AECOM
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403 270 9200 tel
403 270 0399 fax

March 31, 2010

Phyllis Beaulieu
Licensing Manager
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Phyllis:

Project No: Water Use License 1BR-DYE0914

Regarding: DYE-M, Cape Dyer DEW Line Site

AECOM Canada Ltd. is providing the attached annual report form as per Section B.1 of the above-noted water use license. The report is being submitted on behalf of Defence Construction Canada and the Department of National Defence.

In addition to the annual report form, we are providing a summary of the work completed to date at the site. The following is a summary of the work completed and of the samples collected as part of the wastewater monitoring and sewage effluent monitoring:

Work Completed

The following is a summary of the work completed in 2009:

Lower Site Non-Hazardous Waste Landfill: Construction of the berms for the expansion were completed.

Lower Site Tier II Disposal Facility: Completed construction of the second cell. The first cell was closed at the end of the season, including placement of the geomembrane and final shaping.

Existing Landfill Remediation: Lower Camp Landfills East and West; Upper Site Landfills East and West; Pallet Line Landfill; Beach Landfill North; DEW Drop Landfill – excavated.

Demolition: Removal of power and communications cables was completed. No other demolition occurred in 2009.

Debris Removal: Completed.

Contaminated Soil Excavation: On-going.

Community Consultations: The results of the community meetings held by DCC were submitted with the Project Description. The contractor typically holds a project start up meeting prior to each season.

Spill Incidences: See attached spill report.

Monitoring Results: See attached.

We trust the information provided is sufficient. Please feel free to contact the undersigned if you require any additional information.

Sincerely,
AECOM Canada Ltd.

Eva Schulz, P.Ag.
Eva.Schulz@aecom.com

EMS
Encl. Annual Report Form, Updated Site Figures, Selected Site Photos, Spill Report, Monitoring Reports
cc: Douglas Craig, DCC

NWB Annual Report **Year being reported:** 2009

License No: 1BR-DYE0914 **Issued Date:** June 9, 2009
Expiry Date: May 31, 2014

Project Name: DYE-M, Cape Dyer DEW Line Site Clean Up

Licensee: Defence Construction Canada

Mailing Address:
Constitution Square, Suite 1720
350 Albert Street
Ottawa, ON K1A 0K3

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):
AECOM
Design Engineering and Regulatory Support

General Background Information on the Project (*optional):

Licence Requirements: the licensee must provide the following information in accodance with
Part B Item 1

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s): Water supply lakes

Water Quantity:	
150/day	Quantity Allowable Domestic (cu.m)
2106/124 days	Actual Quantity Used Domestic (cu.m)
n/a	Quantity Allowable Drilling (cu.m)
n/a	Total Quantity Used Drilling (cu.m)

Waste Management and/or Disposal

- [x] Solid Waste Disposal
- [x] Sewage — 2,060 cu.m of sewage effluent deposited into sewage lagoons
- [ ] Drill Waste
- [x] Greywater
- [x] Hazardous
- [x] Other:

Additional Details:
Details regarding waste management were provided in the supporting documents included with the application.

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: (as reported to the Spill Hot-line)
Date of Spill: unknown
Date of Notification to an Inspector: August 12, 2009

Additional Details: (impacts to w ater, mitigation measures, short/long term monitoring, etc)

See attached spill report.

Revisions to the Spill Contingency Plan

SCP submitted and approved - no revision required or proposed

Additional Details:

Revisions to the Abandonment and Restoration Plan

AR plan submitted and approved - no revision required or proposed

Additional Details:

The project is an abandonment and restoration plan.

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

Results of the Monitoring Program including:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;

Details attached

Additional Details:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;

Details attached

Additional Details:

Results of any additional sampling and/or analysis that was requested by an Inspector

No additional sampling requested by an Inspector or the Board

Additional Details: (date of request, analysis of results, data attached, etc)

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

No additional sampling requested by an Inspector or the Board

Additional Details: (Attached or provided below)

Any responses or follow-up actions on inspection/compliance reports

Inspection Report received by the Licensee (Date):

Additional Details: (Dates of Report, Follow-up by the Licensee)

See attached.

Any additional comments or information for the Board to consider

Date Submitted:	March 31, 2010	
Submitted/Prepared by:	Eva Schulz	
Contact Information:	**Tel:**	403-270-9200
	Fax:	403-270-0399
	email:	eva.schulz@aecom.com

GPS Coordinates for water sources utilized

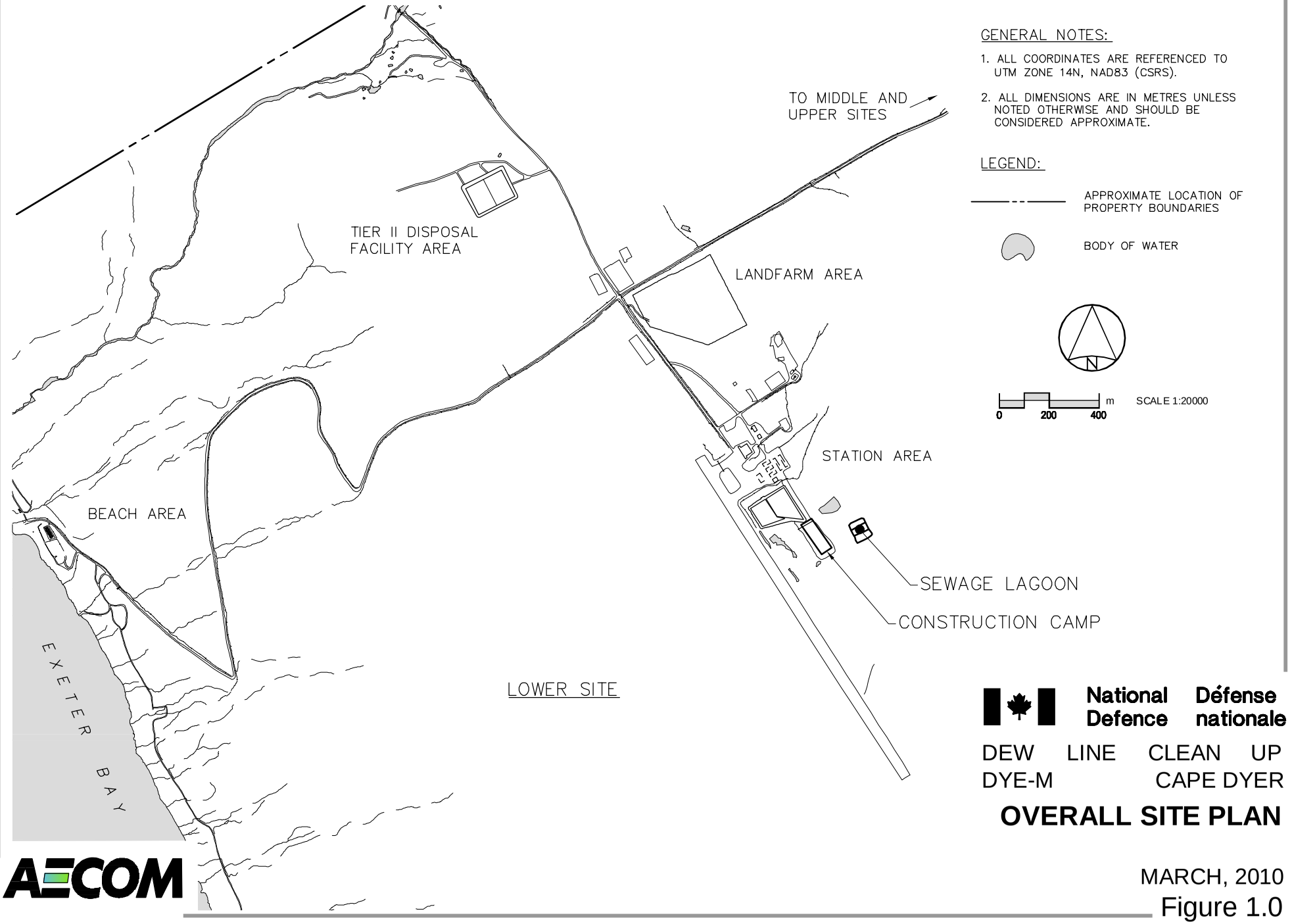
Source Description	UTM Zone 20N, NAD83	
	Northing	Easting
Lower Site Water Supply Lake	7390039	559775
Summer Water Supply Lake	7389802	565916
Winter Water Supply Lake	7395600	570250

GPS Locations of areas of waste disposal

	UTM Zone 20N, NAD83	
	Northing	Easting
Landfarm (E01)	7387924.9	562601.4
Landfarm (E01)	7387931.4	562624.8
Landfarm (E01)	7387004.7	562765
Landfarm (E01)	7387922	562808.3
Landfarm (E01)	7387725.6	562911.1
Landfarm (E01)	7387645.4	562757.8
Landfarm (E01)	7387718.1	562525.6
Landfarm (E01)	7387759.3	562496.2
Landfarm (E01)	7387843.9	562454.5
Lower Site Tier II (H01)	7388272.5	561782.6
Lower Site Tier II (H01)	7388345,3	561925.1
Lower Site Tier II (H01)	7388242.9	561977.4
Lower Site Tier II (H01)	7388170.1	561835
Lower Site Non-Haz (F01)	7387025.5	562989.6
Lower Site Non-Haz (F02)	7387070.4	563061.8
Lower Site Non-Haz (F03)	7387943.1	563141.1
Lower Site Non-Haz (F04)	7387953.3	563034.6
Upper Site Tier II (X01)	7394628.6	571043.9
Upper Site Tier II (X02)	7394676.6	571117.6
Upper Site Tier II (X03)	7394599.5	571167.8
Upper Site Tier II (X04)	7394551.5	571094
Upper Site Non-Haz (V01)	7395184.3	572155.5
Upper Site Non-Haz (V02)	7395144	572311.4
Upper Site Non-Haz (V03)	7395090.7	572297.6
Upper Site Non-Haz (V04)	7395105.9	572239.1
Upper Site Non-Haz (V05)	7395070	572178.1
Upper Site Non-Haz (V06)	7395075	572158.8
Upper Site Non-Haz (V07)	7395112.2	572136.9
Sewage Lagoon Cell #1	7386890	563376
Sewage Lagoon Cell #2	7386916	563362

Attachments

Updated Site Figures



National Defence / Défense nationale

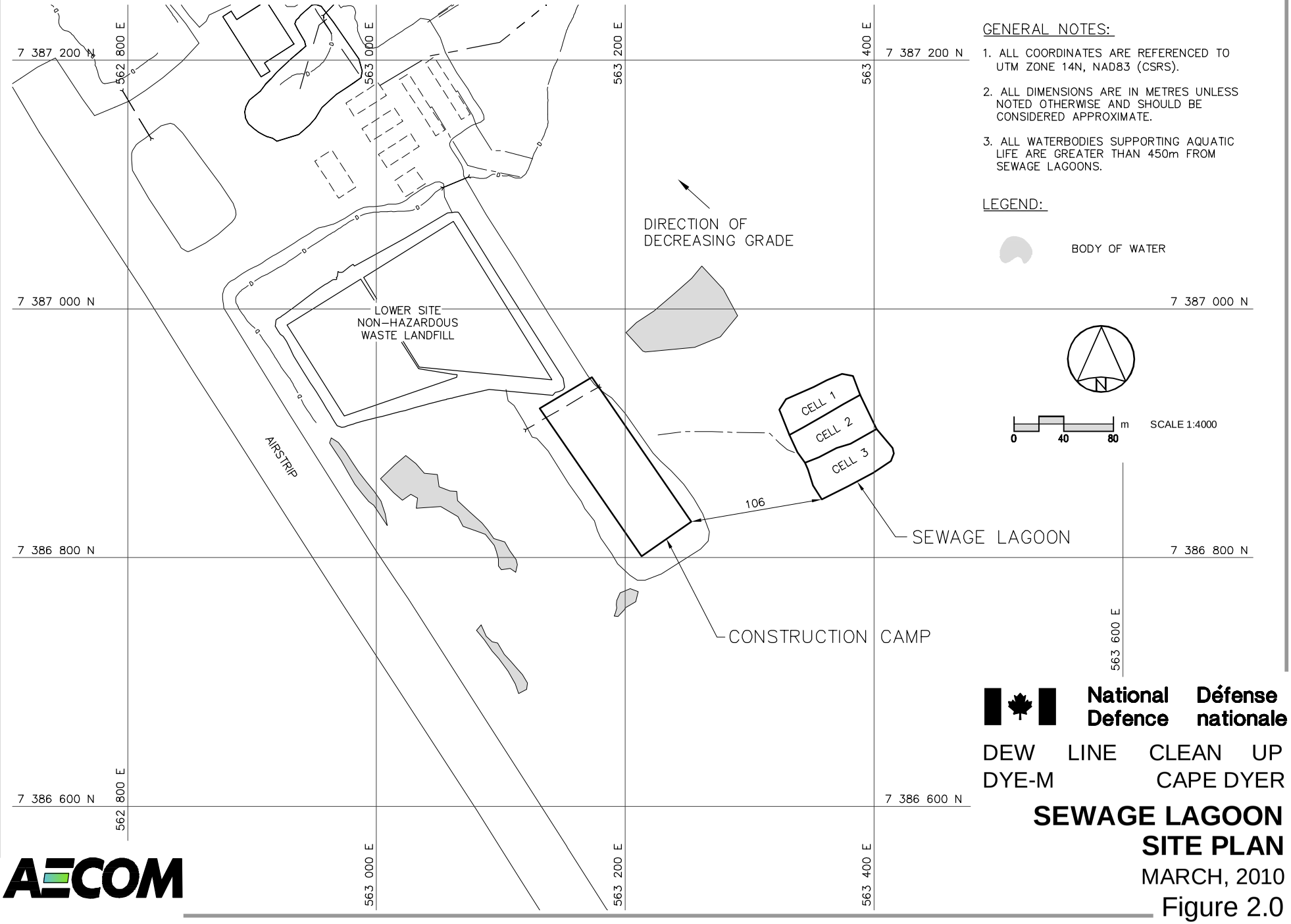
DEW LINE CLEAN UP
DYE-M CAPE DYER

OVERALL SITE PLAN

MARCH, 2010

Figure 1.0

AECOM



National Defence / Défense nationale

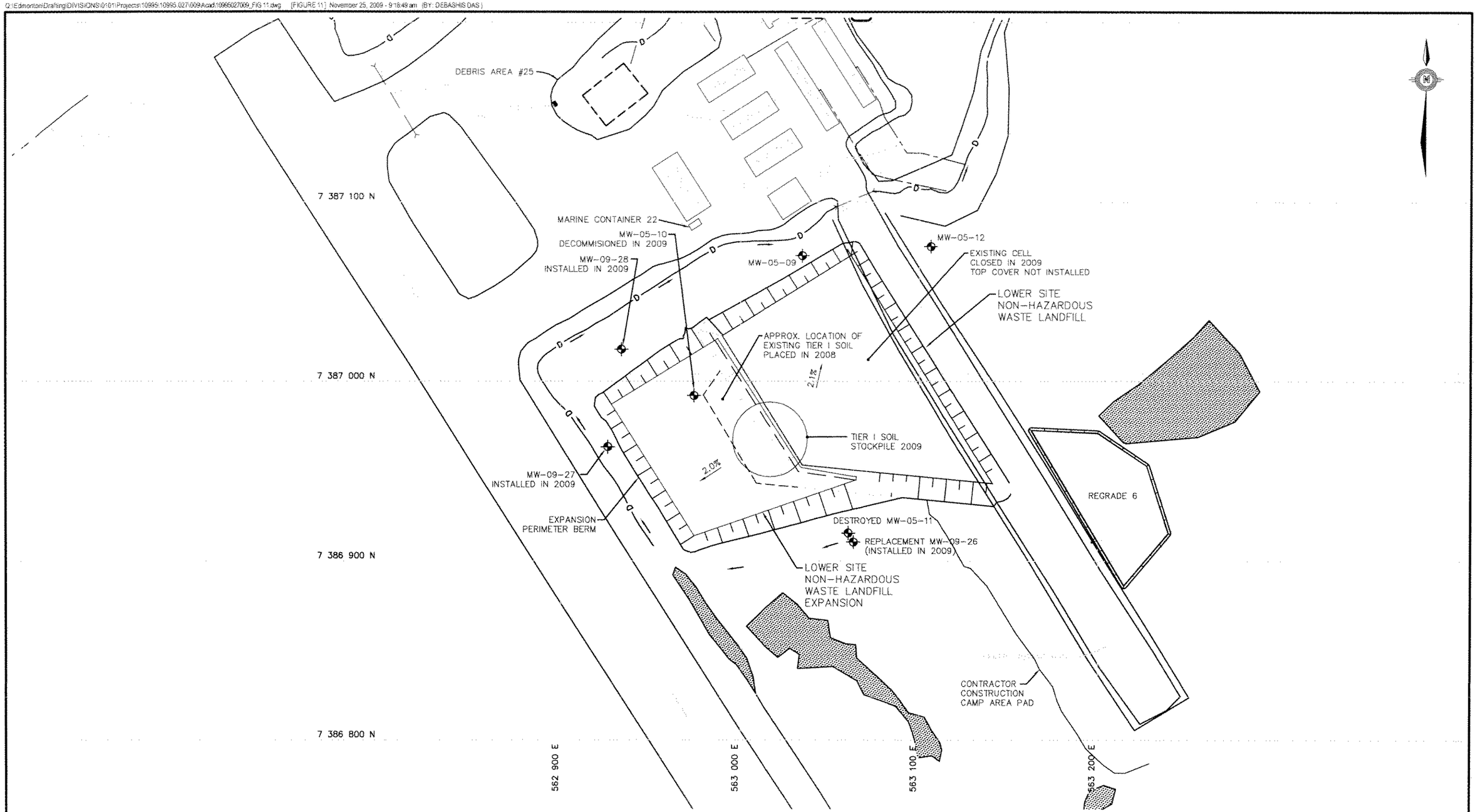
DEW LINE CLEAN UP
DYE-M CAPE DYER

SEWAGE LAGOON SITE PLAN

MARCH, 2010

Figure 2.0

AECOM



BASE DRAWING PROVIDED BY UMA, DYE-M CAPE DYER TENDER DRAWINGS, DATED DECEMBER 2003

LEGEND:

- MONITORING WELL LOCATION

0 100

Scale: 1: 2 000 (metres)

CLIENT

AECOM

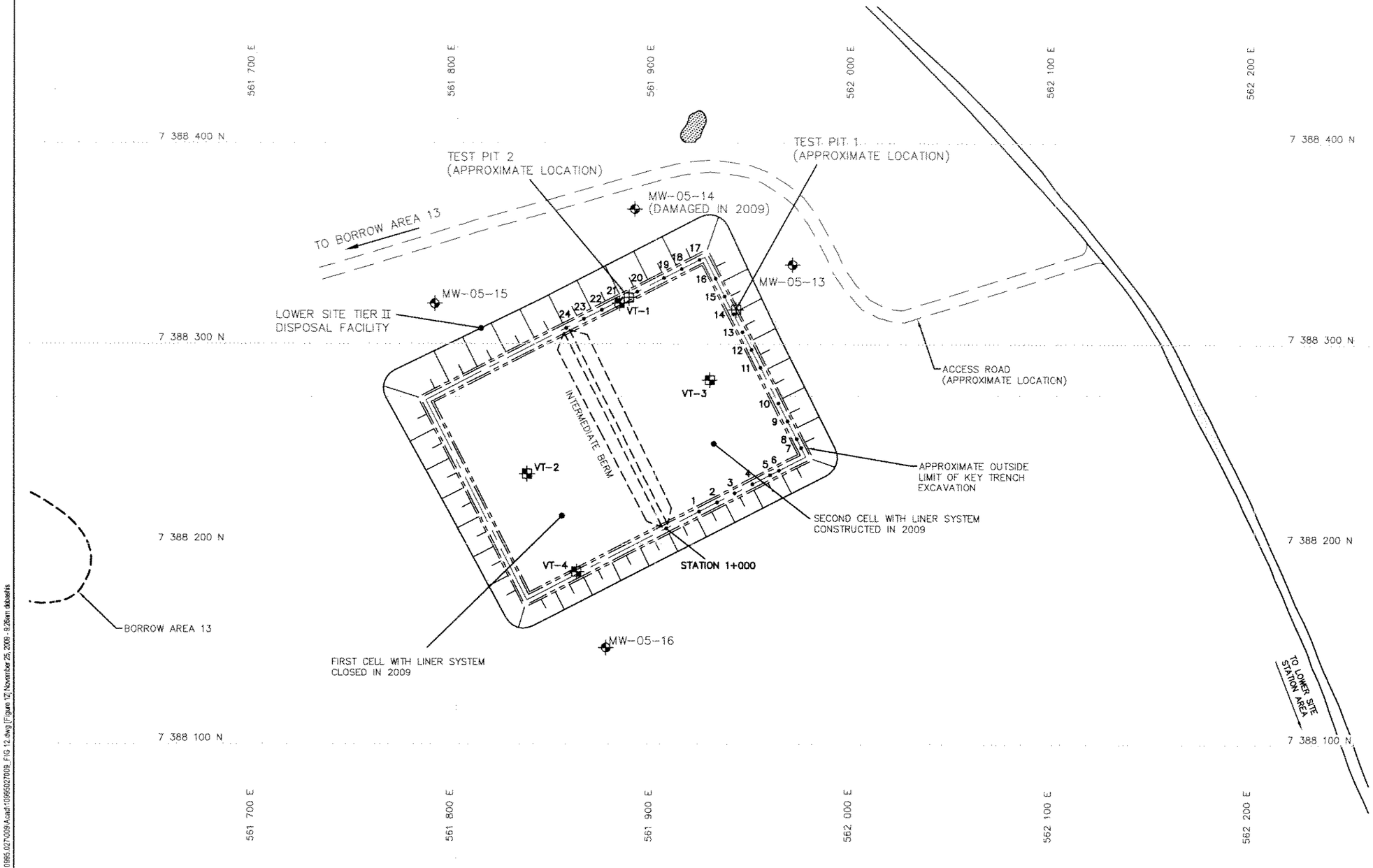
DYE-M DEW Line Clean Up Project
Cape Dyer, Nunavut

Lower Site Non-Hazardous Waste Landfill
Tier I Soils Placement Area
Expansion limits

EBA Engineering Consultants Ltd.

