

AECOM

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March 20, 2009

Project Number: 0171-142-01-08

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

Dear Phyllis:

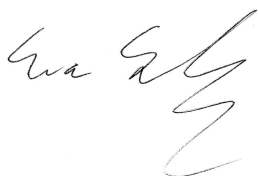
Re: 2008 Annual Report for Water Use License 1BR-DYE0409: DYE-M, Cape Dyer DEW Line Site

AECOM is presenting the following annual report form regarding the remediation program at the DYE-M, Cape Dyer DEW Line site. The information is being submitted on behalf of Defence Construction Canada and the Department of National Defence.

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. 2008 Annual Report Form, Executive Summary
cc: Douglas Craig, DCC

Statement of Qualifications and Limitations

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The information, data, recommendations and conclusions contained in the Report:

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- may be based on information provided to Consultant which has not been independently verified;
- have not been updated since the date of issuance of the Report and their accuracy is limited to the time period and circumstances in which they were collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- were prepared for the specific purposes described in the Report and the Agreement;
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

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This Statement of Qualifications and Limitations is attached to and forms part of the Report.

1BR-DYE0409: Executive Summary

Sewage Effluent Monitoring

A two-celled lagoon was constructed to support the construction camp. As per the requirements of Part B.1.vi of the water use license, samples were collected from the sewage lagoon as part of the monitoring plan prior to each discharge event. In 2008, there was one discharge event. Contents of Lagoon Cell #1 were combined with the contents of Lagoon Cell #2. Lagoon Cell #2 was inadvertently discharged on July 7, 2008, although the pH was above the criteria stated in the water use license of 6-9 pH units. This was reported as a spill to the spill report line.

Sample Number	08-8537	08-32033	08-11777
Location	Lagoon Cell #1	Lagoon Cell #2	Lagoon Cell #2
Coordinates	7386890 N; 563376 E	7386916N; 563362 E	7387592 N; 563064 E
Date	May 29 & 31, 2008	June 21, 2008	August 31, 2008
Parameters			
pH (pH units)	7.17	10.49	8.74
Oil & Grease (visible)	No visible sheen	No visible sheen	No visible sheen
Total Suspended Solids (mg/L)	140	88	476
Biological Oxygen Demand (mg/L)	<3	9	101
Faecal Coliforms (CFU/dL)	0	0	0

Landfarm Discharge Monitoring

As per the requirements of Part B.1.vi of the water use license, water collected from the landfarm was monitored for quality prior to discharge. The following is a summary of the results. The water was discharged on July 2, 2008

Sample Number	08-31764
Location	Landfarm
Coordinates	7387939 N: 562686 E
Date	June 19, 2008
Parameters	
pH (pH units)	7.63
Total Arsenic (mg/L)	0.003
Dissolved Cadmium (mg/L)	0.002
Total Chromium (mg/L)	0.061
Dissolved Cobalt (mg/L)	<0.003
Dissolved Copper (mg/L)	<0.005
Dissolved Lead (mg/L)	0.015
Total Mercury (µg/L)	n/a
Dissolved Nickel (mg/L)	<0.005
Total Zinc (mg/L)	0.058
Oil & Grease (visible)	No visible sheen
PCBs (µg/L)	<3.0

Note: Mercury impacted soils are not placed within the landfarm; therefore, mercury analysis was not required.

Summary of Work Completed in 2008

Demolition: Demolition of the following buildings and structures was completed in 2008: Overhead Walkway between the Powerhouse and Module Train B; interior work at the Power & Equipment Building, Switching Centre & Communication Building and Powerhouse Building; concrete pad of the Radio Terminal Building; concrete footing for the small communication billboards; antennae; concrete slab for the TACAN warehouse; Dining Hall B17A; Lower Site Warehouse B13D.

Landfarm: There is 36,000 m3 of hydrocarbon impacted soil in the landfarm, 20,000 m3 of which were placed in 2008. A number of tilling events occurred in 2008 as part of the remediation program.

Tier II Soil Disposal Facilities: Both the Upper Site and Lower Site Tier II Soil Disposal Facilities have been completed and are accepting Tier II impacted soils. Approximately 6,600 m3 of Tier II impacted soil was placed in the facilities in 2008.

Non-Hazardous Waste Landfills: To date, 6,500 m3 of non-hazardous debris, Tier I and Type A impacted soils have been placed in the Non-Hazardous Waste Landfills at DYE-M, with 5,900 m3 being placed in 2008. use Andre numbers

CEPA Impacted Soil and Other Hazardous Material: 10 m3 of PCB impacted soil above the CEPA criteria and 158 m3 of hazardous materials were packaged and placed in the hazardous materials storage area at DYE-M. These wastes will be shipped off-site for disposal in a southern disposal facility at the end of the clean up program.

Landfill Excavation: Excavation of the following landfills has been completed: Lower Camp Landfill East and West; Beach Landfill South Lobes 1, 3, A and B; Beach Landfill North – Main Lobe and Lobe B; Construction Camp Landfill.

Debris Removal: Debris removal was completed in the following locations: Debris Area #8, 10, 12, 16, 19, 23, 24, 31, 48, 49, 50, 52, 55, 57, 61, 65, 66, 68, and 69; Regrade Area #12, 14, 15, and 16. Debris removal is on-going.

