORE STOCKPILED, OR PROCESSED STORED (Schedule B, Item 1i)

The Jericho mine site continues to be operated under Temporary Closure conditions. There have been no materials mined, stockpiled or stored since Tahera operations ceased in 2008.

11 SUMMARY OF CONSTRUCTION ACTIVITIES AND UPDATED MINE PLAN (Schedule B, Item 1k)

The Jericho mine site has not had any construction activities in May 2012. No construction activities took place and there have been no changes to the Mine Plan originally filed by Tahera Diamond Corporation.

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

No modifications, major maintenance work or demolition work took place in March.

13 LIST AND DESCRIPTION OF ALL UNAUTHORIZED DISCHARGES AND SPILLS (Schedule B, Item 1t)

The kitchen lift station was broken for approximately one week from April 26 to May 2. During that time the lift station was emptied using a vac truck. The contents of the truck were deposited into a designated basin located on the till dump where the STP sludge is also deposited. During this time a total volume of 4.4 m³ was removed from the kitchen lift station.

A total of 7 spills were reported in May 2012. All spill reports can be found in Appendix C.

14 OUTLINE OF SPILL TRAINING EXERCISES CARRIED OUT BY THE LICENSEE (Schedule B, Item 1u)

No spill training exercises were carried out by Shear Diamonds Ltd. May 2012. While operating under Temporary Closure conditions, the number of people on site is limited and all potential training opportunities were not conducive with flight logistics in and out of site. The decision was made to hold off on training until such time as more people were available to participate making it more cost effective and productive.

15 SITE INSPECTIONS

There were no site inspections in May 2012 at the Jericho Mine Site.

16 SITE VISITORS

William Liu from EBA engineering was on site from May 24th to June 7th to complete a seepage survey for the site. The report will be available as soon as the report is complete.

17 NON-COMPLIANCES

May had some compliance issues. Ongoing issues include improper waste sorting, handling, disposal and incineration.

Water testing analysis for SWQ-01 effluent and influent, SWQ-12 carat lake pump house, and dustfall air quality can be found in Appendix D.

Under ice sampling for the Aquatic Effects Monitoring Program was completed from May 12 to May 17. The initial results that were received from the laboratory were erroneous and are currently being double checked. The results will be made available as soon as the discrepancies can be explained.

Monthly Site Inspections can be found in Appendix E.

APPENDIX A: Daily values of water drawn from Carat Lake pump house for Domestic Use

Date	Time	Meter Reading (m3)a	Daily Volume (m3)b
01-May-12	6:15 AM	22879.8	0
02-May-12	7:00 AM	22879.8	0
03-May-12	6:30 AM	22881.5	1.7
04-May-12	6:45 AM	22890.9	9.4
05-May-12	6:30 AM	22890.9	0
06-May-12	6:30 AM	22890.9	0
07-May-12	6:30 AM	22890.9	0
08-May-12	6:15 AM	22908	17.1
09-May-12	6:30 AM	22908	0
10-May-12	7:45 AM	22908	13
11-May-12	7:30 AM	22921	15.2
12-May-12	6:15 AM	22936.2	0
13-May-12	6:37 AM	22936.2	18.7
14-May-12	6:15 AM	22954.9	0
15-May-12	6:54 AM	22954.9	10.7
16-May-12	6:30 AM	22965.6	9.8
17-May-12	6:30 AM	22975.4	0
18-May-12	6:30 AM	22975.4	12.7
19-May-12	6:15 AM	22988.1	0
20-May-12	6:30 AM	22988.1	10.3
21-May-12	6:15 AM	22998.4	23.4
22-May-12	7:00 AM	23021.8	0
23-May-12	6:15 AM	23021.8	11.1
24-May-12	6:45 AM	23032.9	0
25-May-12	6:00 AM	23032.9	18.6
26-May-12	6:15 AM	23051.5	0
27-May-12	7:25 AM	23051.5	0
28-May-12	6:45 AM	23051.5	0
29-May-12	6:15 AM	23051.5	0
30-May-12	6:30 AM	23051.5	14.3
31-May-12	8:30 AM	23065.8	0

APPENDIX B: Daily quantities removed from the Waste Water Treatment Facility to Cell A of the PKCA

Date	Time	Meter Reading	Daily Discharge (L)
1-May-12	6:40	41,132	2
2-May-12	7:15	41,134	2
3-May-12	7:15	41,136	2
4-May-12	7:15	41,138	1 RESET TO 0
5-May-12		41,139	648
6-May-12	7:45	648	2,949
7-May-12	8:05	3,597	4,159
8-May-12	7:00	7,756	5,730
9-May-12	7:50	12,786	13,232
10-May-12	8:00	26,018	4,255
11-May-12	8:30	30,273	11,574
12-May-12	7:00	41,847	6,736
13-May-12	8:45	48,583	9,203
14-May-12	7:38	57,786	165
15-May-12	8:30	57,951	2,923
16-May-12	7:20	60,874	5,124
17-May-12	7:15	65,998	4,313
18-May-12	7:10	70,311	7,099
19-May-12	7:25	77,410	6,270
20-May-12	7:19	83,680	4,787
21-May-12	7:26	88,467	6,070
22-May-12	9:45	94,530	455
23-May-12	7:00	94,985	861
24-May-12	7:00	95,846	3,686
25-May-12	8:00	99,532	939
26-May-12	9:30	100,471	493

27-May-12	8:45	100,964	336
28-May-12	7:30	101,300	5873
31-May-12	7:15	107,173	0

APPENDIX C: Spill reports



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR May 1, 2012	REPORT TIME 6:05pm	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 12-158
B	OCCURRENCE DATE: MONTH - DAY - YEAR May 1, 2012		OCCURRENCE TIME 1:15pm		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) KTL 311 C015		WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Jericho Mine Site		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00		
F	RESPONSIBLE PARTY OR VESSEL NAME Shear Diamonds	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION Suite 220, 6 Adelaide St. Toronto ON M5C 1H6			
G	ANY CONTRACTOR INVOLVED no	CONTRACTOR ADDRESS OR OFFICE LOCATION n/a			
H	PRODUCT SPILLED diesel	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES ~100L	U.N. NUMBER 1202		
	SECOND PRODUCT SPILLED (IF APPLICABLE) none	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES n/a	U.N. NUMBER n/a		
I	SPILL SOURCE fuel hose	SPILL CAUSE person slipped while fueling	AREA OF CONTAMINATION IN SQUARE METRES 4		
J	FACTORS AFFECTING SPILL OR RECOVERY none	DESCRIBE ANY ASSISTANCE REQUIRED n/a	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT n/a		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS -this spill is being reported as required under the conditions in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) Licence 2AM-JER1119 pursuant to the Nunavut waters and Nunavut Surface Rights Tribunal Act, as required by the Government of Nunavut's Environmental Protection Act paragraph 5.1(a) and as required by Environment Canada's Storage Tank Systems For Petroleum Products and Allied Petroleum Products Regulations section 41 pursuant to paragraph 212(1)(a) of the Canadian Environmental Protection Act, 1999 -this incident occurred at 1:15pm, approximately 500m east of Carat Lake -while a fuel truck was being filled with diesel from storage tank EC-00016028, the worker who was standing on top of the truck slipped and almost fell, the fuel hose became disconnected from the truck and sprayed diesel on the worker and the truck -diesel that dripped onto the snow from the truck was immediately shovelled into a nearby berm				
L	REPORTED TO SPILL LINE BY Wes Atchison	POSITION Environmental Tech	EMPLOYER Shear Diamonds	LOCATION CALLING FROM Jericho Mine Site	TELEPHONE 778-372-2723
M	ANY ALTERNATE CONTACT Jim Kane	POSITION Site Supervisor	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho Mine Site	ALTERNATE TELEPHONE 778-372-2726
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY STATION OPERATOR	POSITION STATION OPERATOR	EMPLOYER STATION OPERATOR	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> COG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