PROJECT NO.	DWN	CKD	REV
10995027.009	DBD	RK	0
OFFICE	DATE		
EBA	October 2009		

Figure 11



POINT NO.	STATION	KEY TRENCH DEPTH (m)
START	1+000	--
1	1+020	1.6
2	1+030	1.5
3	1+040	1.4
4	1+050	1.7
5	1+060	1.7
6	1+065	1.7
7	1+085	2.0
8	1+090	2.2
9	1+100	1.9
10	1+110	2.0
11	1+130	1.8
12	1+140	1.8
13	1+150	1.7
14	1+160	1.8
15	1+170	1.9
16	1+180	2.0
17	1+195	1.9
18	1+205	1.8
19	1+215	1.6
20	1+230	1.7
21	1+240	1.8
22	1+250	1.8
23	1+260	1.7
24	1+270	1.8

BASE DRAWING PROVIDED BY JMA, DYE-M CAPE DYER TENDER DRAWINGS, DATED DECEMBER 2003

LEGEND:

- MONITORING WELL LOCATION
- PROPOSED GROUND TEMPERATURE CABLE LOCATION
- TESTPIT LOCATION
- KEY TRENCH DEPTH

0 100

Scale: 1: 2 000 (metres)

CLIENT

AECOM

DYE-M DEW Line Clean-up Project
Cape Dyer, Nunavut

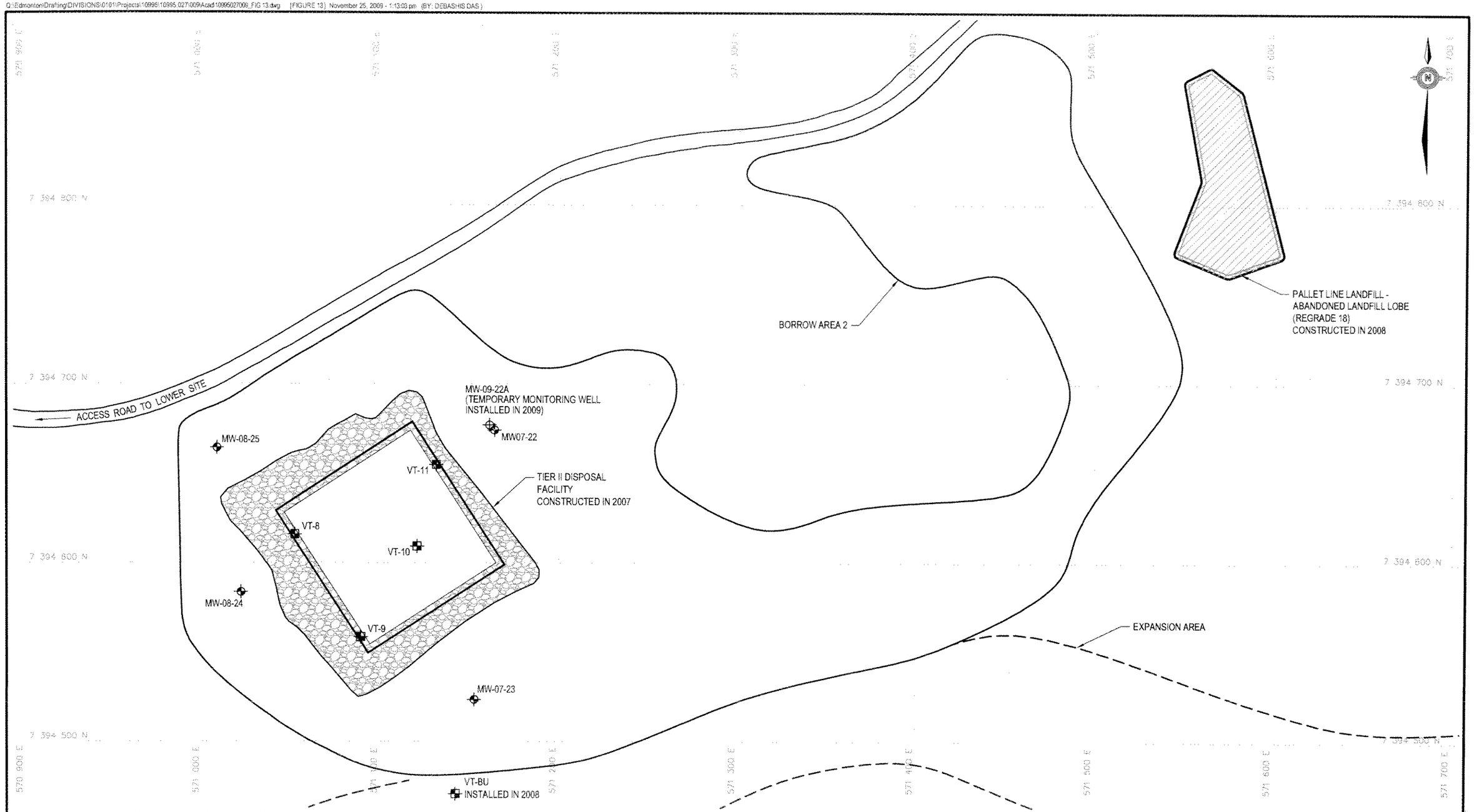
Lower Site Tier II DF
Key Trench Plan and Proposed
Ground Temperature Cable Location

EBA Engineering Consultants Ltd.

PROJECT NO / FILE NO	DWN	CKD	REV
10995027.009	DBD	RK	0
OFFICE	DATE		
EBA-EDM	October, 2009		

FIGURE 12

Q:\Edmonton\Drafting\DIVISIONS\0101\Projects\10995\10995.027\009\Acad\10995027009_FIG 12.dwg [Figure 12, November 25, 2009 - 9:26am dbdsehs



BASE DRAWING PROVIDED BY UMA, DYE-M CAPE DYER TENDER DRAWINGS, DATED DECEMBER 2003

LEGEND:

- MONITORING WELL LOCATION
- PROPOSED GROUND TEMPERATURE CABLE LOCATION

0 100

Scale: 1: 2 000 (metres)

CLIENT

AECOM

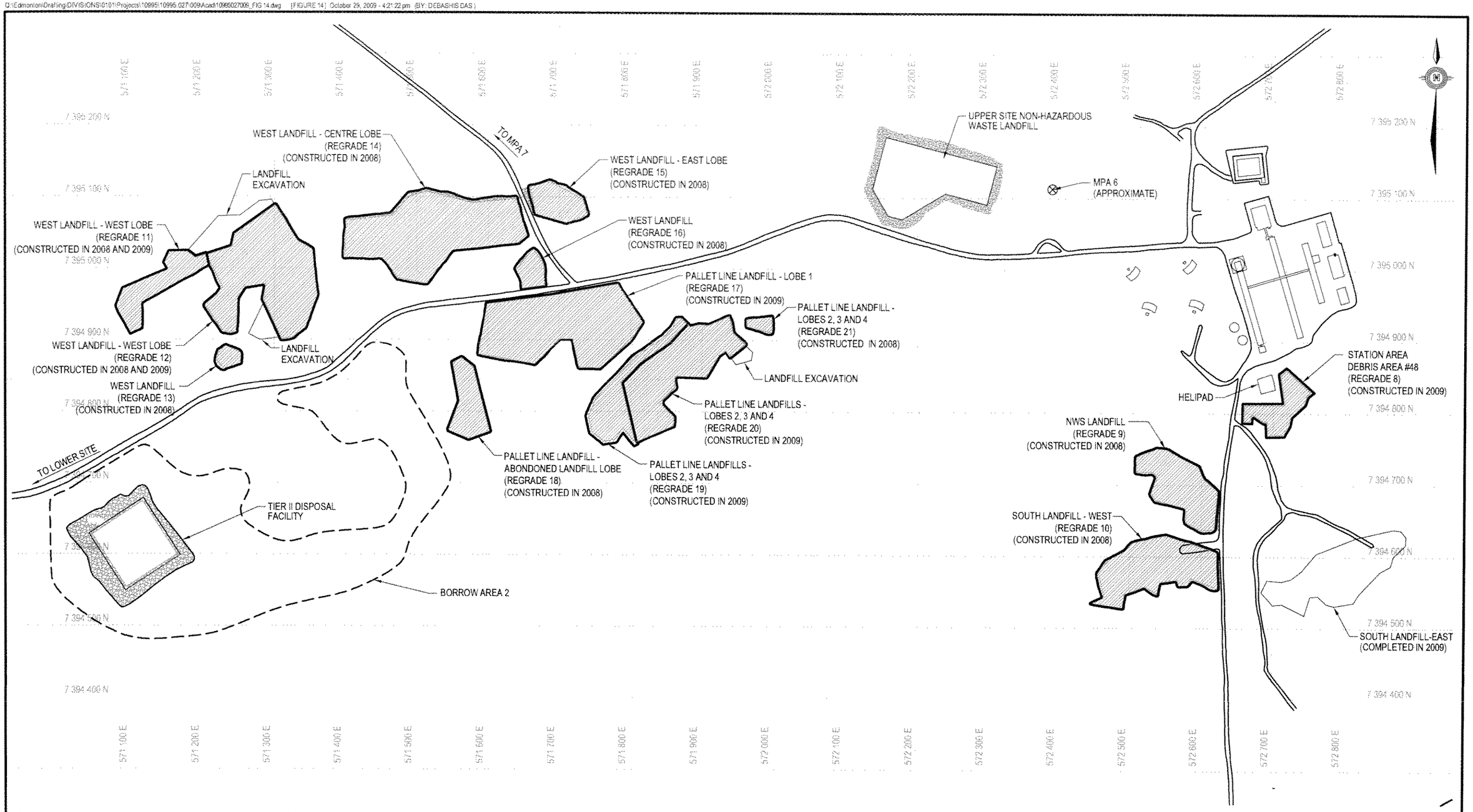
DYE-M DEW Line Clean Up Project
Cape Dyer, Nunavut

Borrow Area 2 and Upper Site Tier II DF
Monitoring Well Locations and Proposed Ground Temperature Cable Location

EBA Engineering Consultants Ltd.

PROJECT NO.	DWN	CKD	REV
10995027.009	DBD	RK	0
OFFICE: EBA	DATE: October 2009		

Figure 13



BASE DRAWING PROVIDED BY UMA, DYE-M CAPE DYER TENDER DRAWINGS, DATED DECEMBER 2003

0 250
Scale: 1: 5 000 (metres)

CLIENT

AECOM

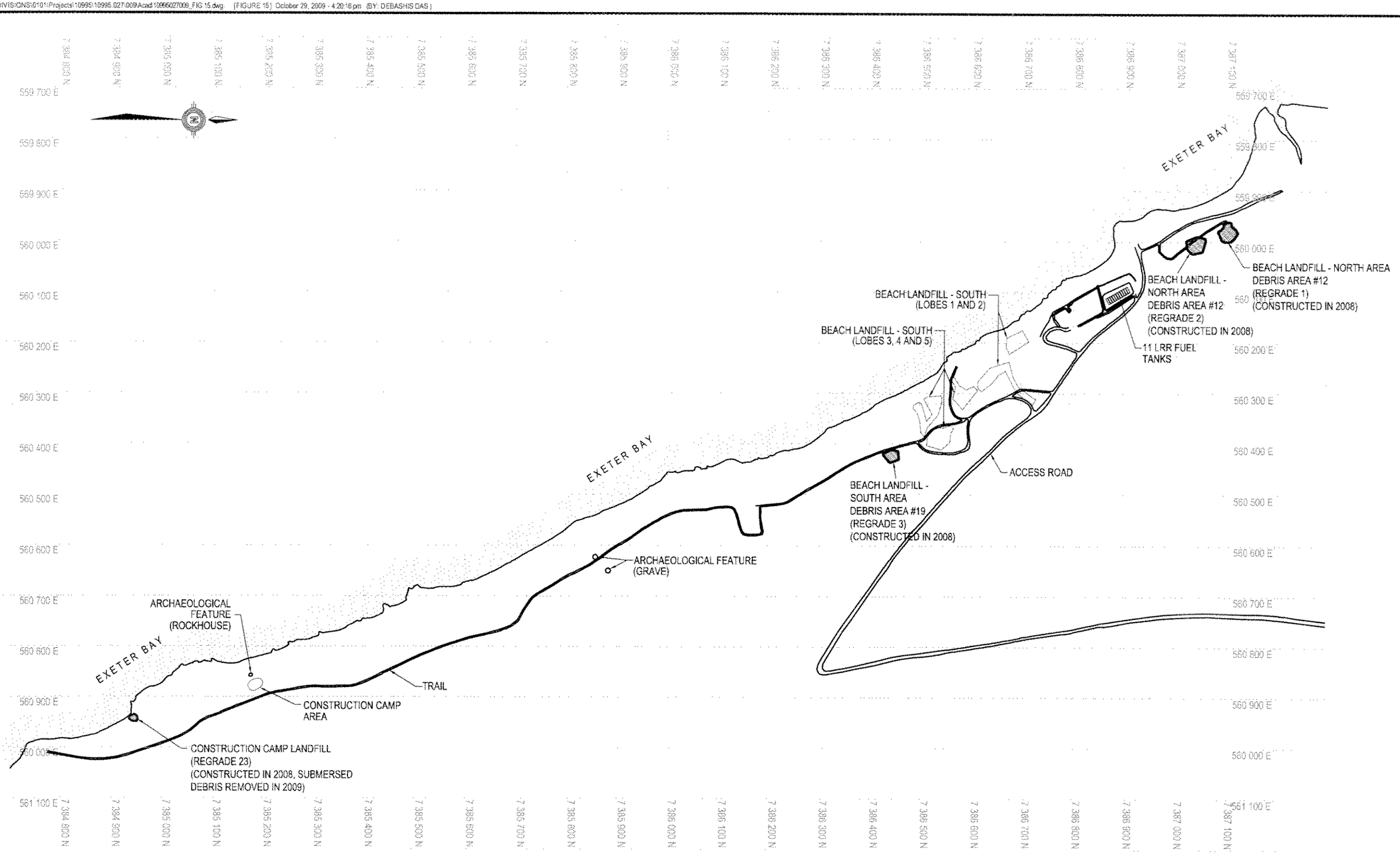
DYE-M DEW Line Clean Up Project
Cape Dyer, Nunavut

Upper Site Regrades

EBA Engineering Consultants Ltd.

PROJECT NO	DWN	CKD	REV
10995027.009	DBD	RK	0
OFFICE	DATE		
EBA-EDM	October 2009		

Figure 14



BASE DRAWING PROVIDED BY UMA, DYE-M CAPE DYER TENDER DRAWINGS, DATED DECEMBER 2009

0 250
Scale: 1: 7 500 (metres)

CLIENT

AECOM

DYE-M DEW Line Clean Up Project
Cape Dyer, Nunavut

Beach Area Regrades

EBA Engineering Consultants Ltd.

PROJECT NO	DWN	CKD	REV
10995027.009	DBD	RK	0
OFFICE: EBA	DATE: October 2009		

Figure 15

Attachments

Selected Site Photos

Photograph 1
Upper Site Non-Hazardous Waste Landfill

Photograph 2
Upper Site Tier II Facility

Photograph 3
Lower Site Non-Hazardous Waste Landfill

Photograph 4
Lower Site Tier II Facility

Attachments

Inspection Report

Indian and Northern Affairs Canada **Affaires Indiennes et du Nord Canada**

WATER USE INSPECTION REPORT

Date: August 22, 2009	**Licensee Rep.** (Name/Title)**: Douglas Craig and Marc Fortier**
Licensee: Defence Construction Canada	**Licence No:** 1BR-DYE0914

WATER SUPPLY

Source(s): Water Supply Lake	**Quantity used: Records to be reviewed**
Owner:/Operator: Defence Const. Canada	Water usage is estimate only

Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Intake Facilities: A	**Storage Structure:** A	**Treatment Systems:** A	**Chemical Storage:** A
Flow Meas. Device: U	**Conveyance Lines:** A	**Pumping Stations:** A	**Screen : A**

Comments: Defence Construction Canada produced water usage records during the period of Inspection that were estimates only. Installation of a water meter to record accurately water usage has not been undertaken by the License. **A water meter is to be installed by the period of the next inspection**.

WASTE DISPOSAL

Sewage: **Sewage Treatment System** (Prim./Sec/Ter.)**: Primary Two or three cell lagoon.**

Natural Water Body: No	**Continuous Discharge** (land or water)**: None**	
Seasonal Discharge: No	**Wetlands Treatment:** None	**Trench:** None

Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Discharge Quality: U	**Decant Structure:** NA	**Erosion:** NA
Discharge Meas. Device: NI	**Dyke Inspection:** NI	**Seepages:** NA
Dams, Dykes: NI	**Freeboard:** NA	**Spills:** NI
Construction: NI	**O&M Plan:** NI	**A&R Plan:** NI
Discharge: seasonal	**Effluent Discharge Rate:** Unknown	

Comments: Effluent was noted outside the lagoon. The Licensee is required to take such measures as to prevent leakage or seepages from the current lagoon system.

Solid Waste: Non-hazardous land fill.

Owner/Operator: Defence Construction Canada

Landfill: A	**Burn & Landfill:** NA	**Other:** Hazardous Mat. Area : A

Comments: An inspection of the Incinerator was conducted during the Inspection. The unit was found to be in a poor state of repair. The front door does not seal the unit and Black smoke was noted exiting the stack during the Inspection (incomplete combustion). The unit is not serviceable. The Licensee is required have a proper incinerator on site by the period of the next inspection.

FUEL STORAGE:.

Waste Oil Storage: On site in designated location **Owner/Operator:** Defence Const. Canada

Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Berms & Liners: NI	**Water within Berms:** NI	**Evidence of Leaks:** NI
Drainage Pipes: NI	**Pump Station & Catchments Berm:** Ni	
Pipeline Condition: NI	**Condition of Tanks: Metal tanks:** NI	

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected	**Owner /Operator:** No sampling results noted	
1	**INAC:** Potable source	
Signs Posted	**SNP:** none	**Warning: A**
Records & Reporting: Records were submitted for 2008.		
Geotechnical Inspection: N/A		

Non-Compliance of Act or Licence: Defence Construction Canada has worked very hard to come into overall compliance with the issued License. Reoccurring issues with the Incineration of garbage, the Lagoon system and installation of simple water meters are hindering their overall excellent efforts. It is highly recommended that the licensee address these areas of deficiency for the period of the next inspection.

A.Keim
Inspector's Name

Sent by E-mail
Inspector's Signature

Attachments

Spill Report

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 **August 12, 2009**	REPORT TIME **15:00**	[X] ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____-_____
B	OCCURRENCE DATE: MONTH – DAY – YEAR **unknown**	OCCURRENCE TIME **unknown**		

C	LAND USE PERMIT NUMBER (IF APPLICABLE) **N2008X0003**	WATER LICENCE NUMBER (IF APPLICABLE) **1BR-DYE0914**
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION **DYE-M, Cape Dyer**	REGION ☐ NWT [X] NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN
E	LATITUDE DEGREES **66** MINUTES **40** SECONDS **00**	LONGITUDE DEGREES **61** MINUTES **21** SECONDS **18**
F	RESPONSIBLE PARTY OR VESSEL NAME **Defence Construction Canada**	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION **350 Albert Street, Suite 1720, Ottawa, ON K1A 0K3**
G	ANY CONTRACTOR INVOLVED **SNC-Lavalin Inc.**	CONTRACTOR ADDRESS OR OFFICE LOCATION **2200 Lakeshore Boul. W., Toronto, ON M8V 1A4**

H	PRODUCT SPILLED **Partially Treated camp sewage**	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES **unknown**	U.N. NUMBER
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER

I	SPILL SOURCE **Effluent lagoon**	SPILL CAUSE **lagoon cell seepage**	AREA OF CONTAMINATION IN SQUARE METRES **N/A**
J	FACTORS AFFECTING SPILL OR RECOVERY **none known**	DESCRIBE ANY ASSISTANCE REQUIRED **none**	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT **none**

K — ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS

During an annual site inspection, it was noted that there were small pockets of greenish water on the land north of the lagoon cells. This has been observed in previous years, and upon testing, the water was below criteria on all parameters associated with the Water Use Licence.

