AECOM
2540 Kensington Road NW
Calgary, AB, Canada T2N 3S3
www.aecom.com

403 270 9200 tel
403 270 0399 fax

RECEIVED
By clerk at 9:45 am, Apr 18, 2011

March 22, 2011

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 2010 Annual Report

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 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. Therefore, during the 2010 season, the work completed at the DYE-M site was comprised of care and maintenance work, which was carried out by the Canadian Military and a separate contractor. The following is a summary of the work items completed during the 2010 summer construction season:

- Snow clearing and road maintenance.
- Dewatering of existing facilities.
- Demolition of two billboards at the Upper Site
- Construction of a temporary storage area at the beach to be used for storage of materials to be shipped off-site.

Work planned for the 2011 construction season includes:

- Continuation of the contaminated soil excavation and disposal.
- Landfarming/treatment of hydrocarbon impacted areas.
- Excavation of two small buried debris areas.

- Wastewater treatment.
- Barrel processing.
- Surface debris removal.
- Demolition of remaining structures not required by NWSO.

It is anticipated that final closure and capping of the Non-Hazardous Waste Landfills and Tier II Soil Disposal Facilities, reshaping of the borrow areas and closure of the sewage lagoon will be completed in 2012.

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 monitoring reports.

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: Tamara Van Dyck, DCC

NWB Annual Report **Year being reported:** 2010

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:
Defence Construction Canada
DGME
101 Colonel By Drive,
Ottawa, Ontario, Canada. K1A 0K2

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)
1189/70 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 — 951 cu.m of sewage effluent and greywater deposited into sewage lagoon
- ☐ 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.: 1 (as reported to the Spill Hot-line)
Date of Spill: June 11, 2010
Date of Notification to an Inspector: June 14, 2010

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)

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

No inspection and/or compliance report issued by INAC

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

Any additional comments or information for the Board to consider

Date Submitted:	March 31, 2011	
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

National Defence Défense nationale

DEW LINE CLEAN UP PROJECT

DYE-M CAPE DYER TENDER DRAWINGS

AECOM

HATCH™

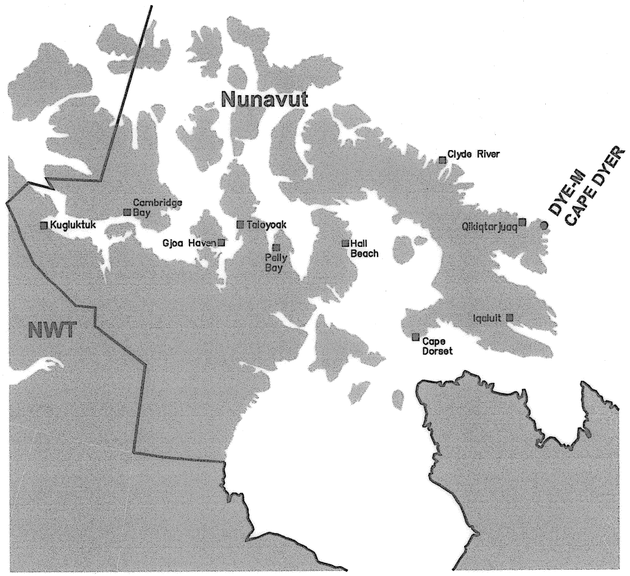
DECEMBER, 2010

DRAWING INDEX

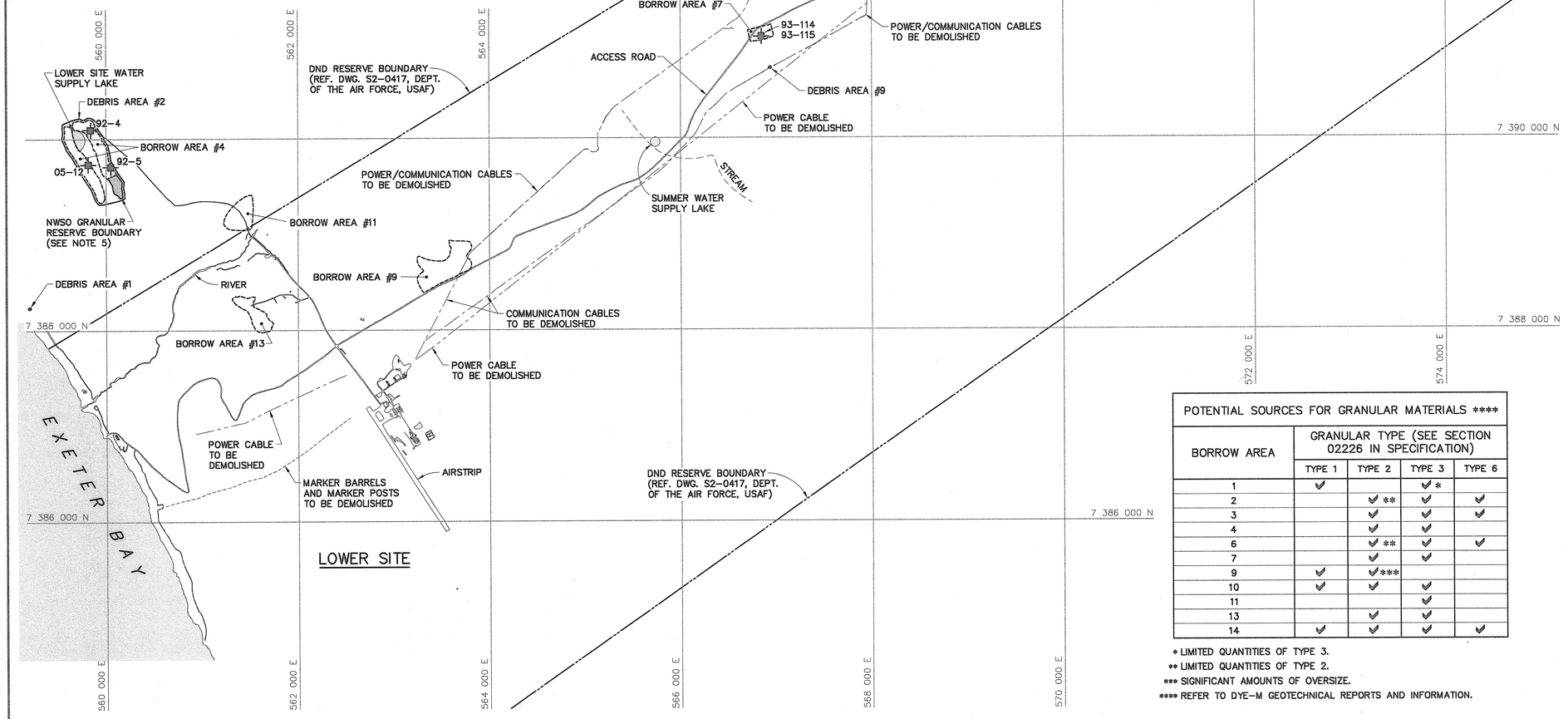
DRAWING No.	TITLE
SITING	
H-C75/3-9101-101	OVERALL SITE PLAN
H-C75/3-9101-102	LOWER SITE BEACH AREA PROJECT LAYOUT
H-C75/3-9101-103	LOWER SITE STATION AREA PROJECT LAYOUT
H-C75/3-9101-104	LOWER SITE BEACH LANDFILL-NORTH AREA PLAN
H-C75/3-9101-105	LOWER SITE BEACH LANDFILL-SOUTH AREA PLAN
H-C75/3-9101-106	LOWER SITE LANDFARM AREA PLAN
H-C75/3-9101-107	LOWER SITE STATION AREA-NORTH PLAN
H-C75/3-9101-108	LOWER SITE STATION AREA PLAN
H-C75/3-9101-109	LOWER SITE LOWER CAMP LANDFILL AREA PLAN
H-C75/3-9101-110	LOWER SITE TIER II DISPOSAL FACILITY AREA PLAN
H-C75/3-9101-111	LOWER SITE LANDFARM CROSS SECTION AND CLOSURE DETAIL
H-C75/3-9101-112	LOWER SITE NON-HAZARDOUS WASTE LANDFILL CROSS SECTION
H-C75/3-9101-113	LOWER SITE TIER II DISPOSAL FACILITY CROSS SECTION SHEET 1
H-C75/3-9101-114	LOWER SITE TIER II DISPOSAL FACILITY CROSS SECTION SHEET 2
H-C75/3-9101-150	MIDDLE SITE SITE PLAN

DRAWING No.	TITLE
SITING	
H-C75/3-9101-160	UPPER SITE PROJECT LAYOUT
H-C75/3-9101-161	UPPER SITE DEW DROP AREA PLAN
H-C75/3-9101-162	UPPER SITE STATION AREA PLAN SHEET 1
H-C75/3-9101-163	UPPER SITE STATION AREA PLAN SHEET 2
H-C75/3-9101-164	UPPER SITE SOUTH LANDFILL AREA PLAN
H-C75/3-9101-165	UPPER SITE WEST OF STATION AREA PLAN SHEET 1
H-C75/3-9101-166	UPPER SITE WEST OF STATION AREA PLAN SHEET 2
H-C75/3-9101-167	UPPER SITE WEST OF STATION AREA PLAN SHEET 3
H-C75/3-9101-168	UPPER SITE NON-HAZARDOUS WASTE LANDFILL CROSS SECTION
H-C75/3-9101-169	UPPER SITE TIER II DISPOSAL FACILITY GRADING/INSTRUMENTATION PLAN
H-C75/3-9101-170	UPPER SITE TIER II DISPOSAL FACILITY CROSS SECTION
H-C75/3-9101-190	MISCELLANEOUS DETAILS SHEET 1
H-C75/3-9101-191	MISCELLANEOUS DETAILS SHEET 2
STRUCTURAL	
H-C75/3-9101-201	LOWER SITE STATION AREA DEMOLITION SITE PLAN

DRAWING No.	TITLE
STRUCTURAL	
H-C75/3-9101-202	UPPER SITE DEW DROP AREA DEMOLITION SITE PLAN
H-C75/3-9101-203	UPPER SITE STATION AREA DEMOLITION SITE PLAN
H-C75/3-9101-204	GARAGE PLAN AND SECTION
H-C75/3-9101-205	HEATED VEHICLE STORAGE PLAN, SECTION AND ELEVATIONS
H-C75/3-9101-206	AIR TERMINAL BUILDING PLAN, SECTION AND ELEVATION
H-C75/3-9101-207	ATWELL DORMITORY PLAN, SECTION AND ELEVATION
H-C75/3-9101-208	WAREHOUSE-B13A PLAN AND SECTION
H-C75/3-9101-209	WAREHOUSE-B13B PLAN AND SECTION
H-C75/3-9101-210	WAREHOUSE-B13F PLAN AND SECTION
H-C75/3-9101-211	WAREHOUSE-B13E PLAN AND SECTION
H-C75/3-9101-212	FUEL TANKS ELEVATIONS
H-C75/3-9101-213	BUILDING LINK SECTION AND ELEVATION
H-C75/3-9101-214	SMALL COMMUNICATION BILLBOARD, FEEDHORN FOUNDATION PLAN, SECTION AND ELEVATIONS
H-C75/3-9101-215	LARGE COMMUNICATION BILLBOARD PLAN, SECTION AND ELEVATION
H-C75/3-9101-216	SWITCHING CENTRE AND COMMUNICATION BUILDING PLAN AND SECTION
H-C75/3-9101-217	POWER AND EQUIPMENT BUILDING PLAN AND SECTION
H-C75/3-9101-218	POWERHOUSE PLAN, SECTIONS AND ELEVATION



LOCATION OF CAPE DYER WITHIN NUNAVUT TERRITORY
SCALE: NTS



POTENTIAL SOURCES FOR GRANULAR MATERIALS ****				
BORROW AREA	GRANULAR TYPE (SEE SECTION 02226 IN SPECIFICATION)			
	TYPE 1	TYPE 2	TYPE 3	TYPE 6
1	✓		✓ *	
2		✓ **	✓	✓
3		✓	✓	✓
4		✓	✓	
6		✓ **	✓	✓
7		✓	✓	
9	✓	✓ ***		
10	✓	✓	✓	
11			✓	
13		✓	✓	
14	✓	✓	✓	✓

* LIMITED QUANTITIES OF TYPE 3.
** LIMITED QUANTITIES OF TYPE 2.
*** SIGNIFICANT AMOUNTS OF OVERSIZE.
**** REFER TO DYE-M GEOTECHNICAL REPORTS AND INFORMATION.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. REMOVE ALL SURFICIAL DEBRIS FROM ENTIRE PLAN AREA. ALL NON-HAZARDOUS DEBRIS FROM SOURCES WEST OF BORROW AREA #7 TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL. ALL NON-HAZARDOUS DEBRIS FROM SOURCES EAST OF BORROW AREA #7 TO BE PLACED IN UPPER SITE NON-HAZARDOUS WASTE LANDFILL.
3. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
4. REMOVE AND DISPOSE OF ALL SURVEY STAKES AND SAMPLE TAGS FROM ALL SITE AREAS.
5. NWSO GRANULAR RESERVE IS NOT AVAILABLE FOR USE BY THE CONTRACTOR.

