

March 12, 2012

Ryan Barry  
Executive Director  
Nunavut Impact Review Board  
P.O. Box 1360  
Cambridge Bay, NU X0B 0C0

Dear Ryan:

**Project No: NIRB No.: 04DN001 2011 Annual Report**

**Regarding: DYE-M, Cape Dyer DEW Line Site**

AECOM Canada Ltd. is providing the following information as per the requirements listed for the annual report. The information is being provided on behalf of Defence Construction Canada and the Department of National Defence.

***a.) Summary of activities undertaken for the year, including but not limited to the amount of contaminated soil removed from the site.***

The contractor for the DYE-M site left at the end of 2009, and notified DCC they would not be returning to the site. As a result, a new tender package and a new contractor would be required for the completion of the work. The 2010 season and the early part of the 2011 season, the work completed at the DYE-M site was comprised of care and maintenance work. The contract for the remaining clean up work was awarded in June, and the successful contractor mobilized to the site in early July. The following is a summary of the work items completed during the 2011 summer construction season:

- The two Atwell Dormitories, two small billboards, the Abandoned Powerhouse, the Power and Equipment Building, and the Switch House were demolished.
- Activities at the landfarm consisted of landfarming the hydrocarbon-contaminated soils and repairs to the berm.
  - Landfarming included weekly tilling of the soils and collection of samples for moisture content determination. No moisture conditioning was required in 2011.
  - The berm repairs were completed in the middle of August. The work included the placement of additional Type 3 granular material in the sloughed section. Type 3 granular fill was added to the buttress top along an approximately 50 m stretch outside of the east berm and compacted with a steel drum compactor. A total length of 200 m was scarified along the top horizontal surface and re-compacted with a steel drum compactor to fill in the cracks.

- Activities at the Lower Site Non-Hazardous Waste Landfill (NHWL) consisted of placing debris and soil in the landfill cell and minor ditching outside the landfill. No work was carried out on the capped cell of the landfill.
  - Landfilling was carried out in early to mid-September. Only one lift was placed in the cell, which was covered with intermediate fill for the winter.
  - The debris contained galbestos from the Abandoned Powerhouse demolition and other demolition debris from the Atwell Dormitories.
  - Once the debris was placed it was covered with intermediate fill.
- Activities at the Lower Site Tier II Disposal Facility consisted of placing small amounts of Tier II soil in the landfill. No work was carried out on the closed cell of the facility.
  - Only one lift was placed in the facility. This lift was capped for the winter as the season's end.
- Activities at the Upper Site NHWL consisted of removed ponded water and landfilling with debris and intermediate fill soils.
  - Snowmelt and precipitation water were present in the landfill at the start of the season. This water did not meet the discharge criteria set out in the water use license and was treated. Treatment occurred from July 30 to August 13, at which time it was tested and found to meet the discharge criteria. This water was then discharged. Heavy precipitation on Aug. 24-25 filled the landfill up again. This water was not discharged at the end of the season as it did not meet the criteria.
  - The debris originated from demolition activities at the Upper Site including demolition of the Power and Equipment building at the DEW Drop, Abandoned Powerhouse and the small billboards.
  - The debris was covered with intermediate fill at the end of the season.
- Activities at the Upper Site Tier II Disposal Facility consisted of dewatering the facility and placement of a small amount of Tier II soil.
  - Snowmelt and precipitation water present in the landfill at the start of the season met discharge criteria and was discharged.
  - Tier II soils were placed near the centre of the facility.
- Reshaping took place in the Material Processing Area 5 (North).
- Regrading was completed at the Abandoned Powerhouse, small billboard foundations and former wastewater holding basin.
- Landfill excavation at the West Landfill and buried debris excavation of the South Landfill Area proceeded at the Upper Site.
- Baseline monitoring was carried out at the landfills which remain on-site.

***b.) Work plan for the following year.***

Work to be completed in 2012 includes the excavation of all remaining landfills and buried debris areas scheduled for excavation; appropriate disposal of excavation materials in on-site landfills or off-site disposal; excavation of remaining contaminated soil areas; and completion of demolition activities.