As part of the due diligence program, our scientific advisor was requested to resample and test the water this season for comparison to the criteria. Recent test results indicated that the water sampled from the pockets outside of the lagoon failed for both TSS and faecal coliform.

The site team is aware of the issue and are investigating the problem. Once our plan of action is in confirmed, I will provide further information.

L	REPORTED TO SPILL LINE BY **Douglas Craig**	POSITION **Environmental Officer**	EMPLOYER **DCC**	LOCATION CALLING FROM **Ottawa**	TELEPHONE **(613) 998-7288**
M	ANY ALTERNATE CONTACT **Nahed Farah**	POSITION **Assoc. Proj. Manager**	EMPLOYER **DCC**	ALTERNATE CONTACT LOCATION **Ottawa**	ALTERNATE TELEPHONE **(613) 998-7917**

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 ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

Attachments

Monitoring Reports

Tricia Cammaart
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4

Douglas Craig
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Tuesday, July 21, 2009

RE: Analytical Results for Wastewater Samples Collected at DYE-M in May, 2009

The following report summarizes results of the analysis of wastewater samples as per the DYE-M (Cape Dyer) DEW Line Cleanup Project (DLCU) Specifications.

The DYE-M specifications require that "wash water, meltwater collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream" meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Total chromium (Cr)	0.100	mg/L
Dissolved cobalt (Co)	0.050	mg/L
Dissolved copper (Cu)	0.200	mg/L
Dissolved lead (Pb)	0.050	mg/L
Total mercury (Hg)	0.6	µg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	1.000	mg/L
Oil & grease	5 mg/L and None visible	mg/L
PCBs	0.050* 0.005**	mg/L
Phenols	0.020	mg/L

*Discharge to barren land, **Discharge to vegetated land

Phenols

The wastewater samples collected by ESG at DYE-M in May, 2009 were not analyzed for phenols but they were analyzed for oil and grease. Research conducted by ESG[1] has determined that a) no federal, territorial or provincial criteria exist for the discharge of

[1] Environmental Sciences Group. *DEW Line Clean Up Project – Phenols in Wastewater*. June, 2007.

wastewater containing phenols to land at a minimum distance of 30-m from natural drainage courses b) the maximum concentration of phenols in DLCU wastewater to date (2.44 mg/L) is below the LC_{50} for freshwater fish and crustaceans and below the oral and dermal LD_{50}s for rats and rodents and c) phenols in excess of the maximum allowable concentration (MAC) have historically co-occurred with a visible oil & grease sheen and/or with an exceedance of the MAC for oil & grease. This information, and a subsequent decision to not test for phenols, has been presented to the NWB. To date, verbal agreement from the NWB has been received, but the project is awaiting written confirmation of the decision to suspend testing for phenols.

WASTEWATER SAMPLES

Nine wastewater samples were collected at DYE-M and analyzed in May 2009. A summary of the details of these results follows.

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50004	Northeast Corner of Landfarm	20W 0562725E 7387978 N	May 26, 2009
09-50005	Northeast Corner of Landfarm	20W 0562778E 7387979N	May 26, 2009
09-50006	LS Tank Farm bermed area	20W 0563040 E 7387528 N	May 26, 2009
*09-50012	Upper Site Non-Hazardous Waste Landfill	No Coordinates Recorded	May 28, 2009
*09-50013	Upper Site Non-Hazardous Waste Landfill	No Coordinates Recorded	May 28, 2009
*09-50014	Upper Site Non-Hazardous Waste Landfill	No Coordinates Recorded	May 28, 2009
*09-50015	Upper Site Non-Hazardous Waste Landfill Surface Composite	No Coordinates Recorded	May 28, 2009
09-50016	Upper Site Non-Hazardous Waste Landfill Depth Composite	No Coordinates Recorded	May 28, 2009
09-50018	LS Tier II Facility	20W 0561821E 7388289N	May 30, 2009

* No coordinates recorded for ice core samples.

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: NORTH EAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562725E 7387978N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50004
pH	6-9	pH units	7.15
Total Arsenic	0.100	mg/L	0.012
Dissolved Cadmium	0.010	mg/L	< 0.001
Total Chromium	0.100	mg/L	**0.333**
Dissolved Cobalt	0.050	mg/L	< 0.003
Dissolved Copper	0.200	mg/L	< 0.006
Dissolved Lead	0.050	mg/L	< 0.010
Total Mercury	0.6	µg/L	< 0.4
Dissolved Nickel	0.200	mg/L	< 0.005
Total Zinc	1.0	mg/L	0.282
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / 2.1 mg/L
PCBs	50* 5**	µg/L	< 3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562778E 7387979 N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50005
pH	6-9	pH units	6.75
Total Arsenic	0.100	mg/L	0.018
Dissolved Cadmium	0.010	mg/L	< 0.001
Total Chromium	0.100	mg/L	**0.419**
Dissolved Cobalt	0.050	mg/L	< 0.003
Dissolved Copper	0.200	mg/L	0.013
Dissolved Lead	0.050	mg/L	< 0.010
Total Mercury	0.6	µg/L	< 0.4
Dissolved Nickel	0.200	mg/L	< 0.005
Total Zinc	1.0	mg/L	0.324
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / 2.7 mg/L
PCBs	50* 5**	µg/L	< 3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at Northeast Corner of Landfarm exceeds the wastewater discharge criteria (WDC) for chromium. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE TANK FARM, BERMED AREA
GPS COORDINATES: 20W 0563040 E 7387528 N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50006
pH	6-9	pH units	6.64
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.017
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.023
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / <2.0 mg/L
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: NO COORDINATES RECORDED, ICE CORE SAMPLE

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50012
pH	6-9	pH units	6.99
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.008
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.163
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / <2.0 mg/L
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: NO COORDINATES RECORDED, ICE CORE SAMPLE

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50013
pH	6-9	pH units	8.05
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.004
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.115
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / **6.0 mg/L**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the Upper Site Non-Hazardous Waste Landfill exceeds the wastewater discharge criteria (WDC) for oil and grease. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: NO COORDINATES RECORDED, ICE CORE SAMPLE

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50014
pH	6-9	pH units	7.57
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.103
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / 2.3 mg/L
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL SURFACE COMPOSITE

GPS COORDINATES: NO COORDINATES RECORDED, ICE CORE SAMPLE

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50015
pH	6-9	pH units	7.21
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.225
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / <2.0 mg/L
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL DEPTH COMPOSITE

GPS COORDINATES: NO COORDINATES RECORDED, ICE CORE SAMPLE

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50015
pH	6-9	pH units	7.39
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.004
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.107
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / <2.0 mg/L
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE TIER II FACILITY
GPS COORDINATES: 20W 0561821E 7388289N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50018
pH	6-9	pH units	6.49
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.027
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.006
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.068
Oil & Grease	None Visible and 5 mg/L	mg/L	None visible / <2.0 mg/L
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Anna Charbonneau, Ryan Vettorazzo, Cam Ollson, Andrea Ellis, (ESG)

APPENDIX A
LABORATORY RESULTS

ASU #	11943		**Report ID:**	Dye-M W4
Client:	ASG 19175		**Date Submitted:**	29-May-09
			Date tested:	29-May-09
Site:	DYE-M		**Date:**	1-Jun-09
	09-017		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50004	2.1			
09-50005	2.7			
09-50006	<2.0			
Blank	<2.0			
Control	16.5			
Control Target	16.1			

ASU #	11943		**Report ID:**	Dye-M W3					
Client:	ASG 19175		**Date Submitted:**	29-May-09					
			Date tested:	2-Jun-09					
Site:	DYE-M		**Date:**	3-Jun-09					
	09-017		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50004	-	-	-	-	-	0.282	0.333	0.012	
09-50005	-	-	-	-	-	0.324	0.419	0.018	
09-50006	-	-	-	-	-	0.023	0.017	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	3.2	0.90	0.85	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50006	-	-	-	-	-	0.023	0.017	<0.003	
09-50006	-	-	-	-	-	0.023	0.017	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50004	0.006	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50005	0.013	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50006	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	*
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-	
Control	1.67	1.67	1.63	0.79	8.30	-	-	-	
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-	
09-50006	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50006	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	

Client: **ESG**
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Fax: (613) 541-6596

ASG Login No: 19175
Site: Dye-M
Client No: 09-017
Samples Received: 29-May-09
Date of analysis: 2-Jun-09
Method No: ASG 015
Date Reported: 3-Jun-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50004	µg/L	< 3.0	< 3.0	< 3.0
W	50005*	µg/L	< 3.0	< 3.0	< 3.0
W	50006	µg/L	< 3.0	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Duplicate ; 50005*	µg/L	< 3.0 ; < 3.0	< 3.0 ; < 3.0	< 3.0 ; < 3.0
	Control Sample	µg/L	< 3.0	< 3.0	13
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

Client: **ESG**
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ASG Login No: 19175
Site: Dye-M
Client No: 09-017
Samples Received: 29-May-09
Date of analysis: 2-Jun-09
Method No: ASG 037
Date Reported: 2-Jun-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50004*	7.15
50005	6.75
50006	6.64

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50004* ; Duplicate	7.15 ; 7.14
Control	7.02
Control Target	7.00

Client : **ESG**
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ASG Login No: 19175
Site: Dye-M
Client No: 09-017
Samples Received: 29-May-09
Date of analysis: 3-Jun-09
Method No: ASG 021
Date Reported: 3-Jun-09

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-500004	µg/L	< 0.4
09-500005	µg/L	< 0.4
09-500006*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 09-500006	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	3.8

Client : **ESG**
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Fax: (613) 541-6596

ASG Login No: 19189
Site: Dye-M
Client No: 09-021
Samples Received: 4-Jun-09
Date of analysis: 4-Jun-09
Method No: ASG 021
Date Reported: 4-Jun-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50018*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 09-50018	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.0

ASU #	11952		**Report ID:**	Dye-M W8				
Client:	ASG 19189		**Date Submitted:**	4-Jun-09				
			Date tested:	4-Jun-09				
Site:	DYE-M		**Date:**	5-Jun-09				
	09-021		**Matrix:**	Water				
Preliminary Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50018	-	-	-	-	-	0.068	0.027	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.2	0.88	0.89
Control Target	-	-	-	-	-	3.0	0.80	0.80
Dissolved Metals								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50018	0.006	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-
Control	1.80	1.84	1.80	0.91	9.09	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

Client: ESG
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Fax: (613) 541-6596

ASG Login No: 19189
Site: DYE-M
Client No: 09-021
Samples Received: 4-Jun-09
Date of analysis: 4-Jun-09
Method No: ASG 039
Date Reported: 5-Jun-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50018	6.49

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50018 ; Duplicate	6.49 ; 6.49
Control	7.00
Control Target	7.00

ASU #	11952		**Report ID:**	Dye-M W6
Client:	ASG 19189		**Date Submitted:**	4-Jun-09
			Date tested:	4-Jun-09
Site:	DYE-M		**Date:**	5-Jun-09
	09-021		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50018	<2.0			
Blank	<2.0			
Control	15.9			
Control Target	16.1			

Client: **ESG**
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ASG Login No: 19189
Site: Dye-M
Client No: 09-021
Samples Received: 4-Jun-09
Date of analysis: 4-Jun-09
Method No: ASG 015
Date Reported: 5-Jun-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50018	µg/L	< 3.0	< 3.0	< 3.0

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Control Sample	µg/L	< 3.0	< 3.0	14
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

Client : **ESG**
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ASG Login No: 19188
Site: Dye-M
Client No: 09-020
Samples Received: 4-Jun-09
Date of analysis: 4-Jun-09
Method No: ASG 021
Date Reported: 4-Jun-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury
09-50012	µg/L	< 0.5
09-50013	µg/L	< 0.5
09-50014	µg/L	< 0.5
09-50015	µg/L	< 0.5
09-50016*	µg/L	< 0.5

LABORATORY QA/QC

Sample I.D.	Unit	Mercury
Duplicate ; 09-50016*	µg/L	< 0.5 ; < 0.5
Blank	µg/L	< 0.5
Control Target	µg/L	2.0
Control Sample	µg/L	2.2

* Averaged result of duplicates

ASU #	11951		**Report ID:**	Dye-M W5
Client:	ASG 19188		**Date Submitted:**	4-Jun-09
			Date tested:	4-Jun-09
Site:	DYE-M		**Date:**	5-Jun-09
	09-020		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50012	<2.0			
09-50013	6.0			
09-50014	2.3			
09-50015	<2.0			
09-50016	<2.0			
Blank	<2.0			
Control	15.9			
Control Target	16.1			

Client: **ESG**
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ASG Login No: 19188
Site: Dye-M
Client No: 09-020
Samples Received: 4-Jun-09
Date of analysis: 4-Jun-09
Method No: ASG 015
Date Reported: 5-Jun-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50012*	µg/L	< 3.0	< 3.0	< 3.0
W	50013	µg/L	< 3.0	< 3.0	< 3.0
W	50014	µg/L	< 3.0	< 3.0	< 3.0
W	50015	µg/L	< 3.0	< 3.0	< 3.0
W	50016	µg/L	< 3.0	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Duplicate ; 50012*	µg/L	< 3.0 ; < 3.0	< 3.0 ; < 3.0	< 3.0 ; < 3.0
	Control Sample	µg/L	< 3.0	< 3.0	14
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

Client: ESG
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ASG Login No: 19188
Site: DYE-M
Client No: 09-020
Samples Received: 4-Jun-09
Date of analysis: 4-Jun-09
Method No: ASG 039
Date Reported: 5-Jun-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50012	6.99
50013	8.05
50014	7.57
50015	7.21
50016	7.39

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50016 ; Duplicate	7.39 ; 7.39
Control	7.00
Control Target	7.00

ASU #	11951		**Report ID:**	Dye-M W7					
Client:	ASG 19188		**Date Submitted:**	4-Jun-09					
			Date tested:	5-Jun-09					
Site:	DYE-M		**Date:**	5-Jun-09					
	09-020		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50012	<0.005	<0.005	0.012	<0.001	<0.010	0.163	<0.005	<0.003	
09-50013	<0.005	<0.005	0.005	<0.001	<0.010	0.115	<0.005	<0.003	
09-50014	<0.005	<0.005	<0.003	<0.001	<0.010	0.103	<0.005	<0.003	
09-50015	<0.005	<0.005	0.003	<0.001	<0.010	0.225	<0.005	<0.003	*
09-50016	<0.005	<0.005	0.006	<0.001	<0.010	0.107	<0.005	<0.003	
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	<0.010	<0.005	<0.003	
Control	1.80	1.84	1.80	0.91	9.09	3.18	0.88	0.89	
Control Target	1.60	1.60	1.60	0.80	8.00	3.00	0.80	0.80	
09-50015	<0.005	<0.005	0.004	<0.001	<0.010	0.230	<0.005	<0.003	
09-50015	<0.005	<0.005	0.003	<0.001	<0.010	0.220	<0.005	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn **	Cr	As	
09-50012	<0.005	<0.005	0.008	<0.001	<0.010	0.110	<0.005	<0.003	
09-50013	<0.005	<0.005	0.004	<0.001	<0.010	0.084	<0.005	<0.003	
09-50014	<0.005	<0.005	<0.003	<0.001	<0.010	0.091	<0.005	<0.003	
09-50015	<0.005	<0.005	0.003	<0.001	<0.010	0.182	<0.005	<0.003	*
09-50016	<0.005	<0.005	0.004	<0.001	<0.010	0.053	<0.005	<0.003	
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	<0.030	<0.005	<0.003	
Control	1.80	1.84	1.80	0.91	9.09	3.18	0.88	0.89	
Control Target	1.60	1.60	1.60	0.80	8.00	3.00	0.80	0.80	
09-50015	<0.005	<0.005	0.003	<0.001	<0.010	0.182	<0.005	<0.003	
09-50015	<0.005	<0.005	0.003	<0.001	<0.010	0.182	<0.005	<0.003	
** Detection limit raised due to interferences									

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSCN1465): Sample 09-50004 collected from ponded water in the Northeast Corner of the Landfarm. Picture was taken facing east.

Photo 2 (DSCN1467): Sample 09-50005 second sample collected from ponded water in the Northeast Corner of the Landfarm. Picture was taken facing southeast.

Photo 3 (DSCN1472): Sample 09-50006 collected from ponded water in the Lower Site Tankfarm area. Picture was taken facing northeast.

Ice Coring Locations at Upper Site Non-Hazardous Waste Landfill

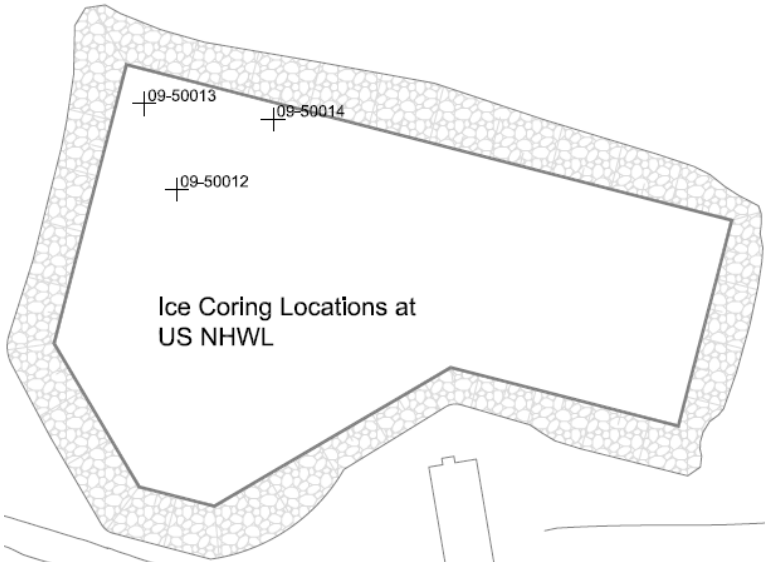

Photo 4: Sample 09-50012 ice core from 30-73cm.

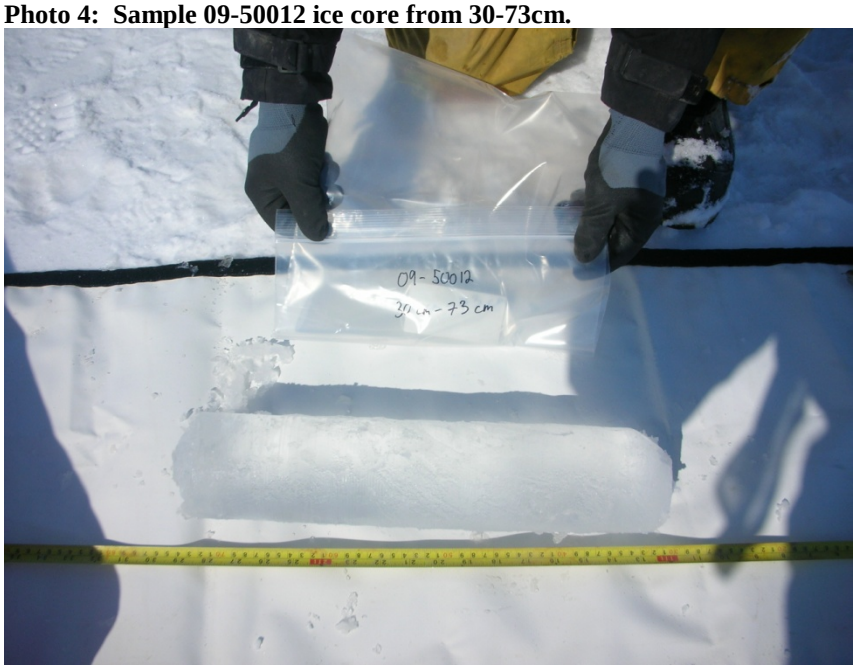

Photo 5: Sample 09-50014 ice core.

Photo 6 (DSCN1525): Sample 09-50018 collected from ponded water in the Lower Site Tier II Facility. Picture was taken facing west.

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Douglas Craig
Environmental Officer
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DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Thursday, July 23, 2009

RE: June 2009 Monthly Report for Water Use License Number: IBR-DYE0914

The following results of the Monitoring Program (MP) and/or Water Use License are provided by the Environmental Sciences Group to meet the requirements of the above-noted license for *DYE-M (Cape Dyer).*

1. SEWAGE EFFLUENT

A sewage lagoon was constructed at DYE-M in September of 2004. The Water Use License and MP require that samples from treated sewage lagoon effluent at the point of discharge to the receiving water be collected prior to each discharge event. Two sewage lagoon samples were collected in June, 2009.

Two sewage lagoon samples were collected and analyzed from DYE-M in June, 2009 (See table).