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Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR May 2, 2012	REPORT TIME 7:05am	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 12-159
	OCURRENCE DATE: MONTH - DAY - YEAR May 1, 2012	OCURRENCE TIME 5:10pm			
C	LAND USE PERMIT NUMBER (IF APPLICABLE) KTL 311 C015	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Jericho Mine Site		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00		
F	RESPONSIBLE PARTY OR VESSEL NAME Shear Diamonds	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION Suite 220, 6 Adelaide St. E. Toronto, ON M5C 1H6			
G	ANY CONTRACTOR INVOLVED no	CONTRACTOR ADDRESS OR OFFICE LOCATION n/a			
H	PRODUCT SPILLED Hydraulic Fluid	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 1	U.N. NUMBER 3082		
	SECOND PRODUCT SPILLED (IF APPLICABLE) none	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES n/a	U.N. NUMBER n/a		
I	SPILL SOURCE bobcat	SPILL CAUSE equipment malfunction	AREA OF CONTAMINATION IN SQUARE METRES 0.5		
J	FACTORS AFFECTING SPILL OR RECOVERY none	DESCRIBE ANY ASSISTANCE REQUIRED n/a	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT n/a		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS -this spill is being reported as required under the conditions in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) Licence 2AM-JER1119 pursuant to the Nunavut waters and Nunavut Surface Rights Tribunal Act and as required by the Government of Nunavut's Environmental Protection Act paragraph 5.1(a) -this incident occurred around 5:15pm, approximately 500m northwest of Ash Lake -while operating a bobcat near the south wall of the processing plant the operator noticed a small trail of fluid being left behind the bobcat -the operator immediately brought the bobcat indoors and called the mechanic to make repairs -the contaminated gravel was shovelled up into a pail and brought to the west cell of the hazardous waste transfer area				
L	REPORTED TO SPILL LINE BY Wes Atchison	POSITION Environmental Tech	EMPLOYER Shear Diamonds	LOCATION CALLING FROM Jericho Mine Site	TELEPHONE 778-372-2723
M	ANY ALTERNATE CONTACT Chris Morton	POSITION VP Operations	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho Mine Site	ALTERNATE TELEPHONE 778-372-2726
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CGG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TTC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR May 5, 2012	REPORT TIME 2:00pm	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 12-169
B	OCCURRENCE DATE: MONTH - DAY - YEAR May 5, 2012	OCCURRENCE TIME 9:00am		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) KTL 311 C015	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Jericho Mine Site		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00	
F	RESPONSIBLE PARTY OR VESSEL NAME Shear Diamonds	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION Suite 220, 6 Adelaide St. E. Toronto ON M5C 1H6		
G	ANY CONTRACTOR INVOLVED no	CONTRACTOR ADDRESS OR OFFICE LOCATION n/a		
H	PRODUCT SPILLED oil	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 15L	U.N. NUMBER 3082	
	SECOND PRODUCT SPILLED (IF APPLICABLE) none	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES n/a	U.N. NUMBER n/a	
I	SPILL SOURCE oil cube	SPILL CAUSE leak	AREA OF CONTAMINATION IN SQUARE METRES 4	
J	FACTORS AFFECTING SPILL OR RECOVERY none	DESCRIBE ANY ASSISTANCE REQUIRED n/a	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT n/a	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS -this spill is being reported as required under the conditions in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) Licence 2AM-JER1119 pursuant to the Nunavut waters and Nunavut Surface Rights Tribunal Act and as required by the Government of Nunavut's Environmental Protection Act paragraph 5.1(a) -this incident was discovered at 9:00am, approximately 700m northwest of Ash Lake -an oil cube located outside of generator #4 of the powerhouse was slowly leaking oil -a tarp that was placed beneath the oil cube during it's initial use stopped most of the spill but there was some oil that seeped through and out of the tarp estimated at 15L -the oil cube was brought inside the truck shop and the oil contaminated snow and ice was removed with a loader and placed in phase II of the fuel tank farm			
L	REPORTED TO SPILL LINE BY Wes Atchison	POSITION Environmental Tech	EMPLOYER Shear Diamonds	LOCATION CALLING FROM Jericho Mine Site
M	ANY ALTERNATE CONTACT Chris Morton	POSITION VP Operations	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho Mine Site
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY STATION OPERATOR	POSITION	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCS <input type="checkbox"/> GMMT <input type="checkbox"/> GN <input type="checkbox"/> LA <input type="checkbox"/> INAC <input type="checkbox"/> NIB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

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Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 05/12/2012	REPORT TIME 17:00	<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER _____
	B	OCCURRENCE DATE: MONTH - DAY - YEAR Ongoing	OCCURRENCE TIME N/A		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) KTL311C015	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Jericho Mine Site		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00		
F	RESPONSIBLE PARTY OR VESSEL NAME PKCA	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION Jericho Mine Site			
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A			
H	PRODUCT SPILLED Fine Processed Kimberlite	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unknown	U.N. NUMBER N/A		
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A		
I	SPILL SOURCE PKCA	SPILL CAUSE Wind dispersion	AREA OF CONTAMINATION IN SQUARE METRES See appendix G		
J	FACTORS AFFECTING SPILL OR RECOVERY See summaries and appendices	DESCRIBE ANY ASSISTANCE REQUIRED Not at this time	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT TBD		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS: - See provided summaries and appendices. - This spill is being reported as required under the conditions outlined in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) License 2AM-JER1119 pursuant to the Nunavut waters and Nunavut Surface Rights Tribunal Act and as required by the Governments of Nunavut's Environmental Protection Act paragraph 5.1(a).				
L	REPORTED TO SPILL LINE BY Allison Armstrong	POSITION General Manager	EMPLOYER N/A	LOCATION CALLING FROM Jericho	TELEPHONE 778-372-2750
M	ANY ALTERNATE CONTACT Steve Willcott	POSITION General Manager	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho	ALTERNATE TELEPHONE 778-372-2753
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CGG <input type="checkbox"/> GNWT <input type="checkbox"/> ON <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NES <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

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EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY					
A	REPORT DATE: MONTH - DAY - YEAR 05/12/2012	REPORT TIME 17:57	<input type="checkbox"/> ORIGINAL SPILL REPORT, OR		REPORT NUMBER -
B	OCCURRENCE DATE: MONTH - DAY - YEAR 05/12/2012	OCCURRENCE TIME 01:00	<input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT		
C	LAND USE PERMIT NUMBER (IF APPLICABLE)		WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM THE NAMED LOCATION Jericho Mine Site			REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR	
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00		
F	RESPONSIBLE PARTY OR VESSEL NAME Fuel Truck	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION Jericho Diamond Mine			
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A			
H	PRODUCT SPILLED Diesel	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 5 - 10 litres	U.N. NUMBER N/A		
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A		
I	SPILL SOURCE Overflow on the Tank of the Fuel Truck	SPILL CAUSE Bumpy road caused spill from	AREA OF CONTAMINATION IN SQUARE METRES 0.5m X 0.5m		
J	FACTORS AFFECTING SPILL OR RECOVERY Hard ground, still frozen	DESCRIBE ANY ASSISTANCE REQUIRED None	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT N/A		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS This spill is being reported in accordance with the conditions outlined in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) Licence 2AM-JER1119 pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and as required by the Government of Nunavut's Environmental Protection Act paragraph 5.1(a). The material that was scraped up by the loader was mistakenly taken to the Phase II Fuel Farm. This is not permitted. The snow on the road to the Hazardous Waste Transfer Area was cleared today. The contaminated material will be placed in drums and taken to the HWTa for storage until it is backhauled from site for appropriate storage.				
L	REPORTED TO SPILL LINE BY Allison Armstrong	POSITION Environment	EMPLOYER Shear Diamodns	LOCATION CALLING FROM Jericho	TELEPHONE 778-372-2752
M	ANY ALTERNATE CONTACT Steve Willcott	POSITION General Manager	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho	ALTERNATE TELEPHONE 778-372-2753
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION Station operator	EMPLOYER	LOCATION CALLED Yellowknife, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

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NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-8924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR May 24, 2012	REPORT TIME 8:15am	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 12-201
B	OCCURRENCE DATE: MONTH – DAY – YEAR May 22, 2012	OCCURRENCE TIME 7:30pm			
C	LAND USE PERMIT NUMBER (IF APPLICABLE) KTL 311 C013	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM THE NAMED LOCATION Jericho Mine Site		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR		
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00		
F	RESPONSIBLE PARTY OR VESSEL NAME Shear Diamonds	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION Suite 220, 6 Adelaide St. Toronto ON M5C 1H6			
G	ANY CONTRACTOR INVOLVED First Air	CONTRACTOR ADDRESS OR OFFICE LOCATION 155 Bristol Avenue Yellowknife, NT X1A 2R3			
H	PRODUCT SPILLED Diesel	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 100	U.N. NUMBER 1202		
	SECOND PRODUCT SPILLED (IF APPLICABLE) none	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES n/a	U.N. NUMBER n/a		
I	SPILL SOURCE Fuel hose	SPILL CAUSE valve left open after disconnected	AREA OF CONTAMINATION IN SQUARE METRES 3		
J	FACTORS AFFECTING SPILL OR RECOVERY none	DESCRIBE ANY ASSISTANCE REQUIRED n/a	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT n/a		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS This spill is being reported as required under the conditions in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) License 2AM-JER1119 pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act, as required by the Government of Nunavut's Environmental Protection Petroleum Products and Allied Petroleum Products Regulations section 41 pursuant to paragraph 212(1)(a) of the Canadian Environmental Protection Act, 1999. This incident occurred approximately 500m east of Carat Lake. After a Herc from First Air was finished pumping diesel into storage tank EC-00016028, the site's fuel line was disconnected from the pump in order to bleed the line, this was done improperly and diesel ended up spilling from the line. The diesel was cleaned up and the contaminated ground will be brought to the HMTA and put in drums.				
L	REPORTED TO SPILL LINE BY Wes Atchison	POSITION Environmental Tech.	EMPLOYER Shear Diamonds	LOCATION CALLING FROM Jericho Mine Site	TELEPHONE 778-372-2723
M	ANY ALTERNATE CONTACT Allison Armstrong	POSITION Environment	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho Mine Site	ALTERNATE TELEPHONE 778-372-2753
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION Station operator	EMPLOYER	LOCATION CALLED Yellowknife, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> LA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					



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TEL: (867) 920-8130

FAX: (867) 973-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR May 30, 2012	REPORT TIME 7:30pm	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 12-217
B	OCCURRENCE DATE: MONTH - DAY - YEAR May 30, 2012	OCCURRENCE TIME 4:00pm			
C	LAND USE PERMIT NUMBER (IF APPLICABLE) KTL 311 C015	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-JER1119			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Jericho Mine Site		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 66 MINUTES 01 SECONDS 00		LONGITUDE DEGREES 111 MINUTES 27 SECONDS 00		
F	RESPONSIBLE PARTY OR VESSEL NAME Shear Diamonds	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 6 Adelaide St. E, Suite 220 Toronto, ON M5C 1H6			
G	ANY CONTRACTOR INVOLVED no	CONTRACTOR ADDRESS OR OFFICE LOCATION n/a			
H	PRODUCT SPILLED raw sewage	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 40L	U.N. NUMBER n/a		
	SECOND PRODUCT SPILLED (IF APPLICABLE) none	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES n/a	U.N. NUMBER n/a		
I	SPILL SOURCE pipe line	SPILL CAUSE disconnected joint	AREA OF CONTAMINATION IN SQUARE METRES 4		
J	FACTORS AFFECTING SPILL OR RECOVERY none	DESCRIBE ANY ASSISTANCE REQUIRED n/a	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT n/a		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS -this spill is being reported as required under the conditions in Part H, Section 8(b) of Shear Diamonds Water Board (NWB) License 2AM-JER1119 pursuant to the Nunavut waters and Nunavut Surface Rights Tribunal Act and as required by the Government of Nunavut's Environmental Protection Act paragraph 5.1(a) -this incident occurred approximately 600m northwest of Ash Lake -there was a small break in one of the connections in the line running from the main lift station to the sewage treatment plant -the main lift station was immediately shut down and the connecting piece was replaced -all contaminated dirt in the area was shovelled up into a drum and brought to the HWTB				
L	REPORTED TO SPILL LINE BY Wes Atchison	POSITION Environmental Tech	EMPLOYER Shear Diamonds	LOCATION CALLING FROM Jericho Mine Site	TELEPHONE 778-372-2723
M	ANY ALTERNATE CONTACT Andrew Uyarral	POSITION Site Services Mngr	EMPLOYER Shear Diamonds	ALTERNATE CONTACT LOCATION Jericho Mine Site	ALTERNATE TELEPHONE 778-372-2726
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> ON <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