***c.) Update on the extent of contamination on-site and supporting documentation.***

An exhaustive site investigation was completed in 1997, 1998 and 2000 to determine all areas of contamination prior to the preparation of the specifications and drawings. To date, forty contaminated

soil areas have been excavated and backfilled. Twenty five contaminated soil areas still require remediation.

***d.) Wildlife encounters and actions/mitigation taken.***

Polar bears were identified on and around the site throughout the season; however, no mitigative actions were required. Other wildlife and avifauna observed include Arctic fox, Arctic hare, snow buntings, snow geese and ravens.

***e.) Summary of local hires and initiatives.***

The percentage of Inuit in the workforce at DYE-M averaged 75% in 2011.

***f.) Summary of community consultations undertaken and results (if any).***

The results of the community meetings held by DCC were submitted with the Project Description submission. The contractor typically holds a project start up meeting each year prior to the start of construction; however, a copy of the presentation has not been received.

***g.) Summary of site visits by inspectors with results and follow-up actions.***

An inspection of the site was completed by an Environment Canada Enforcement Office on August 16, 2011. However, a written inspection report was not provided.

***h.) Summary of site visits with community members.***

N/A.

***i.) Site photos and updated maps.***

See attached.

***j.) Number of barges utilized.***

There was one barge trip in August for fuel resupply.

***k.) Issues related to monitoring, including updates to the plan.***

To date, there have been no issues or updates to the monitoring plan.

***l.) Revisions to the abandonment and restoration plan.***

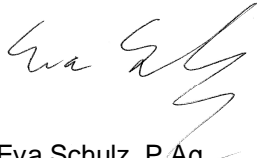
The entire project is an abandonment and restoration plan. There are currently no updates to the plan.

***m.) Summary of how it has complied with all project Terms and Conditions and how the terms and conditions are achieving their purpose.***

The Terms and Conditions supplied by NIRB are consistent with the requirements of the Project Description and Screening Report submitted by DCC, which were based on the specifications and drawings. The specifications and drawings are part of the contract package that the contractor must adhere to, and therefore, contractor compliance with the contract documents ensures compliance with the NIRB Terms and Conditions. DCC has a Contract Manager on-site for the duration of the construction season to ensure compliance with the contract.