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50069	South Cell of Sewage Lagoon	20W 0563402E 7386898N	June 23, 2009
09-50084	South Cell of Sewage Lagoon	20W 0563390E 7386898N	June 27, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: SOUTH CELL OF SEWAGE LAGOON
GPS COORDINATES: 20W 0563402E 7386898N

Parameter	Allowable Maximum Average Concentration	Units	**09-50069** (June 23, 2009)
pH	6.0 to 9.0	pH units	7.78
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	28
BOD	120	mg/L	<3.0
Faecal Coliforms	10,000	CFU/dL	N/A
Total Coliforms	-	CFU/ 100 mL	N/A

LOCATION: SOUTH CELL OF SEWAGE LAGOON
GPS COORDINATES: 20W 0563390E 7386898N

Parameter	Allowable Maximum Average Concentration	Units	**09-50084** (June 27, 2009)
pH	6.0 to 9.0	pH units	N/A
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	N/A
BOD	120	mg/L	N/A
Faecal Coliforms	10,000	CFU/dL	0
Total Coliforms	-	CFU/ 100 mL	2

The water inside the sewage lagoon meets water discharge criteria. The water was discharged to land in accordance to the water use license, to the discharge location approved by the INAC Environmental Inspector.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Anna Charbonneau, Ryan Vettorazzo, Cam Ollson, Andrea Ellis, (ESG)

APPENDIX A
LABORATORY RESULTS

Client: ESG
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567

ASG Login No: 19332
Site: DYE-M
Client No: 09-049
Samples Received: 27-Jun-09
Date of analysis: 30-Jun-09
Method No: ASG 037
Date Reported: 1-Jul-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50069*	7.78

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50069* ; Duplicate	7.78 ; 7.78
Control	7.01
Control Target	7.00

Client: **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19332
Site: DYE-M
Client Login No: 09-049
Samples Received: 27-Jun-09
Date of analysis: 1-Jul-09
Method No: ASG 042
Date Reported: 6-Jul-09

RESULTS OF BOD ANALYSIS

Sample I.D.	Unit	BOD
09-50069*	mg/L	< 3

*Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	Unit	BOD
Duplicate ; 09-50069	mg/L	< 3 ; < 3
Blank	mg/L	< 3
Control	mg/L	151
Control Target	mg/L	165

Client : ESG
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19332
Site: DYE-M
Client Login No: 09-049
Samples Received: 27-Jun-09
Date of analysis: 1-Jul-09
Method No: ASG 039
Date Reported: 2-Jul-09
Sheet: 1 of 1

RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
09-50069*	SW	mg/L	28

*Insufficient sample volume for duplicate analysis.

LABORATORY QA/QC

Blank	Control	mg/L	< 1
Control	Control	mg/L	180
Control Target	Control	mg/L	200

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

Client : **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19339
Site: Dye-M
Client No: 09-067
Samples Received: 29-Jun-09
Date of analysis: 29-Jun-09
Date Reported: 1-Jul-09
Sheet: 1 of 1

RESULTS OF MICROBIOLOGICAL ANALYSIS

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
50084	2	0	470	0

LABORATORY QA/QC

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
Blank	0	0	0	0
Control Sample	37	37	0	30
Control Sample Target	32	32	0	32

* Duplicate analysis completed on dilution not required

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSCN1713): Sample 09-50069 collecting a wastewater sample from the Sewage Lagoon. Picture was taken facing west.

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Ottawa ON K1A 0K3

Thursday, July 23, 2009

RE: Analytical Results for Wastewater Samples Collected at DYE-M in June, 2009

The following report summarizes results of the analysis of wastewater samples as per the DYE-M (Cape Dyer) DEW Line Cleanup Project (DLCU) Specifications.

The DYE-M specifications require that "wash water, meltwater collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream" meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Total chromium (Cr)	0.100	mg/L
Dissolved cobalt (Co)	0.050	mg/L
Dissolved copper (Cu)	0.200	mg/L
Dissolved lead (Pb)	0.050	mg/L
Total mercury (Hg)	0.6	µg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	1.000	mg/L
Oil & grease	5 mg/L and None visible	mg/L
PCBs	0.050* 0.005**	mg/L
Phenols	0.020	mg/L

*Discharge to barren land, **Discharge to vegetated land

Phenols

The wastewater samples collected by ESG at DYE-M in June, 2009 were not analyzed for phenols but they were analyzed for oil and grease. Research conducted by ESG[1] has determined that a) no federal, territorial or provincial criteria exist for the discharge of

[1] Environmental Sciences Group. *DEW Line Clean Up Project – Phenols in Wastewater*. June, 2007.

wastewater containing phenols to land at a minimum distance of 30-m from natural drainage courses b) the maximum concentration of phenols in DLCU wastewater to date (2.44 mg/L) is below the LC_{50} for freshwater fish and crustaceans and below the oral and dermal LD_{50}s for rats and rodents and c) phenols in excess of the maximum allowable concentration (MAC) have historically co-occurred with a visible oil & grease sheen and/or with an exceedance of the MAC for oil & grease. This information, and a subsequent decision to not test for phenols, has been presented to the NWB. To date, verbal agreement from the NWB has been received, but the project is awaiting written confirmation of the decision to suspend testing for phenols.

WASTEWATER SAMPLES

Twenty one wastewater samples were collected at DYE-M and analyzed in June 2009. A summary of the details of these results follows.

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50020	Northeast corner of Landfarm	20W 0562693E 7387967N	June 3, 2009
09-50021	Northeast corner of Landfarm	20W 0562693E 7387967N	June 3, 2009
09-50029	Northeast corner of Landfarm	20W 0562737E 7387988N	June 3, 2009
09-50049	Northeast corner of Landfarm	20W 0562783E 7387968N	June 13, 2009
09-50050	Northeast corner of Landfarm	20W 0562739E 7387990N	June 13, 2009
09-50051	Northeast corner of Landfarm	20W 0562739E 7387990N	June 13, 2009
09-50032	Upper Site Tier II Facility	20W 0571054E 7394633N	June 9, 2009
09-50052	Southeast Corner of the Lower Site Tank Farm	20W 0563232E 7386840N	June 17, 2009
09-50053	Northwest corner of the Upper Site Non Hazardous Waste Landfill	20W 0572177E 7395181N	June 17, 2009
09-50054	Northwest corner of the Upper Site Non Hazardous Waste Landfill	20W 0572147E 7395157N	June 17, 2009
09-50055	Northeast Corner of the Lower Site Tank Farm	20W 0563038E 7387530N	June 18, 2009
09-50066	Upper Site Non Hazardous Waste Landfill	20W 0572187E 7395177N	June 22, 2009
09-50067	Upper Site Non Hazardous Waste Landfill	20W 0572151E 7395162N	June 22, 2009
09-50088	Upper Site Non Hazardous Waste Landfill	20W 0572192E 7395176N	June 30, 2009
09-50089	Upper Site Non Hazardous Waste Landfill	20 W 0572147E 7395152N	June 30, 2009

09-50090	Lower Site Holding Basin 6	20W 0563062E 7387587N	June 30, 2009
09-50091	Lower Site Holding Basin 6	20W 0563062E 7387587N	June 30, 2009
09-50092	Lower Site Holding Basin 5	20W 0563064E 7387596N	June 30, 2009
09-50093	Lower Site Holding Basin 4	20W 0563060E 7387602N	June 30, 2009
09-50094	Lower Site Holding Basin 3	20W 0563043E 7387632N	June 30, 2009
09-50095	Lower Site Holding Basin 2	20W 0563043E 7387627N	June 30, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562693 7387967

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50020
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	**0.176**
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562693 7387967

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50021
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	**0.112**
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562737 7387988

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50029
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	**0.126**
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562783 7387968

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50049
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	**0.130**
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562739 7387990

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50050
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	**0.134**
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHEAST CORNER OF LANDFARM
GPS COORDINATES: 20W 0562739 7387990

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50051
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	**0.129**
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the northeast corner of the landfarm exceeds the wastewater discharge criteria (WDC) for chromium. Please refer to ESG Memo DYE-M-460. Chromium was elevated due to natural sources. The water has been discharged.

LOCATION: UPPER SITE TIER II FACILITY
GPS COORDINATES: 20W 0571054 7394633

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50032
pH	6-9	pH units	7.09
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.028
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.017
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4 & <0.5
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.111
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible,** 3.0
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Upper Site Tier II Facility met the wastewater discharge criteria except for the visible sheen of oil and grease. The

sheen was removed at the time of discharge. The water has been discharged to land in accordance to the water use license.

LOCATION: SOUTHEAST CORNER LOWER SITE TANK FARM
GPS COORDINATES: 20W 0563232 7386840

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50052
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHWEST CORNER OF THE UPPER SITE NON HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 20W 0572177 7395181

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50053
pH	6-9	pH units	7.39
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.003
Dissolved Copper	0.200	mg/L	0.006
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	**2.4**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible 2.0
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHWEST CORNER OF THE UPPER SITE NON HAZARDOUS WASTE LANDFILL

GPS COORDINATES: 20W 0572147 7395157

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50054
pH	6-9	pH units	7.35
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.004
Dissolved Copper	0.200	mg/L	0.011
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	**2.4**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible 4.8
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the northwest corner of the upper site non hazardous waste landfill exceeds the wastewater discharge criteria (WDC) for zinc. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: NORTHEAST CORNER OF THE LOWER SITE TANK FARM

GPS COORDINATES: 20W 0563038 7387530

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50055
pH	6-9	pH units	6.62
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.042
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.087
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible <2.0
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHWEST CORNER OF THE UPPER SITE NON HAZARDOUS WASTE LANDFILL

GPS COORDINATES: 20W 0572187 7395177

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50066
pH	6-9	pH units	7.31
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	0.002
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.007
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	**2.5**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, **6.1**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: NORTHWEST CORNER OF THE UPPER SITE NON HAZARDOUS WASTE LANDFILL

GPS COORDINATES: 20W 0572151 7395162

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50067
pH	6-9	pH units	7.36
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	0.002
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	**2.2**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible <2.0
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the northwest corner of the upper site non hazardous waste landfill exceeds the wastewater discharge criteria (WDC) for zinc. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: UPPER SITE NON HAZARDOUS LANDFILL
GPS COORDINATES: 20W 0572192 7395176

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50088
pH	6-9	pH units	7.04
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	**2.2**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 20W 0572147 7395152

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50089
pH	6-9	pH units	7.28
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	**2.1**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the upper site non hazardous waste landfill exceeds the wastewater discharge criteria (WDC) for zinc. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE HOLDING BASIN 6
GPS COORDINATES: 20W 0563062 7387587

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50090
pH	6-9	pH units	**5.42**
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible**, <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 6
GPS COORDINATES: 20W 0563062 7387587

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50091
pH	6-9	pH units	**4.96**
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, 5.9**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the lower site holding basin 6 exceeds the wastewater discharge criteria (WDC) for pH and oil and grease. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE HOLDING BASIN 5
GPS COORDINATES: 20W 0563064 7387596

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50092
pH	6-9	pH units	6.15
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	Broken sample container
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 4
GPS COORDINATES: 20W 0563060 7387602

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50093
pH	6-9	pH units	6.20
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, 10.1**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the lower site holding basin 4 exceeds the wastewater discharge criteria (WDC) for oil and grease. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE HOLDING BASIN 3
GPS COORDINATES: 20W 0563043 7387632

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50094
pH	6-9	pH units	**5.84**
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, **10.4**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The wastewater at the lower site holding basin 3 exceeds the wastewater discharge criteria (WDC) for pH and oil and grease. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE HOLDING BASIN 2
GPS COORDINATES: 20W 0563043 7387627

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50095
pH	6-9	pH units	6.85
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Anna Charbonneau, Ryan Vettorazzo, Cam Ollson, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

ASU #	11953		**Report ID:**	Dye-M W9
Client:	ASG 19212		**Date Submitted:**	8-Jun-09
			Date tested:	8-Jun-09
Site:	DYE-M		**Date:**	9-Jun-09
	09-022		**Matrix:**	Water
Preliminary Report of Analysis				
Total Metals	Results in mg/L			
SAMPLE	Cr			
09-50020	0.176	*		
09-50021	0.112			
09-50029	0.126			
Blank	<0.005			
Control	0.78			
Control Target	0.80			
09-50020	0.174			
09-50020	0.178			

Client: **ESG**
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Fax: (613) 541-6596

ASG Login No: 19249
Site: Dye-M
Client No: 09-028
Samples Received: 12-Jun-09
Date of analysis: 13-Jun-09
Method No: ASG 015
Date Reported: 15-Jun-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50032	µg/L	< 3.0	< 3.0	< 3.0

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Control Sample	µg/L	< 3.0	< 3.0	12
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

Client : **ESG**
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Fax: (613) 541-6596

ASG Login No: 19249
Site: Dye-M
Client No: 09-028
Samples Received: 12-Jun-09
Date of analysis: 13-Jun-09
Method No: ASG 021
Date Reported: 13-Jun-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury
09-50032*	µg/L	< 0.5

LABORATORY QA/QC

Sample I.D.	Unit	Mercury
Duplicate ; 09-50032*	µg/L	< 0.5 ; < 0.5
Blank	µg/L	< 0.5
Control Target	µg/L	2.0
Control Sample	µg/L	2.1

* Averaged result of duplicates

ASU #	11963		**Report ID:**	Dye-M W11
Client:	ASG 19249		**Date Submitted:**	12-Jun-09
			Date tested:	13-Jun-09
Site:	DYE-M		**Date:**	14-Jun-09
	09-028		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50032	3.0			
Blank	<2.0			
Control	16.1			
Control Target	16.1			

Client: ESG
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RMC, PO Box 17000
Kingston, Ontario
613-541-6000 # 6567

ASG Login No:
Site:
Client No:
Samples Received:
Date of analysis:
Method No:
Date Reported:
Page:

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50032	7.09

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.04
Control Target	7.00

Client : **ESG**
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Fax: (613) 541-6596

ASG Login No: 19249
Site: Dye-M
Client No: 09-028
Samples Received: 12-Jun-09
Date of analysis: 13-Jun-09
Method No: ASG 021
Date Reported: 13-Jun-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50032*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 09-50032*	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.7

ASU #	11963		**Report ID:**	Dye-M W10				
Client:	ASG 19249		**Date Submitted:**	12-Jun-09				
			Date tested:	14-Jun-09				
Site:	DYE-M		**Date:**	14-Jun-09				
	09-028		**Matrix:**	Water				
Preliminary Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50032	-	-	-	-	-	0.111	0.028	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	2.9	0.80	0.80
Control Target	-	-	-	-	-	3.0	0.80	0.80
Dissolved Metals								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50032	0.017	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-
Control	1.51	1.54	1.50	0.75	7.61	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

ASU #	11970		**Report ID:**	Dye-M W14
Client:	ASG 19265		**Date Submitted:**	15-Jun-09
			Date tested:	18-Jun-09
Site:	DYE-M		**Date:**	18-Jun-09
	09-033		**Matrix:**	Water
Preliminary Report of Analysis				
Results in mg/L				
SAMPLE	Total Cr	Dissolved Cr		
09-50049	0.130	<0.005	*	
09-50050	0.134	<0.005		
09-50051	0.129	<0.005		
Blank	<0.005	<0.005		
Control	0.83	0.83		
Control Target	0.80	0.80		
09-50049	0.135	<0.005		
09-50049	0.125	<0.005		

Client: ESG
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Kingston, Ontario
613-541-6000 # 6567

ASG Login No: 19290
Site: DYE-M
Client No: 09-048
Samples Received: 22-Jun-09
Date of analysis: 24-Jun-09
Method No: ASG 037
Date Reported: 24-Jun-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50055*	6.62

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50055* ; Duplicate	6.62 ; 6.62
Control	7.01
Control Target	7.00

ASU #	11991		**Report ID:**	Dye-M W16					
Client:	ASG 19290		**Date Submitted:**	22-Jun-09					
			Date tested:	25-Jun-09					
Site:	DYE-M		**Date:**	25-Jun-09					
	09-048		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50055	-	-	-	-	-	0.087	0.042	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	3.2	0.91	0.83	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50055	-	-	-	-	-	0.086	0.041	<0.003	
09-50055	-	-	-	-	-	0.088	0.043	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50055	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	*
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-	
Control	1.71	1.70	1.68	0.83	8.47	-	-	-	
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-	
09-50055	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50055	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	

Client : **ESG**
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ASG Login No: 19290
Site: Dye-M
Client No: 09-048
Samples Received: 22-Jun-09
Date of analysis: 23-Jun-09
Method No: ASG 021
Date Reported: 24-Jun-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50055*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 09-50055*	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	3.9

Client: **ESG**
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ASG Login No: 19290
Site: Dye-M
Client No: 09-048
Samples Received: 22-Jun-09
Date of analysis: 24-Jun-09
Method No: ASG 015
Date Reported: 25-Jun-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50055*	µg/L	< 3.0	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Duplicate ; 50055*	µg/L	< 3.0 ; < 3.0	< 3.0 ; < 3.0	< 3.0 ; < 3.0
	Control Sample	µg/L	< 3.0	< 3.0	11
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	11991		**Report ID:**	Dye-M W15
Client:	ASG 19290		**Date Submitted:**	22-Jun-09
			Date tested:	22-Jun-09
Site:	DYE-M		**Date:**	23-Jun-09
	09-048		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50052	<2.0			
09-50055	<2.0			
Blank	<2.0			
Control	14.9			
Control Target	16.1			

Client : **ESG**
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ASG Login No: 19303
Site: Dye-M
Client No: 09-058
Samples Received: 24-Jun-09
Date of analysis: 25-Jun-09
Method No: ASG 021
Date Reported: 25-Jun-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50053	µg/L	< 0.4
09-50054	µg/L	< 0.4
09-50067*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 09-50067*	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.0

Client: ESG
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Fax: (613) 541-6596

ASG Login No: 19299
Site: DYE-M
Client No: 09-058
Samples Received: 24-Jun-09
Date of analysis: 26-Jun-09
Method No: ASG 037
Date Reported: 26-Jun-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50053	7.39
09-50054	7.35
09-50066*	7.31
09-50067	7.36

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50066* ; Duplicate	7.31 ; 7.31
Control	7.01
Control Target	7.00

ASU #	11999		**Report ID:**	Dye-M W17					
Client:	ASG 19299		**Date Submitted:**	24-Jun-09					
			Date tested:	25-Jun-09					
Site:	DYE-M		**Date:**	25-Jun-09					
	09-058		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50053	-	-	-	-	-	2.4	<0.005	<0.003	
09-50054	-	-	-	-	-	2.4	<0.005	<0.003	
09-50066	-	-	-	-	-	2.5	<0.005	<0.003	
09-50067	-	-	-	-	-	2.2	<0.005	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	3.2	0.91	0.83	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50067	-	-	-	-	-	2.2	<0.005	<0.003	
09-50067	-	-	-	-	-	2.2	<0.005	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50053	0.006	<0.005	0.003	0.001	<0.010	-	-	-	
09-50054	0.011	<0.005	0.004	0.001	<0.010	-	-	-	
09-50066	0.007	<0.005	<0.003	0.002	<0.010	-	-	-	
09-50067	<0.005	<0.005	<0.003	0.002	<0.010	-	-	-	*
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-	
Control	1.71	1.70	1.68	0.83	8.47	-	-	-	
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-	
09-50067	<0.005	<0.005	<0.003	0.002	<0.010	-	-	-	
09-50067	<0.005	<0.005	<0.003	0.002	<0.010	-	-	-	

ASU #	11999		**Report ID:**	Dye-M W18
Client:	ASG 19299		**Date Submitted:**	24-Jun-09
			Date tested:	25-Jun-09
Site:	DYE-M		**Date:**	26-Jun-09
	09-058		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50053	2.0			
09-50054	4.8			
09-50066	6.1			
09-50067	<2.0			
Blank	<2.0			
Control	16.8			
Control Target	16.1			

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P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19299
Site: Dye-M
Client No: 09-058
Samples Received: 24-Jun-09
Date of analysis: 24-Jun-09
Method No: ASG 015
Date Reported: 25-Jun-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50053	µg/L	< 3.0	< 3.0	< 3.0
W	50054	µg/L	< 3.0	< 3.0	< 3.0
W	50067	µg/L	< 3.0	< 3.0	< 3.0

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Control Sample	µg/L	< 3.0	< 3.0	11
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	12018		**Report ID:**	Dye-M W23
Client:	ASG 19368		**Date Submitted:**	2-Jul-09
			Date tested:	3-Jul-09
Site:	DYE-M		**Date:**	3-Jul-09
	09-071		**Matrix:**	Water
Preliminary Report of Analysis				
Results in mg/L				
SAMPLE	Total Zn	Dissolved Zn		
09-50088	2.2	1.6		
09-50089	2.1	1.6	*	
Blank	<0.010	<0.010		
Control	2.8	2.8		
Control Target	3.0	3.0		
09-50089	2.1	1.6		
09-50089	2.1	1.6		

ASU #	12018		**Report ID:**	Dye-M W22
Client:	ASG 19368		**Date Submitted:**	2-Jul-09
			Date tested:	3-Jul-09
Site:	DYE-M		**Date:**	3-Jul-09
	09-071		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50088	<2.0			
09-50089	<2.0			
09-50090	<2.0			
09-50091	5.9			
09-50092	broken sample			
09-50093	10.1			
09-50094	10.4			
09-50095	<2.0			
Blank	<2.0			
Control	17.2			
Control Target	16.1			

Client: ESG
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P.O. Box 17000, Stn. Forces
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(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19368
Site: DYE-M
Client No: 09-071
Samples Received: 2-Jul-09
Date of analysis: 2-Jul-09
Method No: ASG 037
Date Reported: 3-Jul-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50088	7.04
09-50089	7.28
09-50090*	5.42
09-50091	4.96
09-50092	6.15
09-50093	6.20
09-50094	5.84
09-50095	6.85

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50090* ; Duplicate	5.42 ; 5.41
Control	7.00
Control Target	7.00

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSCN1562): Samples 09-50020 and 09-50021 collected from ponded water in the Northeast Corner of the Landfarm. Picture was taken facing south.