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APPENDIX D: Raw Data from ALS and Maxxam water testing

Effluent

ALS		Sample ID	JER-AEM-01 EFFLUENT	Maxxam ID	DM3082
6/25/2012		ALS ID	L1145687-3	Sampling Date	22/05/2012 17:45
Multiple Work Orders		Date Sampled	5/10/2012 6:45:00 AM	COC Number	A058335
Analyte	Units	LOR	Water	JER-SWQ-01 EFFLUENT	
Physical Properties					
Hardness (as CaCO3)	mg/L	0.5	28.2	pH	6.34
Temperature	Degree C	1	25	Hardness (CaCO3)	N/A
Total Suspended Solids	mg/L	3	15	Total Hardness (CaCO3)	45.4
Total Dissolved Solids	mg/L	10	361	Total Organic Carbon (C)	15
Turbidity	NTU	0.1	8.67	Total Inorganic Carbon (C)	1.3
Acidity (as CaCO3)	mg/L	5	23.1	Total Dissolved Solids	270
Alkalinity, Total (as CaCO3)	mg/L	5	12.9	Total Suspended Solids	39

Ammonia, Total (as N)	mg/L	0.005	3.84	Turbidity	21
Bicarbonate (HCO ₃)	mg/L	5	15.8	Conductivity	440
Carbonate (CO ₃)	mg/L	5	<5.0	Dissolved Hardness (CaCO ₃)	42.2
Chloride (Cl)	mg/L	0.5	58.4	Total Dissolved Solids	270
Conductivity (EC)	uS/cm	0.2	559	Anions	
Fluoride (F)	mg/L	0.05	0.061	Alkalinity (PP as CaCO ₃)	<0.50
Hardness (as CaCO ₃)	mg/L	n/a	27	Alkalinity (Total as CaCO ₃)	7.0
Hydroxide (OH)	mg/L	5	<5.0	Carbonate (CO ₃)	<0.50
Ion Balance	%	n/a	104	Bicarbonate (HCO ₃)	8.6
Nitrate and Nitrite (as N)	mg/L	0.006	23.5	Hydroxide (OH)	<0.50
Nitrate (as N)	mg/L	0.006	23.4	Dissolved Sulphate (SO ₄)	27
Nitrite (as N)	mg/L	0.002	0.1	Dissolved Chloride (Cl)	46
Total Kjeldahl Nitrogen	mg/L	0.05	7.74	Ion Balance	0.90
pH	pH	0.1	6.92	Dissolved Nitrate (NO ₃)	84
Orthophosphate-Dissolved (as P)	mg/L	0.001	8.21	Nitrate plus Nitrite	19

			(N)	
Phosphorus (P)-Total Dissolved	mg/L	0.001	Dissolved Nitrite (NO2)	8.39
Phosphorus (P)-Total	mg/L	0.001	Orthophosphate (P)	9.31
TDS (Calculated)	mg/L	n/a	Total Ammonia (N)	7.1 (2)
Sulfate (SO4)	mg/L	0.05	Total Phosphorus (P)	3.4 (2)
Total Inorganic Carbon	mg/L	1	Dissolved Nitrite (N)	8.2 (2)
Total Organic Carbon	mg/L	1	Dissolved Nitrate (N)	0.024
Mercury (Hg)-Total	mg/L	0.00005	Demand Parameters	19 (2)
Aluminum (Al)-Total	mg/L	0.0002	Biochemical Oxygen Demand	16
Antimony (Sb)-Total	mg/L	0.000005	Total Metals by ICPMS	
Arsenic (As)-Total	mg/L	0.00002	Total Aluminum (Al)	410
Barium (Ba)-Total	mg/L	0.00002	Total Antimony (Sb)	1.73
Beryllium (Be)-Total	mg/L	0.000002	Total Arsenic (As)	0.685
Bismuth (Bi)-Total	mg/L	0.000001	Total Barium (Ba)	16.1

Boron (B)-Total	mg/L	0.005	0.979	Total Beryllium (Be)	0.030
Cadmium (Cd)-Total	mg/L	0.000005	0.000089	Total Bismuth (Bi)	2.51
Calcium (Ca)-Total	mg/L	0.03	7.36	Total Boron (B)	388
Cesium (Cs)-Total	mg/L	0.000005	0.000068	Total Cadmium (Cd)	0.182
Chromium (Cr)-Total	mg/L	0.00005	0.00089	Total Chromium (Cr)	1.10
Cobalt (Co)-Total	mg/L	0.000005	0.000623	Total Cobalt (Co)	0.601
Copper (Cu)-Total	mg/L	0.00005	0.278	Total Copper (Cu)	170
Gallium (Ga)-Total	mg/L	0.00005	<0.00025 *	Total Iron (Fe)	1050
Iron (Fe)-Total	mg/L	0.01	0.693	Total Lead (Pb)	1.86
Lead (Pb)-Total	mg/L	0.000005	0.00104	Total Lithium (Li)	103
Lithium (Li)-Total	mg/L	0.0002	0.146	Total Manganese (Mn)	65.5
Magnesium (Mg)-Total	mg/L	0.03	2.74	Total Molybdenum (Mo)	0.713
Manganese (Mn)-Total	mg/L	0.000005	0.0387	Total Nickel (Ni)	12.9
Molybdenum (Mo)-Total	mg/L	0.00001	0.00318	Total Selenium (Se)	0.374
Nickel (Ni)-Total	mg/L	0.00005	0.0199	Total Silicon (Si)	2110
Phosphorus (P)-Total	mg/L	0.05	9.31	Total Silver (Ag)	0.0386

Potassium (K)-Total	mg/L	0.05	26.1	Total Strontium (Sr)	21.7
Rhenium (Re)-Total	mg/L	0.000005	<0.000025 *	Total Thallium (Tl)	0.0094
Rubidium (Rb)-Total	mg/L	0.000005	0.0211	Total Tin (Sn)	0.27
Selenium (Se)-Total	mg/L	0.00004	0.00042	Total Titanium (Ti)	1.49
Silicon (Si)-Total	mg/L	0.05	3.76	Total Uranium (U)	0.251
Silver (Ag)-Total	mg/L	0.000005	0.000073	Total Vanadium (V)	0.62
Sodium (Na)-Total	mg/L	0.2	80.4	Total Zinc (Zn)	1300
Strontium (Sr)-Total	mg/L	0.00001	0.0108	Total Zirconium (Zr)	0.56
Tellurium (Te)-Total	mg/L	0.00001	<0.000050 *	Total Calcium (Ca)	11.7
Thallium (Tl)-Total	mg/L	0.000001	0.000012	Total Magnesium (Mg)	3.90
Thorium (Th)-Total	mg/L	0.000005	<0.000025 *	Total Potassium (K)	24.2
Tin (Sn)-Total	mg/L	0.00001	0.000501	Total Sodium (Na)	41.8
Titanium (Ti)-Total	mg/L	0.00005	0.0008	Total Sulphur (S)	<10
Tungsten (W)-Total	mg/L	0.00001	0.000182	Dissolved Metals by ICPMS	
Uranium (U)-Total	mg/L	0.000001	0.0000962	Dissolved Aluminum (Al)	23.7
Vanadium (V)-Total	mg/L	0.00001	0.000927	Dissolved	1.81

				Antimony (Sb)	
Yttrium (Y)-Total	mg/L	0.000005	0.000101	Dissolved Arsenic (As)	0.633
Zinc (Zn)-Total	mg/L	0.0001	1.02	Dissolved Barium (Ba)	4.04
Zirconium (Zr)-Total	mg/L	0.00001	0.00111	Dissolved Beryllium (Be)	0.024
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0417	Dissolved Bismuth (Bi)	1.53
Antimony (Sb)-Dissolved	mg/L	0.000005	0.00237	Dissolved Boron (B)	381
Arsenic (As)-Dissolved	mg/L	0.00002	0.000741	Dissolved Cadmium (Cd)	0.0963
Barium (Ba)-Dissolved	mg/L	0.00002	0.00226	Dissolved Chromium (Cr)	0.43
Beryllium (Be)-Dissolved	mg/L	0.000002	0.0000035	Dissolved Cobalt (Co)	0.505
Bismuth (Bi)-Dissolved	mg/L	0.000001	0.00165	Dissolved Copper (Cu)	63.5
Boron (B)-Dissolved	mg/L	0.005	0.986	Dissolved Iron (Fe)	184
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.0000999	Dissolved Lead (Pb)	0.0890
Calcium (Ca)-Dissolved	mg/L	0.03	7.04 *	Dissolved Lithium (Li)	102

Cesium (Cs)-Dissolved	mg/L	0.000005	0.0000664	Dissolved Manganese (Mn)	60.8
Chromium (Cr)-Dissolved	mg/L	0.000005	0.000779	Dissolved Molybdenum (Mo)	1.45 (1)
Cobalt (Co)-Dissolved	mg/L	0.000005	0.000604	Dissolved Nickel (Ni)	11.4
Copper (Cu)-Dissolved	mg/L	0.000005	0.256	Dissolved Selenium (Se)	0.283
Gallium (Ga)-Dissolved	mg/L	0.000005	<0.000050	Dissolved Silicon (Si)	2010
Iron (Fe)-Dissolved	mg/L	0.01	0.397	Dissolved Silver (Ag)	0.0164
Lead (Pb)-Dissolved	mg/L	0.000005	0.000556	Dissolved Strontium (Sr)	19.9
Lithium (Li)-Dissolved	mg/L	0.0002	0.148	Dissolved Thallium (Tl)	0.0055
Magnesium (Mg)-Dissolved	mg/L	0.03	2.57 *	Dissolved Tin (Sn)	<0.20
Manganese (Mn)-Dissolved	mg/L	0.000005	0.04	Dissolved Titanium (Ti)	0.83
Mercury (Hg)-Dissolved	mg/L	0.000005	<0.000050	Dissolved Uranium (U)	0.0676
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00311	Dissolved Vanadium (V)	0.45
Nickel (Ni)-Dissolved	mg/L	0.000005	0.0203	Dissolved Zinc (Zn)	1030