Legend:

- APPROXIMATE LOCATION OF PROPERTY BOUNDARIES
- APPROXIMATE EXTENT OF BORROW AREAS
- TEST PIT LOCATION
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

Dec 16/16

AECOM HATCH

SCALE - ECHELLE 400 200 0 400 800 1200m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE - METIER	DATE
SITING	2010-12-07

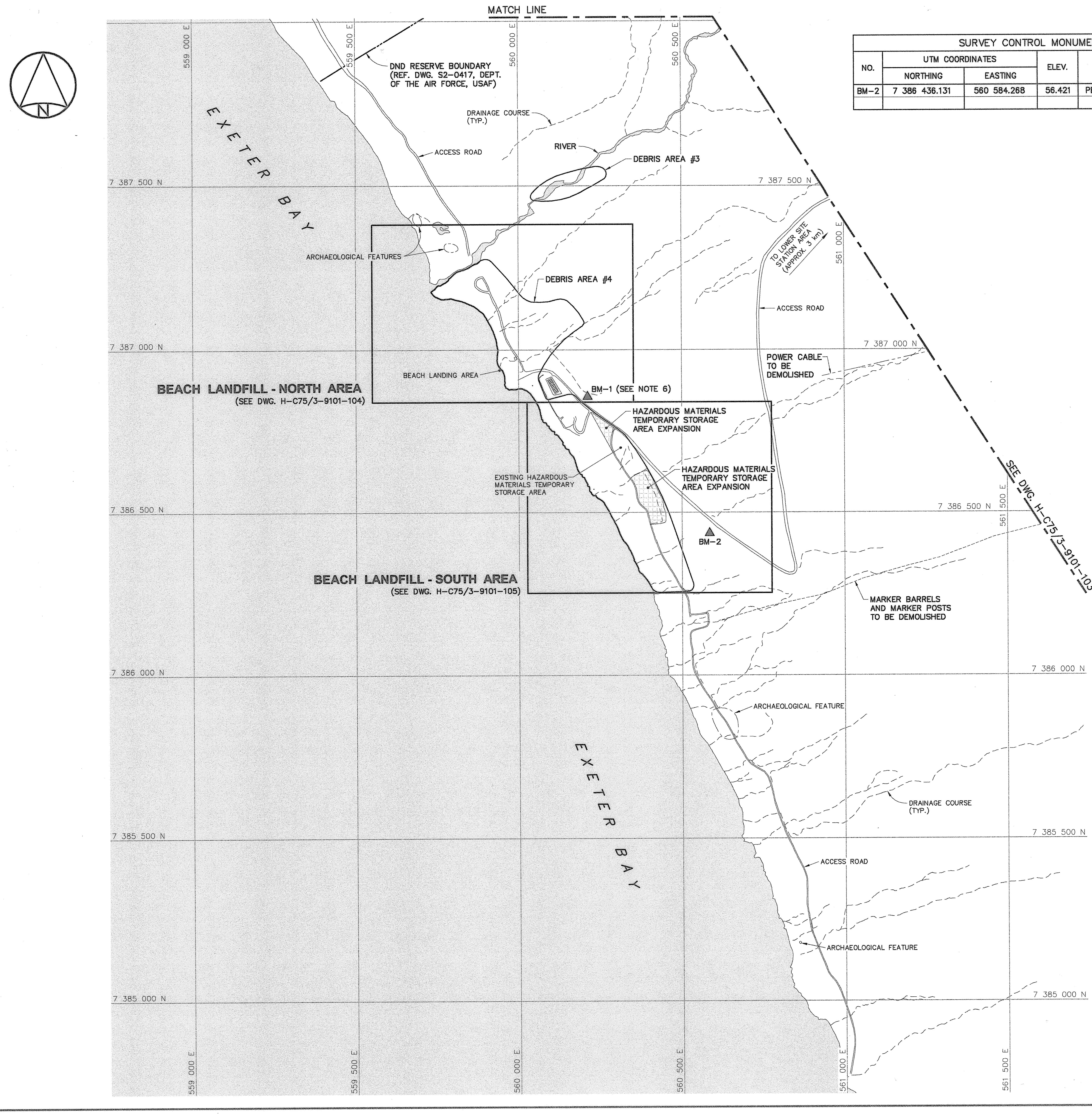
SUBJECT - SUJET

OVERALL SITE PLAN

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE DTH/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

DWG. NO. - DESSIN NO.
H-C75/3-9101-101

Canada



SURVEY CONTROL MONUMENTS

NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
BM-2	7 386 436.131	560 584.268	56.421	PERMANENT BENCHMARK

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ARCHAEOLOGICAL FEATURES LOCATED AS PER ENVIRONMENTAL CLEAN UP STUDY OF 21 DEW LINE SITES IN CANADA, VOL. 23, UMA 1991.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
5. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
6. BM-1 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.

Legend:

▲ BM-1 — PERMANENT BENCHMARK LOCATION (2)

BODY OF WATER

No.	DATE	REVISION	APPR.

REGISTERED PROFESSIONAL ENGINEER
R.R. VERKOSKY
LICENSEE
NWT/NU
[illegible]
Dec 10/10

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature [illegible]
Date Dec 10/10
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 100 50 0 100 200 300m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

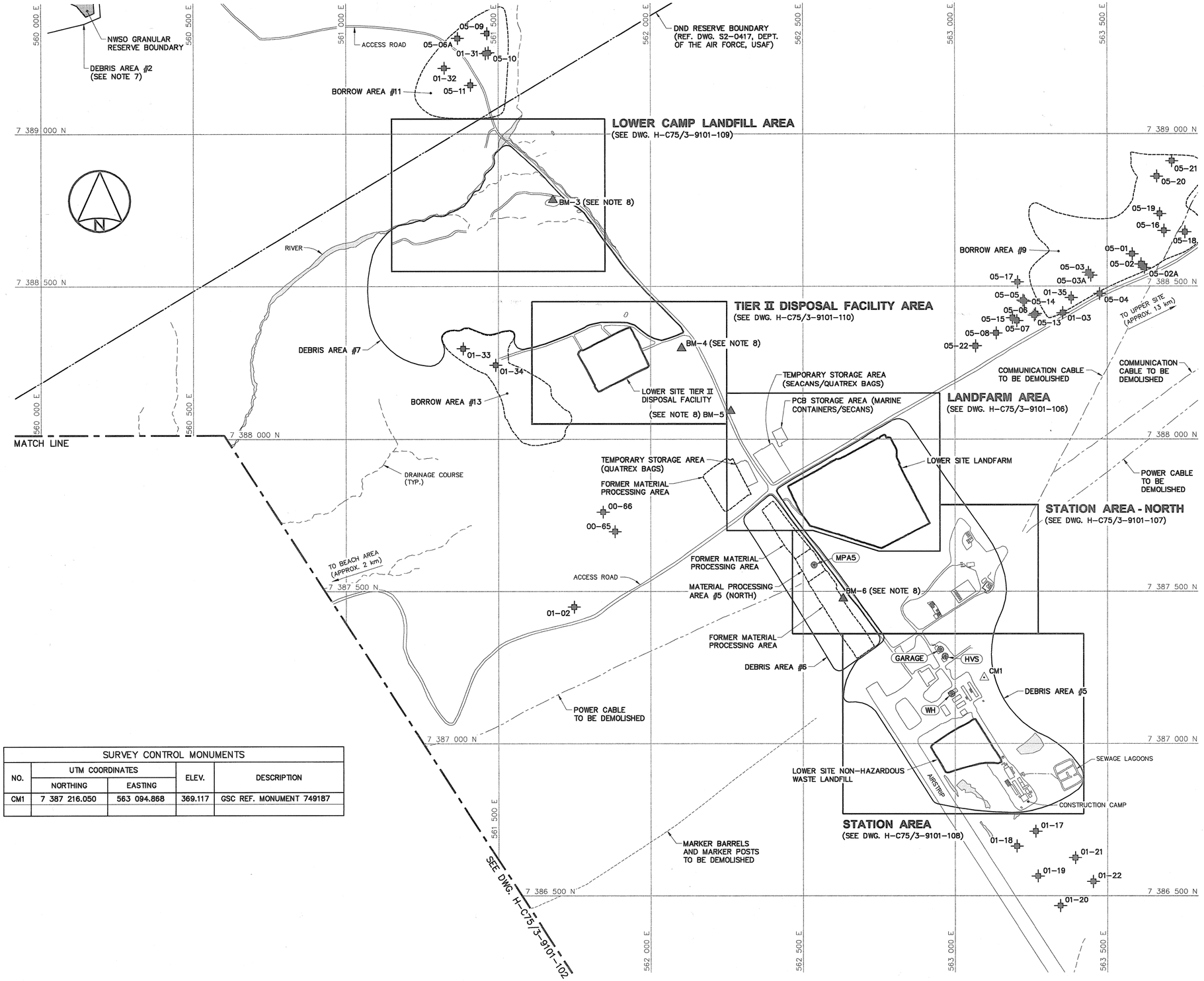
TRADE – METIER: SITING
DATE: 2010-12-07

SUBJECT – SUJET
LOWER SITE
BEACH AREA
PROJECT LAYOUT

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-102

Canada



SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM1	7 387 216.050	563 094.868	369.117	GSC REF. MONUMENT 749187

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ARCHAEOLOGICAL FEATURES LOCATED AS PER ENVIRONMENTAL CLEAN UP STUDY OF 21 DEW LINE SITES IN CANADA, VOL. 23, UMA 1991.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
5. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
6. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
7. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-101.
8. BM-3, BM-4, BM-5 AND BM-6 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.

Legend:

- CM1 — SURVEY CONTROL MONUMENT
- BM-3 — PERMANENT BENCHMARK LOCATION (4)
- CONTAMINATED AREA
- TEST PIT LOCATION
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 100 50 0 100 200 300m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

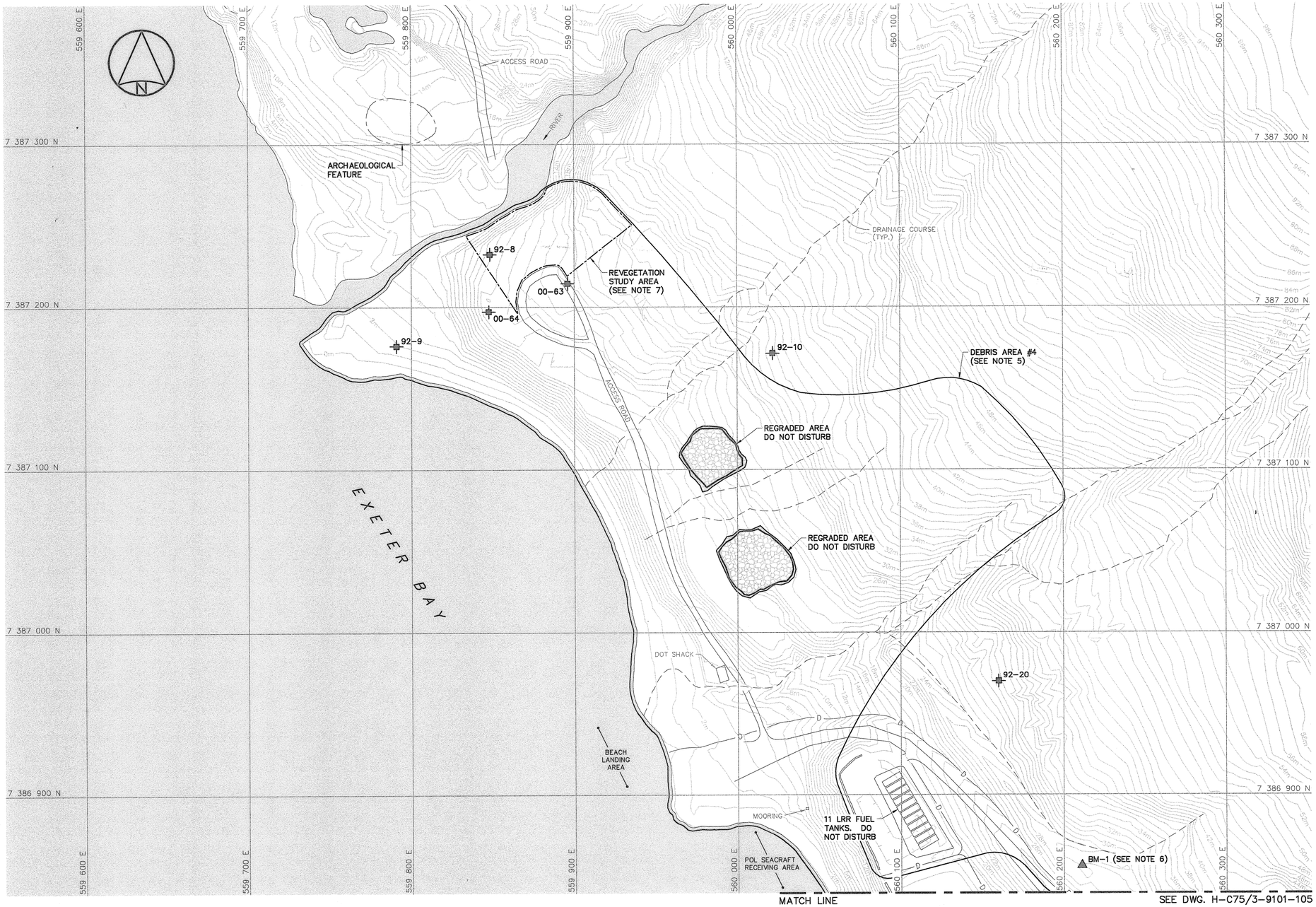
TRADE – METIER	DATE
SITING	2010-12-07

SUBJECT – SUJET
LOWER SITE
STATION AREA
PROJECT LAYOUT

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTH/ TMF		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-103

Canada



National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-102.
6. BM-1 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.
7. ACCESS RESTRICTED TO FOOT TRAFFIC ONLY UNLESS AUTHORIZED BY THE ENGINEER.