Photo 2 (DSCN1592): Sample 09-50032 collecting a wastewater sample from the Upper Site Tier II Facility. Picture was taken facing southeast.

Photo 3 (DSCN1640): Sample 09-50049 collecting a wastewater sample from ponded water in the northeast corner of the landfarm. Photo was taken facing northwest.

Photo 4 (DSCN1641): Samples 09-50050 and 09-50051 collecting a wastewater sample from ponded water in the northeast corner of the landfarm. Photo was taken facing west.

Photo 5 (DSC01133): Sample 09-50053 collecting a wastewater sample from ponded water in the northwest corner of the Upper Site . Photo taken facing east.

Photo 6 (DCS01155): Sample 09-50054 collecting a wastewater sample from ponded water in the northwest corner of the Upper Site. Photo taken facing south.

Photo 7 (DSC01124): Sample 09-50052 wastewater sampling at Lower Site W-22 Tankfarm.

Photo 8 (DSCN1657): Sample 09-50055 collecting a wastewater sample from ponded water in the north corner of the Lower Site Tank Farm. Photo was taken facing northeast.

Photo 9 (DSCN1658): Sample 09-50055 collecting a wastewater sample from ponded water in the north corner of the Lower Site Tank Farm. Photo was taken facing north.

Photo 10 (DSCN1713): Sample 09-50066 and 09-50067 collecting a wastewater sample from the Upper Site Non Hazardous Waste Landfill. Picture was taken facing east.

Photo 11 (IMG_0724): Sample 09-50088 collecting a wastewater sample from the Upper Site Non Hazardous Waste Landfill. Picture was taken facing south east.

Photo 12 (IMG_0731): Sample 09-50089 collecting a wastewater sample from the Upper Site Non Hazardous Waste Landfill. Picture was taken facing south east.

Photo 13 (DSC01360): Sample 09-50090 and 09-50091 collecting a wastewater sample at Lower Site Holding Basin 6. Picture was taken facing north.

Photo 14 (DSC01361): Sample 09-50092 collecting a wastewater sample at Lower Site Holding Basin 5. Picture was taken facing east.

Photo 15 (DSC03165): Sample 09-50093 collecting a wastewater sample at Lower Site Holding Basin 4. Picture was taken facing east.

Photo 16 (DSC01368): Sample 09-50094 collecting a wastewater sample at Lower Site Holding Basin 3. Picture was taken facing north.

Photo 16 (DSC01371): Sample 09-50095 collecting a wastewater sample at Lower Site Holding Basin 2. Picture was taken facing east.

Tricia Cammaart
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Douglas Craig
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Friday, August 14, 2009

RE: July 2009 Monthly Report for Water Use License Number: IBR-DYE0914

The following results of the Monitoring Program (MP) and/or Water Use License are provided by the Environmental Sciences Group to meet the requirements of the above-noted license for *DYE-M (Cape Dyer)*.

1. SEWAGE EFFLUENT

A sewage lagoon was constructed at DYE-M in September of 2004. The Water Use License and MP require that samples from treated sewage lagoon effluent at the point of discharge to the receiving water be collected prior to each discharge event.

Three sewage lagoon samples were collected and analyzed from DYE-M in July, 2009 (See table).

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50127	South Cell of Sewage Lagoon	0563390E 7386898N	July 11, 2009
09-50139	South Cell of Sewage Lagoon	0563390E 7386898N	July 15, 2009
09-50182	Potential Spill Area East of Northern most cell of Sewage Lagoon	0563404E 7386970N	July 29, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: SOUTH CELL OF SEWAGE LAGOON
GPS COORDINATES: 0563390E 7386898N

Parameter	Allowable Maximum Average Concentration	Units	09-50127 (July 11, 2009)
pH	6.0 to 9.0	pH units	**9.47**
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	80
BOD	120	mg/L	34
Faecal Coliforms	10,000	CFU/dL	N/A
Total Coliforms	-	CFU/ 100 mL	N/A

LOCATION: SOUTH CELL OF SEWAGE LAGOON
GPS COORDINATES: 0563390E 7386898N

Parameter	Allowable Maximum Average Concentration	Units	09-50139 (July 15, 2009)
pH	6.0 to 9.0	pH units	N/A
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	N/A
BOD	120	mg/L	N/A
Faecal Coliforms	10,000	CFU/dL	<10
Total Coliforms	-	CFU/ 100 mL	<10

The water inside the sewage lagoon is outside the normal range for pH. On August 4, 2009 acid was added to the water. A sample was collected, 09-50192, and analyzed for pH in the field. The result was 8.78. The water was discharged to land in accordance to the water use license, to the discharge location approved by the INAC Environmental Inspector.

LOCATION: POTENTIAL SPILL AREA EAST OF NORTHERN MOST CELL OF SEWAGE LAGOON

GPS COORDINATES: 0563404E 7386970N

Parameter	Allowable Maximum Average Concentration	Units	09-50139 (July 15, 2009)
pH	6.0 to 9.0	pH units	7.48
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	**325**
BOD	120	mg/L	119
Faecal Coliforms	10,000	CFU/dL	**>200 000**
Total Coliforms	-	CFU/ 100 mL	**>200 000**

The potential spill area east of northern most cell of the sewage lagoon exceeds water discharge criteria for TSS, Faecal Coliforms and Total Coliforms. The spill was attributed to leakage from the new northernmost cell of the sewage lagoon. The contents of this cell were pumped into the empty southernmost cell. The spill area was not cleaned as most of it had already evaporated.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Anna Charbonneau, Ryan Vettorazzo, Cam Ollson, Andrea Ellis, (ESG)

APPENDIX A
LABORATORY RESULTS

DYE-M, Cape Dyer
DATE REPORTED: 20-Jul-09
Caduceon Environmental Laboratories
613-526-1244
2378 Holly Lane
Ottawa, Ontario, K1V 7P1
Tel: 613-526-0123
Fax:
JOB/PROJECT NO.:

Final Report

REPORT No. B09-21031
Environmental Sciences Group
P.O. Box 17000 Station Forces
Kingston, Ontario, K7K 7B4
Report To:
Attention: Cam Ollson
DATE RECEIVED: 13-Jul-09
P.O. NUMBER: 09-095
SAMPLE MATRIX: Waste Water WATERWORKS NO.
C.O.C.: C17550

CERTIFICATE OF ANALYSIS

Parameter Units M.D.L.
Reference
Method
Date/Site
Analyzed
Client I.D.: 50127
Sample I.D.: B09-21031-1
Date Collected: 11-Jul-09
BOD mg/L 3 SM 5210 15-Jul-09/O 34
Total Suspended Solids mg/L 3 SM 2540 15-Jul-09/O 80
pH pH Units EPA 150.1 14-Jul-09/O 9.47
Page 1 of 1.

M.D.L. = Method Detection Limit
Lab Manager - Ottawa District
Greg Clarkin , BSc., C. Chem
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,P-Peterborough,M-Moncton

Client : **ESG**
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Fax: (613) 541-6596

ASG Login No: 19454
Site: Dye-M
Client No: 09-110
Samples Received: 16-Jul-09
Date of analysis: 16-Jul-09
Date Reported: 17-Jul-09
Sheet: 1 of 1

RESULTS OF MICROBIOLOGICAL ANALYSIS

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
50139	< 10	< 10	< 10	< 10

LABORATORY QA/QC

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
Blank	0	0	0	0
Control Sample	21	21	0	14
Control Sample Target	19	19	0	19

* Duplicate analysis completed on dilution not required

Client: **ESG**
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Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19541
Site: Dye-M
Client Login No: 09-169
Samples Received: 30-Jul-09
Date of analysis: 5-Aug-09
Method No: ASG 042
Date Reported: 6-Aug-09
Page: 1 of

RESULTS OF BOD ANALYSIS

Sample I.D.	**Unit**	**BOD**
09-50182*	mg/L	119

*Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	**Unit**	**BOD**
Duplicate ; 09-50182*	mg/L	117 ; 120
Blank	mg/L	< 1
Control	mg/L	145
Control Target	mg/L	165

Client : ESG
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Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19541
Site: Dye-M
Client Login No: 09-169
Samples Received: 30-Jul-09
Date of analysis: 4-Aug-09
Method No: ASG 039
Date Reported: 6-Aug-09
Sheet: 1 of 1

RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
09-50182*	SE	mg/L	325

*Averaged result of duplicates.

LABORATORY QA/QC

Blank	Control	mg/L	< 1
Control	Control	mg/L	210
Control Target	Control	mg/L	200
09-50182* ; Duplicate	SE ; SE	mg/L	320 ; 330

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent

Client: ESG
12 Verite Ave
Dept of Chem/Chem Eng
RMC, PO Box 17000
Kingston, Ontario
613-541-6000 # 6567

ASG Login No: 19541
Site: Dye-M
Client No: 09-169
Samples Received: 30-Jul-09
Date of analysis: 4-Aug-09
Method No: ASG 037
Date Reported: 4-Aug-09
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50182*	7.48

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00
Duplicate ; 50182*	7.48 ; 7.48

Client : **ESG**
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ASG Login No: 19541
Site: DYE-M
Client No: 09-169
Samples Received: 30-Jul-09
Date of analysis: 30-Jul-09
Date Reported: 31-Jul-09
Sheet: 1 of 1

RESULTS OF MICROBIOLOGICAL ANALYSIS

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
50182*	> 200 000	46 000	6 000	> 200 000

LABORATORY QA/QC

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
Blank	0	0	0	0
Control Sample	22	22	0	28
Control Sample Target	22	22	0	22

* Duplicate analysis completed on dilution not required
**Significant background colonies (> 200 per dilution) could potentially inhibit the growth of target colonies.

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSC01532): Sample 09-50127 DYE-M lower site sewage lagoon southern cell. Photo was taken facing north.

Photo 2 (DSC01612): Sample 09-50139 DYE-M lower site sewage lagoon southern cell. Photo was taken facing north.

Photo 3 (DSC01714): Sample 09-50182 sampling from west edge of pond, east of northern most cell of sewage lagoon.

Photo 4 (DSC01715): Sample 09-50182 sampling from west edge of pond, east of northern most cell of sewage lagoon.

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Douglas Craig
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350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Friday, August 14, 2009

RE: Analytical Results for Wastewater Samples Collected at DYE-M in July, 2009

The following report summarizes results of the analysis of wastewater samples as per the DYE-M (Cape Dyer) DEW Line Cleanup Project (DLCU) Specifications.

The DYE-M specifications require that "wash water, melt water collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream" meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Total chromium (Cr)	0.100	mg/L
Dissolved cobalt (Co)	0.050	mg/L
Dissolved copper (Cu)	0.200	mg/L
Dissolved lead (Pb)	0.050	mg/L
Total mercury (Hg)	0.6	µg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	1.000	mg/L
Oil & grease	5 mg/L and None visible	mg/L
PCBs	0.050* 0.005**	mg/L
Phenols	0.020	mg/L

*Discharge to barren land, **Discharge to vegetated land

Phenols

The wastewater samples collected by ESG at DYE-M in July, 2009 were not analyzed for phenols but they were analyzed for oil and grease. Research conducted by ESG[1] has determined that a) no federal, territorial or provincial criteria exist for the discharge of

[1] Environmental Sciences Group. *DEW Line Clean Up Project – Phenols in Wastewater*. June, 2007.

wastewater containing phenols to land at a minimum distance of 30-m from natural drainage courses b) the maximum concentration of phenols in DLCU wastewater to date (2.44 mg/L) is below the LC_{50} for freshwater fish and crustaceans and below the oral and dermal LD_{50}s for rats and rodents and c) phenols in excess of the maximum allowable concentration (MAC) have historically co-occurred with a visible oil & grease sheen and/or with an exceedance of the MAC for oil & grease. This information, and a subsequent decision to not test for phenols, has been presented to the NWB. To date, verbal agreement from the NWB has been received, but the project is awaiting written confirmation of the decision to suspend testing for phenols.

WASTEWATER SAMPLES

Twenty seven wastewater samples were collected at DYE-M and analyzed in July 2009. A summary of the details of these results follows.

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50112	Upper Site Non-Hazardous Waste Landfill – North Edge	0572147E 7395152N	July 7, 2009
09-50113	Upper Site Non-Hazardous Waste Landfill – Western Edge	0572165E 7395185N	July 7, 2009
09-50142	Upper Site Non-Hazardous Waste Landfill – Western Edge	0572145E 7395151N	July 17, 2009
09-50143	Upper Site Non-Hazardous Waste Landfill – Northern Edge	0572176E 7395182N	July 17, 2009
09-50168	Upper Site Non-Hazardous Waste Landfill – Northern Edge	0572176E 7395185N	July 28, 2009
09-50169	Upper Site Non-Hazardous Waste Landfill – Western Edge	0572145E 7395151N	July 28, 2009
09-50110	Lower Site Holding Basin 1 – Northeast Corner	0563035E 7387621N	July 7, 2009
09-50111	Lower Site Holding Basin 1 – Northeast Corner	0563035E 7387621N	July 7, 2009
09-50128	Lower Site Holding Basin 2 – Northeast Corner	0563043E 7387627N	July 12, 2009
09-50126	Lower Site Holding Basin 3 – Northeast Side	0563043E 7387632N	July 11, 2009
09-50155	Lower Site Holding Basin 3 – Northeast Side	0563043E 7387632N	July 22, 2009
09-50129	Lower Site Holding Basin 4 – Southside in Middle of Basin	0563043E 7387627N	July 15, 2009
09-50154	Lower Site Holding Basin 4 – Southside along middle of basin	0563043E 7387627N	July 21, 2009
09-50165	Lower Site Holding Basin 4 – Southside along middle of basin	0563043E 7387627N	July 24, 2009
09-50105	Lower Site Holding Basin 5 – Northeast Corner	0563064E 7387596N	July 3, 2009
09-50140	Lower Site Holding Basin 5 – Southern Edge	0563039E 7387588N	July 18, 2009

09-50141	Lower Site Holding Basin 5 – Southern Edge	0563039E 7387588N	July 18, 2009
09-50166	Lower Site Holding Basin 5 – Southside along middle of basin	0563039E 7387588N	July 25, 2009
09-50183	Lower Site Holding Basin 5 – Southern Edge	0563039E 7387588N	July 30, 2009
09-50124	Lower Site Holding Basin 6 – Southwest Corner	0563062E 7387587N	July 11, 2009
09-50153	Lower Site Holding Basin 6 – Southwest side	0563062E 7387587N	July 21, 2009
09-50144	Lower Site Tote 1	No GPS coordinates Tote may be moved	July 18, 2009
09-50179	Lower Site Tote 1	No GPS coordinates Tote may be moved	July 29, 2009
09-50145	Lower Site Tote 2	No GPS coordinates Tote may be moved	July 18, 2009
09-50146	Lower Site Tote 3	No GPS coordinates Tote may be moved	July 18, 2009
09-50147	Lower Site Tote 4	No GPS coordinates Tote may be moved	July 18, 2009
09-50167	Mobile Lab Waste Water Tote	0563249E 7386820N	July 25, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 0572147E 7395149N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50112
pH	6-9	pH units	7.68
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	**1.8**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, N/A
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 0572165E 7395185N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50113
pH	6-9	pH units	7.61
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	**1.9**
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, N/A
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 0572145E 7395151N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50142
pH	6-9	pH units	7.45
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	**1.9**
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible**, **<2.0**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 0572176E 7395182N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50143
pH	6-9	pH units	7.36
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	**1.8**
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, <2.0**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 0572176E 7395185N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50168
pH	6-9	pH units	**9.11**
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	0.44
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, N/A
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: UPPER SITE NON-HAZARDOUS WASTE LANDFILL
GPS COORDINATES: 0572176E 7395182N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50169
pH	6-9	pH units	**9.16**
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	0.57
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, N/A
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

As of July 28, 2009 the wastewater at the upper site non hazardous waste landfill met the wastewater discharge criteria (WDC) for zinc but was out of range for pH. A sample was collected, 09-50185, on July 31, 2009 and analyzed in the field for pH. The result was 8.57; the water was discharged to land.

LOCATION: LOWER SITE HOLDING BASIN 1
GPS COORDINATES: 0563035E 7387621N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50110
pH	6-9	pH units	7.57
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, <2.0**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 1
GPS COORDINATES: 0563035E 7387621N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50111
pH	6-9	pH units	7.50
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, <2.0**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

Wastewater at the lower site holding basin 1 was visible for oil and grease. The water was passed through an oil and grease separator to remove the visible sheen and was discharged to land.

LOCATION: LOWER SITE HOLDING BASIN 2
GPS COORDINATES: 0563043E 7387627N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50128
pH	6-9	pH units	6.97
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, 8.4**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

Wastewater at the lower site holding basin 2 was visible for oil and grease and above criteria for oil and grease. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE HOLDING BASIN 3
GPS COORDINATES: 0563043E 7387632N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50126
pH	6-9	pH units	7.85
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, <1.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 3
GPS COORDINATES: 0563043E 7387632N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50155
pH	6-9	pH units	6.76
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.029
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 8.2**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

Wastewater at the lower site holding basin 3 was above criteria for oil and grease. The water has not been discharged to land. Treatment and additional sampling are in progress.

LOCATION: LOWER SITE HOLDING BASIN 4
GPS COORDINATES: 0563043E 7387627N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50129
pH	6-9	pH units	6.95
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 8.8**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 4
GPS COORDINATES: 0563043E 7387627N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50154
pH	6-9	pH units	7.29
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 4
GPS COORDINATES: 0563043E 7387627N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50165
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

As of July 24, 2009 the analytical results for the water contained in the Lower Site Holding Basin 4 met wastewater discharge criteria. The water was discharged to land in accordance to the water use license on July 29, 2009.

LOCATION: LOWER SITE HOLDING BASIN 5
GPS COORDINATES: 0563064E 7387596N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50105
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Visible, 5.4**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 5
GPS COORDINATES: 0563039E 7387588N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50140
pH	6-9	pH units	7.31
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 6.0**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 5
GPS COORDINATES: 0563039E 7387588N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50141
pH	6-9	pH units	7.53
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, 5.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 5
GPS COORDINATES: 0563039E 7387588N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50166
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, 4.8
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 5
GPS COORDINATES: 0563039E 7387588N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50183
pH	6-9	pH units	7.22
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.018
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, 4.5
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Lower Site Holding Basin 5 met wastewater discharge criteria. The water was discharged to land in accordance to the water use license on July 29,2009.

LOCATION: LOWER SITE HOLDING BASIN 6
GPS COORDINATES: 0563062E 7387587N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50124
pH	6-9	pH units	8.20
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, <1.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE HOLDING BASIN 6
GPS COORDINATES: 0563062E 7387587N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50153
pH	6-9	pH units	7.29
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 11.8**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Lower Site Holding Basin 6 did not meet the wastewater discharge criteria for the oil and grease. The water has not been discharged to land in accordance to the water use license.

LOCATION: LOWER SITE TOTE 1

GPS COORDINATES: NO GPS COORDINATES COLLECTED, TOTE MAY BE MOVED

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50144
pH	6-9	pH units	7.74
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	<0.005
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	<0.010
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, <2.0
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: LOWER SITE TOTE 1

GPS COORDINATES: NO GPS COORDINATES COLLECTED, TOTE MAY BE MOVED

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50179
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 8.5**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Lower Site Tote 1 did not meet the wastewater discharge criteria for the oil and grease. The water has not been discharged to land in accordance to the water use license.

LOCATION: LOWER SITE TOTE 2

GPS COORDINATES: NO GPS COORDINATES COLLECTED, TOTE MAY BE MOVED

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50145
pH	6-9	pH units	**4.36**
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	0.002
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	0.030
Dissolved Copper	0.200	mg/L	0.050
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	0.10
Total Zinc	1.0	mg/L	0.60
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 10.3**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Lower Site Tote 2 did not meet the wastewater discharge criteria for the oil and grease and was outside the normal range for pH. The water has not been discharged to land in accordance to the water use license.

LOCATION: LOWER SITE TOTE 3

GPS COORDINATES: NO GPS COORDINATES COLLECTED, TOTE MAY BE MOVED

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50146
pH	6-9	pH units	6.82
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.0068
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.058
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, 3.2
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Lower Site Tote 3 met the wastewater discharge criteria. The water has been discharged to land in accordance to the water use license.

LOCATION: LOWER SITE TOTE 4

GPS COORDINATES: NO GPS COORDINATES COLLECTED, TOTE MAY BE MOVED

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50147
pH	6-9	pH units	6.83
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	<0.005
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.0057
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	1.0	mg/L	0.058
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 6.2**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Lower Site Tote 4 did not meet the wastewater discharge criteria for the oil and grease. The water has not been discharged to land in accordance to the water use license.