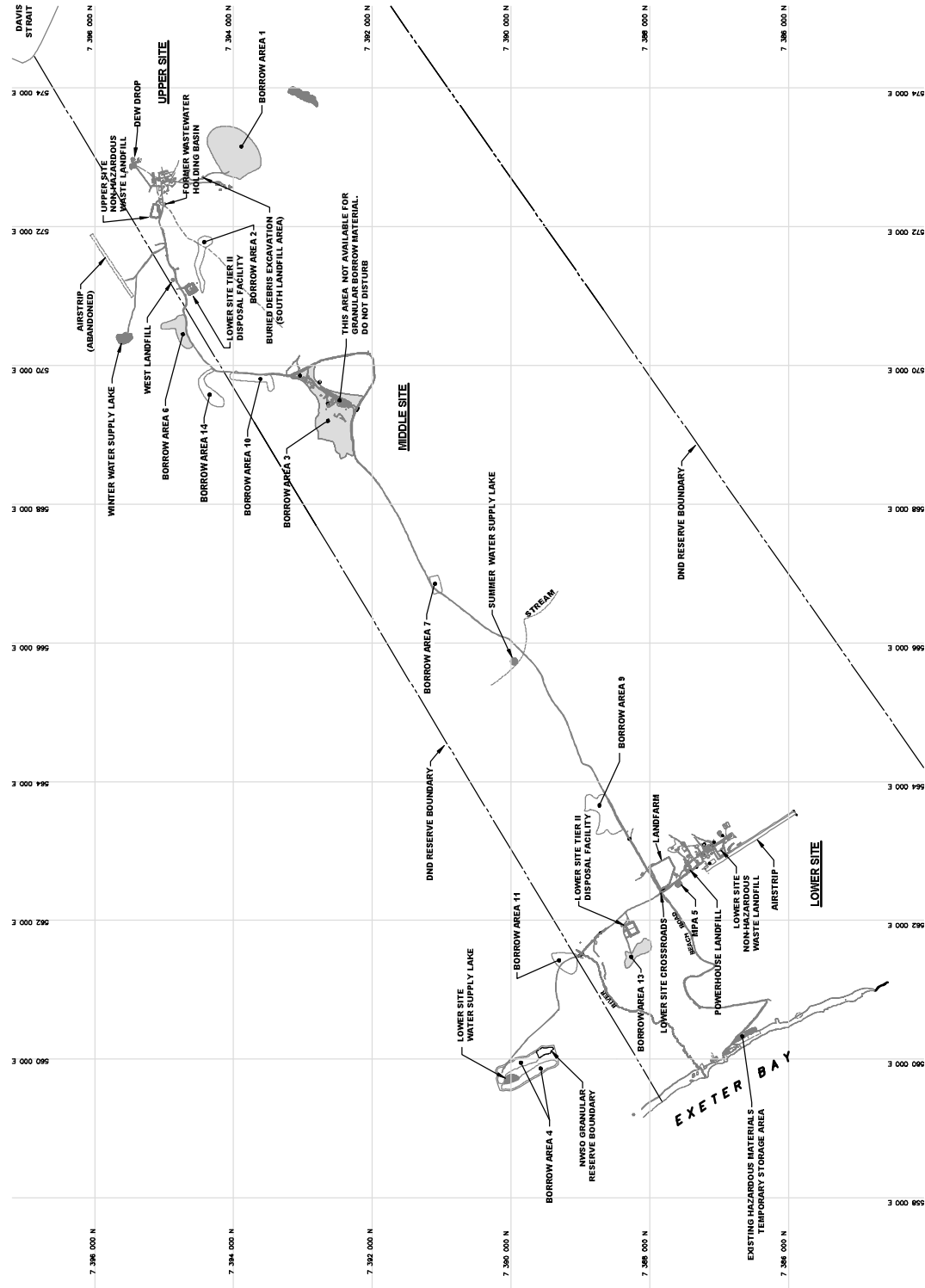
We trust the information provided is sufficient. Please feel free to contact the undersigned if you have any questions or comments.

Sincerely,  
**AECOM Canada Ltd.**

A handwritten signature in black ink, appearing to read 'Eva Schulz', with a stylized flourish extending from the end.