Phosphorus (P)- Dissolved	mg/L	0.05	8.84	Dissolved Zirconium (Zr)	0.37
Potassium (K)- Dissolved	mg/L	0.05	24.5 *	Dissolved Calcium (Ca)	11.0
Rhenium (Re)- Dissolved	mg/L	0.000005	<0.0000050	Dissolved Magnesium (Mg)	3.58
Rubidium (Rb)- Dissolved	mg/L	0.000005	0.0195	Dissolved Potassium (K)	24.4
Selenium (Se)- Dissolved	mg/L	0.00004	0.00041	Dissolved Sodium (Na)	39.9
Silicon (Si)-Dissolved	mg/L	0.05	3.54	Dissolved Sulphur (S)	<10
Silver (Ag)-Dissolved	mg/L	0.000005	0.0000647		
Sodium (Na)-Dissolved	mg/L	0.2	76.3 *	Dissolved Mercury (Hg)	<0.0020
Strontium (Sr)- Dissolved	mg/L	0.00001	0.00999	Total Mercury (Hg)	0.0024
Tellurium (Te)- Dissolved	mg/L	0.00001	<0.000010		
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000058		
Thorium (Th)-Dissolved	mg/L	0.000005	0.0000108		
Tin (Sn)-Dissolved	mg/L	0.00001	0.000531		
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000303		
Tungsten (W)- Dissolved	mg/L	0.00001	0.000186		
Uranium (U)-Dissolved	mg/L	0.000001	0.0000496		
Vanadium (V)- Dissolved	mg/L	0.00001	0.000913		
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000653		

Zinc (Zn)-Dissolved	mg/L	0.0001	0.936
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.00098
Biochemical Oxygen Demand	mg/L	2	15.6

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Influent

ALS		Sample ID	JER-AEM-01 INFLUENT	Maxxam ID	DM3081
6/25/2012		ALS ID	L1145687-2	Sampling Date	22/05/2012
Multiple Work Orders		Date Sampled	5/10/2012 6:45:00 AM	COC Number	A058335
Analyte	Units	LOR	Water		JER-SWQ-01 INFLUENT
Physical Properties					
Hardness (as CaCO3)	mg/L	0.5	-		7.60
Temperature	Degree C	1	25		29
Total Suspended Solids	mg/L	3	312		N/A
Total Dissolved Solids	mg/L	10	182		N/A
Turbidity	NTU	0.1	132		85 (2)
Acidity (as CaCO3)	mg/L	5	57.4		37
					280

Alkalinity, Total (as CaCO ₃)	mg/L	5	98.5	Total Suspended Solids	mg/L	420 (3)
Ammonia, Total (as N)	mg/L	0.005	19.8	Turbidity	NTU	170
Bicarbonate (HCO ₃)	mg/L	5	120	Conductivity	uS/cm	610
Carbonate (CO ₃)	mg/L	5	<5.0	Dissolved Hardness (CaCO ₃)	mg/L	N/A
Chloride (Cl)	mg/L	0.5	24.9	Total Dissolved Solids	mg/L	260 (3)
Conductivity (EC)	uS/cm	0.2	318	Anions		
Fluoride (F)	mg/L	0.05	<0.50 *	Alkalinity (PP as CaCO ₃)	mg/L	<0.50
Hardness (as CaCO ₃)	mg/L	n/a	16.1	Alkalinity (Total as CaCO ₃)	mg/L	170
Hydroxide (OH)	mg/L	5	<5.0	Carbonate (CO ₃)	mg/L	<0.50
Ion Balance	%	n/a	112 *	Bicarbonate (HCO ₃)	mg/L	210
Nitrate and Nitrite (as N)	mg/L	0.006	0.0085	Hydroxide (OH)	mg/L	<0.50
Nitrate (as N)	mg/L	0.006	<0.0063	Dissolved Sulphate (SO ₄)	mg/L	2.4
Nitrite (as N)	mg/L	0.002	0.0078	Dissolved Chloride (Cl)	mg/L	44
Total Kjeldahl Nitrogen	mg/L	0.05	37.8	Ion Balance	N/A	0.98
pH	pH	0.1	7.63	Dissolved Nitrate (NO ₃)	mg/L	0.62
Orthophosphate-Dissolved (as P)	mg/L	0.001	2.37	Nitrate plus Nitrite (N)	mg/L	0.14
Phosphorus (P)-Total Dissolved	mg/L	0.001	2.6	Dissolved Nitrite (NO ₂)	mg/L	<0.20
Phosphorus (P)-Total	mg/L	0.001	4.44	Orthophosphate (P)	mg/L	7.8 (2)
TDS (Calculated)	mg/L	n/a	125	Total Ammonia (N)	mg/L	30 (2)

Sulfate (SO4)	mg/L	0.05	1.15	Total Phosphorus (P)	mg/L	16 (2)
Total Inorganic Carbon	mg/L	1	23.4	Dissolved Nitrite (N)	mg/L	<0.060 (4)
Total Organic Carbon	mg/L	1	57.8	Dissolved Nitrate (N)	mg/L	0.14 (4)
Calcium (Ca)-Dissolved	mg/L	0.03	3.84	Demand Parameters		
Magnesium (Mg)-Dissolved	mg/L	0.03	1.59	Biochemical Oxygen Demand	mg/L	390 (1)
Potassium (K)-Dissolved	mg/L	0.05	10.3			
Sodium (Na)-Dissolved	mg/L	0.2	23.7			
Biochemical Oxygen Demand	mg/L	2	216			

SWQ-12 Carat lake pump house

ALS		Sample ID	JER-AEM-12 (CARAT INTAKE)
6/25/2012		ALS ID	L1145687-1
Multiple Work Orders		Date Sampled	5/10/2012 7:15:00 AM
Analyte	Units	LOR	Water
Hardness (as CaCO3)	mg/L	0.5	6.58
Temperature	Degree C	1	25
Total Suspended Solids	mg/L	3	3
Total Dissolved Solids	mg/L	10	12
Turbidity	NTU	0.1	1.4
Total Dustfall (mg/100cm2/30days)	mg	8	-
Total Fixed Dustfall (mg/100cm2/30days)	mg	5	-
Acidity (as CaCO3)	mg/L	5	<5.0

Alkalinity, Total (as CaCO3)		mg/L	5	5.7
Ammonia, Total (as N)		mg/L	0.005	0.0228
Bicarbonate (HCO3)		mg/L	5	6.9
Carbonate (CO3)		mg/L	5	<5.0
Chloride (Cl)		mg/L	0.5	<0.50
Conductivity (EC)		uS/cm	0.2	17.4
Fluoride (F)		mg/L	0.05	<0.050
Hardness (as CaCO3)		mg/L	n/a	6.1
Hydroxide (OH)		mg/L	5	<5.0
Ion Balance		%	n/a	Low EC
Nitrate and Nitrite (as N)		mg/L	0.006	0.0387
Nitrate (as N)		mg/L	0.006	0.0387
Nitrite (as N)		mg/L	0.002	<0.0020
Total Kjeldahl Nitrogen		mg/L	0.05	-
pH		pH	0.1	7.07
Orthophosphate-Dissolved (as P)		mg/L	0.001	<0.0010
Phosphorus (P)- Total Dissolved		mg/L	0.001	<0.0010
Phosphorus (P)- Total		mg/L	0.001	<0.0010
TDS (Calculated)		mg/L	n/a	7.2
Sulfate (SO4)		mg/L	0.05	1.03
Total Inorganic Carbon		mg/L	1	1.2
Total Organic Carbon		mg/L	1	4
Aluminum (Al)- Total		mg/dm2.day	0.000016	-
Antimony (Sb)- Total		mg/dm2.day	0.0000016	-
Arsenic (As)- Total		mg/dm2.day	0.0000016	-
Barium (Ba)- Total		mg/dm2.day	0.00000078	-
Beryllium (Be)- Total		mg/dm2.day	0.0000078	-
Bismuth (Bi)- Total		mg/dm2.day	0.0000078	-
Boron (B)- Total		mg/dm2.day	0.00016	-
Cadmium (Cd)- Total		mg/dm2.day	0.00000078	-
Calcium (Ca)- Total		mg/dm2.day	0.00031	-
Chromium (Cr)- Total		mg/dm2.day	0.0000078	-
Cobalt (Co)- Total		mg/dm2.day	0.0000016	-
Copper (Cu)- Total		mg/dm2.day	0.0000016	-
Iron (Fe)- Total		mg/dm2.day	0.00047	-