LOCATION: MOBILE LAB WASTE WATER TOTE

GPS COORDINATES: 0563249E 7386820N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50167
pH	6-9	pH units	6.52
Total Arsenic	0.100	mg/L	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.010
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.0068
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	0.031
Total Zinc	1.0	mg/L	**1.1**
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 16.9**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

The analytical results for the water contained in the Mobile Lab waste water tote did not meet the wastewater discharge criteria for zinc, oil and grease. The water has not been discharged to land in accordance to the water use license

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Anna Charbonneau, Ryan Vettorazzo, Cam Ollson, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

ASU #	12039		**Report ID:**	Dye-M W24
Client:	ASG 19408		**Date Submitted:**	9-Jul-09
			Date tested:	10-Jul-09
Site:	DYE-M		**Date:**	10-Jul-09
	09-086		**Matrix:**	Water
Preliminary Report of Analysis				
Results in mg/L				
SAMPLE	Dissolved Zn	Total Zn		
09-50112	1.5	1.8		
09-50113	1.5	1.9	*	
Blank	<0.010	<0.010		
Control	2.8	2.8		
Control Target	3.0	3.0		
09-50113	1.5	1.9		
09-50113	1.6	1.9		

Client: ESG
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Kingston, Ontario K7K 7B4
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Fax: (613) 541-6596

ASG Login No: 19488
Site: DYE-M
Client No: 09-124
Samples Received: 21-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 037
Date Reported: 24-Jul-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50140	7.31
50141	7.53
50144	7.74
50145	4.36
50146	6.82
50147*	6.83

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50147 ; Duplicate	6.83 ; 6.83
Control	7.01
Control Target	7.00

ASU #	12073		**Report ID:**	Dye-M W29
Client:	ASG 19488		**Date Submitted:**	21-Jul-09
			Date tested:	21-Jul-09
Site:	DYE-M		**Date:**	22-Jul-09
	09-124		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50140	6.0			
09-50141	5.0			
09-50144	<2.0			
09-50145	10.3			
09-50146	3.2			
09-50147	6.2			
Blank	<2.0			
Control	16.2			
Control Target	16.1			

ASU #	12072		**Report ID:**	Dye-M W30
Client:	ASG 19487		**Date Submitted:**	21-Jul-09
			Date tested:	23-Jul-09
Site:	DYE-M		**Date:**	23-Jul-09
	09-123		**Matrix:**	Water
Preliminary Report of Analysis				
Results in mg/L				
SAMPLE	Total Zn	Dissolved Zn		
09-50142	1.9	1.2		
09-50143	1.8	1.3		
Blank	<0.010	<0.010		
Control	2.8	2.8		
Control Target	3.0	3.0		

ASU #	12072		**Report ID:**	Dye-M W28
Client:	ASG 19487		**Date Submitted:**	21-Jul-09
			Date tested:	21-Jul-09
Site:	DYE-M		**Date:**	22-Jul-09
	09-123		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50142	<2.0			
09-50143	<2.0			
Blank	<2.0			
Control	16.2			
Control Target	16.1			

Client: ESG
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Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19487
Site: DYE-M
Client No: 09-123
Samples Received: 21-Jul-09
Date of analysis: 21-Jul-09
Method No: ASG 037
Date Reported: 21-Jul-09

AMENDED RESULTS OF pH ANALYSIS

Sample I.D.	pH
50142*	7.45
50143	7.36

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50142 ; Duplicate	7.44 ; 7.45
Control	7.00
Control Target	7.00

ASU #	12108		**Report ID:**	Dye-M W37
Client:	ASG 19542		**Date Submitted:**	30-Jul-09
			Date tested:	30-Jul-09
Site:	DYE-M		**Date:**	31-Jul-09
	09-168		**Matrix:**	Water
Preliminary Report of Analysis				
Results in mg/L				
SAMPLE	Total Zn	Dissolved Zn		
09-50168	0.44	0.019		
09-50169	0.57*	0.028		
Blank	<0.010	<0.010		
Control	3.1	3.1		
Control Target	3.0	3.0		
09-50169	0.52	-		
09-50169	0.63	-		

Client: ESG
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Dept of Chem/Chem Eng
RMC, PO Box 17000
Kingston, Ontario
613-541-6000 # 6567

ASG Login No: 19542
Site: Dye-M
Client No: 09-168
Samples Received: 30-Jul-09
Date of analysis: 31-Jul-09
Method No: ASG 037
Date Reported: 31-Jul-09
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50168	9.11
50169*	9.16

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00
Duplicate ; 50169	9.16 ; 9.16

Client: ESG
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ASG Login No: 19408
Site: DYE-M
Client No: 09-086
Samples Received: 9-Jul-09
Date of analysis: 14-Jul-09
Method No: ASG 037
Date Reported: 14-Jul-09
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50110	7.57
09-50111	7.50
09-50112	7.68
09-50113*	7.61

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50113** ; Duplicate	7.61 ; 7.61
Control	7.00
Control Target	7.00

ASU #	12039		**Report ID:**	Dye-M W25
Client:	ASG 19408		**Date Submitted:**	9-Jul-09
			Date tested:	9-Jul-09
Site:	DYE-M		**Date:**	10-Jul-09
	09-086		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50110	<2.0			
09-50111	<2.0			
Blank	<2.0			
Control	16.1			
Control Target	16.1			

Client : **ESG**
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Fax: (613) 541-6596

ASG Login No: 19497
Site: Dye-M
Client No: 09-125
Samples Received: 23-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 021
Date Reported: 24-Jul-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
50155	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	3.9

ASU #	12083		**Report ID:**	Dye-M W33
Client:	ASG 19497		**Date Submitted:**	23-Jul-09
			Date tested:	24-Jul-09
Site:	DYE-M		**Date:**	27-Jul-09
	09-125		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50153	11.8			
09-50154	broken sample			
09-50155	8.2			
Blank	<2.0			
Control	14.9			
Control Target	16.1			

Client: ESG
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ASG Login No: 19497
Site: DYE-M
Client No: 09-125
Samples Received: 23-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 037
Date Reported: 24-Jul-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50153	7.29
50154	7.29
50155*	6.76

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50155 ; Duplicate	6.76 ; 6.76
Control	7.01
Control Target	7.00

ASU #	12083		**Report ID:**	Dye-M W32					
Client:	ASG 19497		**Date Submitted:**	23-Jul-09					
			Date tested:	24-Jul-09					
Site:	DYE-M		**Date:**	27-Jul-09					
	09-125		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50155	-	-	-	-	-	0.029	<0.005	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	2.8	0.88	0.79	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50155	-	-	-	-	-	0.030	<0.005	<0.003	
09-50155	-	-	-	-	-	0.029	<0.005	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50155	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	*
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-	
Control	1.6	1.6	1.6	0.76	8.0	-	-	-	
Control Target	1.6	1.6	1.6	0.80	8.0	-	-	-	
09-50155	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50155	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	

Client: **ESG**
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Fax: (613) 541-6596

ASG Login No: 19497
Site: Dye-M
Client No: 09-125
Samples Received: 23-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 015
Date Reported: 24-Jul-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50155	µg/L	< 3.0	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Control Sample	µg/L	< 3.0	< 3.0	12
	Control Sample Target	µg/L	< 3.0	< 3.0	16

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	12040		**Report ID:**	Dye-M W26
Client:	ASG 19407		**Date Submitted:**	9-Jul-09
			Date tested:	9-Jul-09
Site:	DYE-M		**Date:**	10-Jul-09
	09-084		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50105	5.4			
Blank	<2.0			
Control	16.1			
Control Target	16.1			

DYE-M, Cape Dyer
DATE REPORTED: 20-Jul-09
Caduceon Environmental Laboratories
613-526-1244
2378 Holly Lane
Ottawa, Ontario, K1V 7P1
Tel: 613-526-0123
Fax:
JOB/PROJECT NO.:
Final Report
REPORT No. B09-20834
Environmental Sciences Group
P.O. Box 17000 Station Forces
Kingston, Ontario, K7K 7B4
Report To:
Attention: Cam Ollson
DATE RECEIVED: 13-Jul-09
P.O. NUMBER: 09-102
SAMPLE MATRIX: Waste Water WATERWORKS NO.
C.O.C.: C17540
CERTIFICATE OF ANALYSIS
Parameter Units M.D.L.
Reference
Method
Date/Site
Analyzed
Client I.D.: 50124 50125 50126
Sample I.D.: B09-20834-1 B09-20834-2 B09-20834-3
Date Collected: 10-Jul-09 10-Jul-09 10-Jul-09
Oil & Grease-Total mg/L 1.0 SM 5520 16-Jul-09/K < 1.0 < 1.0 < 1.0
pH pH Units EPA 150.1 14-Jul-09/O 8.20 -- 7.85

Client: **ESG**
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Fax: (613) 541-6596

ASG Login No: 19488
Site: Dye-M
Client No: 09-124
Samples Received: 21-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 015
Date Reported: 24-Jul-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1248	Aroclor 1254	Aroclor 1260
W	50144	µg/L	< 3.0	< 3.0	< 3.0
W	50145	µg/L	< 3.0	< 3.0	< 3.0
W	50146	µg/L	< 3.0	< 3.0	< 3.0
W	50147	µg/L	< 3.0	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0	< 3.0
	Control Sample	µg/L	< 3.0	< 3.0	11
	Control Sample Target	µg/L	< 3.0	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	12073		**Report ID:**	Dye-M W31					
Client:	ASG 19488		**Date Submitted:**	21-Jul-09					
			Date tested:	22-Jul-09					
Site:	DYE-M		**Date:**	23-Jul-09					
	09-124		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50144	-	-	-	-	-	<0.010	<0.005	<0.003	
09-50145	-	-	-	-	-	0.60	<0.005	<0.003	
09-50146	-	-	-	-	-	0.058	<0.005	<0.003	
09-50147	-	-	-	-	-	0.058	<0.005	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	3.1	0.76	0.86	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50147	-	-	-	-	-	0.057	<0.005	<0.003	
09-50147	-	-	-	-	-	0.059	<0.005	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50144	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50145	0.050	0.10	0.030	0.002	<0.010	-	-	-	
09-50146	0.0068	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50147	0.0057	<0.005	<0.003	<0.001	<0.010	-	-	-	*
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-	
Control	1.6	1.7	1.7	0.83	8.3	-	-	-	
Control Target	1.6	1.6	1.6	0.80	8.0	-	-	-	
09-50147	0.0057	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50147	0.0057	<0.005	<0.003	<0.001	<0.010	-	-	-	

Client : **ESG**
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Fax: (613) 541-6596

ASG Login No: 19488
Site: Dye-M
Client No: 09-124
Samples Received: 21-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 021
Date Reported: 24-Jul-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
50144	µg/L	< 0.4
50145	µg/L	< 0.4
50146	µg/L	< 0.4
50147*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 50147	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	3.9

Client: ESG
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ASG Login No: 19497
Site: DYE-M
Client No: 09-125
Samples Received: 23-Jul-09
Date of analysis: 23-Jul-09
Method No: ASG 037
Date Reported: 24-Jul-09
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50153	7.29
50154	7.29
50155*	6.76

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50155 ; Duplicate	6.76 ; 6.76
Control	7.01
Control Target	7.00

ASU #	12061		**Report ID:**	Dye-M W27
Client:	ASG 19455		**Date Submitted:**	16-Jul-09
			Date tested:	16-Jul-09
Site:	DYE-M		**Date:**	17-Jul-09
	09-103		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50128	8.4			
09-50129	8.8			
Blank	<2.0			
Control	17.9			
Control Target	16.1			

Client: ESG
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ASG Login No: 19455
Site: DYE-M
Client No: 09-103
Samples Received: 16-Jul-09
Date of analysis: 21-Jul-09
Method No: ASG 037
Date Reported: 21-Jul-09

AMENDED RESULTS OF pH ANALYSIS

Sample I.D.	pH
50128*	6.97
50129	6.95

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50128*	6.96 ; 6.97
Control	7.00
Control Target	7.00

ASU #	12109		**Report ID:**	Dye-M W36
Client:	ASG 19545		**Date Submitted:**	30-Jul-09
			Date tested:	31-Jul-09
Site:	DYE-M		**Date:**	31-Jul-09
	09-170		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50179	8.5			
Blank	<2.0			
Control	17.9			
Control Target	16.1			

ASU #	12095		**Report ID:**	Dye-M W34
Client:	ASG 19524		**Date Submitted:**	27-Jul-09
			Date tested:	28-Jul-09
Site:	DYE-M		**Date:**	29-Jul-09
	09-147		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50165	<2.0			
09-50166	4.8			
09-50167	16.9			
Blank	<2.0			
Control	15.9			
Control Target	16.1			

Client: ESG
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RMC, PO Box 17000
Kingston, Ontario
613-541-6000 # 6567

ASG Login No: 19524
Site: Dye-M
Client No: 09-147
Samples Received: 27-Jul-09
Date of analysis: 4-Aug-09
Method No: ASG 037
Date Reported: 4-Aug-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50167*	6.52

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00
Duplicate ; 501677*	6.52 ; 6.52

ASU #	12095		**Report ID:**	Dye-M W35					
Client:	ASG 19524		**Date Submitted:**	27-Jul-09					
			Date tested:	28-Jul-09					
Site:	DYE-M		**Date:**	29-Jul-09					
	09-147		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50167	-	-	-	-	-	1.1	0.010	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	3.1	0.85	0.83	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50167	-	-	-	-	-	1.1	0.011	<0.003	
09-50167	-	-	-	-	-	1.1	0.010	<0.003	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50167	0.068	0.031	<0.003	<0.001	<0.010	-	-	-	*
Blank	<0.005	<0.010	<0.003	<0.001	<0.010	-	-	-	
Control	1.6	1.7	1.7	0.81	8.3	-	-	-	
Control Target	1.6	1.6	1.6	0.80	8.0	-	-	-	
09-50167	0.077	0.033	<0.003	<0.001	<0.010	-	-	-	
09-50167	0.059	0.030	<0.003	<0.001	<0.010	-	-	-	

Client: **ESG**
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Fax: (613) 541-6596

ASG Login No: 19524
Site: Dye-M
Client No: 09-147
Samples Received: 27-Jul-09
Date of analysis: 29-Jul-09
Method No: ASG 015
Date Reported: 30-Jul-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	50167	µg/L	< 3.0	< 3.0

* Average result of Duplicate

Client : **ESG**
12 Verite Ave
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Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19524
Site: Dye-M
Client No: 09-147
Samples Received: 27-Jul-09
Date of analysis: 30-Jul-09
Method No: ASG 021
Date Reported: 31-Jul-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50167*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Blank	µg/L	< 0.4
Duplicate ; 09-50167*	ug/L	< 0.4 ; < 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.1

ASU #	12095		**Report ID:**	Dye-M W34
Client:	ASG 19524		**Date Submitted:**	27-Jul-09
			Date tested:	28-Jul-09
Site:	DYE-M		**Date:**	29-Jul-09
	09-147		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50165	<2.0			
09-50166	4.8			
09-50167	16.9			
Blank	<2.0			
Control	15.9			
Control Target	16.1			

Client: ESG
12 Verite Ave
Dept of Chem/Chem Eng
RMC, PO Box 17000
Kingston, Ontario
613-541-6000 # 6567

ASG Login No: 19567
Site: Dye-M
Client No: 09-176
Samples Received: 4-Aug-09
Date of analysis: 6-Aug-09
Method No: ASG 037
Date Reported: 6-Aug-09
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50183*	7.22

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00
Duplicate ; 09-50183*	7.22 ; 7.23

Client: **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19567
Site: Dye-M
Client No: 09-176
Samples Received: 4-Aug-09
Date of analysis: 5-Aug-09
Method No: ASG 015
Date Reported: 6-Aug-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	50183*	µg/L	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0
	Duplicate ; 50183*	µg/L	< 3.0 ; < 3.0	< 3.0 : < 3.0
	Control Sample	µg/L	< 3.0	18
	Control Sample Target	µg/L	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

Client : **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19567
Site: Dye-M
Client No: 09-176
Samples Received: 4-Aug-09
Date of analysis: 6-Aug-09
Method No: ASG 021
Date Reported: 6-Aug-09
Sheet: 1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50183*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Blank	µg/L	< 0.4
Duplicate ; 09-50183*	ug/L	< 0.4 ; < 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.0

ASU #	12125		**Report ID:**	Dye-M W40				
Client:	ASG 19567		**Date Submitted:**	4-Aug-09				
			Date tested:	5-Aug-09				
Site:	DYE-M		**Date:**	6-Aug-09				
	09-176		**Matrix:**	Water				
Preliminary Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50183	-	-	-	-	-	0.018	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.0	0.85	0.84
Control Target	-	-	-	-	-	3.0	0.80	0.80
Dissolved Metals								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50183	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.6	1.6	1.6	0.79	8.0	-	-	-
Control Target	1.6	1.6	1.6	0.80	8.0	-	-	-
09-50183	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
09-50183	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-

ASU #	12125		**Report ID:**	Dye-M W39
Client:	ASG 19567		**Date Submitted:**	4-Aug-09
			Date tested:	6-Aug-09
Site:	DYE-M		**Date:**	7-Aug-09
	09-176		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50183	4.5			
Blank	<2.0			
Control	13.6			
Control Target	16.1			

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSC01487): Sample 09-50112 DYE-M upper site non-hazardous waste landfill. Photo was taken facing east.

Photo 2 (DSC01488): Sample 09-50113 DYE-M upper site non-hazardous waste landfill. Photo was taken facing south.

Photo 3(IMG_1670): Sample 09-50142 DYE-M upper site non-hazardous waste landfill. Photo was taken facing north.

Photo 4 (IMG_1674): Sample 09-50143 DYE-M upper site non-hazardouse waste landfill. Photo was taken facing south.

Photo 5 (DSC01996): Sample 09-50168 upper site non-hazardous waste landfill.

Photo 6 (DCS01997): Sample 09-50169 upper site non-hazardous waste lanfill.

Photo 7 (DSC01489): Samples 09-50110 and 09-50111 DYE-M lower site holding basin 1. Photo was taken facing north.

Photo 8 (DSC01558): Sample 09-50128 DYE-M lower site holding basin 2. Photo was taken facing south.

Photo 9 (P7100118): Sample 09-50126 DYE-M lower site holding basin 3. Photo was taken facing west.

Photo 10 (DSC01696): Sample 09-50155 DYE-M lower site holding basin 3. Photo was taken facing east.

Photo 11 (DSC01609): Sample 09-50129 DYE-M lower site holding basin 4. Photo was taken facing east.

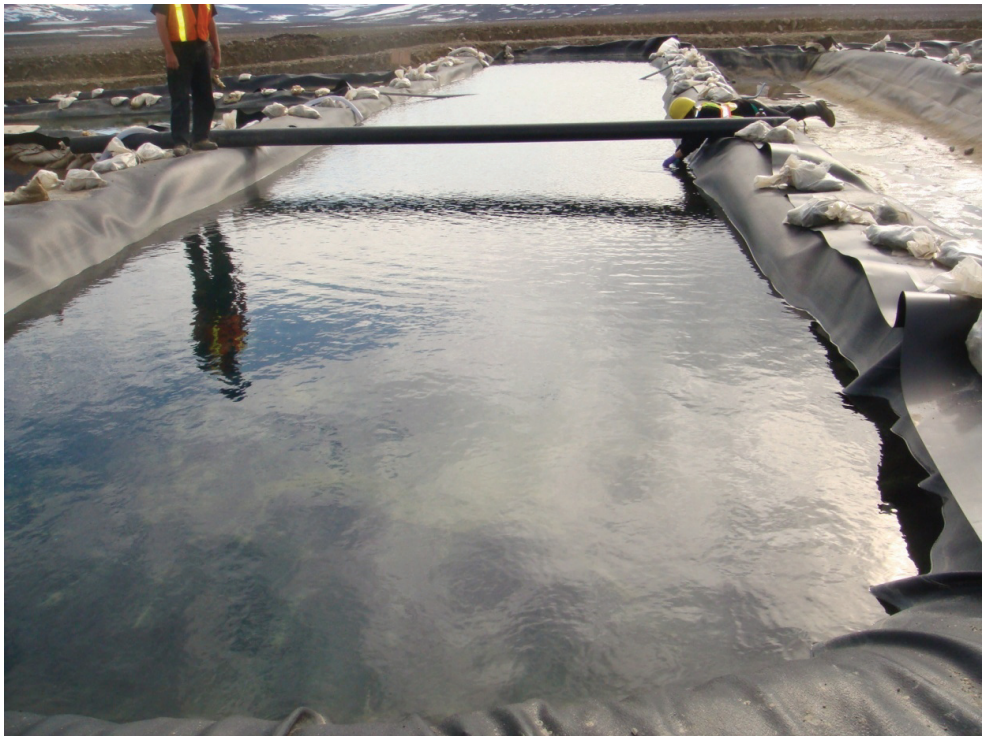

Photo 12 (DSC01694): Sample 09-50154 DYE-M lower site holding basin 4. Photo was taken facing east.

Photo 13 (DSC01704): Sample 09-50165 DYE-M lower site holding basin 4. Photo was taken facing northwest.

Photo 14 (DSC01427): Samples 09-50105 DYE-M lower site holding basin 5. Photo was taken facing south.

Photo 15 (DSC05325): Sample 09-50140 and 09-50141 DYE-M lower site holding basin 5. Photo was taken facing east.

Photo 16 (DSC01706): Sample 09-50166 DYE-M lower site holding basin 5. Photo was taken facing east.