Legend:

- BM-1 — PERMANENT BENCHMARK LOCATION (1)
- TEST PIT LOCATION
- TYPE 1 GRANULAR FILL
- BODY OF WATER
- —D— DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

Dec 16/10

AECOM HATCH

SCALE - ECHELLE 20 10 0 20 40 60m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

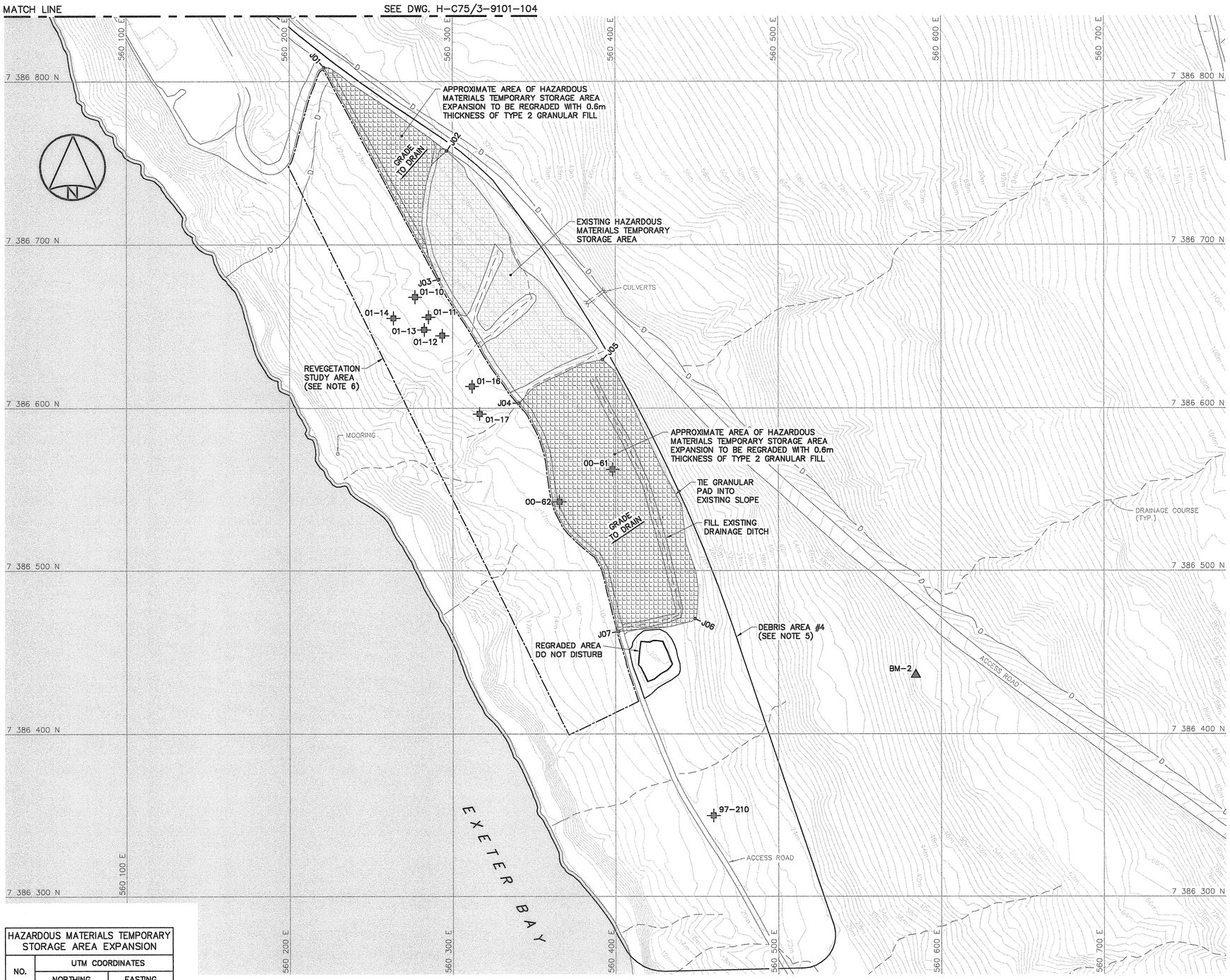
TRADE - METIER	DATE
SITING	2010-12-07

SUBJECT - SUJET
LOWER SITE
BEACH LANDFILL-NORTH AREA
PLAN

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

DWG. NO. - DESSIN NO.
H-C75/3-9101-104

Canada



HAZARDOUS MATERIALS TEMPORARY STORAGE AREA EXPANSION		
NO.	UTM COORDINATES	
	NORTHING	EASTING
J01	7 386 808.6	560 221.1
J02	7 386 757.5	560 296.4
J03	7 386 678.9	560 291.5
J04	7 386 603.1	560 340.7
J05	7 386 629.8	560 392.0
J06	7 386 470.5	560 448.6
J07	7 386 462.6	560 401.8

SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
BM-2	7 386 436.131	560 584.268	56.421	PERMANENT BENCHMARK

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-102.
6. ACCESS RESTRICTED TO FOOT TRAFFIC ONLY UNLESS AUTHORIZED BY THE ENGINEER.

Legend:

- BM-2 — PERMANENT BENCHMARK LOCATION (1)
- J01 — COORDINATE POINT
- TEST PIT LOCATION
- BODY OF WATER
- D — DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

Dec 16/10

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

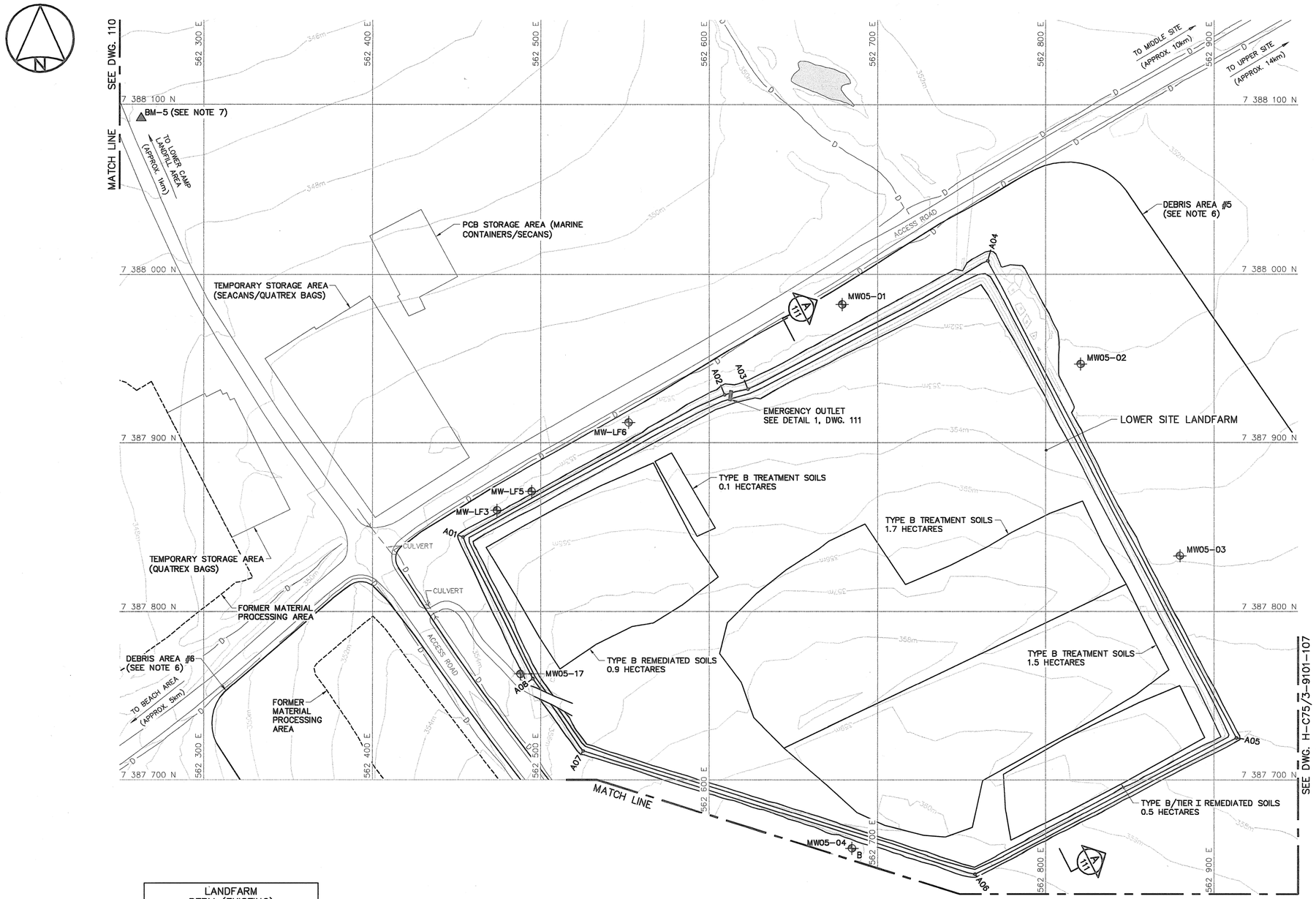
TRADE – METIER: SITING
DATE: 2010-12-07

SUBJECT – SUJET
LOWER SITE
BEACH LANDFILL-SOUTH AREA
PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE DTM/ TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/ CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-105

Canada



LANDFARM BERM (EXISTING)		
NO.	UTM COORDINATES	
	NORTHING	EASTING
A01	7 387 844.5	562 453.8
A02	7 387 928.5	562 609.1
A03	7 387 931.9	562 623.1
A04	7 388 008.1	562 765.6
A05	7 387 724.9	562 913.4
A06	7 387 644.4	562 757.9
A07	7 387 717.2	562 525.2
A08	7 387 760.1	562 495.3

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-103.
7. BM-5 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.

Legend:

- BM-5 — PERMANENT BENCHMARK LOCATION (1)
- A01 — COORDINATE POINT
- MONITORING WELL LOCATION (7)
- B — BACKGROUND MONITORING WELL LOCATION (1)
- BODY OF WATER
- D — DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

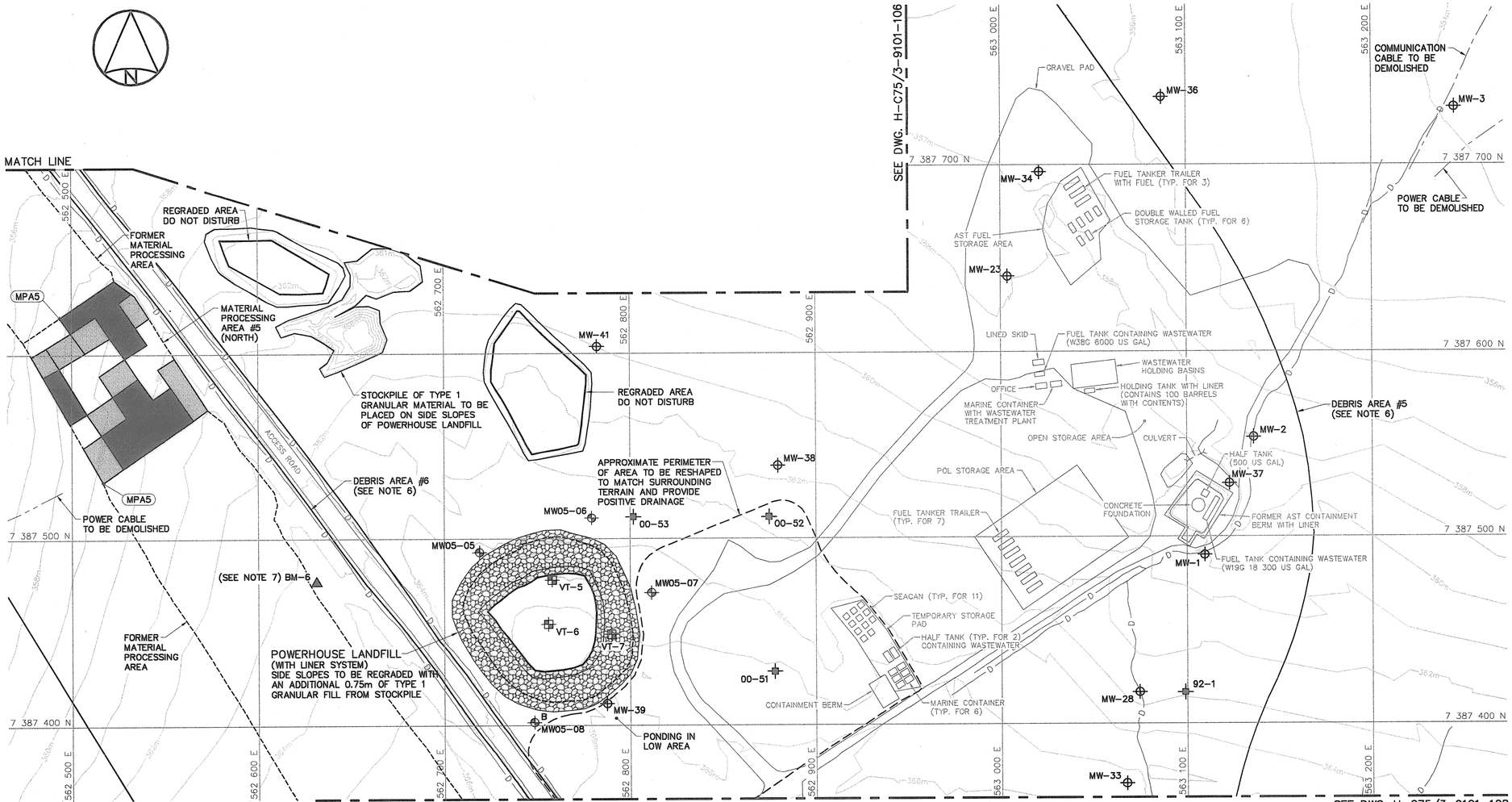
TRADE – METIER: SITING
DATE: 2010-12-07

SUBJECT – SUJET
LOWER SITE
LANDFARM AREA
PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAY/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-106

Canada



CONTAMINATED SOIL TO BE EXCAVATED				
AREA NO.	APPROX. AREA (m^2)	ESTIMATED IN PLACE VOLUME (m^3)	REFERENCE POINT	
			NORTHING	EASTING
DCC TIER I				
MPA5	1747	350	7 387 530.8	562 516.8
DCC TIER II				
MPA5	2303	981	7 387 620.1	562 493.5

NOTE:
DETAILS OF CONTAMINATED SOIL AREAS, INCLUDING COORDINATE POINTS, WILL BE PROVIDED PRIOR TO CONSTRUCTION.