Eva Schulz, P.Ag.  
Senior Environmental Scientist  
Eva.Schulz@aecom.com

EMS  
Encl. Updated Site Plans; Selected Site Photos  
cc: Tamara Van Dyck, DCC



LEGEND:  
WORKED BORROW AREA IN 2011

NOTES  
BASE DRAWING PROVIDED BY AECOM (2010)  
DRAWING NOT TO SCALE

AECOM



GENERAL SITE PLAN  
BORROW SOURCES LOCATIONS

PROJECT NO.	DWN	CKD	REV
94-10995027 011	MM	RK	0
OFFICE	DATE	October 14, 2011	
EDM			

Figure 1

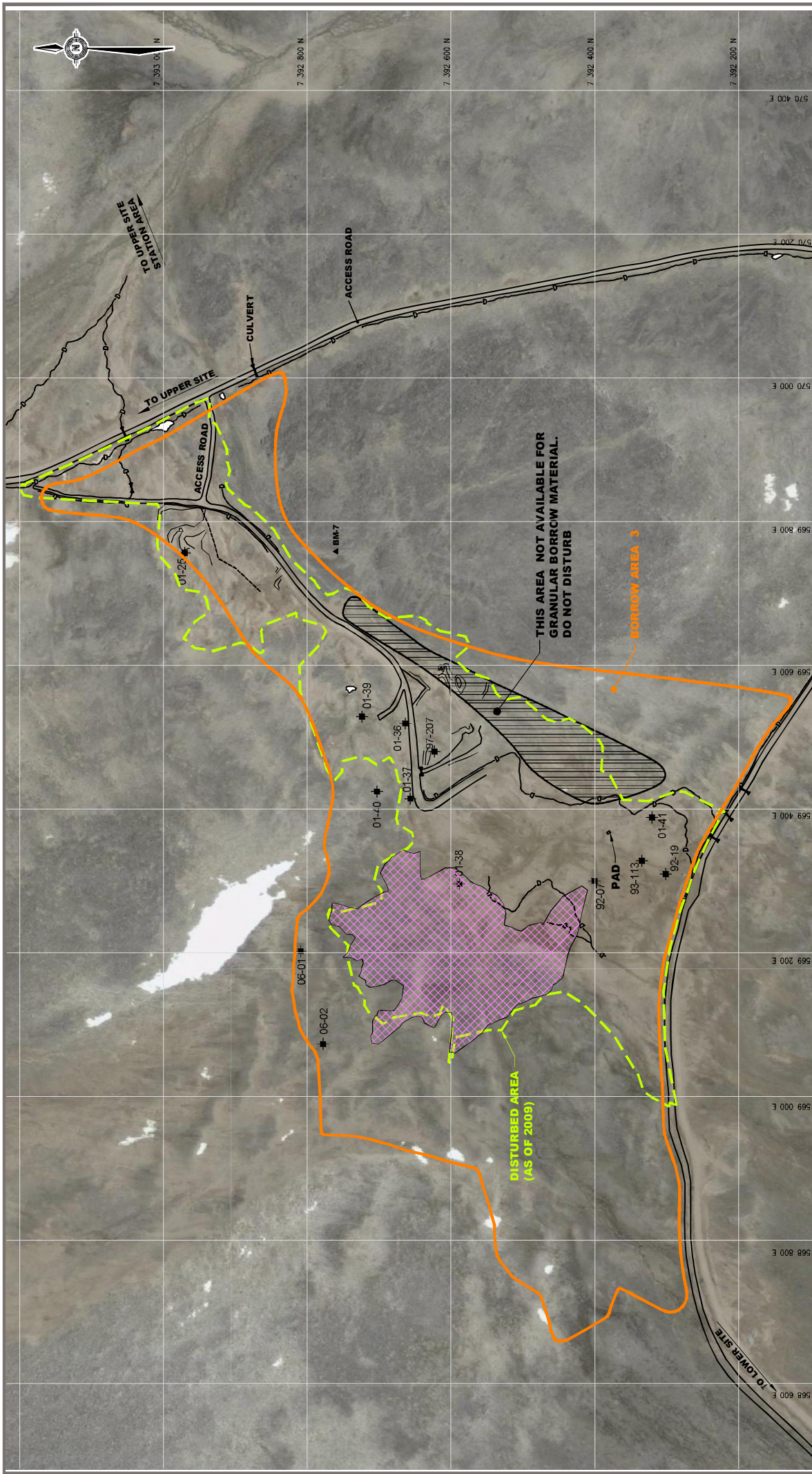












**LEGEND:**

- DRAINAGE
- SPECIFIED BORROW LIMITS
- DISTURBED AREA (AS OF 2009)
- APPROXIMATE 2011 BORROW DEVELOPMENT AREA
- - TESTPIT (EXCAVATION YEAR DENOTED BY FIRST TWO DIGITS OF TESTPIT ID)
- - GROUND TEMPERATURE CABLE LOCATION
- ◆ - MONITORING WELL LOCATION
- BM-3 ▲ - BENCHMARK

**NOTES**

SATELLITE IMAGE FROM GOOGLE EARTH  
BASE DRAWING PROVIDED BY AECOM (2010)

**CLIENT**

**AECOM**

**EBA**  
A TETRA TECH COMPANY

**DEW LINE CLEAN UP PROJECT**  
**DYE-M, CAPE DYER, NU**

**BORROW AREA 3**

PROJECT NO.	DWN	CKD	REV
94-10995027.011	MM	RK	0

OFFICE	DATE
EDM	October 14, 2011

**Figure 4**



\\eba.local\corpl\Edmonton\Drafting\DWG\CON\S\010\IP\Projects\10995\027\011\acadi\0995027.011 Figure 5.dwg 5.8.9.10.12 L.dwg [FIGURE 5] October 14, 2011 - 9:28:03 am (BY: MARSH, MAUREEN)



#### NOTES

SATELLITE IMAGE FROM GOOGLE EARTH



BASE DRAWING PROVIDED BY AECOM (2010)

0 250

Scale: 1: 5 000 (metres)