Lead (Pb)-Total	mg/dm2.day	0.00000078	-
Lithium (Li)-Total	mg/dm2.day	0.000078	-
Magnesium (Mg)-Total	mg/dm2.day	0.000078	-
Manganese (Mn)-Total	mg/dm2.day	0.00000078	-
Molybdenum (Mo)-Total	mg/dm2.day	0.00000078	-
Nickel (Ni)-Total	mg/dm2.day	0.00000078	-
Phosphorus (P)-Total	mg/dm2.day	0.0047	-
Potassium (K)-Total	mg/dm2.day	0.00078	-
Selenium (Se)-Total	mg/dm2.day	0.000016	-
Silicon (Si)-Total	mg/dm2.day	0.00078	-
Silver (Ag)-Total	mg/dm2.day	0.00000016	-
Sodium (Na)-Total	mg/dm2.day	0.00078	-
Strontium (Sr)-Total	mg/dm2.day	0.00000016	-
Thallium (Tl)-Total	mg/dm2.day	0.00000016	-
Tin (Sn)-Total	mg/dm2.day	0.00000016	-
Titanium (Ti)-Total	mg/dm2.day	0.00016	-
Uranium (U)-Total	mg/dm2.day	0.000000016	-
Vanadium (V)-Total	mg/dm2.day	0.000016	-
Zinc (Zn)-Total	mg/dm2.day	0.000016	-
Aluminum (Al)-Total	mg/L	0.2	-
Antimony (Sb)-Total	mg/L	0.2	-
Arsenic (As)-Total	mg/L	0.2	-
Barium (Ba)-Total	mg/L	0.01	-
Beryllium (Be)-Total	mg/L	0.005	-
Bismuth (Bi)-Total	mg/L	0.2	-
Boron (B)-Total	mg/L	0.1	-
Cadmium (Cd)-Total	mg/L	0.01	-
Calcium (Ca)-Total	mg/L	0.5	-
Chromium (Cr)-Total	mg/L	0.005	-
Cobalt (Co)-Total	mg/L	0.01	-
Copper (Cu)-Total	mg/L	0.01	-
Iron (Fe)-Total	mg/L	0.01	-
Lead (Pb)-Total	mg/L	0.05	-
Lithium (Li)-Total	mg/L	0.01	-
Magnesium (Mg)-Total	mg/L	0.1	-

Manganese (Mn)-Total		mg/L	0.002	-
Mercury (Hg)-Total		mg/L	0.00005	<0.000050
Molybdenum (Mo)-Total		mg/L	0.03	-
Nickel (Ni)-Total		mg/L	0.05	-
Phosphorus (P)-Total		mg/L	0.1	-
Potassium (K)-Total		mg/L	0.1	-
Selenium (Se)-Total		mg/L	0.2	-
Silicon (Si)-Total		mg/L	0.1	-
Silver (Ag)-Total		mg/L	0.01	-
Sodium (Na)-Total		mg/L	1	-
Strontium (Sr)-Total		mg/L	0.005	-
Sulfur (S)-Total		mg/L	0.5	-
Thallium (Tl)-Total		mg/L	0.2	-
Tin (Sn)-Total		mg/L	0.03	-
Titanium (Ti)-Total		mg/L	0.01	-
Vanadium (V)-Total		mg/L	0.005	-
Zinc (Zn)-Total		mg/L	0.005	-
Aluminum (Al)-Total		mg/L	0.0002	0.0134
Antimony (Sb)-Total		mg/L	0.000005	0.0000069
Arsenic (As)-Total		mg/L	0.00002	0.000188
Barium (Ba)-Total		mg/L	0.00002	0.00179
Beryllium (Be)-Total		mg/L	0.000002	0.0000038
Bismuth (Bi)-Total		mg/L	0.000001	0.0000014
Boron (B)-Total		mg/L	0.005	<0.0050
Cadmium (Cd)-Total		mg/L	0.000005	0.0000052
Calcium (Ca)-Total		mg/L	0.03	1.41
Cesium (Cs)-Total		mg/L	0.000005	<0.0000050
Chromium (Cr)-Total		mg/L	0.00005	0.000076
Cobalt (Co)-Total		mg/L	0.000005	0.0000451
Copper (Cu)-Total		mg/L	0.00005	0.00199
Gallium (Ga)-Total		mg/L	0.00005	<0.000050
Iron (Fe)-Total		mg/L	0.01	0.475
Lead (Pb)-Total		mg/L	0.000005	0.000125
Lithium (Li)-Total		mg/L	0.0002	0.00066
Magnesium (Mg)-Total		mg/L	0.03	0.748

Manganese (Mn)-Total	mg/L	0.000005	0.00733
Molybdenum (Mo)-Total	mg/L	0.00001	0.000113
Nickel (Ni)-Total	mg/L	0.00005	0.000601
Phosphorus (P)-Total	mg/L	0.05	<0.050
Potassium (K)-Total	mg/L	0.05	0.405
Rhenium (Re)-Total	mg/L	0.000005	<0.0000050
Rubidium (Rb)-Total	mg/L	0.000005	0.000828
Selenium (Se)-Total	mg/L	0.00004	<0.000040
Silicon (Si)-Total	mg/L	0.05	0.364
Silver (Ag)-Total	mg/L	0.000005	<0.0000050
Sodium (Na)-Total	mg/L	0.2	0.67
Strontium (Sr)-Total	mg/L	0.00001	0.00593
Tellurium (Te)-Total	mg/L	0.00001	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	<0.0000010
Thorium (Th)-Total	mg/L	0.000005	0.0000114
Tin (Sn)-Total	mg/L	0.00001	0.000155
Titanium (Ti)-Total	mg/L	0.00005	0.000062
Tungsten (W)-Total	mg/L	0.00001	<0.000010
Uranium (U)-Total	mg/L	0.000001	0.000235
Vanadium (V)-Total	mg/L	0.00001	0.000037
Yttrium (Y)-Total	mg/L	0.000005	0.0000747
Zinc (Zn)-Total	mg/L	0.0001	0.0111
Zirconium (Zr)-Total	mg/L	0.00001	0.000057
Dissolved Metals Filtration Location		n/a	LAB
Aluminum (Al)-Dissolved	mg/L	0.0002	0.00715
Antimony (Sb)-Dissolved	mg/L	0.000005	0.0000086
Arsenic (As)-Dissolved	mg/L	0.00002	0.000152
Barium (Ba)-Dissolved	mg/L	0.00002	0.00181
Beryllium (Be)-Dissolved	mg/L	0.000002	0.0000031
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	0.0083
Cadmium (Cd)-Dissolved	mg/L	0.000005	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	1.40 *
Cesium (Cs)-Dissolved	mg/L	0.000005	<0.0000050
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000139

Cobalt (Co)-Dissolved	mg/L	0.000005	0.0000253
Copper (Cu)-Dissolved	mg/L	0.00005	0.00157
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	0.124
Lead (Pb)-Dissolved	mg/L	0.000005	0.000073
Lithium (Li)-Dissolved	mg/L	0.0002	0.00063
Magnesium (Mg)-Dissolved	mg/L	0.03	0.746 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.0041
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00007
Nickel (Ni)-Dissolved	mg/L	0.00005	0.000507
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050
Potassium (K)-Dissolved	mg/L	0.05	0.390 *
Rhenium (Re)-Dissolved	mg/L	0.000005	<0.0000050
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.000818
Selenium (Se)-Dissolved	mg/L	0.00004	<0.000040
Silicon (Si)-Dissolved	mg/L	0.05	0.352
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	0.65 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.0054
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	<0.0000010
Thorium (Th)-Dissolved	mg/L	0.000005	0.0000141
Tin (Sn)-Dissolved	mg/L	0.00001	0.000096
Titanium (Ti)-Dissolved	mg/L	0.00005	<0.000050
Tungsten (W)-Dissolved	mg/L	0.00001	<0.000010
Uranium (U)-Dissolved	mg/L	0.000001	0.000153
Vanadium (V)-Dissolved	mg/L	0.00001	0.000022
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000562
Zinc (Zn)-Dissolved	mg/L	0.0001	0.0087
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000059
Biochemical Oxygen Demand	mg/L	2	<2.0

Dustfalls

		Sample ID	PKDF-S	PKDF-E	PKDF-SE	PKDF-W
		ALS ID	L1148079-1	L1148079-2	L1148079-3	L1148079-4
		Date Sampled	5/15/2012 12:00:00 AM	5/15/2012 12:00:00 AM	5/15/2012 12:00:00 AM	5/15/2012 12:00:00 AM
Analyte	Units	LOR	Dustfall	Dustfall	Dustfall	Dustfall
Total Dustfall (mg/100cm2/30days)	mg	8	732	37.4	<8.0	
Total Fixed Dustfall (mg/100cm2/30days)	mg	5	701	34.6	<5.0	
Aluminum (Al)-Total	mg/dm2.day	0.000016	0.00817	0.000402	0.000043	
Antimony (Sb)-Total	mg/dm2.day	0.0000016	<0.0000016	<0.0000016	<0.0000016	
Arsenic (As)-Total	mg/dm2.day	0.0000016	<0.0000016	<0.0000016	<0.0000016	
Barium (Ba)-Total	mg/dm2.day	0.00000078	0.000952	0.0000794	0.00000184	
Beryllium (Be)-Total	mg/dm2.day	0.0000078	<0.0000079	<0.0000079	<0.0000079	
Bismuth (Bi)-Total	mg/dm2.day	0.0000078	<0.0000079	<0.0000079	<0.0000079	
Boron (B)-Total	mg/dm2.day	0.00016	<0.00016	<0.00016	<0.00016	
Cadmium (Cd)-Total	mg/dm2.day	0.00000078	<0.00000079	<0.00000079	<0.00000079	
Calcium (Ca)-Total	mg/dm2.day	0.00031	0.0588	0.0102	0.00078	
Chromium (Cr)-Total	mg/dm2.day	0.0000078	0.000537	0.000022	<0.0000079	
Cobalt (Co)-Total	mg/dm2.day	0.0000016	0.0000716	0.0000031	<0.0000016	