National Défense / Defence nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-103.
7. BM-6 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.

Legend:

- BM-6 — PERMANENT BENCHMARK LOCATION (1)
- DCC TIER I CONTAMINATED SOIL
- DCC TIER II CONTAMINATED SOIL
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- MONITORING WELL LOCATION (3)
- B — BACKGROUND MONITORING WELL LOCATION (1)
- VERTICAL GROUND TEMPERATURE CABLE LOCATION (3)
- D — DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

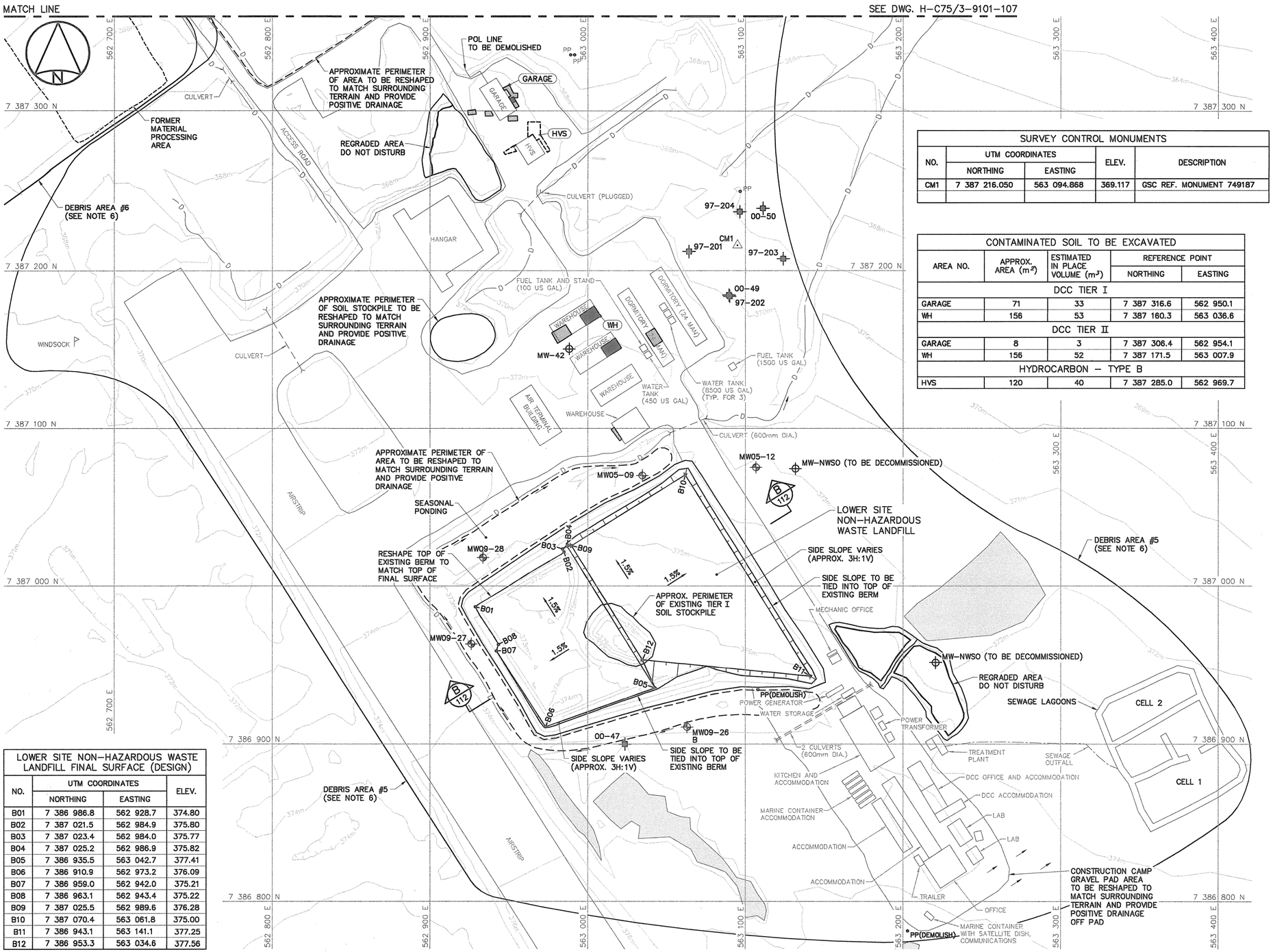
TRADE – METIER: SITING
DATE: 2010-12-07

SUBJECT – SUJET
LOWER SITE
STATION AREA-NORTH
PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-107

Canada



SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM1	7 387 216.050	563 094.868	369.117	GSC REF. MONUMENT 749187

CONTAMINATED SOIL TO BE EXCAVATED				
AREA NO.	APPROX. AREA (m^2)	ESTIMATED IN PLACE VOLUME (m^3)	REFERENCE POINT	
			NORTHING	EASTING
DCC TIER I				
GARAGE	71	33	7 387 316.6	562 950.1
WH	156	53	7 387 160.3	563 036.6
DCC TIER II				
GARAGE	8	3	7 387 306.4	562 954.1
WH	156	52	7 387 171.5	563 007.9
HYDROCARBON – TYPE B				
HVS	120	40	7 387 285.0	562 969.7

LOWER SITE NON-HAZARDOUS WASTE LANDFILL FINAL SURFACE (DESIGN)			
NO.	UTM COORDINATES		ELEV.
	NORTHING	EASTING	
B01	7 386 986.8	562 928.7	374.80
B02	7 387 021.5	562 984.9	375.80
B03	7 387 023.4	562 984.0	375.77
B04	7 387 025.2	562 986.9	375.82
B05	7 386 935.5	563 042.7	377.41
B06	7 386 910.9	562 973.2	376.09
B07	7 386 959.0	562 942.0	375.21
B08	7 386 963.1	562 943.4	375.22
B09	7 387 025.5	562 989.6	376.28
B10	7 387 070.4	563 061.8	375.00
B11	7 386 943.1	563 141.1	377.25
B12	7 386 953.3	563 034.6	377.56

NOTE:
DETAILS OF CONTAMINATED SOIL AREAS, INCLUDING COORDINATE POINTS, WILL BE PROVIDED PRIOR TO CONSTRUCTION.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-103.

Legend:

- CM1 — SURVEY CONTROL MONUMENT
- DCC TIER I CONTAMINATED SOIL
- DCC TIER II CONTAMINATED SOIL
- HYDROCARBON – TYPE B CONTAMINATED SOIL
- B01 — COORDINATE POINT
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- MONITORING WELL LOCATION (4)
- B — BACKGROUND MONITORING WELL LOCATION (1)
- D — DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

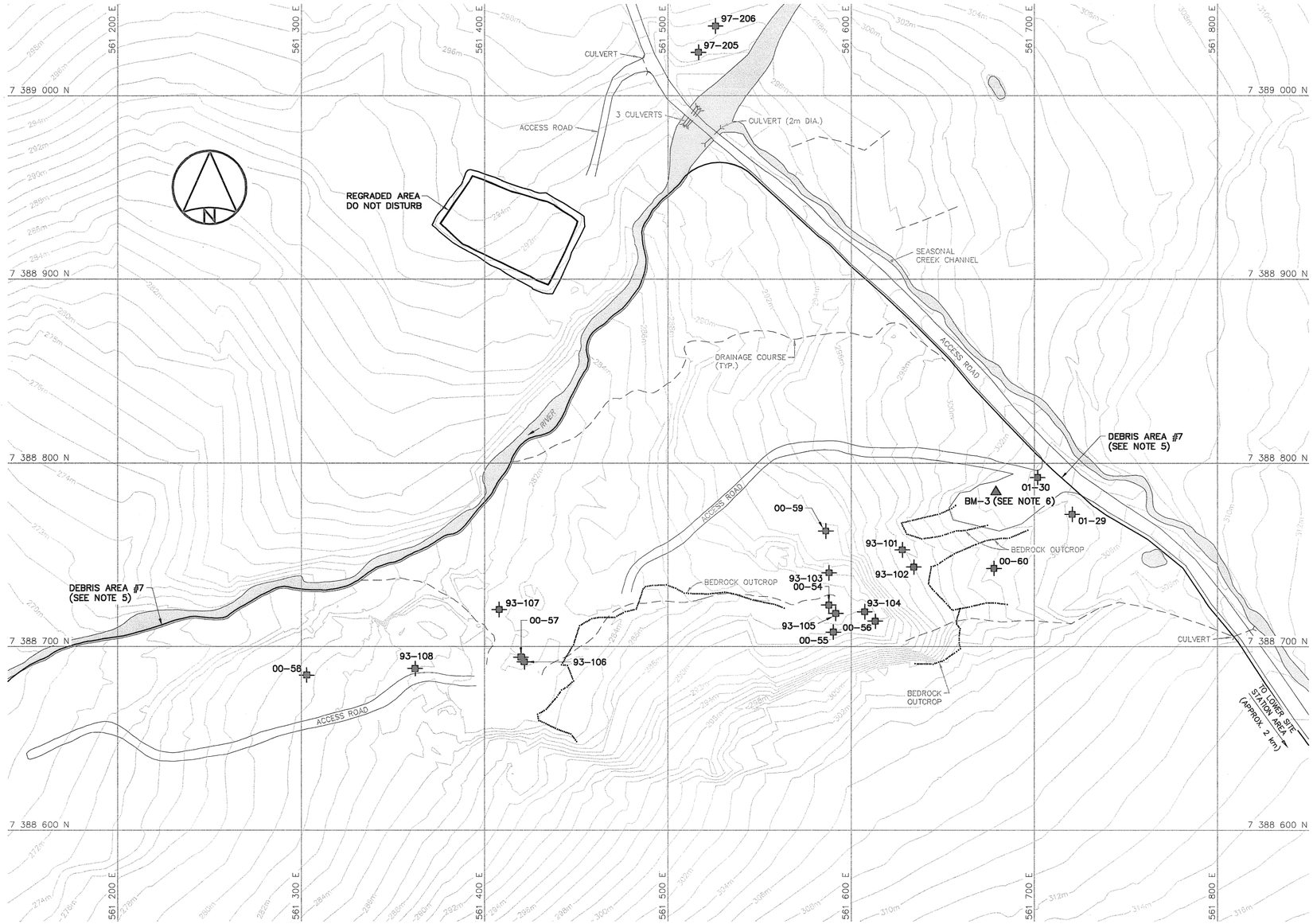
TRADE – METIER	DATE
SITING	2010-12-07

SUBJECT – SUJET
LOWER SITE
STATION AREA
PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED – ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN – DESSINE IC/CME		SECT HD CHEF SECT
CHECKED – VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-108

Canada



National Défense / Defence nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON–HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON–HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219–1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H–C75/3–9101–103.
6. BM–3 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.

Legend:

- BM–3 — PERMANENT BENCHMARK LOCATION (1)
- TEST PIT LOCATION
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

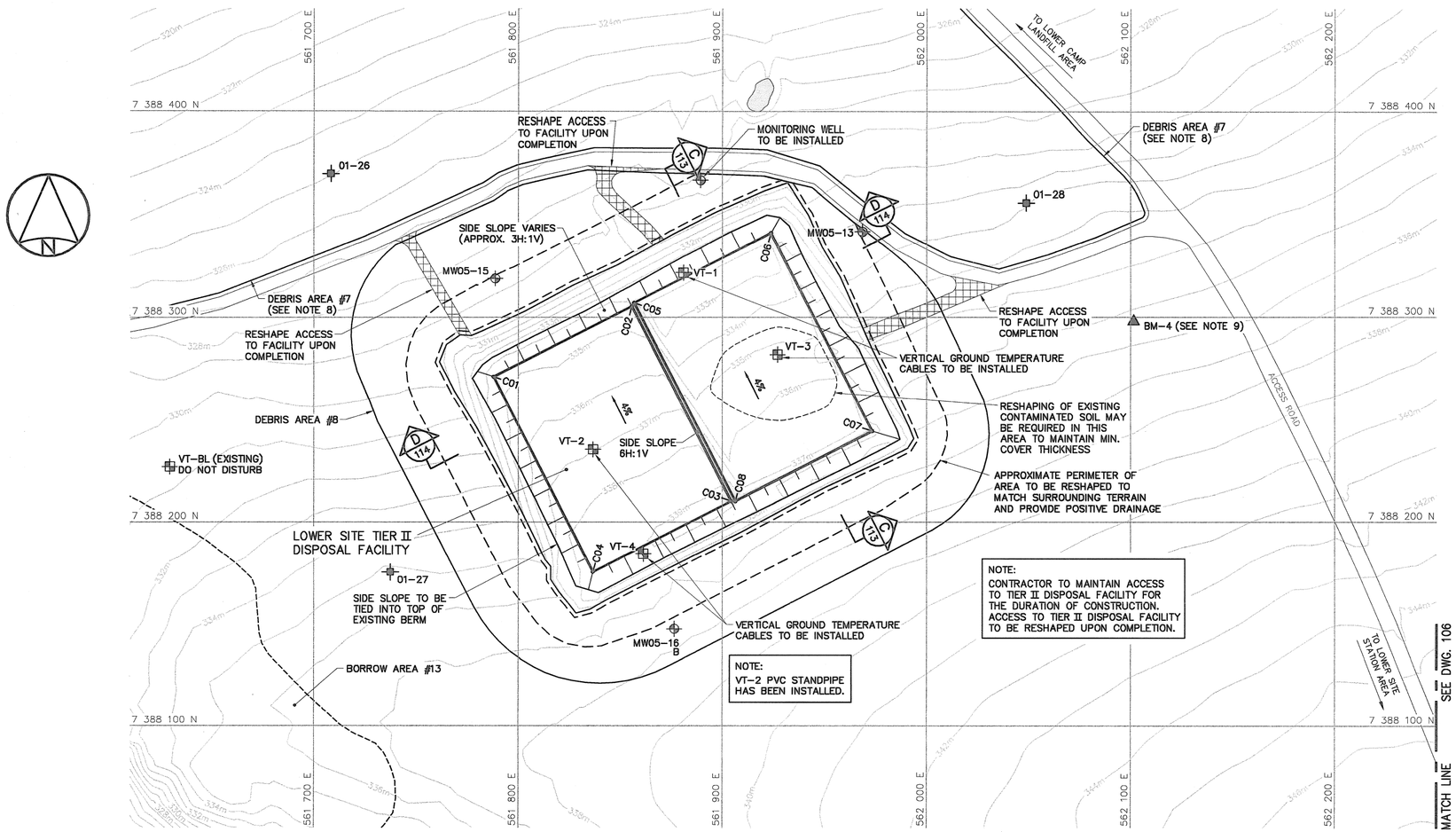
TRADE – METIER	DATE
SITING	2010–12–07

SUBJECT – SUJET
LOWER SITE
LOWER CAMP LANDFILL AREA
PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE DTM/ TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/ CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–109