#### LEGEND:

- DRAINAGE
- SPECIFIED BORROW LIMITS
- DISTURBED AREA (AS OF 2009)
- TESTPIT (EXCAVATION YEAR DENOTED BY FIRST TWO DIGITS OF TESTPIT ID)

#### CLIENT

**AECOM**



#### DEW LINE CLEAN UP PROJECT DYE-M, CAPE DYER, NU

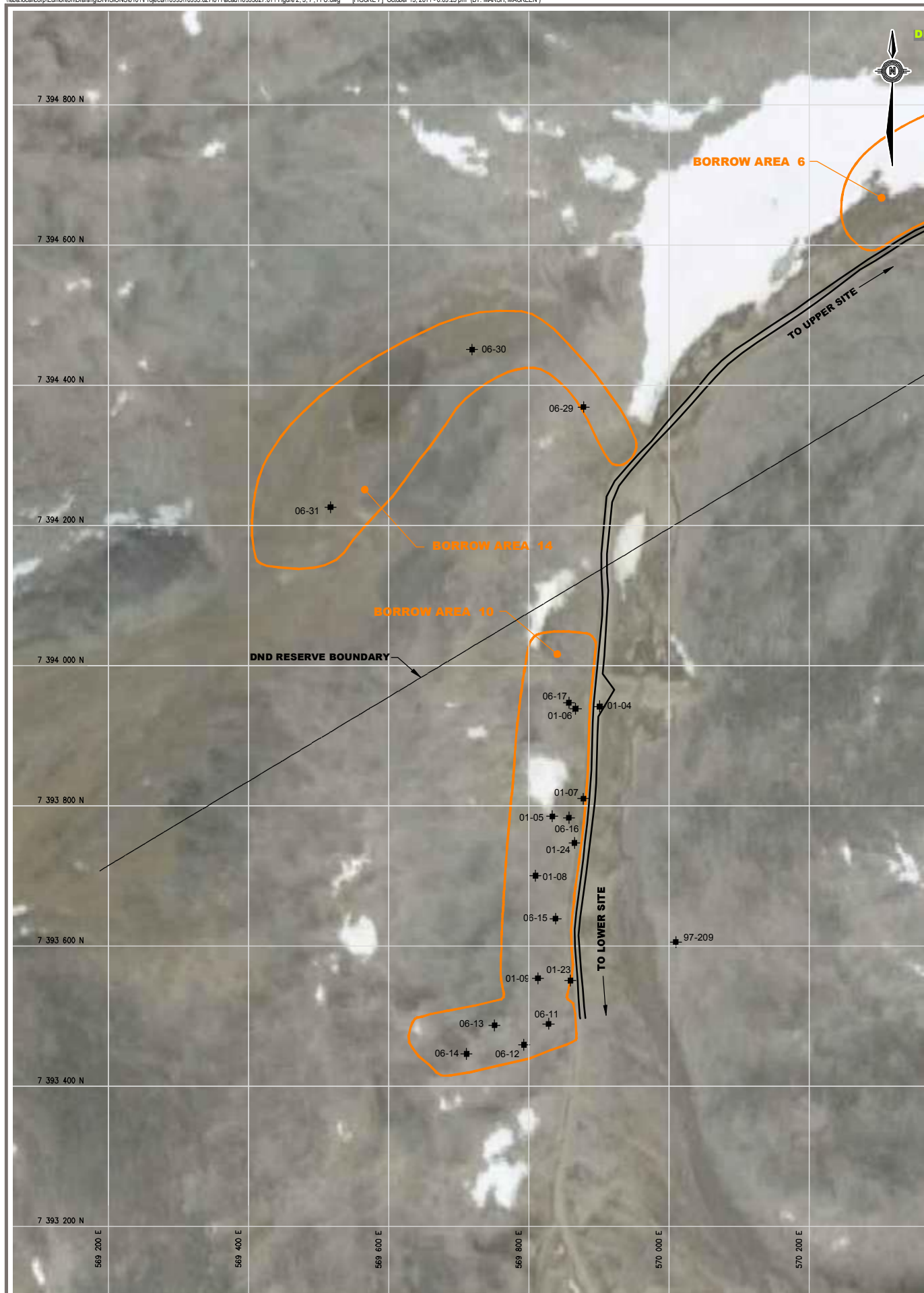
#### BORROW AREA 4

PROJECT NO. 94-10995027.011	DWN MM	CKD RK	REV 0
OFFICE EDM	DATE October 14, 2011		






**Figure 5**







**LEGEND:**

-  - DRAINAGE