Copper (Cu)-Total	mg/dm2.day	0.0000016	0.0000056	0.000057	0.0000039	0.0000054
Iron (Fe)-Total	mg/dm2.day	0.00047	0.0017	0.0368	0.00157	<0.00047
Lead (Pb)-Total	mg/dm2.day	0.00000078	<0.00000078	0.00000873	0.00000081	<0.00000079
Lithium (Li)-Total	mg/dm2.day	0.000078	<0.000078	<0.000079	<0.000079	<0.000079
Magnesium (Mg)-Total	mg/dm2.day	0.000078	0.00662	0.141	0.00603	0.000307
Manganese (Mn)-Total	mg/dm2.day	0.00000078	0.0000366	0.000616	0.0000348	0.00000261
Molybdenum (Mo)-Total	mg/dm2.day	0.00000078	<0.00000078	0.00000109	<0.00000079	<0.00000079
Nickel (Ni)-Total	mg/dm2.day	0.0000078	0.0000799	0.00144	0.0000697	<0.0000079
Phosphorus (P)-Total	mg/dm2.day	0.0047	<0.0047	<0.0047	<0.0047	<0.0047
Potassium (K)-Total	mg/dm2.day	0.00078	<0.00078	0.0034	<0.00079	<0.00079
Selenium (Se)-Total	mg/dm2.day	0.000016	<0.000016	<0.000016	<0.000016	<0.000016
Silicon (Si)-Total	mg/dm2.day	0.00078	0.00492	0.0835	0.00475	<0.00079
Silver (Ag)-Total	mg/dm2.day	0.00000016	<0.00000016	<0.00000016	<0.00000016	<0.00000016
Sodium (Na)-Total	mg/dm2.day	0.00078	<0.00078	0.00081	<0.00079	<0.00079
Strontium (Sr)-Total	mg/dm2.day	0.0000016	0.0000401	0.000344	0.0000477	0.0000028
Thallium (Tl)-Total	mg/dm2.day	0.0000016	<0.0000016	<0.0000016	<0.0000016	<0.0000016
Tin (Sn)-Total	mg/dm2.day	0.0000016	<0.0000016	<0.0000016	<0.0000016	<0.0000016
Titanium (Ti)-Total	mg/dm2.day	0.00016	<0.00016	0.00101	<0.00016	<0.00016
Uranium (U)-Total	mg/dm2.day	0.00000016	0.00000072	0.0000145	0.00000062	<0.00000016

Vanadium (V)-Total	mg/dm ² .day	0.000016	<0.000016
Zinc (Zn)-Total	mg/dm ² .day	0.000016	<0.000016

0.000045	<0.000016	<0.000016
0.000059	<0.000016	0.000099

APPENDIX D: Internal Site Inspections



Shear Diamonds

Internal Inspection Report Form

LUP # N2011C0009

WL # 2AM-JER1119-Type A

Date: May 2, 2012

Inspected By: Wes Atchison

Indicate: A – Acceptable,

U – Unacceptable,

N/A – Not applicable

Hazardous Materials Storage

Drums and Tanks:

Notes – leaks, leaks mitigated, bungs at 9 and 3.

Tank farm	U	There is a leaning tank in the S berm. Flex pipes on tank 11 and 12 should be replaced.
Vehicle fueling station (Inside and outside)	A	Strong evidence of spillage within fuel transfer station, stained pads and strong odor of diesel. (Photo 1) Some evidence of spillage outside vehicle fueling station. An empty drum has been placed outside with cover for spill containment.
HWTA	U	Drums and tanks will need to be organized when snow melts. (Photo 2)
By Generator	A	No issues with the tank.
Helicopter Landing	A	All drums are properly sealed and placed at 9:00-3:00. They are all exposed now.
Airport	A	No leaks present at the airstrip day tanks.
Signage	U	Many of the signs have been knocked down by weather. Will need to be replaced during summer months.
MSDS Sheets	A	Present where needed.
Spill Kits	A	Present where required. We have 2 brand new vehicle spill kits

		in the site services shack
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Resp. Party: Enviro/Site Services	Site Manager: Chris Morton	Env tech: Wes Atchison
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Secondary Containment:

Notes – leaks, water or ice, breaches, holes, slumping, erosion.

Tank farm	U	Fuel present on the ground. Presents slight issues of dispersion around the tank farm. Contaminated snow stored in phase II. There are many small spills being dumped in these berms. These should be contained in drums or cubes and brought to the HWTa or into the truck shop.
Reclaim Area	A	No issues present.
Vehicle fueling station	A	Spills are frequent here. An empty 45 gallon drum with cover has been placed here to put spills in.
HWTa	U	Damage to berm liner. Slumping and erosion of berm presents a potential containment issue. There is a lot of snow contained within the berm that we may want to remove before it melts.
By Generator	A	Evidence of historical spills. Spill evidence down side of tank. Will need to be remediated once thawed.
Helicopter Landing	A	Snow has been removed from on top of the fuel drums. (Photo 3)
Airport	A	Fuel hoses have been removed from the berm. (Photo 7) There have been small spills within the berm during fueling from hercs. A recent spill that has been reported is being stored in the berm. Will need to be remediated once snow thaws.

Resp. Party: Enviro/Site Services	Site Manager: CM	Env tech: WA
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General

Notes

Chemical Storage	A	Chemical storage area is clean and organized.
Signage	A	Proper signs present to indicate which chemicals are present.

MSDS Sheets	A	MSDS present .
Spill Kits	A	Spill kits present. Spill kit at airstrip is buried.

Resp. Party: Enviro	Site Manager: CM	Env tech: WA
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Waste Disposal Storage

Notes

WWTP	A	Clean and in working order. Kept well organized.
Incineration Area	U	Issues with storage inside the incineration area: 3 drums full of ash and 2 drums full of miscellaneous waste (Photo 4) . 3 drums full of aerosol cans have been placed in the old incinerator. Need to find designated area for ash. Door is in poor condition, does not close properly. Issues with proper waste disposal, action plan is in place.
Landfill	n/a	There isn't currently a landfill on site.

Resp. Party: Enviro/Site Services	Site Manager: CM	Env tech: WA
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Truck Shop

Notes

Oil Cubes	A	Waste oil cubes have been removed from the shop. There should be an empty one at all times in the shop to pump out grate/sump when it is full.
Waste Oil Traps	A	Waste oil traps are acceptable.
Central Grate	A	Grate is empty.
Oil Burner Stacks	A	Burner is clean again.
Snow beneath oil burners	A	Snow below the stack is has been removed and placed in the PKCA
Waste storage	U	There is still some more cleaning up to do but the situation has improved. Still issues with waste containers. A lot of unlabelled waste. 3 full drums of oil/diesel soaked rags (Photo 5) .

Powerhouse Area	U	There was a large diesel spill under genset #3. A 45 gallon drum with cover has been placed in the area for spill containment, some of the smaller spills in that area have been scooped up. There is an oil cube next to generator 4 that should be removed
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Resp. Party: Enviro/Site Services	Site Manager: CM	Env tech: WA
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Water Supply – Carat Lake

Notes – slumping, erosion, siltation.

Pump House	A	No issues present.
Causeway	A	Slight erosion on north side.
Pumps	A	Pumps functioning.
Flow Measuring Device	A	All flow meters around site function properly.
Intake	A	No issues present.
Treatment	A/U	Chlorine analyzer reading 0.00, however, Cl readings taken from sinks are between 0.1 and 0.6 for free and total Cl.

Resp. Party: Enviro/Site Services	Site Manager: CM	Env tech: WA
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East, Southeast, and West Dams. PKCA.

Notes – FPK dispersion.

Tire Wall Inspection	A	Tire wall has a large buildup of snow.
FPK (contained within PKCA)	U	FPK should be saturated to mitigate dispersion.
Inspect tundra surrounding dams	U	Shows up on down slopes facing away from the dams. Evidence of FPK as far as 200m past SE dam. Now that snow is starting to melt the black FPK is becoming more and more visible. (Photo 6)

Resp. Party: Shear	Site Manager: CM	Env tech: WA
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Drill Sites**Notes**

Water Sources	n/a	We are not currently drilling.
Drill Site Areas	n/a	We are not currently drilling.
Drill Sumps	n/a	We are not currently drilling.
Erosion	n/a	We are not currently drilling.
Flow Measure Device	n/a	We are not currently drilling.
Debris	n/a	We are not currently drilling.

Resp. Party:	Site Manager: CM	Env tech: WA
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General Conditions**Notes**

Posting and Signage's	U	Some signs missing or Damaged at the HWTA
Litter around buildings	A	Everyone is being conscientious about bringing their waste inside.
Records and Reporting	A	Everything has been properly recorded and reported to the proper parties. We recently got some tips for our spill reports.
Proper waste disposal bins in place	A	Employees need to take a little more care when throwing out waste, just because the correct bin is not in their vicinity it does not mean that any bin can be used for any type of waste. This is a reoccurring problem. We will work on waste management awareness.

Resp. Party: Enviro	Site Manager: CM	Env tech: WA
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PHOTOS

Photo 1

Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Shear Diamonds

Internal Inspection Report Form

LUP # N2011C0009

CTL311C015

WL # 2AM-JER1119-Type A

Date: May 9, 2012

Inspected By: Wes Atchison Arthur Oniak

Indicate: A – Acceptable,

U – Unacceptable,

N/A – Not applicable

Hazardous Materials Storage

Drums and Tanks:

Notes – leaks, leaks mitigated, bungs at 9 and 3.

Tank farm	U	There is a leaning tank in the S berm. Flex pipes on tank 11 and 12 should be replaced. Some of the supports are looking warped. (Photo 1)
Vehicle fueling station (Inside and outside)	A	Strong evidence of spillage within fuel transfer station, stained pads and strong odor of diesel. Seals may need to be replaced.

HWTA	U	Drums and tanks will need to be organized when snow melts. Snow is starting to melt and flooding the area (Photo 4)
By Generator	A	No issues with the tank.
Helicopter Landing	A	All drums are properly sealed and placed at 9:00-3:00.
Airport	A	No leaks present at the airstrip day tanks.
Signage	U	Many of the signs have been knocked down by weather. Will need to be replaced during summer months.
MSDS Sheets	A	Present where needed.
Spill Kits	A	Present where required. We have 2 brand new vehicle spill kits in the site services shack.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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Secondary Containment:

Notes – leaks, water or ice, breaches, holes, slumping, erosion.