Canada



LOWER SITE TIER II DISPOSAL FACILITY FINAL SURFACE (DESIGN)			
NO.	UTM COORDINATES		ELEV.
	NORTHING	EASTING	
C01	7 388 270.8	561 788.0	337.16
C02	7 388 305.4	561 855.7	337.16
C03	7 388 210.1	561 904.4	341.44
C04	7 388 175.5	561 836.7	341.44
C05	7 388 307.1	561 856.8	336.82
C06	7 388 341.3	561 923.8	336.82
C07	7 388 244.2	561 973.4	341.18
C08	7 388 210.0	561 906.4	341.18

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN LOWER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR MONITORING WELL INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.
7. FOR VERTICAL GROUND TEMPERATURE CABLE INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-190. EXACT LOCATIONS TO BE FIELD DETERMINED BY THE ENGINEER.
8. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-103.
9. BM-4 TO BE TIED INTO SITE SURVEY COORDINATE SYSTEM.

Legend:

- BM-4 — PERMANENT BENCHMARK LOCATION (1)
- C01 — COORDINATE POINT
- TEST PIT LOCATION
- MONITORING WELL LOCATION (3)
- B — BACKGROUND MONITORING WELL LOCATION (1)
- VERTICAL GROUND TEMPERATURE CABLE LOCATION (5)
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P839
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE - ECHELLE 20 10 0 20 40 60m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

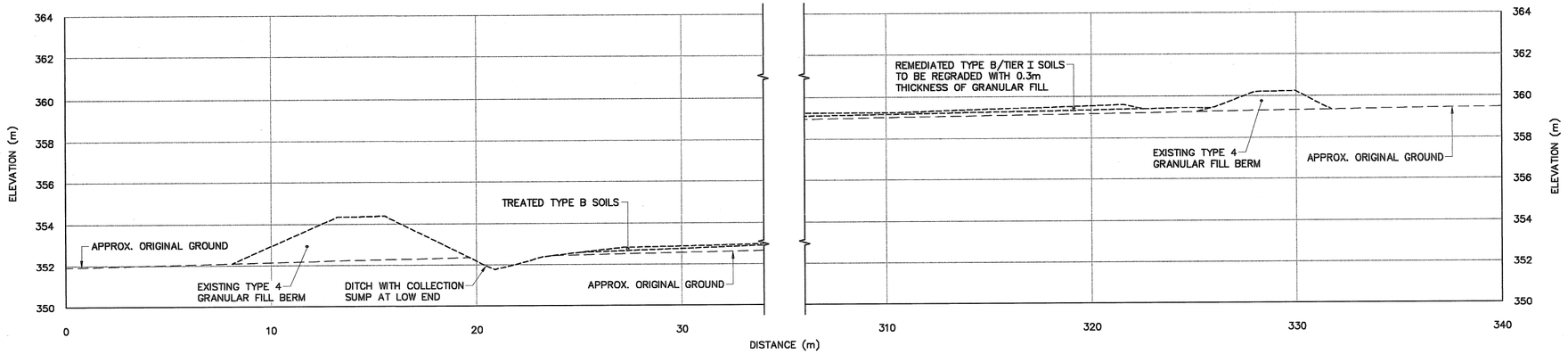
TRADE - METIER: SITING
DATE: 2010-12-07

SUBJECT - SUJET
LOWER SITE
TIER II DISPOSAL FACILITY AREA
PLAN

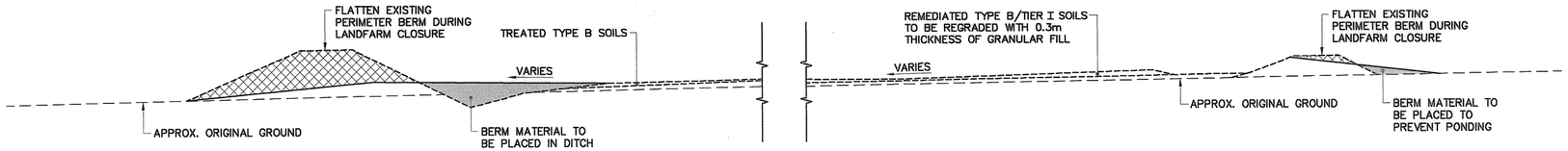
PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE DTAL/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE DWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

DWG. NO. - DESSIN NO.
H-C75/3-9101-110

Canada



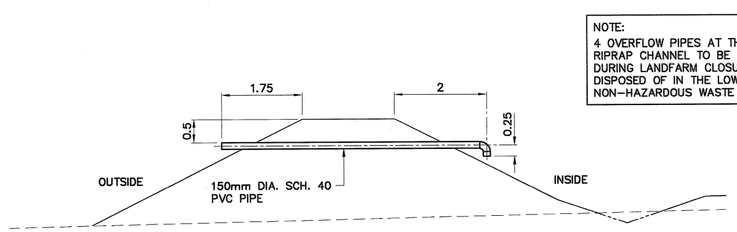
SECTION A 106



TYPICAL LANDFARM CLOSURE DETAIL

SCALE: NTS

NOTE:
4 OVERFLOW PIPES AT THE ORIGINAL RIPRAP CHANNEL TO BE REMOVED DURING LANDFARM CLOSURE AND DISPOSED OF IN THE LOWER SITE NON-HAZARDOUS WASTE LANDFILL.



SECTION

DETAIL 1 106

SCALE: NTS

EMERGENCY OUTLET

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

Legend:

- DESIGN REQUIREMENTS TO BE CONSTRUCTED
- GENERATED BASED ON EXISTING SURVEY INFORMATION
- GENERATED BASED ON ORIGINAL SURVEY INFORMATION

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

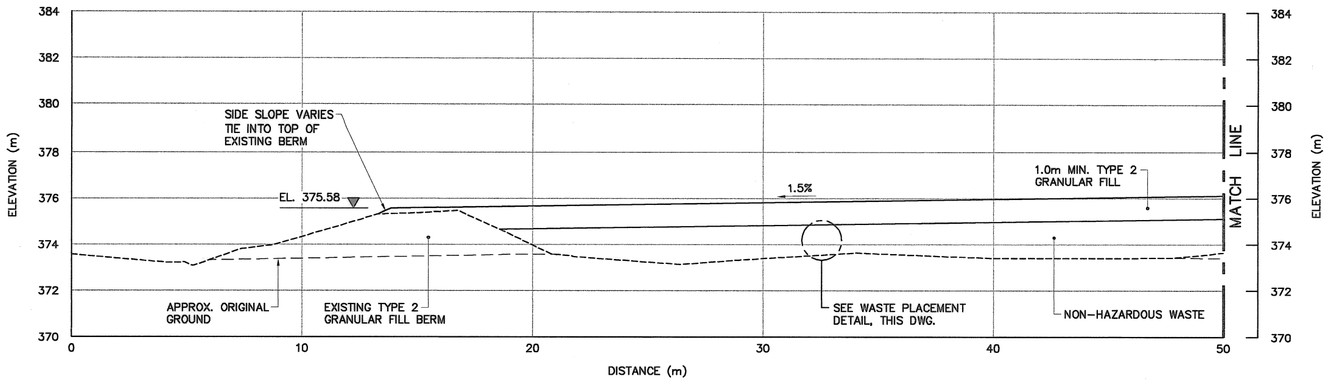
TRADE – METIER	DATE
SITING	2010–12–07

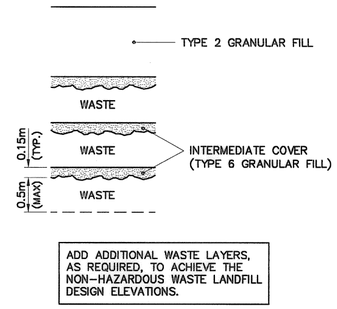
SUBJECT – SUJET
LOWER SITE
LANDFARM CROSS SECTION
AND CLOSURE DETAIL

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION KRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–111

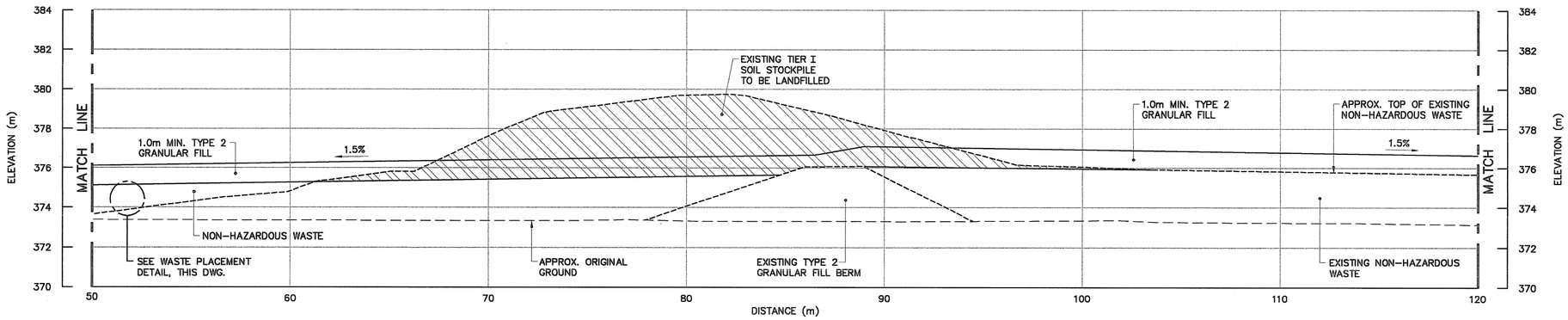
Canada

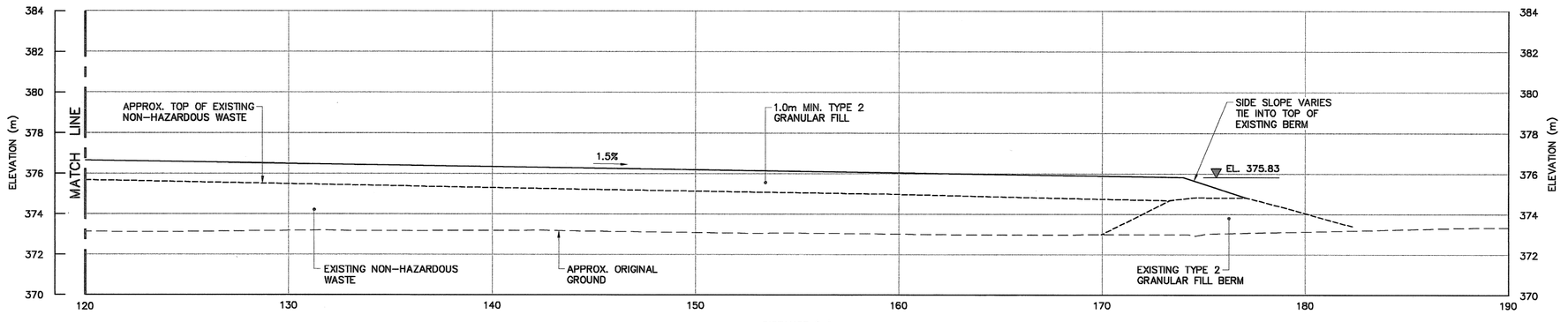




WASTE PLACEMENT DETAIL

SCALE: NTS





SECTION B 108

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. USE STOCKPILED TIER I SOIL FOR INTERMEDIATE COVER AS REQUIRED.
4. DURING THE COURSE OF WASTE PLACEMENT, UTILIZE ENTIRE FLOOR OF LANDFILL AND MAINTAIN A LEVEL WASTE LAYER. PLACE WASTE LAYERS IN PROGRESSIVE HORIZONTAL LIFTS THAT EXTEND ACROSS THE ENTIRE LANDFILL FLOOR.