Photo 17 (DSC01727): Sample 09-50183 DYE-M lower site holding basin 5. Photo was taken facing east.

Photo 18 (DSC01529): Sample 09-50124 DYE-M lower site holding basin 6. Photo was taken facing northwest.

Photo 19 (DSC01693): Sample 09-50153 DYE-M lower site holding basin 6. Photo was taken facing southwest.

Photo 20 (DSC05326): Sample 09-50144 DYE-M lower site tote 1. Photo was taken facing north.

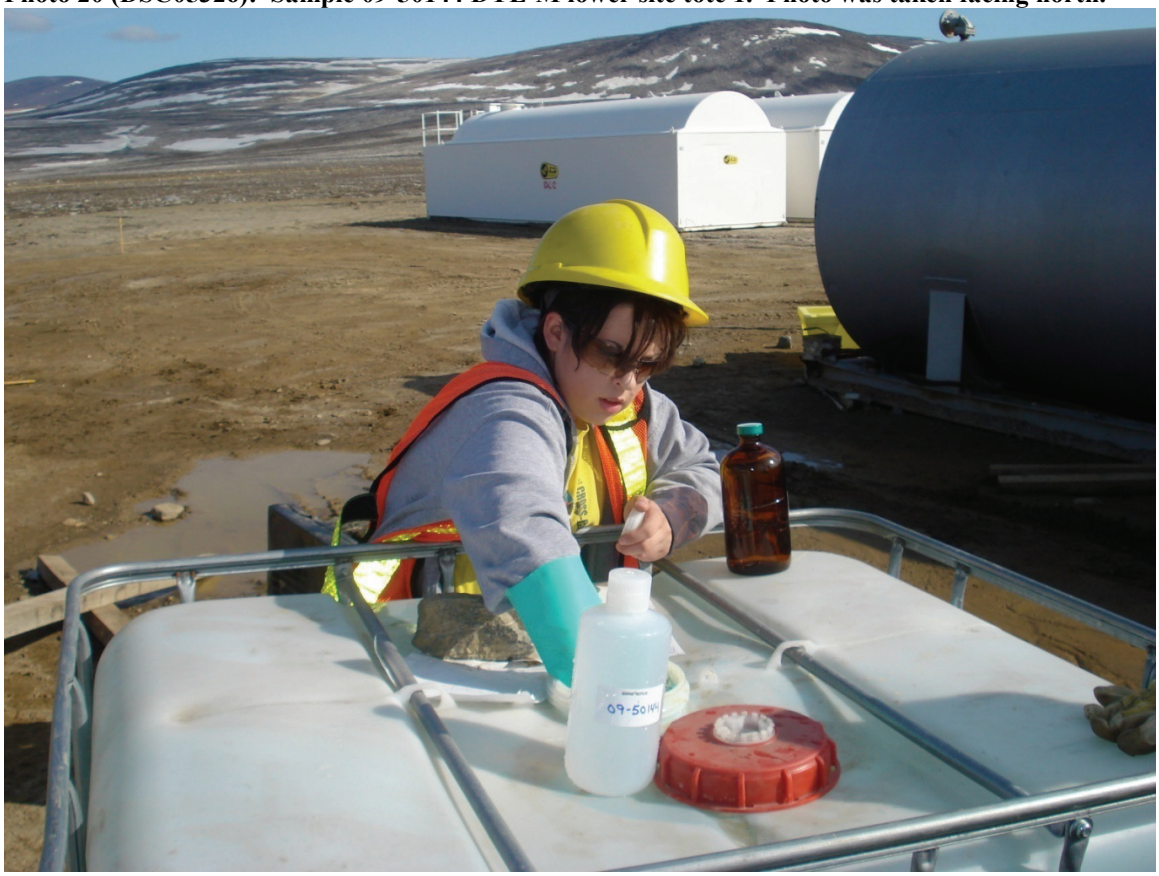

Photo 21 (DSC01712): Sample 09-50179 DYE-M lower site tote 1. Photo was taken facing north.

Photo 22 (DCS01713): Sample 09-50179 DYE-M lower site totel 1. Photo was taken facing north.

Photo 23 (DSC05328): Sample 09-50145 DYE-M lower site tote 2. Photo was taken facing north.

Photo 24(DSC05336): Sample 09-50146 DYE-M lower site tote 3. Photo was taken facing northwest.

Photo 25 (DSC05335): Sample 09-50147 DYE-M lower site tote 4. Photo was taken facing northwest.

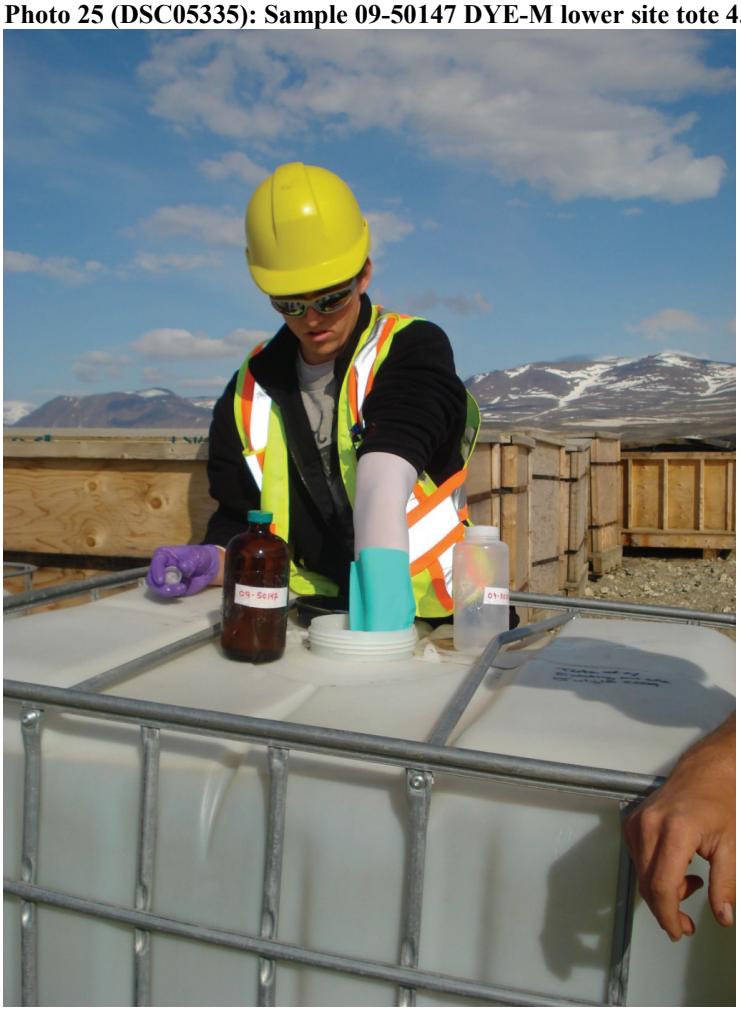

Photo 26 (DSC01710): Sample 09-50167 sampling mobile lab wase water tote on the south side of lab.

Tricia Cammaart
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4

Douglas Craig
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Tuesday, September 29, 2009

RE: August 2009 Monthly Report for Water Use License Number: IBR-DYE0914

The following results of the Monitoring Program (MP) and/or Water Use License are provided by the Environmental Sciences Group to meet the requirements of the above-noted license for *DYE-M (Cape Dyer).*

1. SEWAGE EFFLUENT

A sewage lagoon was constructed at DYE-M in September of 2004. The Water Use License and MP require that samples from treated sewage lagoon effluent at the point of discharge to the receiving water be collected prior to each discharge event.

Two sewage lagoon samples were collected and analyzed from DYE-M in August, 2009 (See table).

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50192	South Cell of Sewage Lagoon	0563390E 7386898N	August 4, 2009
09-50226	Middle Cell of Sewage Lagoon	0563228E 7386835N	August 19, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: SOUTH CELL OF SEWAGE LAGOON
GPS COORDINATES: 0563390E 7386898N

Parameter	Allowable Maximum Average Concentration	Units	09-50192 (August 4, 2009)
pH	6.0 to 9.0	pH units	8.78
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	N/A
BOD	120	mg/L	N/A
Faecal Coliforms	10,000	CFU/dL	N/A
Total Coliforms	-	CFU/ 100 mL	N/A

Sample 09-50192 was collected and analyzed for pH in the field. The result was 8.78. The water was discharged to land in accordance to the water use license, to the discharge location approved by the INAC Environmental Inspector.

LOCATION: MIDDLE CELL OF SEWAGE LAGOON
GPS COORDINATES: 0563390E 7386898N

Parameter	Allowable Maximum Average Concentration	Units	09-50226 (August 19, 2009)
pH	6.0 to 9.0	pH units	**9.62**
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	116
BOD	120	mg/L	25
Faecal Coliforms	10,000	CFU/dL	<2
Total Coliforms	-	CFU/ 100 mL	<20

The water inside the sewage lagoon did not meet water discharge criteria. The water was not discharged to land in accordance to the water use license.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Marc Ellmers, Ryan Vettorazzo, Cam Ollson, Andrea Ellis, (ESG)

APPENDIX A
LABORATORY RESULTS

09-236
DATE REPORTED: 28-Aug-09
Caduceon Environmental Laboratories
613-526-1244
2378 Holly Lane
Ottawa, Ontario, K1V 7P1
Tel: 613-526-0123
Fax:
JOB/PROJECT NO.:

Final Report

REPORT No. B09-25906
Environmental Sciences Group
P.O. Box 17000 Station Forces
Kingston, Ontario, K7K 7B4
Report To:
Attention: Suzanne Ronan
DATE RECEIVED: 21-Aug-09
P.O. NUMBER:
SAMPLE MATRIX: Waste Water WATERWORKS NO.
C.O.C.: ---

CERTIFICATE OF ANALYSIS

Parameter Units M.D.L.
Reference
Method
Date/Site
Analyzed
Client I.D.: 50226
Sample I.D.: B09-25906-1
Date Collected: 19-Aug-09
BOD mg/L 3 SM 5210 22-Aug-09/O 25
Total Suspended Solids mg/L 3 SM 2540 23-Aug-09/O 116
pH pH Units EPA 150.1 24-Aug-09/O 9.62
Total Coliform cfu/100ml 1 MOE E3371 21-Aug-09/O <20 *1*
Fecal Coliform cfu/100ml 1 MOE E3371 21-Aug-09/O <2 *2*
1 . Elevated MDL due to sample matrix interference
2 . Passed holding time, run by request
Page 1 of 1.
Gord Murphy
Lab Supervisor

M.D.L. = Method Detection Limit
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,P-Peterborough,M-Moncton

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSC02160): Sample 09-50192 DYE-M lower site sewage lagoon. Photo was taken facing northeast.

Photo 2 (DSC02182): Sample 09-50226 DYE-M lower site sewage lagoon Sothern edge of middle cell.

Tricia Cammaart
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4

Douglas Craig
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Tuesday, September 29, 2009

RE: Analytical Results for Wastewater Samples Collected at DYE-M in August, 2009

The following report summarizes results of the analysis of wastewater samples as per the DYE-M (Cape Dyer) DEW Line Cleanup Project (DLCU) Specifications.

The DYE-M specifications require that "wash water, melt water collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream" meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Total chromium (Cr)	0.100	mg/L
Dissolved cobalt (Co)	0.050	mg/L
Dissolved copper (Cu)	0.200	mg/L
Dissolved lead (Pb)	0.050	mg/L
Total mercury (Hg)	0.6	µg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	1.000	mg/L
Oil & grease	5 mg/L and None visible	mg/L
PCBs	0.050* 0.005**	mg/L
Phenols	0.020	mg/L

*Discharge to barren land, **Discharge to vegetated land

Phenols

The wastewater samples collected by ESG at DYE-M in August, 2009 were not analyzed for phenols but they were analyzed for oil and grease. Research conducted by ESG[1] has determined that a) no federal, territorial or provincial criteria exist for the discharge of

[1] Environmental Sciences Group. *DEW Line Clean Up Project – Phenols in Wastewater*. June, 2007.

wastewater containing phenols to land at a minimum distance of 30-m from natural drainage courses b) the maximum concentration of phenols in DLCU wastewater to date (2.44 mg/L) is below the LC_{50} for freshwater fish and crustaceans and below the oral and dermal LD_{50}s for rats and rodents and c) phenols in excess of the maximum allowable concentration (MAC) have historically co-occurred with a visible oil & grease sheen and/or with an exceedance of the MAC for oil & grease. This information, and a subsequent decision to not test for phenols, has been presented to the NWB. To date, verbal agreement from the NWB has been received, but the project is awaiting written confirmation of the decision to suspend testing for phenols.

WASTEWATER SAMPLES

Four wastewater samples were collected at DYE-M and analyzed in August 2009. A summary of the details of these results follows.

Sample Number	**Sample Location**	**GPS Coordinates**	**Sampling Date**
09-50186	Holding Basin 4	0563042E 7387592N	August 1, 2009
09-50210	Holding Basin 4	0563042E 7387592N	August 12, 2009
09-50211	Holding Basin 4	0563042E 7387592N	August 12, 2009
09-50225	Holding Basin 4	0563032E 7387598N	August 19, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 0563042E 7387592N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50186
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 10.9**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 0563042E 7387592N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50210
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 9.9**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 0563042E 7387592N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50211
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 11.5**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 0563042E 7387592N

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50225
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible, 27.8**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

As of August 19th, 2009 the wastewater at the lower site Holding Basin 4 did not meet the wastewater discharge criteria (WDC) for oil and grease. The water was not discharged to land.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Tricia Cammaart

Tricia Cammaart
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Anna Charbonneau, Marc Ellesmers, Ryan Vettorazzo, Cam Ollson, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

ASU #	12126		**Report ID:**	Dye-M W38
Client:	ASG 19579		**Date Submitted:**	4-Aug-09
			Date tested:	6-Aug-09
Site:	DYE-M		**Date:**	7-Aug-09
	09-188		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50186	10.9			
Blank	<2.0			
Control	13.6			
Control Target	16.1			

ASU #	12164		**Report ID:**	Dye-M W42
Client:	ASG 19665		**Date Submitted:**	13-Aug-09
			Date tested:	13-Aug-09
Site:	DYE-M		**Date:**	14-Aug-09
	09-211		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50210	9.9			
09-50211	11.5			
Blank	<2.0			
Control	14.6			
Control Target	16.1			

ASU #	12197		**Report ID:**	Dye-M W43
Client:	ASG 19719		**Date Submitted:**	22-Aug-09
			Date tested:	23-Aug-09
Site:	DYE-M		**Date:**	24-Aug-09
	09-235		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50225	27.8			
Blank	<2.0			
Control	17.7			
Control Target	16.1			

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSC01734): Sample 09-50186 DYE-M lower site facing east Holding Basin 4.

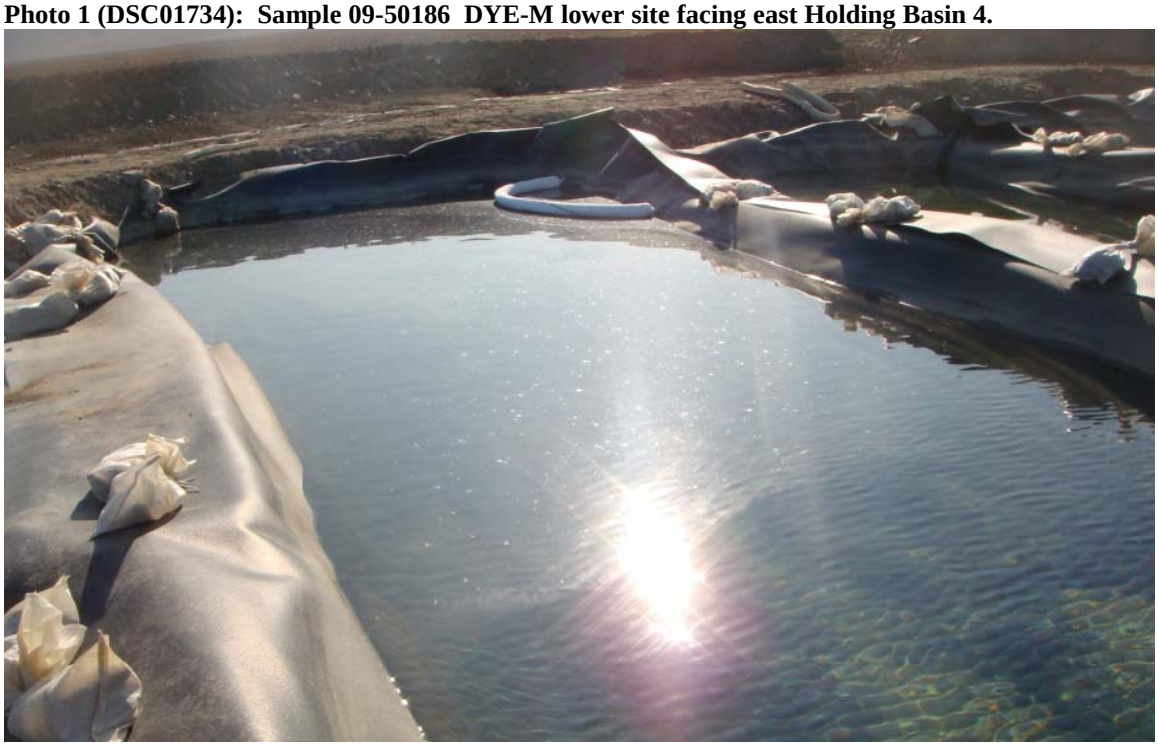

Photo 2 (DSC01740): Sample 09-50186 DYE-M lower site facing east Holding Basin 4.

Photo 3 (DSC01862): Sample 09-50210 and 09-50211 DYE-M lower site Holding Basin 4.

Photo 4(DSC02181): Sample 09-50225 DYE-M lower site Holding Basin 4.

Candice Casucci
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
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Douglas Craig
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Friday, November 6, 2009

RE: September 2009 Monthly Report for Water Use License Number: IBR-DYE0914

The following results of the Monitoring Program (MP) and/or Water Use License are provided by the Environmental Sciences Group to meet the requirements of the above-noted license for *DYE-M (Cape Dyer)*.

1. SEWAGE EFFLUENT

A sewage lagoon was constructed at DYE-M in September of 2004. The Water Use License and MP require that samples from treated sewage lagoon effluent at the point of discharge to the receiving water be collected prior to each discharge event.

Three sewage lagoon samples were collected and analyzed from DYE-M in September, 2009 (See table).

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50255	Middle Cell of Sewage Lagoon	20W0563228 7386835	September 3, 2009
09-50265	Middle Cell of Sewage Lagoon	20W0563228 7386835	September 5, 2009
09-50267	Middle Cell of Sewage Lagoon	20W 0563228 7386835	September 12, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

LOCATION: MIDDLE CELL OF SEWAGE LAGOON
GPS COORDINATES: **20W 0563228 7386835**

Parameter	**Allowable Maximum Average Concentration**	**Units**	**09-50255** (September 3, 2009)
pH	6.0 to 9.0	pH units	6.68
Oil & Grease	None Visible	-	N/A
Total Suspended Solids (TSS)	180	mg/L	N/A
BOD	120	mg/L	N/A
Faecal Coliforms	10,000	CFU/dL	N/A
Total Coliforms	-	CFU/ 100 mL	N/A

LOCATION: MIDDLE CELL OF SEWAGE LAGOON
GPS COORDINATES: 20W 0563228 7386835

Parameter	**Allowable Maximum Average Concentration**	**Units**	**09-50265** (September 5, 2009)
pH	6.0 to 9.0	pH units	N/A
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	N/A
BOD	120	mg/L	N/A
Faecal Coliforms	10,000	CFU/dL	**20,000**
Total Coliforms	-	CFU/ 100 mL	>200,000

The water from sample #09-50255 expired before it could be sampled for faecal Coliforms and was analyzed for pH only. The same water was re-sampled 2 days later, #09-50265 for faecal Coliforms and was over criteria and therefore the water was not discharged to land.

LOCATION: MIDDLE CELL OF SEWAGE LAGOON
GPS COORDINATES: 20W 0563228 7386835

Parameter	Allowable Maximum Average Concentration	Units	09-50267 (September 12, 2009)
pH	6.0 to 9.0	pH units	N/A
Oil & Grease	None Visible	-	N/A
Total Suspended Solids (TSS)	180	mg/L	N/A
BOD	120	mg/L	N/A
Faecal Coliforms	10,000	CFU/dL	3,600
Total Coliforms	-	CFU/ 100 mL	44,000

The water from sample #09-0267 (same water as #09-0266) was sampled on September 12th and found to be below Faecal Coliforms and therefore was discharged to land.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Candice Casucci
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Marc Ellmers, Cam Ollson, Andrea Ellis, (ESG)

APPENDIX A
LABORATORY RESULTS

Client: ESG
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19850
Site: Dye-M
Client No: 09-323
Samples Received: 9-Sep-09
Date of analysis: 10-Sep-09
Method No: ASG 037
Date Reported: 10-Sep-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50255*	6.68

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50255* ; Duplicate	6.68 ; 6.68
Control	7.00
Control Target	7.00

Client : **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19834
Site: Dye-M
Client No: 09-329
Samples Received: 6-Sep-09
Date of analysis: 6-Sep-09
Date Reported: 8-Sep-09
Sheet: 1 of 1

RESULTS OF MICROBIOLOGICAL ANALYSIS

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
50265~	> 200 000	5000	> 200 000	20 000

LABORATORY QA/QC

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
Blank	0	0	0	0
Control Sample	37	37	0	36
Control Sample Target	38	38	0	38

~Significant background colonies (> 200 per dilution) could potentially inhibit the growth of target colonies.