Tank farm	U	Fuel present on the ground. Contaminated snow, dirt, and now a tarp are stored in phase II. (Photo 3) A lot of water build up.
Reclaim Area	A	No issues present.
Vehicle fueling station	A	Not looking as bad now.
HWTA	U	Damage to berm liner. Slumping and erosion of berm presents a potential containment issue. Melted snow is starting to puddle up.
By Generator	A	Evidence of historical spills. Spill evidence down side of tank. Almost completely full of water. (Photo 2)
Helicopter Landing	A	Rain drain will need to be attached to the berms soon.
Airport	A	Evidence of spillage. Most of berm is now filled with water. (Photo 6)

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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General**Notes**

Chemical Storage	A	Chemical storage area is clean and organized.
Signage	A	Proper signs present to indicate which chemicals are present.
MSDS Sheets	A	MSDS present .
Spill Kits	A	Spill kits present. Spill kit at airstrip is buried.

Resp. Party: Enviro	Site Manager:	Env tech: WA
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Waste Disposal Storage**Notes**

WWTP	A	Clean and in working order. Kept well organized.
Incineration Area	U	Issues with storage inside the incineration area: 3 drums full of ash and 2 drums full of miscellaneous waste. Need to find designated area for ash. Door is in poor condition, does not close properly. Issues with proper waste disposal, action plan is in place.
Landfill	n/a	There isn't currently a landfill on site.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech:
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Truck Shop**Notes**

Oil Cubes	A	Waste oil cubes have been removed from the shop. There is a half-filled cube next to the shop that should be brought inside or removed.
Waste Oil Traps	A	Waste oil traps are acceptable.
Central Grate	A	Grate was recently emptied (weekend)
Oil Burners Stacks	A	Burners are running clean.
Snow beneath oil burners	A	As snow is melting more and more ash that was deposited is becoming present.
Waste storage	U	Some unlabeled waste. Shop is a bit full right now to be doing

		much serious floor cleaning. 3 full drums of oil/diesel soaked rags have been removed and are now stored in the other incinerator.
Powerhouse Area	U	Snow is melting around generators exposing many of the smaller historical spills that can be seen in the puddles.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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Water Supply – Carat Lake

Notes – slumping, erosion, siltation.

Pump House	A	No issues present.
Causeway	A	Slight erosion on north side.
Pumps	A	Pumps functioning.
Flow Measuring Device	A	All flow meters around site function properly.
Intake	A	No issues present.
Treatment	A/U	Chlorine analyzer still reading 0.00, however, Cl readings taken from sinks are between 0.1 and 0.6 for free and total Cl.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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East, Southeast, and West Dams. PKCA.

Notes – FPK dispersion.

Tire Wall Inspection	A	Tire wall has a large buildup of snow.
FPK (contained within PKCA)	U	FPK should be saturated to mitigate dispersion.
Inspect tundra surrounding dams	U	Shows up on down slopes facing away from the dams. Evidence of FPK as far as 200m past SE dam. Now that snow is starting to melt the black FPK is becoming more and more visible. (Photo 5)

Resp. Party: Shear	Site Manager:	Env tech: WA
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Drill Sites**Notes**

Water Sources	n/a	We are not currently drilling.
Drill Site Areas	n/a	We are not currently drilling.
Drill Sumps	n/a	We are not currently drilling.
Erosion	n/a	We are not currently drilling.
Flow Measure Device	n/a	We are not currently drilling.
Debris	n/a	We are not currently drilling.

Resp. Party:	Site Manager:	Env tech: WA
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General Conditions**Notes**

Posting and Signage's	U	Some signs missing or Damaged at the HWTa
Litter around buildings	A	As snow is melting much of the waste that was not brought in are becoming visible.
Records and Reporting	A	Everything has been properly recorded and reported to the proper parties. We still need to submit follow ups for the genset spill and the diesel spill at the airport.
Proper waste disposal bins in place	A	An ongoing issue at camp. The recycling program is going very well.

Resp. Party: Enviro	Site Manager:	Env tech: WA
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PHOTOS

Photo 1



Photo 2



Photo 3



Photo 4

May 2, 2012

May 9, 2012



Photo 5

May 2, 2012

May 9, 2012



Photo 6

May 2, 2012

May 9, 2012



Shear Diamonds

Internal Inspection Report Form

LUP # N2011C0009

KTL311C015

WL # 2AM-JER1119-Type A

Date: May 18, 2012

Inspected By: Kyle Conway and Jason McCarthy

Indicate: **A – Acceptable,**

U – Unacceptable,

N/A – Not applicable

Hazardous Materials Storage

Drums and Tanks:

Notes – leaks, leaks mitigated, drums at 9 and 3.

Tank farm	U	There is a leaning tank in the South berm. Flex pipes on tank 10 and 12 should be replaced. Some of the supports appear to be warped.
Vehicle fueling station (Inside and outside)	U	Strong evidence of spillage within fuel transfer station. Stained pads and strong odor of diesel. There is strong evidence of diesel spillage where vehicles refuel. Soil will need to be relocated to HWTa for future remediation (Photo 1). An empty drum has been placed outside with cover for minor spill containment and will be monitored regularly.
HWTa	U	Drums and oil cubes will need to be reorganized. Full and empty drums have been knocked about and some appear to be

		leaking within the containment berm. Water within berm will need to be treating with both oil/water separator as well as the Oztec water remediation unit. (Photo 2-5)
By Generator	A	No issues with the tank.
Helicopter Landing	A	All drums are properly sealed and placed at 9:00-3:00. Snow has been removed from atop.
Airport	A	No leaks present at the airstrip day tanks or Jet A fuel drums.
Signage	U	Many of the signs have been knocked down by weather. Will need to be repaired or replaced during summer months.
MSDS Sheets	A	Present where needed.
Spill Kits	A	Present where required. We have 2 brand new vehicle spill kits in the site services shack. Contents of all kits will need to be inspected regularly.

Resp. Party: Enviro/Site Services	Site Manager: Steve Willcott	Env tech: Kyle Conway
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Secondary Containment:

Notes – leaks, water or ice, breaches, holes, slumping, erosion.

Tank farm	U	Fuel present on the ground. Contaminated snow stored in phase II has slowly been drummed (Photo 6) . There is still a large quantity of contaminated snow that needs to be drummed before freshet, which is imminent. It appears that other small spills have been relocated to the phase I fuel farm. These spills should be drummed and relocated to the HWTa. If there are any questions as to what needs to be done with spills please refer to the Contingency Management Plan, Appendix A or contact Enviro personnel.
Reclaim Area	A	No issues present.
Vehicle fueling station	A	Spills are frequent here. An empty 45 gallon drum with cover has been placed here to put minor spills in. This drum will be monitored.
HWTa	U	Damage to berm liner. Slumping and erosion of berm presents a potential containment issue. Snow has begun to melt within the berm which is quite contaminated. Water will need to be pumped out and treated using oil/water separator along with

		the Oztec water remediation unit (Photo 7-8) .
By Generator	A	Evidence of historical spills. Water within the berm has melted and will need to be pumped out and treated. There is also a large spill just outside of the berm from manual fuel transfers that will need immediate attention (Photo 9-10) .
Helicopter Landing	A	Berm has some ice and snow within. Filters will need to be reassembled and berms will need to be drained when ice melts. Spill kit needs to be dug up.
Airport	A	Fuel hoses have been removed from the berm. Water within berm will need to be pumped out and treated. There are large spills that have appeared where ,annual fuel transfer occurred over the winter. Soil will have to be dug up and relocated to HWTa for future remediation. There is also presence of a previous spill outside of the Wacker genset that will need to be dug up and relocated to the HWTa (Photo 11-13) .
Spill Pallets	A	Most of the pill pallets are in good shape. There is one in particular in between the shop and incinerator that should be emptied and relocated to an area with level ground (Photo 16) .

Resp. Party: Enviro/Site Services	Site Manager: SW	Env tech: KC
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General

Notes

Chemical Storage	A	Chemical storage area is clean and organized.
Signage	A	Proper signs present to indicate which chemicals are present.
MSDS Sheets	A	MSDS present.
Spill Kits	A	Spill kits present where required. Contents of each should be inspected regularly. Spill kit at airstrip is buried and will need to be dug up along with spill kit at lay down area.

Resp. Party: Enviro	Site Manager: SW	Env tech: KC
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Waste Disposal Storage

Notes

WWTP	A	Clean and in working order. Kept well organized.
Incineration Area	U	Need to find designated area for ash. Door is in poor condition, does not close properly. A chain and carabineer have been put in place to make sure that door remains closed. Waste disposal around camp has improved significantly however, the shop and process plant are still areas of concern.
Landfill	N/A	Landfill site has yet to be approved.

Resp. Party: Enviro/Site Services	Site Manager: SW	Env tech: KC
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Truck Shop

Notes

Oil Cubes	A	Waste oil cubes have been removed from the shop. There should be an empty one at all times in the shop to pump out grate/sump when it is full. A spill pallet has been put in place for secondary containment of waste oil cube. There is a number of small spills within the shop that should be absorbed and disposed of appropriately.
Waste Oil Traps	A	Waste oil traps are acceptable however, catchments should be pumped out ASAP as they are close to maximum capacity (Photo 14) .
Central Grate	A	Grate is low.
Oil Burner Stacks	A	Burner is clean again.
Waste Storage	U	Though there have been major improvements made in the truck shop waste disposal is still an issue. General awareness will need to be improved upon. Enviro department is working towards this and will be addressing the timelines set out in the action plan.
Powerhouse Area	U	There was a large diesel spill under genset #3. A large majority of the fuel was reclaimed however, the contaminated soil under the genset cannot be accessed and will have to be included in final closure and reclamation (Photo 15) . A 45 gallon drum with cover has been placed in the area for spill containment. Some of the smaller spills in that area have been scooped up.

Parking Lot	U	Now that the snow has melted there are a number of small spills where vehicles and heavy equipment were stored over the winter. These will need to be cleaned up ASAP.
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Resp. Party: Enviro/Site Services/Mechanics	Site Manager: SW	Env tech: KC
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Water Supply – Carat Lake

Notes – slumping, erosion, siltation.

Pump House	A	No issues present.
Causeway	A	Slight erosion on north side.
Pumps	A	Pumps functioning.
Flow Measuring Device	A	All flow meters around site function properly.
Intake	A	No issues present.
Treatment	A	Chlorine analyzer has been repaired and in functioning well.