Legend:

- DESIGN REQUIREMENTS TO BE CONSTRUCTED
- GENERATED BASED ON EXISTING SURVEY INFORMATION
- GENERATED BASED ON ORIGINAL SURVEY INFORMATION

National Defence / Défense nationale

Headquarters
Quartier général

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

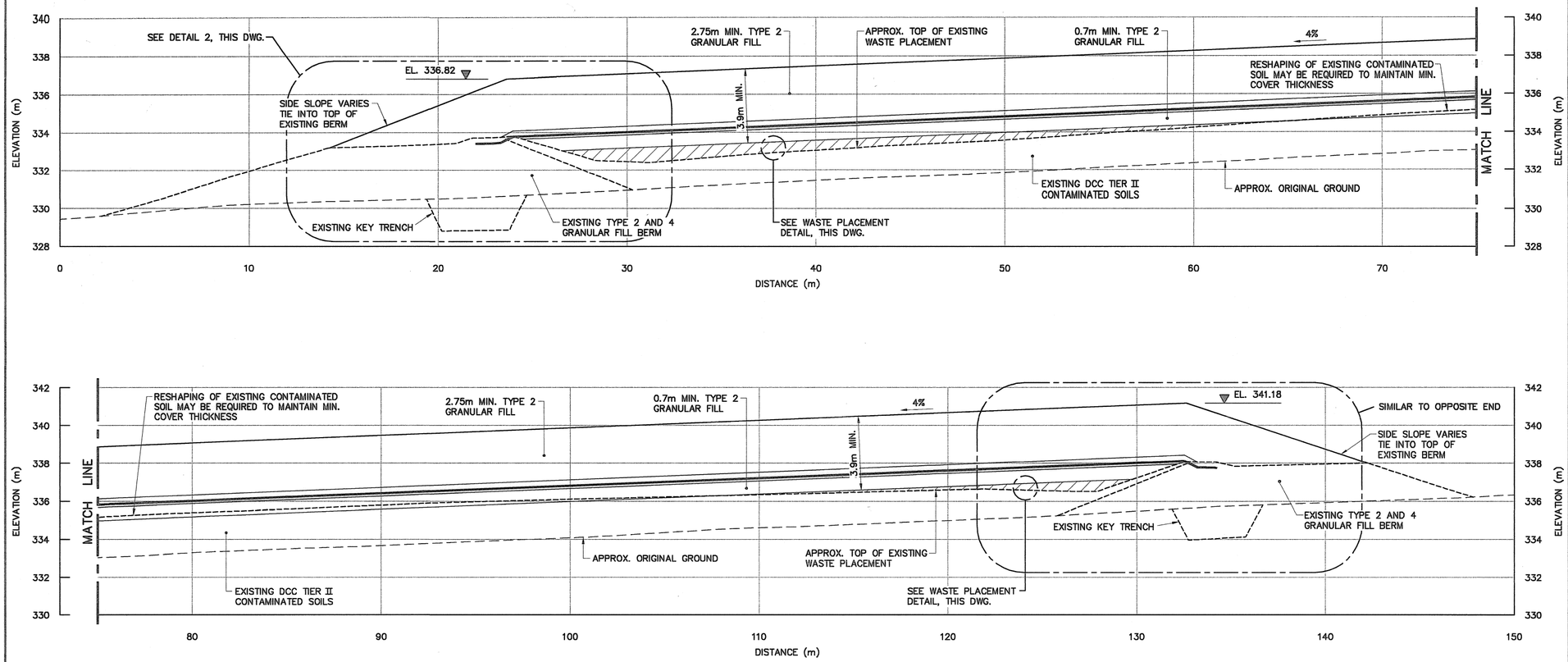
TRADE – METIER	DATE
SITING	2010–12–07

SUBJECT – SUJET
LOWER SITE
NON–HAZARDOUS WASTE LANDFILL
CROSS SECTION

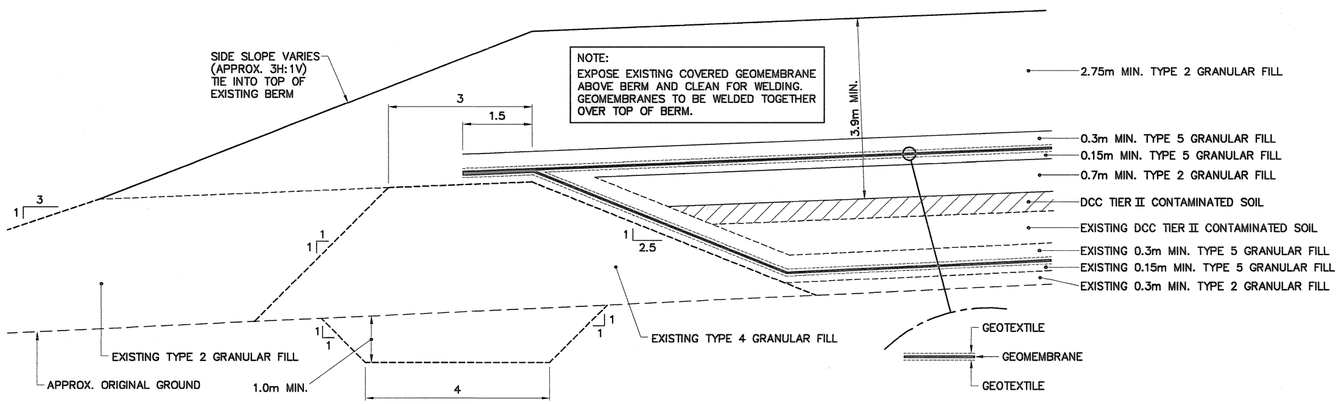
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED – ETUDIE DTAL/TME		DES OFF – AGENT CONCEPT
DRAWN – DESSINE IC/CAE		SECT HD – CHEF SECT
CHECKED – VERIFIE DWF		DES MGR – GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–112

Canada

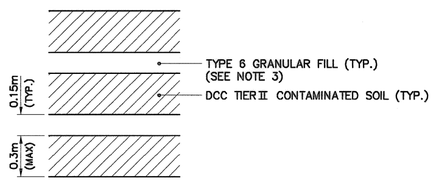


SECTION C 110



DETAIL 2 113,114
SCALE: NTS

ADD ADDITIONAL TIER II LAYERS, AS REQUIRED, TO ACHIEVE THE TIER II DISPOSAL FACILITY DESIGN ELEVATIONS.



WASTE PLACEMENT DETAIL
SCALE: NTS

National Défense / Defence nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. TYPE 6 INTERMEDIATE FILL ONLY REQUIRED FOR LANDFILLING OF ORGANIC OR WET SOILS, AS DIRECTED BY THE ENGINEER.

Legend:

- DESIGN REQUIREMENTS TO BE CONSTRUCTED
- GENERATED BASED ON EXISTING SURVEY INFORMATION
- GENERATED BASED ON ORIGINAL SURVEY INFORMATION

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

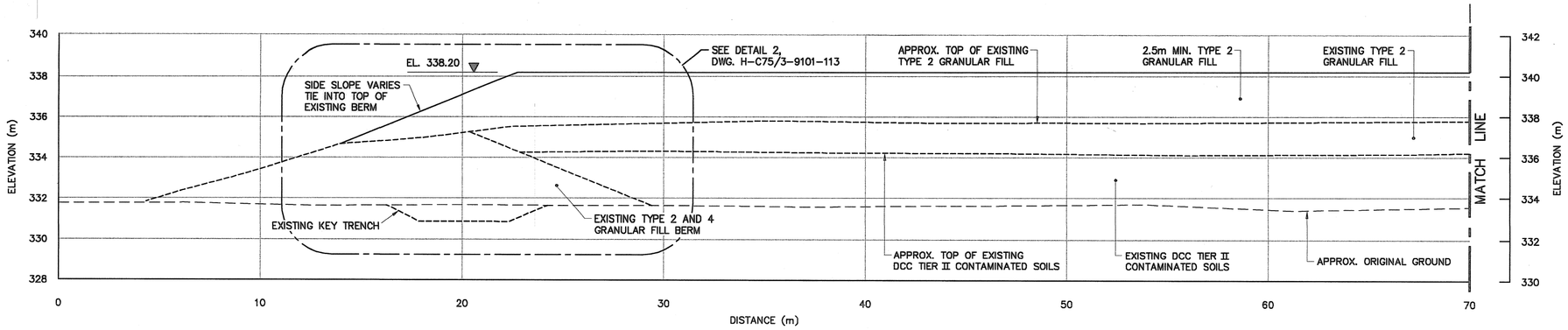
TRADE – METIER	DATE
SITING	2010–12–07

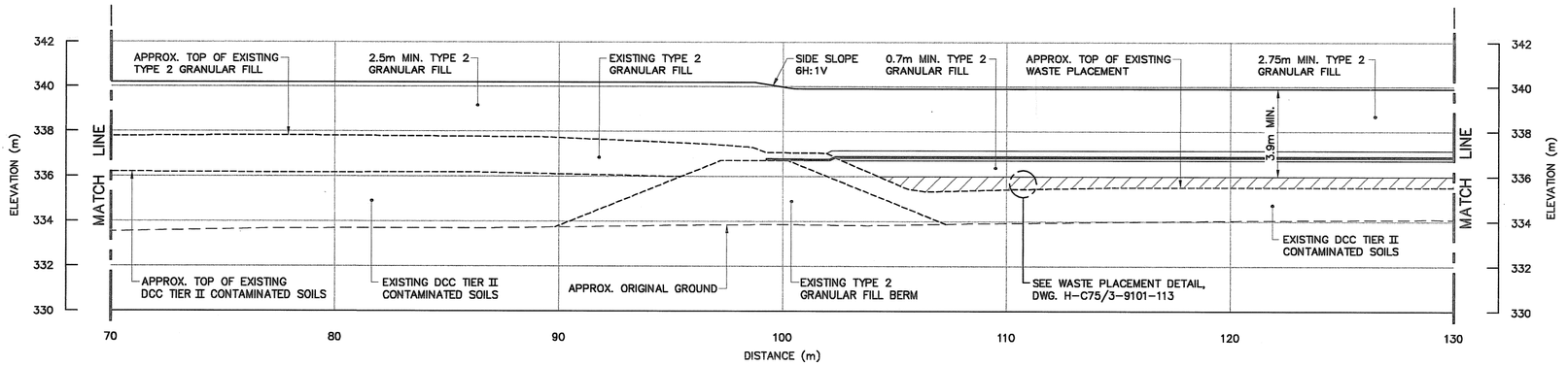
SUBJECT – SUJET
LOWER SITE
TIER II DISPOSAL FACILITY
CROSS SECTION SHEET 1

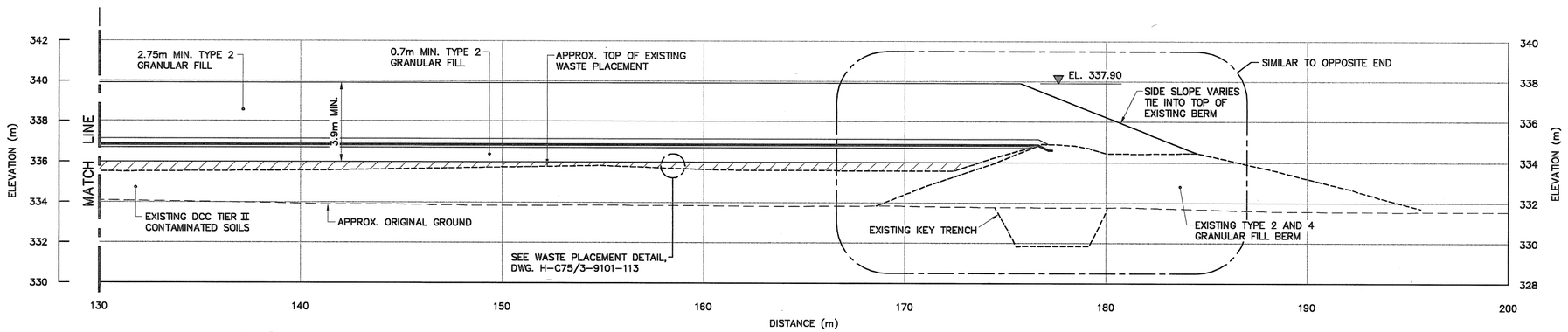
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAL/ THE		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–113

Canada







SECTION D 110

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. PROTECT GEOMEMBRANE LINERS DURING CONSTRUCTION.

Legend:

- DESIGN REQUIREMENTS TO BE CONSTRUCTED
- GENERATED BASED ON EXISTING SURVEY INFORMATION
- GENERATED BASED ON ORIGINAL SURVEY INFORMATION

No.	DATE	REVISION	REVISION	APPR.

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NWT/NU Association of Professional Engineers and Geoscientists