Client :	**ESG**	ASG Login No:	19865
	12 Verite Ave	Site:	Dye-M
	Dept. of Chem. / Chem. Eng., RMC	Client No:	09-342
	P.O. Box 17000, Stn. Forces	Samples Received:	14-Sep-09
	Kingston, Ontario K7K 7B4	Date of analysis:	14-Sep-09
	(613) 541-6000 ext 6567	Date Reported:	16-Sep-09
	Fax: (613) 541-6596	Sheet:	1 of 1

RESULTS OF MICROBIOLOGICAL ANALYSIS

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
50267*	44 000	1000	44 000	3600

LABORATORY QA/QC

Sample Identification	Method: ASG 036 **Total Coliforms** (CFU/100 mL)	Method: ASG 036 **E. coli** (CFU/100 mL)	Method: ASG 036 **Background** (CFU/100 mL)	Method: ASG 044 **Fecal Coliforms** (CFU/100 mL)
Blank	0	0	0	0
Duplicate ; 50267*	42 000 ; 45 000	1000 ; 1000	43 000 ; 44 000	3700 ; 3400
Control Sample	36	36	0	40
Control Sample Target	38	38	0	38

* Average result of duplicate

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSC02163): Sample 09-50255 DYE-M Lower site sewage lagoon. Western edge of middle cell.

Photo 2 (DSC02164): Sample 09-50255 DYE-M Lower site sewage lagoon. Western edge of middle cell.

Photo 3 (DSC02165): Sample 09-502565 DYE-M Lower site sewage lagoon. Western edge of middle cell.

Photo 4 (DSC02166): Sample 09-502567 DYE-M Lower site sewage lagoon. Western edge of middle cell.

Candice Casucci
Environmental Sciences Group
The Royal Military College of Canada
PO Box 17000 Stn. Forces
Kingston, ON K7K 7B4

Douglas Craig
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
350 Albert Street, Suite 1720
Ottawa ON K1A 0K3

Friday, November 6, 2009

RE: Analytical Results for Wastewater Samples Collected at DYE-M in September, 2009

The following report summarizes results of the analysis of wastewater samples as per the DYE-M (Cape Dyer) DEW Line Cleanup Project (DLCU) Specifications.

The DYE-M specifications require that "wash water, melt water collection, rinse water resulting from the cleaning of fuel tanks and pipelines, and/or any other liquid effluent stream" meet the following guidelines prior to their discharge to land (01560.4.1):

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Total chromium (Cr)	0.100	mg/L
Dissolved cobalt (Co)	0.050	mg/L
Dissolved copper (Cu)	0.200	mg/L
Dissolved lead (Pb)	0.050	mg/L
Total mercury (Hg)	0.6	µg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	1.000	mg/L
Oil & grease	5 mg/L and None visible	mg/L
PCBs	0.050* 0.005**	mg/L
Phenols	0.020	mg/L

*Discharge to barren land, **Discharge to vegetated land

Phenols

The wastewater samples collected by ESG at DYE-M in September, 2009 were not analyzed for phenols but they were analyzed for oil and grease. Research conducted by

ESG[1] has determined that a) no federal, territorial or provincial criteria exist for the discharge of wastewater containing phenols to land at a minimum distance of 30-m from natural drainage courses b) the maximum concentration of phenols in DLCU wastewater to date (2.44 mg/L) is below the LC_{50} for freshwater fish and crustaceans and below the oral and dermal LD_{50}s for rats and rodents and c) phenols in excess of the maximum allowable concentration (MAC) have historically co-occurred with a visible oil & grease sheen and/or with an exceedance of the MAC for oil & grease. This information, and a subsequent decision to not test for phenols, has been presented to the NWB. To date, verbal agreement from the NWB has been received, but the project is awaiting written confirmation of the decision to suspend testing for phenols.

WASTEWATER SAMPLES

Six wastewater samples were collected at DYE-M and analyzed in September 2009. A summary of the details of these results follows.

Sample Number	Sample Location	GPS Coordinates	Sampling Date
09-50266	Mobile Lab Tote Tank	20W 0563249 7386820	September 7th, 2009
09-50268	Mogas W19G	20W 0563091 7387503	September 16th, 2009
09-50269	Mogas W38G	20W 0563030 7387592	September 13th, 2009
09-50270	Holding Basin 4	20W 0563042 7387592	September 16th, 2009
09-50271	Holding Basin 4	20W 0563042 7387592	September 16th, 2009
09-50282	Landfarm	20W 0562718 7387976	September 17th, 2009
09-50283	Holding Basin 4	20W 0563042 7387592	September 19th, 2009

A summary of the results for the parameters tested is provided below. Laboratory results and photographs are provided in Appendices A and B, respectively.

[1] Environmental Sciences Group. *DEW Line Clean Up Project – Phenols in Wastewater*. June, 2007.

LOCATION: MOBILE LAB TOTE TANK
GPS COORDINATES: 20W0563249 7386820

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50266
pH	6-9	pH units	2.62
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	<0.003
Total Chromium	0.100	mg/L	0.019
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.173
Dissolved Lead	0.050	mg/L	**0.051**
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	0.092
Total Zinc	1.0	mg/L	**2.08**
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible / 5.6**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land
As of September 7th, 2009 the wastewater in Mobile Lab Tote Tank, did not meet the wastewater discharge criteria (WDC) for oil and grease, dissolved lead and total zinc. The water was not discharged to land.

LOCATION: MOGAS W19G
GPS COORDINATES: 20W0563091 7387503

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50268
pH	6-9	pH units	6.28
Total Arsenic	0.100	mg/L	0.040
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.796
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.008
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	0.005
Total Zinc	1.0	mg/L	0.937
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible / 6.8**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land
As of September 16th, 2009 the wastewater in MOGAS W19G, did not meet the wastewater discharge criteria (WDC) for oil and grease. The water was not discharged to land.

LOCATION: MOGAS W38G
GPS COORDINATES: 20W 0563030 7387592

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50269
pH	6-9	pH units	5.75
Total Arsenic	0.100	mg/L	0.009
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	**0.102**
Dissolved Cobalt	0.050	mg/L	<0.003
Dissolved Copper	0.200	mg/L	0.007
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	<0.4
Dissolved Nickel	0.200	mg/L	0.005
Total Zinc	1.0	mg/L	**5.01**
Oil & Grease	None Visible and 5 mg/L	mg/L	**None Visible/ 14.0**
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

As of September 13th, 2009, the water from MOGAS W38G, did not meet the wastewater discharge criteria (WDC) for oil and grease. The water was not discharged to land.

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 20W 0563030 7387592

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50270
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	**Non Visible 6.5**
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 20W 0563030 7387592

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50271
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	Non Visible 3.8
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land
As of September 16th, 2009 the wastewater samples at Holding Basin 4 did not meet the wastewater discharge criteria (WDC) for oil and grease. The water was not discharged to land.

LOCATION: LANDFARM
GPS COORDINATES: 20W 0562718 7387976

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50282
pH	6-9	pH units	6.60
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	<0.010
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible 3.5
PCBs	50* 5**	µg/L	<3.0
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land
As of August 19th, 2009 the wastewater at the LANDFARM did meet the wastewater discharge criteria (WDC). The water was discharged to land in accordance to the water use license.

LOCATION: HOLDING BASIN 4
GPS COORDINATES: 20W 0563042 7387592

Parameter	Maximum Allowable Concentration	Units	Sample # 09-50283
pH	6-9	pH units	N/A
Total Arsenic	0.100	mg/L	N/A
Dissolved Cadmium	0.010	mg/L	N/A
Total Chromium	0.100	mg/L	N/A
Dissolved Cobalt	0.050	mg/L	N/A
Dissolved Copper	0.200	mg/L	N/A
Dissolved Lead	0.050	mg/L	N/A
Total Mercury	0.6	µg/L	N/A
Dissolved Nickel	0.200	mg/L	N/A
Total Zinc	1.0	mg/L	N/A
Oil & Grease	None Visible and 5 mg/L	mg/L	None Visible, <2.0
PCBs	50* 5**	µg/L	N/A
Phenols	20	µg/L	N/A

*Discharge to barren land, **Discharge to vegetated land
As of August 19th, 2009 the wastewater at Holding Basin 4 did meet the wastewater discharge criteria (WDC) for oil and grease. The water was discharged to land in accordance to the water use license.

We trust that the information provided meets current requirements. Please contact the undersigned if you have any questions or concerns.

Sincerely,

Candice Casucci
Environmental Sciences Group

cc: Eva Schulz (UMA)
Daniela Loock, Kat White, Marc Ellesmers, Cam Ollson, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

Client:	ESG	ASG Login No:	19868
	12 Verite Ave	Site:	Dye-M
	Dept. of Chem. / Chem. Eng., RMC	Client No:	09-341
	P.O. Box 17000, Stn. Forces	Samples Received:	14-Sep-09
	Kingston, Ontario K7K 7B4	Date of analysis:	16-Sep-09
	(613) 541-6000 ext 6567	Method No:	ASG 037
	Fax: (613) 541-6596	Date Reported:	16-Sep-09
		Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
50266*	2.62

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
50266* ; Duplicate	2.62 ; 2.62
Control	7.00
Control Target	7.00

Client :	**ESG**	ASG Login No:	19868
	12 Verite Ave	Site:	Dye-M
	Dept. of Chem. / Chem. Eng., RMC	Client No:	09-341
	P.O. Box 17000, Stn. Forces	Samples Received:	14-Sep-09
	Kingston, Ontario K7K 7B4	Date of analysis:	16-Sep-09
	(613) 541-6000 ext 6567	Method No:	ASG 021
	Fax: (613) 541-6596	Date Reported:	17-Sep-09
		Sheet:	1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
50266*	µg/L	< 0.4

*Results of duplicate analysis.
^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Duplicate ; 50266*	µg/L	< 0.4 ; < 0.4
Blank	µg/L	< 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.0

			Date tested:	18-Sep-09					
Site:	DYE-M		**Date:**	18-Sep-09					
	09-349		**Matrix:**	Water					
Preliminary Report of Analysis									
Total Metals	Results in mg/L								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50268	-	-	-	-	-	0.937	0.796	0.040	
09-50269	-	-	-	-	-	5.01	0.102	0.009	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	2.8	0.80	0.79	
Control Target	-	-	-	-	-	3.0	0.80	0.80	
09-50269	-	-	-	-	-	6.37	0.136	0.011	
09-50269	-	-	-	-	-	3.65	0.102	0.009	
Dissolved Metals									
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
09-50268	0.008	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50269	0.007	<0.005	<0.003	<0.001	<0.010	-	-	-	*
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
Control	1.5	1.5	1.5	0.74	7.5	-	-	-	
Control Target	1.6	1.6	1.6	0.80	8.0	-	-	-	
09-50269	0.007	<0.005	<0.003	<0.001	<0.010	-	-	-	
09-50269	0.007	<0.005	<0.003	<0.001	<0.010	-	-	-	

Client: **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19868
Site: Dye-M
Client No: 09-341
Samples Received: 14-Sep-09
Date of analysis: 15-Sep-09
Method No: ASG 015
Date Reported: 18-Sep-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	50266*	µg/L	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0
	Duplicate ; 50266*	µg/L	< 3.0 ; < 3.0	< 3.0 : < 3.0
	Control Sample	µg/L	< 3.0	17
	Control Sample Target	µg/L	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	12288		**Report ID:**	Dye-M W45
Client:	ASG 19868		**Date Submitted:**	14-Sep-09
			Date tested:	17-Sep-09
Site:	DYE-M		**Date:**	18-Sep-09
	09-341		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50266	5.6			
Blank	<2.0			
Control	14.2			
Control Target	16.1			

ASU #	12288		**Report ID:**	Dye-M W46				
Client:	ASG 19868		**Date Submitted:**	14-Sep-09				
			Date tested:	16-Sep-09				
Site:	DYE-M		**Date:**	18-Sep-09				
	09-341		**Matrix:**	Water				
Preliminary Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50266	-	-	-	-	-	2.08	0.019	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	2.8	0.79	0.81
Control Target	-	-	-	-	-	3.0	0.80	0.80
Dissolved Metals								
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
09-50266	0.173	0.092	<0.003	<0.001	0.051	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.6	1.6	1.6	0.78	7.8	-	-	-
Control Target	1.6	1.6	1.6	0.80	8.0	-	-	-

Client: **ESG**
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19882
Site: Dye-M
Client No: 09-349
Samples Received: 17-Sep-09
Date of analysis: 22-Sep-09
Method No: ASG 015
Date Reported: 23-Sep-09
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	50268*	µg/L	< 3.0	< 3.0
W	50269	µg/L	< 3.0	< 3.0

* Average result of Duplicate

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0
	Duplicate ; 50268*	µg/L	< 3.0 ; < 3.0	< 3.0 : < 3.0
	Control Sample	µg/L	< 3.0	12
	Control Sample Target	µg/L	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	12300		**Report ID:**	Dye-M W48
Client:	ASG 19882		**Date Submitted:**	17-Sep-09
			Date tested:	21-Sep-09
Site:	DYE-M		**Date:**	22-Sep-09
	09-349		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50268	6.8			
09-50269	14.0			
Blank	<2.0			
Control	15.6			
Control Target	16.1			

Client: ESG
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No: 19882
Site: Dye-M
Client No: 09-349
Samples Received: 17-Sep-09
Date of analysis: 22-Sep-09
Method No: ASG 037
Date Reported: 22-Sep-09

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50268*	6.28
09-50269	5.75

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50268* ; Duplicate	6.28 ; 6.28
Control	7.00
Control Target	7.00

Client : **ASU**
School of Environmental Studies
Queen's University
Kingston, Ontario K7L 3N6
(613) 533-2656
Fax: (613) 533-2897

ASG Login No: 19882
Site: Dye-M
Client No: 09-349
Samples Received: 17-Sep-09
Date of analysis: 21-Sep-09
Method No: ASG 021
Date Reported: 21-Sep-09

RESULTS OF MERCURY IN WATER ANALYSIS

Sample I.D.	Unit	Mercury^
09-50268*	ug/L	< 0.4
09-50269	ug/L	< 0.4

^ Acid digestion performed.
# Reported at 0.4 µg/L detection limit.
*Average results of duplicates.

LABORATORY QA/QC

Sample I.D.	Unit	Mercury^
Blank	µg/L	< 0.4
09-50268* ; Duplicate	µg/L	< 0.4 ; < 0.4
Control Target	µg/L	4.0
Control Sample	µg/L	4.4

ASU #	12299		**Report ID:**	Dye-M W47
Client:	ASG 19881		**Date Submitted:**	17-Sep-09
			Date tested:	17-Sep-09
Site:	DYE-M		**Date:**	18-Sep-09
	09-348		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50270	6.5			
09-50271	3.8			
Blank	<2.0			
Control	14.2			
Control Target	16.1			

Client:	**ESG**	ASG Login No:	19892
	12 Verite Ave	Site:	Dye-M
	Dept. of Chem. / Chem. Eng., RMC	Client No:	09-352
	P.O. Box 17000, Stn. Forces	Samples Received:	21-Sep-09
	Kingston, Ontario K7K 7B4	Date of analysis:	22-Sep-09
	(613) 541-6000 ext 6567	Method No:	ASG 015
	Fax: (613) 541-6596	Date Reported:	23-Sep-09
		Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	50282	µg/L	< 3.0	< 3.0

LABORATORY QA/QC

	Blank	µg/L	< 3.0	< 3.0
	Control Sample	µg/L	< 3.0	12
	Control Sample Target	µg/L	< 3.0	15

** S = Soil , C = Concrete , PC = Paint Chip , SW = Swab , P = Plant , W = Water

All results corrected for the recovery of the surrogate decachlorobiphenyl

ASU #	12307		**Report ID:**	Dye-M W51
Client:	ASG 19892		**Date Submitted:**	21-Sep-09
			Date tested:	21-Sep-09
Site:	DYE-M		**Date:**	22-Sep-09
	09-352		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50282	3.5			
Blank	<2.0			
Control	15.6			
Control Target	16.1			

Client: ESG
12 Verite Ave
Dept. of Chem. / Chem. Eng., RMC
P.O. Box 17000, Stn. Forces
Kingston, Ontario K7K 7B4
(613) 541-6000 ext 6567
Fax: (613) 541-6596

ASG Login No:	19892
Site:	Dye-M
Client No:	09-352
Samples Received:	21-Sep-09
Date of analysis:	22-Sep-09
Method No:	ASG 037
Date Reported:	22-Sep-09
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
09-50282*	6.60

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
09-50282* ; Duplicate	6.60 ; 6.60
Control	7.00
Control Target	7.00

ASU #	12307		**Report ID:**	Dye-M W50
Client:	ASG 19892		**Date Submitted:**	21-Sep-09
			Date tested:	24-Sep-09
Site:	DYE-M		**Date:**	24-Sep-09
	09-352		**Matrix:**	Water
Preliminary Report of Analysis				
Dissolved Metals				
SAMPLE	Pb			
	mg/L			
09-50282	<0.010			
Blank	<0.010			
Control	8.0			
Control Target	8.0			

ASU #	12306		**Report ID:**	Dye-M W52
Client:	ASG 19896		**Date Submitted:**	21-Sep-09
			Date tested:	21-Sep-09
Site:	DYE-M		**Date:**	21-Sep-09
	09-353		**Matrix:**	water
Preliminary Report of Analysis				
Sample	Oil & Grease			
	mg/L			
09-50283	<2.0			
Blank	<2.0			
Control	15.6			
Control Target	16.1			

APPENDIX B
PHOTOGRAPHS

Photo 1 (DSC02164): Sample 09-50255 Dye-M Sept 3rd, Lower site sewage lagoon. Western edge of middle cell.

Photo 2 (DSC02655): Sample 09-50268 Dye-M 2009 Sep 16th Waste water sampling at W19G

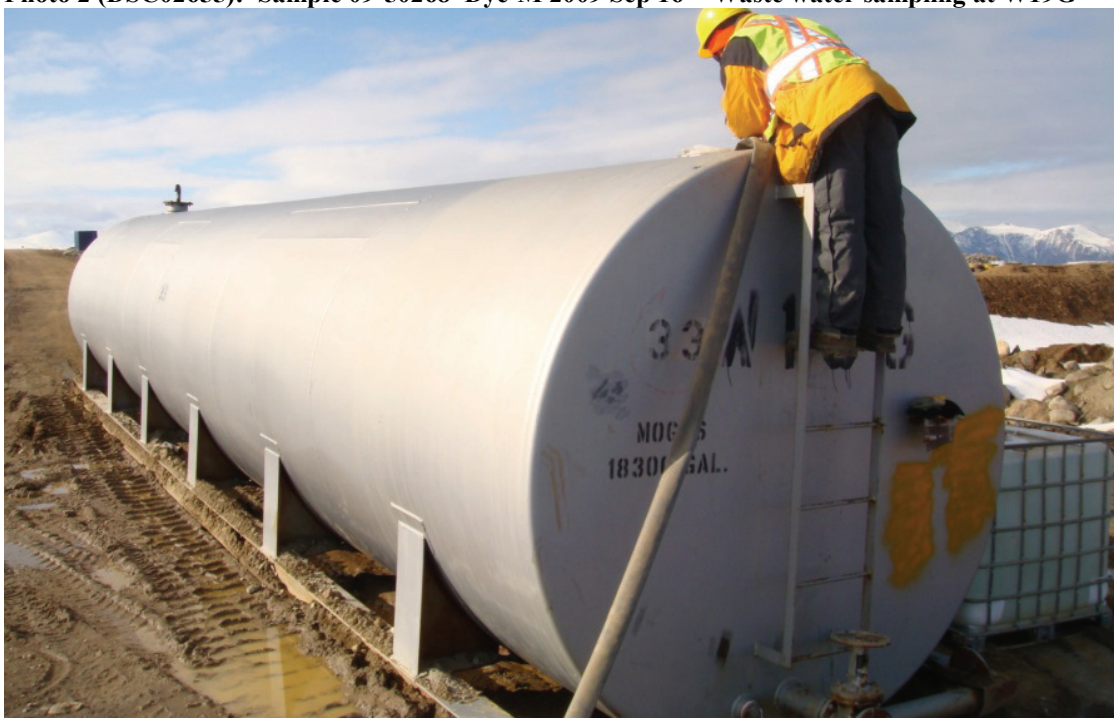

Photo 3(DSC02656): Sample 09-50269 DYE-M Sept 13th Waste water sampling at W38G

Photo 4 (DSC02426): Sample 09-50270/71 DYE-M Sept 16th Waste water sampling at HB-4, 09-50270/71

Photo 5 (DSC02465) Sample 09-50282 DYE-M Sept 17th Sampling wastewater pooled in the northwest corner of the Landfarm

Photo 6 (DSC02475) Sample 09-50283 DYE-M Sept 19th Waste water sampling at HB-4

****No photo available for Sample 09-50266.**