Post-Construction Monitoring Stations: All monitoring wells required for post-construction monitoring have been installed. Thermistors were installed at the Powerhouse Landfill and Upper Site Tier II Facility. GPS coordinates for the post-construction monitoring stations can be provided once the information has been received from the contractor.

Community Meetings

Community meetings were held by Defence Construction Canada prior to the start up of the work at DYE-M. The contractor typically holds a community meeting before the start of each construction season.

Spill Incidences

There was one spill incidence reported to the Spill Report Line on August 20, 2008. A copy of the spill report is attached.

NWB Annual Report

Year being reported: 2008 ▼

License No: 1BR-DYE0409

Issued Date: May 6, 2004

Expiry Date: May 31, 2009

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
accordance 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)
	2330/107 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

- ☒ Solid Waste Disposal
☒ Sewage
☐ Drill Waste
☒ Greywater
☒ Hazardous
☒ 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.: 08-406 (as reported to the Spill Hot-line)

Date of Spill: July 7, 2008

Date of Notification to an Inspector: August 20, 2008

Additional Details: (impacts to water, 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)

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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	▼
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Additional Details: (Attached or provided below)

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

No inspection and/or compliance report issued by INAC	▼
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Additional Details: (Dates of Report, Follow-up by the Licensee)

An insection was completed on

Any additional comments or information for the Board to consider

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Date Submitted:

March 31, 2009

Submitted/Prepared by:

Eva Schulz

Contact Information:

Tel:	403-270-9200
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Fax:	403-270-0399
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email:	eva.schulz@aecom.com
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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



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR		REPORT TIME		<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____
	OCCURRENCE DATE: MONTH – DAY – YEAR		OCCURRENCE TIME			
C	LAND USE PERMIT NUMBER (IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)		
	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION				REGION <input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE			LONGITUDE		
	DEGREES	MINUTES	SECONDS	DEGREES	MINUTES	SECONDS
F	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION			
	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION			
H	PRODUCT SPILLED		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER	
I	SPILL SOURCE		SPILL CAUSE		AREA OF CONTAMINATION IN SQUARE METRES	
	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS					
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE	
	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE	

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLED	REPORT LINE NUMBER
		STATION OPERATOR		YELLOWKNIFE, NT	(867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					



Photograph 1. Lower Camp Landfill East – Landfill Excavation.



Photograph 2. Beach Landfill North – Completed Landfill Excavation.



Photograph 3. Regrade Areas within Debris Area #12.



Photograph 4. Powerhouse Landfill.



Photograph 5. Lower Site Tier II Disposal Facility.



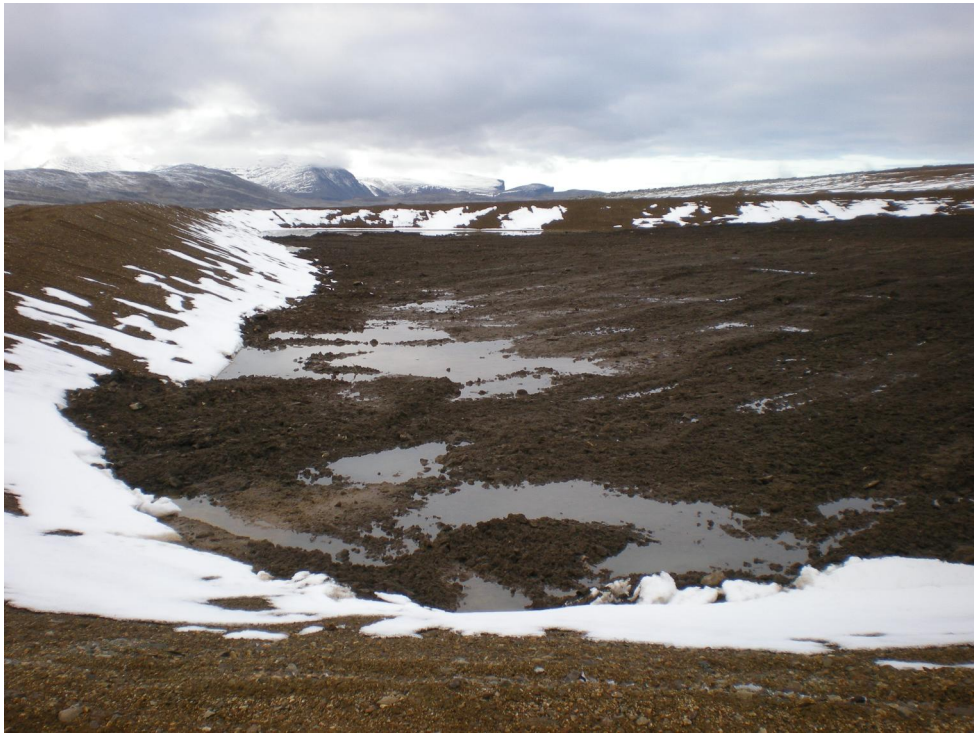
Photograph 6. Landfarm – Containment Berms and Runoff Collection.



Photograph 7. Upper Site Tier II Disposal Facility.



Photograph 8. Foundation Landfill.



Photograph 9. Upper Site Non-Hazardous Waste Landfill.



Photograph 10. Crossroads Landfill.



Photograph 11. PCB Storage Area.



Photograph 12. Lower Camp Landfill – East.