-  - SPECIFIED BORROW LIMITS
-  - DISTURBED AREA (AS OF 2009)
-  - APPROXIMATE 2011 BORROW DEVELOPMENT AREA
-  - TESTPIT (EXCAVATION YEAR DENOTED BY FIRST TWO DIGITS OF TESTPIT ID)

**NOTES**

SATELLITE IMAGE FROM GOOGLE EARTH  
BASE DRAWING PROVIDED BY AECOM (2010)

0 250  
Scale: 1:5 000 (metres)

**CLIENT**

**AECOM**

**eba**  
A TETRA TECH COMPANY

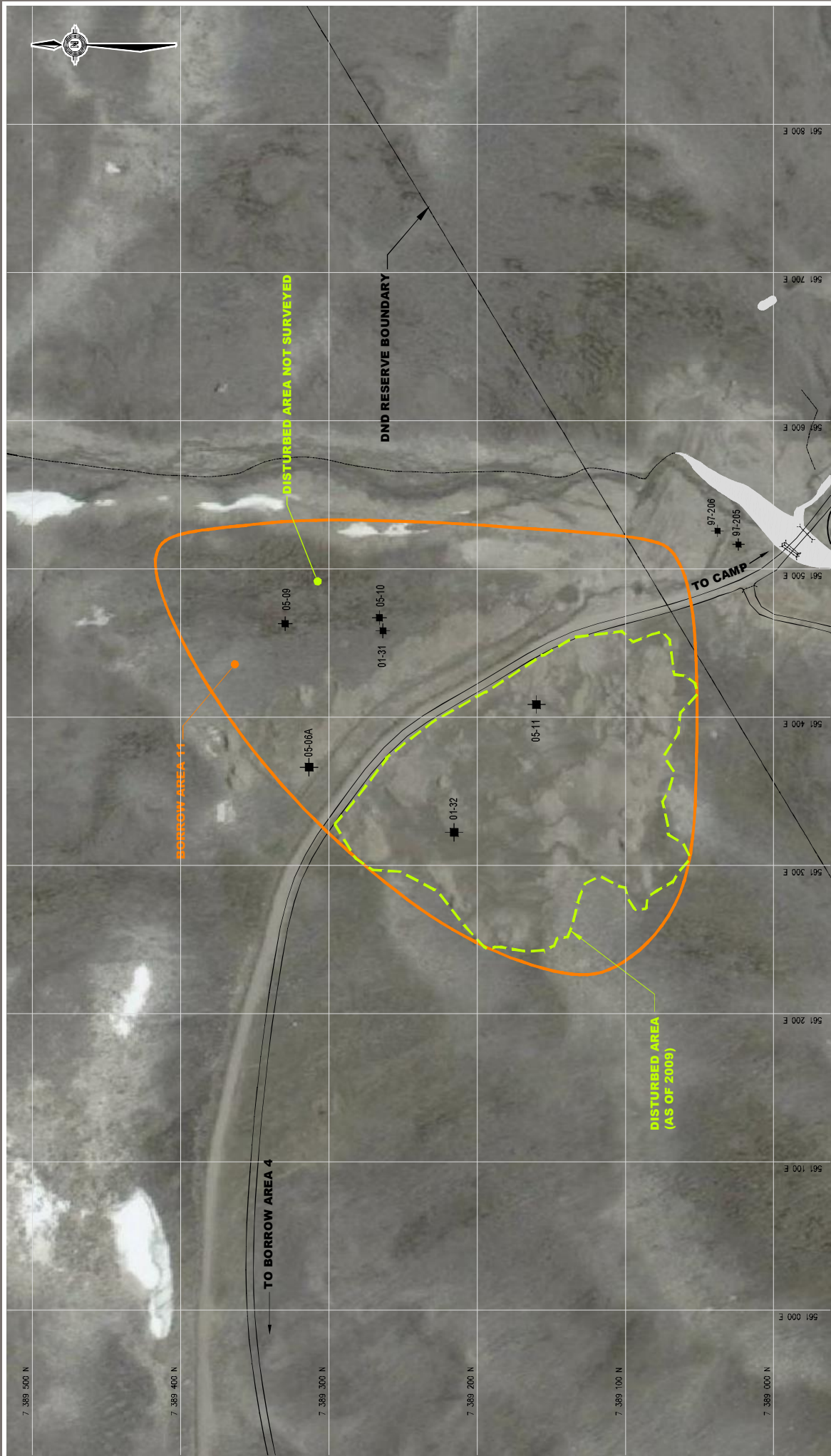
**DEW LINE CLEAN UP PROJECT  
DYE-M, CAPE DYER, NU**