Resp. Party: Enviro/Site Services	Site Manager: SW	Env tech: KC
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East, Southeast, and West Dams. PKCA.

Notes – FPK dispersion.

Tire Wall Inspection	A	No issues present.
FPK (contained within PKCA)	U	FPK should be saturated to mitigate dispersion.
Inspect tundra surrounding dams	U	Shows up on down slopes facing away from the dams. Evidence of FPK as far as 200m past SE dam. Now that snow is starting to melt the black FPK is becoming more and more visible. Reports have been submitted to the appropriate regulators and open communication of mitigation measures has been established. FPK relocation commenced yesterday and is making a difference. (Photo 17-18)

Resp. Party: Enviro/Site Services	Site Manager: SW	Env tech: KC
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Drill Sites**Notes**

Water Sources	n/a	We are not currently drilling.
Drill Site Areas	n/a	We are not currently drilling.
Drill Sumps	n/a	We are not currently drilling.
Erosion	n/a	We are not currently drilling.
Flow Measure Device	n/a	We are not currently drilling.
Debris	n/a	We are not currently drilling.

Resp. Party:	Site Manager: SW	Env tech: KC
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General Conditions**Notes**

Posting and Signage's	U	Some signs missing or Damaged at the HWTA and around site which will need to be repaired or replaced.
Litter around buildings	A	Everyone is being conscientious about bringing their waste inside. There are still cigarette butts in concentrated in specific areas. This has been addressed and butt receptacles are in place.
Records and Reporting	A	Everything has been properly recorded and reported to the appropriate parties.
Proper waste disposal bins in place	A	People need to be a little more conscientious when disposing of any waste. Proper receptacles are in place and labeled however, not all of the waste items are making it into the correct locations. General awareness needs to be reiterated.

Resp. Party: Enviro/Site Services	Site Manager: SW	Env tech: KC
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The Environmental department would like to propose a spring clean-up day on each shift in co-ordination with all site personnel. Now that freshet is occurring there are some areas being revealed that could use some attention and TLC.

PHOTOS

Photo 1



Photo



Photo 3

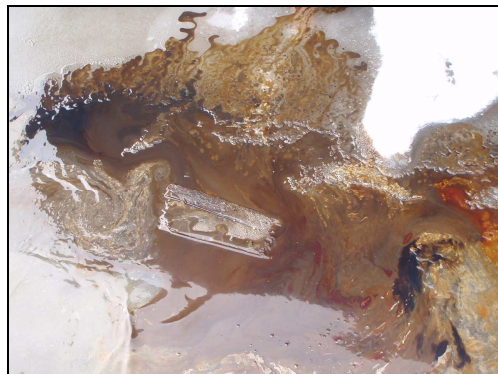


Photo 4



Photo 5

Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14

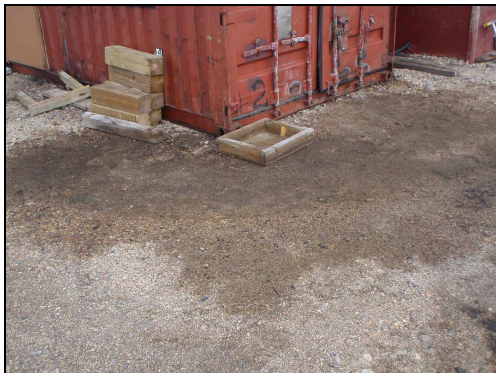


Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Shear Diamonds

Internal Inspection Report Form

LUP # N2011C0009

KTL311C015

WL # 2AM-JER1119-Type A

Date: May 28, 2012

Inspected By: Wes Atchison Jeff

Indicate: A – Acceptable,

U – Unacceptable,

N/A – Not applicable

Hazardous Materials Storage

Drums and Tanks:

Notes – leaks, leaks mitigated, drums at 9 and 3.

Tank farm	U	There is a leaning tank in the South berm. Flex pipes on tank 11 and 12 should be replaced. Some of the supports appear to be warped.
Vehicle fueling station (Inside and outside)	U	Strong smell of diesel within fuel transfer station. Fresh pads have been placed. Evidence of diesel spillage where vehicles refuel. Soil will need to be relocated to HMTA for future remediation. An empty drum has been placed outside with cover for minor spill containment, has not been used at all.
HMTA	U	Drums and oil cubes will need to be reorganized. Both cells are completely flooded, especially the east cell. (Photo 1-3) Drums are floating around.
By Generator	A	No issues with the tank.
Helicopter Landing	A	All drums are properly sealed and placed at 9:00-3:00.
Airport	A	No leaks present at the airstrip day tanks or Jet A fuel drums.
Signage	U	Many of the signs have been knocked down by weather. Will need to be repaired or replaced during summer months.
MSDS Sheets	A	Present where needed.
Spill Kits	A	Present where required.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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Secondary Containment:

Notes – leaks, water or ice, breaches, holes, slumping, erosion.

Tank farm	U	Fuel present on the ground. Contaminated snow stored in phase II has all been drummed. There is a lot of oil contaminated water in phase II and diesel contaminated water in phase I. Phase II will need to be smoothed out (Photo 4)
Reclaim Area	A	No issues present.
Vehicle fueling station	A	Spills are frequent here, may be a good idea to get some secondary containment for underneath fuel nozzles. (Photo 5)

HWTa	U	Damage to berm liner. Flooded. Water will need to be pumped out and treated using oil/water separator along with the Oztec water remediation unit (Photo 1-3) .
By Generator	A	Evidence of historical spills. Water within the berm will need to be pumped out and treated.
Helicopter Landing	A	Snow has melted, rain drains have been attached. Drums are now accessible. Spill kits are now accessible due to snow melt.
Airport	A	Fuel hoses need to be drained and put away. Large spills that have appeared where annual fuel transfer occurred over the winter have begun to get dug up and relocated to HWTa for future remediation but are still present (Photo 6) . Still presence of a previous spill outside of the Wacker genset that will need to be dug up and relocated to the HWTa.
Spill Pallets	A	Most of the pill pallets are in good shape. There is one in particular in between the shop and incinerator that should be emptied and relocated to an area with level ground.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech:WA
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General

Notes

Chemical Storage	A	Chemical storage area is clean and organized.
Signage	A	Proper signs present to indicate which chemicals are present.
MSDS Sheets	A	MSDS present.
Spill Kits	A	Spill kits present where required. Contents of each should be inspected regularly. Spill kit at airstrip is buried and will need to be dug up along with spill kit at lay down area.

Resp. Party: Enviro	Site Manager:	Env tech:WA
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Waste Disposal Storage

Notes

WWTP	A	Clean and in working order. Kept well organized.
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Incineration Area	U	Need to find designated area for ash. Door is in poor condition, does not close properly. A chain and carabineer have been put in place to make sure that door remains closed. Waste disposal around camp has improved significantly however, the shop and process plant are still areas of concern.
Landfill	N/A	Landfill site has yet to be approved.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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Truck Shop

Notes

Oil Cubes	U	There are cubes and gasoline outside of truckshop that need to be brought inside or placed in secondary containment. (Photo 7)
Waste Oil Traps	A	Waste oil traps are acceptable however, catchments should be pumped out ASAP as they are close to maximum capacity.
Central Grate	A	Grate is low.
Oil Burner Stacks	A	Burner is no longer in use.
Waste Storage	U	Waste disposal is an ongoing issue in here. A lot of non burnable waste is generated in this area.
Powerhouse Area	U	Lots of stains are showing up on the ground now that the snow is melted. Oil cubes that were used for a recent oil change need to be put away (Photo 8)
Parking Lot	U	Now that the snow has melted there are a number of small spills where vehicles and heavy equipment were stored over the winter. These will need to be cleaned up ASAP.

Resp. Party: Enviro/Site Services/Mechanics	Site Manager:	Env tech: WA
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Water Supply – Carat Lake

Notes – slumping, erosion, siltation.

Pump House	A	No issues present.
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Causeway	A	Slight erosion on north side.
Pumps	A	Pumps functioning.
Flow Measuring Device	A	All flow meters around site function properly.
Intake	A	No issues present.
Treatment	A	Chlorine levels are acceptable

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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East, Southeast, and West Dams. PKCA.

Notes – FPK dispersion.

Tire Wall Inspection	A	Will need further inspection. There appears to be some tires that are overhanging now (Photo 9)
FPK (contained within PKCA)	U	FPK should be saturated to mitigate dispersion. There are many areas of bone dry FPK still.
Inspect tundra surrounding dams	U	Major cleanup has taken place and will need to continue.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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Drill Sites

Notes

Water Sources	n/a	We are not currently drilling.
Drill Site Areas	n/a	We are not currently drilling.
Drill Sumps	n/a	We are not currently drilling.
Erosion	n/a	We are not currently drilling.
Flow Measure Device	n/a	We are not currently drilling.
Debris	n/a	We are not currently drilling.

Resp. Party:	Site Manager:	Env tech: WA
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General Conditions**Notes**

Posting and Signage's	U	Some signs missing or Damaged at the HWTA and around site which will need to be repaired or replaced.
Litter around buildings	U	A lot of garbage is showing up where the snow is melting, butts need to be disposed of properly.
Records and Reporting	A	Everything has been properly recorded and reported to the appropriate parties.
Proper waste disposal bins in place	A	People need to be a little more conscientious when disposing of any waste. Proper receptacles are in place and labeled however, not all of the waste items are making it into the correct locations. General awareness needs to be reiterated.

Resp. Party: Enviro/Site Services	Site Manager:	Env tech: WA
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Photos 1 & 2 - HWT A



Photo 3 – HWTa



Photo 4 – Phase II following the clean up



Photo 5 – Vehicle refueling station



Photo 6 – Airstrip fuel transfer area



Photo 7 – Cubes and drums outside of the Truck Shop, no secondary containment



Photo 8 – Oil cubes outside of Power House



Photo 9 – Tire wall along the Southeast Dam – monitor during snow melt