Dec 16/10

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

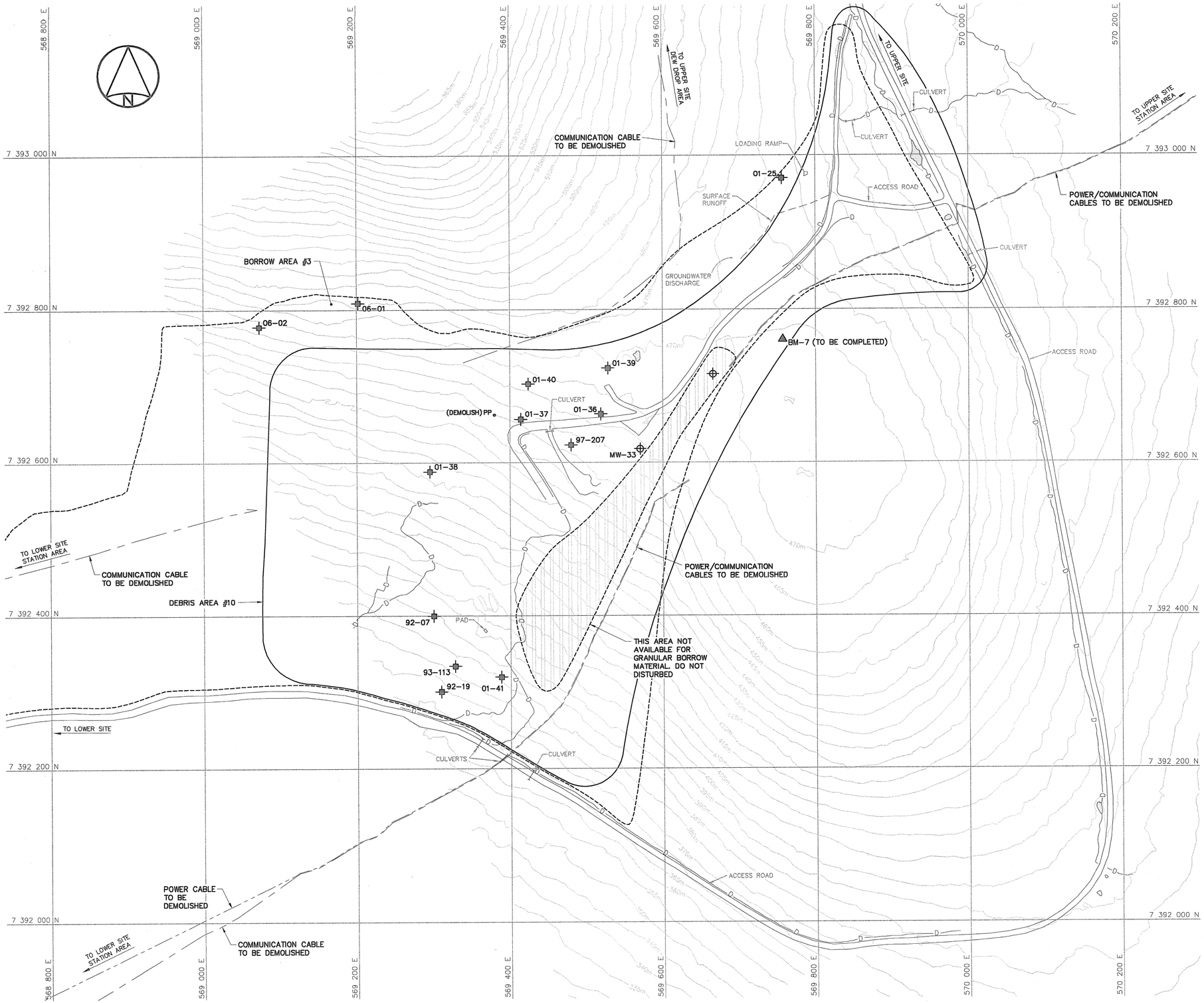
TRADE – METIER	DATE
SITING	2010–12–07

SUBJECT – SUJET
LOWER SITE
TIER II DISPOSAL FACILITY
CROSS SECTION SHEET 2

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–114

Canada



National Défense / Defence nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN UPPER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. FOR PERMANENT SURVEY CONTROL (BENCHMARK) INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.

Legend:

- BM-7 — PERMANENT BENCHMARK LOCATION (1)
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- BODY OF WATER
- D — DITCH

No.	DATE	REVISION	REVISION	APPR.

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Dec 16/10

AECOM HATCH

SCALE - ECHELLE 40 20 0 40 80 120m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE - METIER	DATE
SITING	2010-12-07

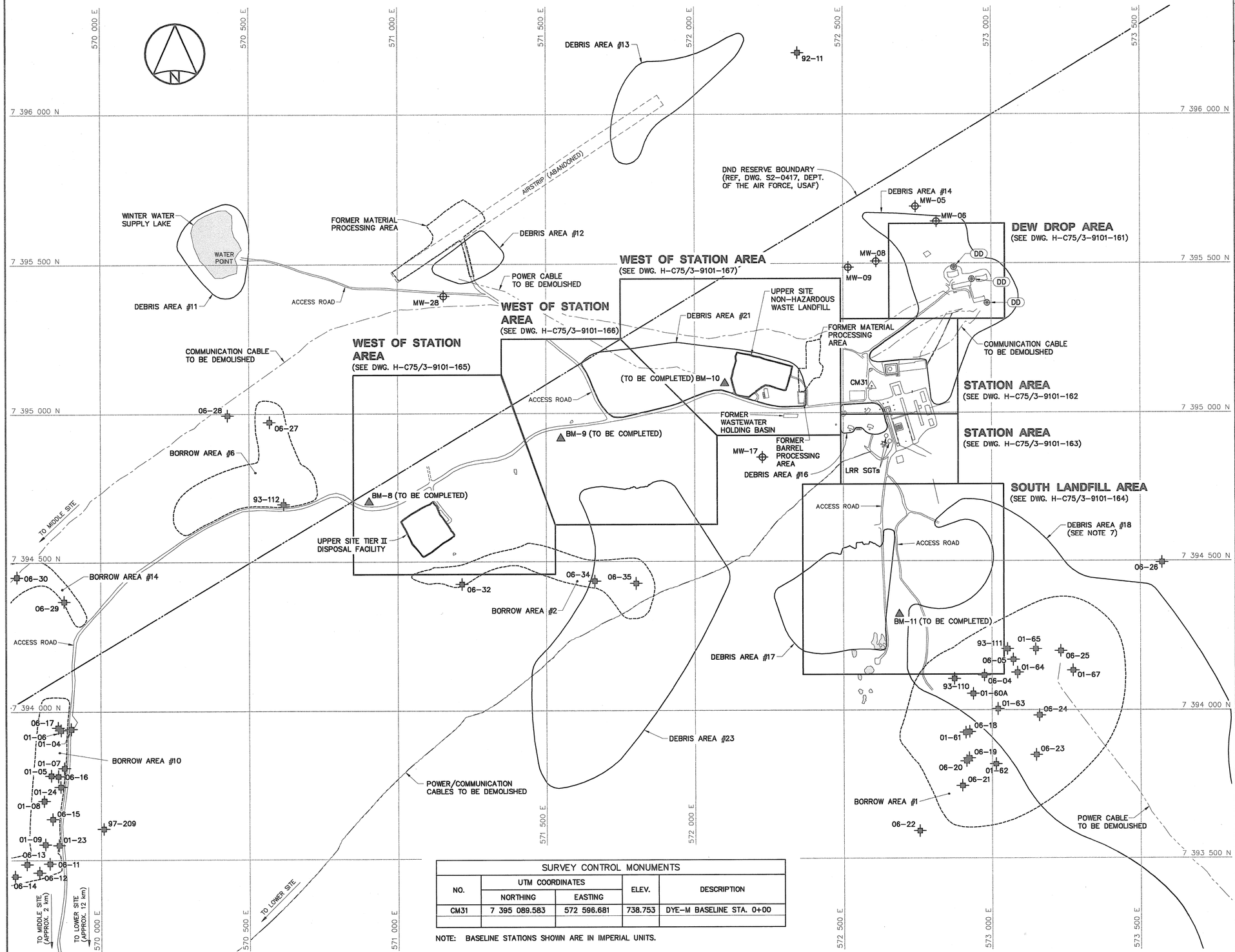
SUBJECT - SUJET

MIDDLE SITE
SITE PLAN

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

DWG. NO. - DESSIN NO.
H-C75/3-9101-150

Canada



SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM31	7 395 089.583	572 596.681	738.753	DYE-M BASELINE STA. 0+00

NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.

National Defence / Défense nationale

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Quartier général

General Notes:

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2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN UPPER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. SEE DWGS. H-C75/3-9101-202 AND 203 FOR ADDITIONAL DETAILS.
6. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
7. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-101.

Legend:

- CM31 — SURVEY CONTROL MONUMENT
- BM-8 — PERMANENT BENCHMARK LOCATION (4)
- CONTAMINATED AREA
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

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AECOM HATCH

SCALE – ECHELLE 100 50 0 100 200 300m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER	DATE
SITING	2010-12-07

SUBJECT – SUJET

UPPER SITE
PROJECT LAYOUT

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-160

Canada

CONTAMINATED SOIL TO BE EXCAVATED				
AREA NO.	APPROX. AREA (m^2)	ESTIMATED IN PLACE VOLUME (m^3)	REFERENCE POINT	
			NORTHING	EASTING
DCC TIER I				
DD	849	301	7 395 369.5	572 994.3
DCC TIER II				
DD	2975	929	7 395 428.2	572 961.2
HYDROCARBON – TYPE B				
DD	2355	1809	7 395 396.8	572 846.0
HAZARDOUS				
DD	16	3	7 395 370.2	572 945.8

NOTE:
DETAILS OF CONTAMINATED SOIL AREAS, AS WELL AS THE FINAL GRADING DESIGN FOR THE "REDIRECT DRAINAGE AREA", INCLUDING COORDINATE POINTS, WILL BE PROVIDED PRIOR TO CONSTRUCTION.

NOTE:
LARGE BOULDERS ARE PRESENT ON THE SURFACE IN THIS AREA AND MAY ALSO BE ENCOUNTERED DURING EXCAVATION.

572 700 E
572 750 E
572 800 E
572 850 E
572 900 E
572 950 E
573 000 E
7 395 600 N
7 395 550 N
7 395 500 N
7 395 450 N
7 395 400 N
7 395 350 N
MW-07
MW-03
MW-01
MW-02
MW-10
MW-11
00-44
00-43
00-42
PAD
DEBRIS AREA #14 (SEE NOTE 6)
DD
FOLLOWING EXCAVATION REDIRECT DRAINAGE
DRAINAGE COURSE
POWER AND EQUIPMENT BUILDING
CONCRETE PAD
LARGE COMMUNICATION BILLBOARD
SWITCHING CENTRE AND COMMUNICATION BUILDING
ACCESS ROAD
COMMUNICATION CABLE TO BE DEMOLISHED
POL LINE TO BE DEMOLISHED
POWER CONDUIT TO BE DEMOLISHED
COMMUNICATION CABLES TO BE DEMOLISHED
PP
MATCH LINE
SEE DWG. H-C75/3-9101-162

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN UPPER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-160.

Legend:

- DCC TIER I CONTAMINATED SOIL
- DCC TIER II CONTAMINATED SOIL
- HYDROCARBON – TYPE B CONTAMINATED SOIL
- HAZARDOUS CONTAMINATED SOIL
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION

National Defence / Défense nationale

Headquarters
Quartier général

No.	DATE	REVISION	REVISION	APPR.

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AECOM HATCH

SCALE – ECHELLE 10 5 0 10 20 30m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER	DATE
SITING	2010-12-07

SUBJECT – SUJET
UPPER SITE
DEW DROP AREA
PLAN

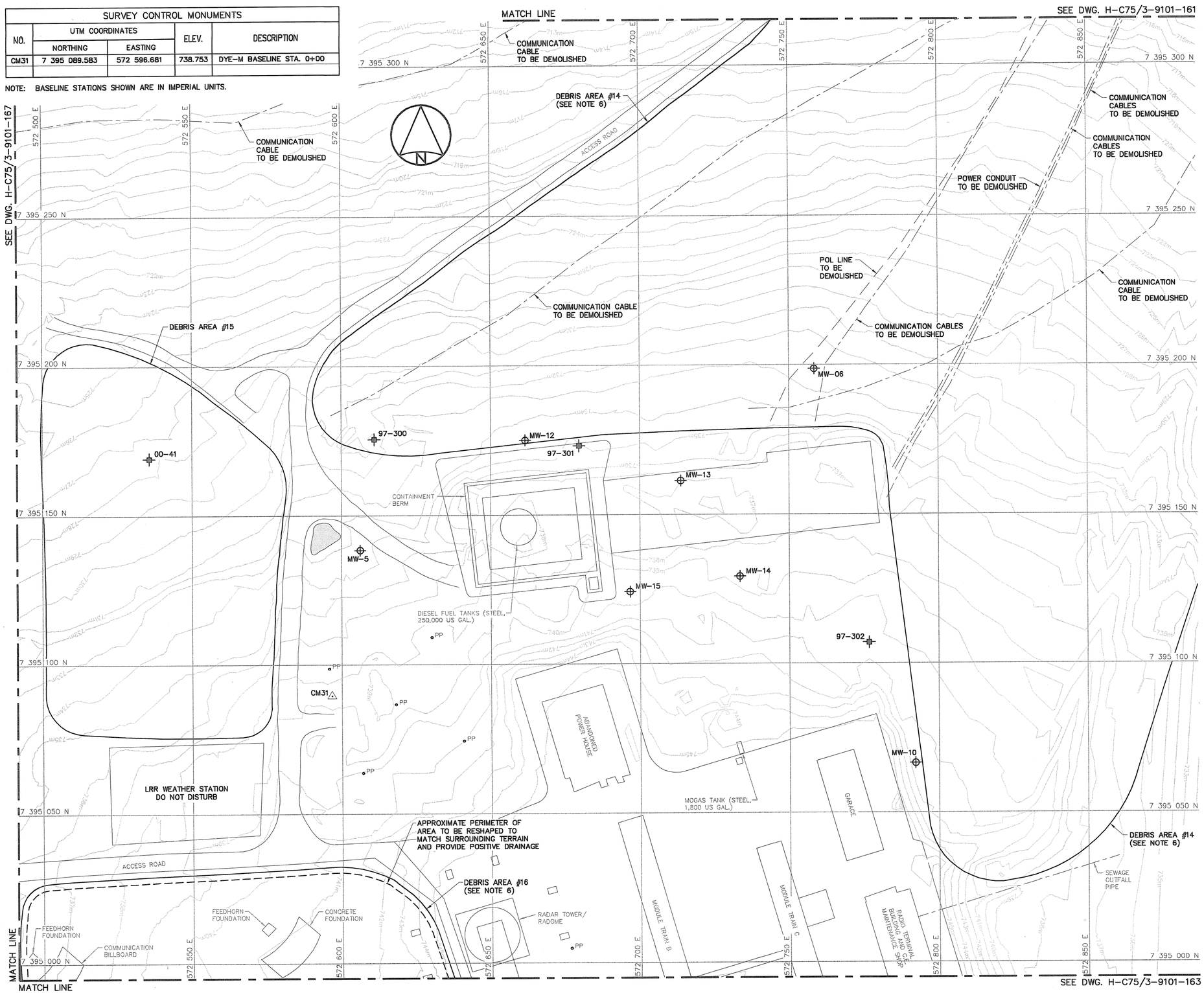
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAS/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-161

Canada

SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM31	7 395 089.583	572 596.681	738.753	DYE–M BASELINE STA. 0+00

NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.



National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

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4. REFER TO TABLE 02219–1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. SEE DWGS. H–C75/3–9101–202 AND 203 FOR ADDITIONAL DETAILS.
6. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H–C75/3–9101–160.