**BORROW AREA 10 AND 14**

PROJECT NO. 94-10995027.011	DWN MM	CKD RK	REV 0
OFFICE EDM	DATE October 14, 2011		

**Figure 7**





**LEGEND:**

- DRAINAGE
- SPECIFIED BORROW LIMITS
- DISTURBED AREA (AS OF 2009)
- APPROXIMATE 2011 BORROW DEVELOPMENT AREA

**NOTES**

SATELLITE IMAGE FROM GOOGLE EARTH

BASE DRAWING PROVIDED BY AECOM (2010)

- TESTPIT (EXCAVATION YEAR DENOTED BY FIRST TWO DIGITS OF TESTPIT ID)

- GROUND TEMPERATURE CABLE LOCATION

- MONITORING WELL LOCATION

**BM-3** ▲ - BENCHMARK

**CLIENT**

**AECOM**

**ebc**  
A TETRA TECH COMPANY

**DEW LINE CLEAN UP PROJECT**  
**DYE-M, CAPE DYER, NU**

**BORROW AREA 11**

PROJECT NO.	DWN	CHK	REV
94-10995027.011	MM	RK	0

**Figure 8**

DATE: October 14, 2011

OFFICE: EDM

**Scale: 1:4,000 (metres)**

0 200





# PHOTOGRAPHIC LOG



**Site Name:**  
DYE-M, Cape Dyer

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
1

**Date:**  
21-Jul-  
2011

**Direction Photo  
Taken:**

**Description:**

Landfarm at the start of  
the season.



**Photo No.**  
2

**Date:**  
10-Sep-  
2011

**Direction Photo  
Taken:**

**Description:**

Landfarm at the end of the  
season





# PHOTOGRAPHIC LOG



**Site Name:**  
DYE-M, Cape Dyer

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
3

**Date:**  
11-Sep-  
2011

**Direction Photo  
Taken:**

**Description:**

Lower Site Non-Hazardous Waste Landfill at the end of the construction season.



**Photo No.**  
4

**Date:**  
11-Sep-  
2011

**Direction Photo  
Taken:**

**Description:**

Lower Site Tier II Disposal Facility at the end of the construction season.



# PHOTOGRAPHIC LOG



**Site Name:**  
DYE-M, Cape Dyer

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
5

**Date:**  
5-sep-  
2011

**Direction Photo  
Taken:**

**Description:**  
Upper Site Non-  
Hazardous Waste Landfill  
at the end of the  
construction season.



**Photo No.**  
6

**Date:**  
6-sep-  
2011

**Direction Photo  
Taken:**

**Description:**  
Upper Site Tier II  
Disposal Facility at the  
end of the construction  
season.





# PHOTOGRAPHIC LOG

**Site Name:**  
DYE-M, Cape Dyer

**Site Location:**  
Nunavut

**Project No.**  
60212727

**Photo No.**  
7

**Date:**  
28-aug-  
2011

**Direction Photo  
Taken:**

**Description:**

Excavated area at the  
West Landfill prior to  
backfilling.



**Photo No.**  
8

**Date:**  
21-aug-  
2011

**Direction Photo  
Taken:**

**Description:**

Removal of large tanks at  
the Buried Debris  
Excavation (South Landfill  
Area).