Legend:

- CM31 — SURVEY CONTROL MONUMENT
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

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Date
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NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 10 5 0 10 20 30m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

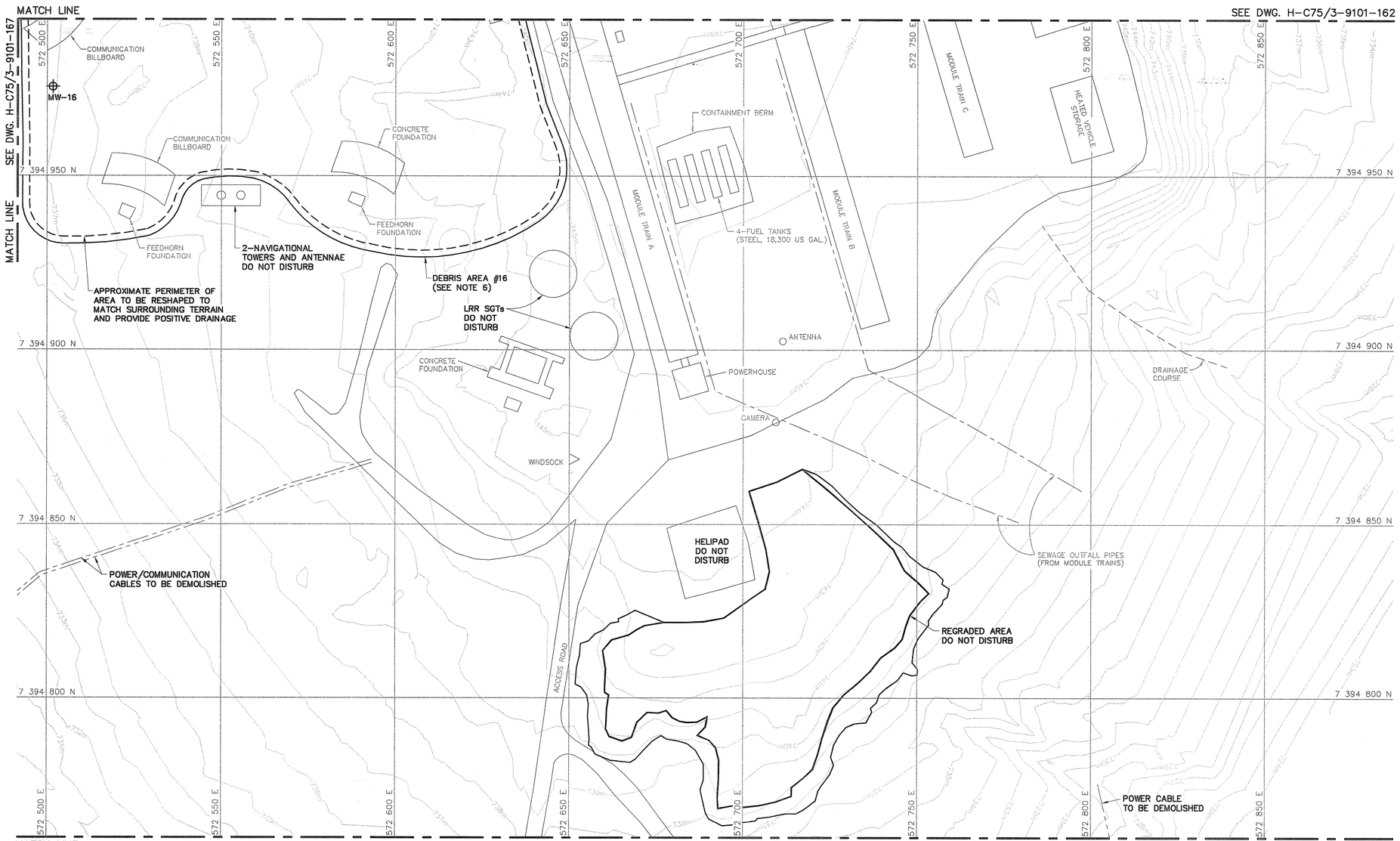
TRADE – METIER	DATE
SITING	2010–12–07

SUBJECT – SUJET
UPPER SITE
STATION AREA
PLAN SHEET 1

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTH/ THE		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION IRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–162

Canada



National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
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5. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. SEE DWGS. H-C75/3-9101-202 AND 203 FOR ADDITIONAL DETAILS.
6. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-160.

Legend:

⊕ SITE INVESTIGATION MONITORING WELL LOCATION

No.	DATE	REVISION	REVISION	APPR.

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AECOM HATCH

SCALE - ECHELLE 10 5 0 10 20 30m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

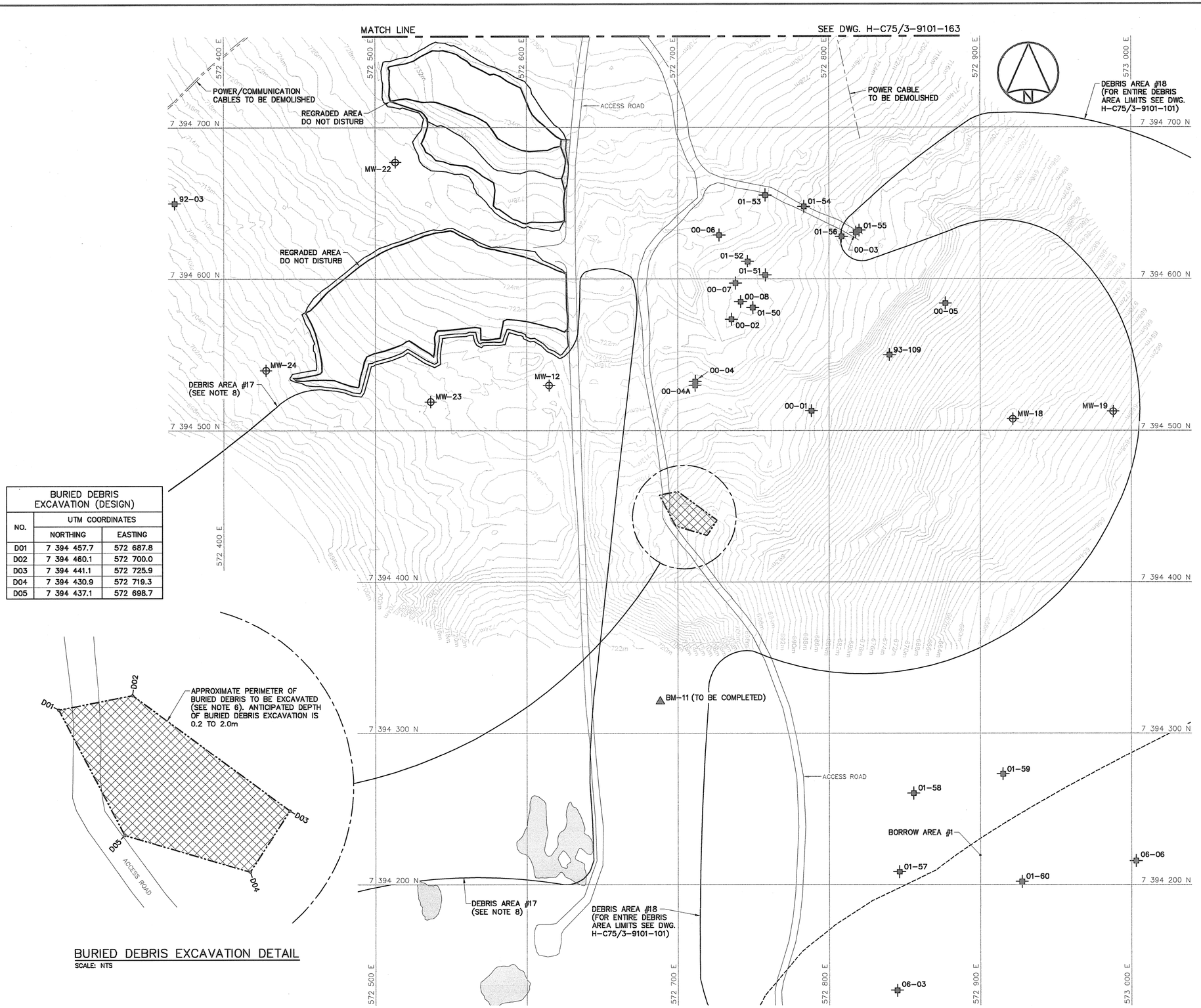
TRADE - METIER	DATE
SITING	2010-12-07

SUBJECT - SUJET
UPPER SITE
STATION AREA
PLAN
SHEET 2

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED / ETUDIE DTM/ TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/ CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

DWG. NO. - DESSIN NO.
H-C75/3-9101-163

Canada



BURIED DEBRIS EXCAVATION (DESIGN)		
NO.	UTM COORDINATES	
	NORTHING	EASTING
D01	7 394 457.7	572 687.8
D02	7 394 460.1	572 700.0
D03	7 394 441.1	572 725.9
D04	7 394 430.9	572 719.3
D05	7 394 437.1	572 698.7

BURIED DEBRIS EXCAVATION DETAIL

SCALE: NTS

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

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2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN UPPER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. DEPTH OF BURIED DEBRIS EXCAVATION TO EXTEND TO THE BASE OF THE DEBRIS. LIMIT AND DEPTH OF BURIED DEBRIS EXCAVATION TO BE FIELD VERIFIED BY CONFIRMATORY TESTING AND EXCAVATION OF TESTPITS.
7. FOR PERMANENT SURVEY CONTROL (BENCHMARK) INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.
8. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-160.

Legend:

- BM-11 — PERMANENT BENCHMARK LOCATION (1)
- D01 — COORDINATE POINT
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- BURIED DEBRIS EXCAVATION AREA
- TYPE 1 GRANULAR FILL
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

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AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

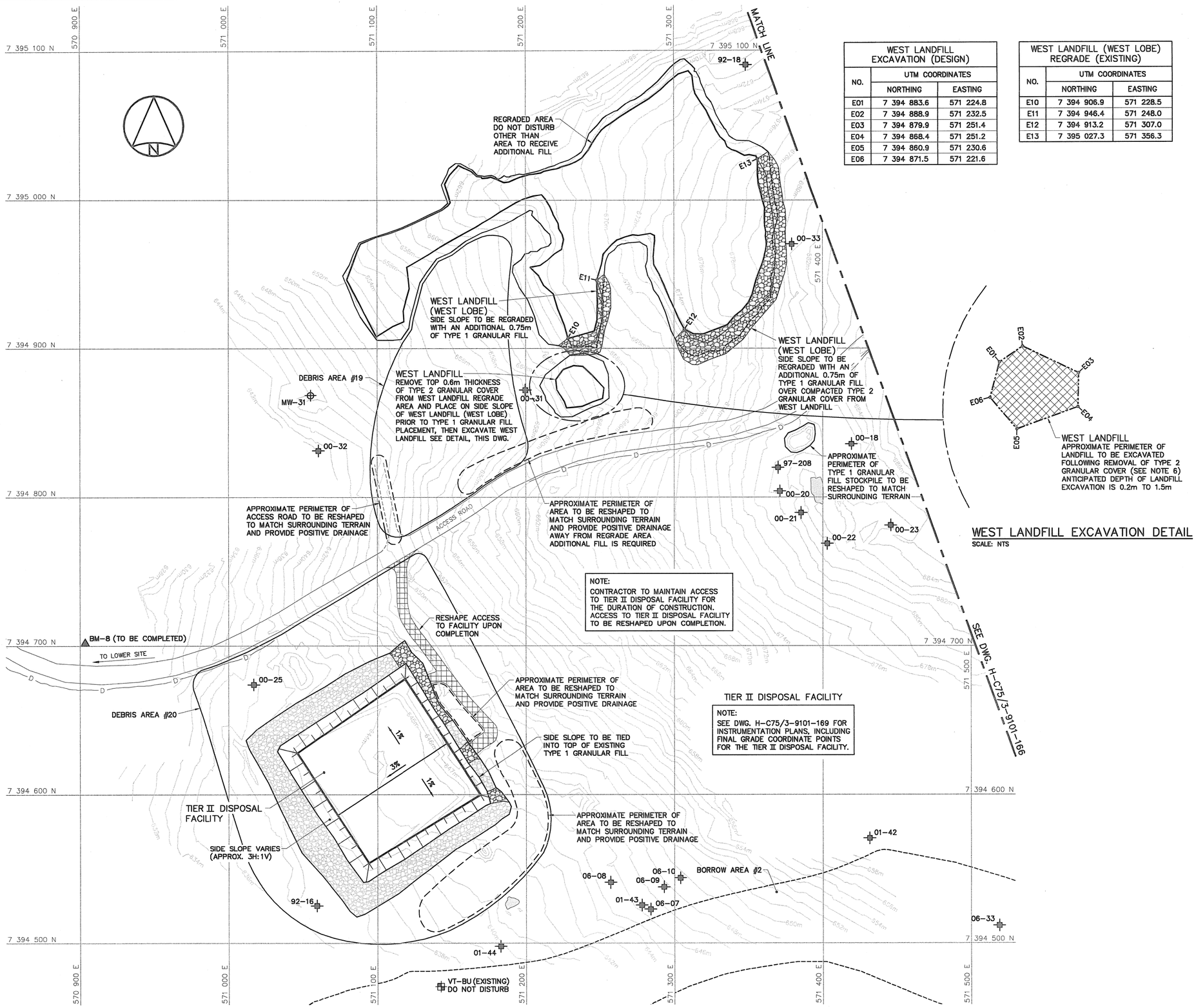
TRADE – METIER: SITING
DATE: 2010-12-07

SUBJECT – SUJET
UPPER SITE
SOUTH LANDFILL AREA
PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DYM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-164

Canada



WEST LANDFILL EXCAVATION DETAIL

SCALE: NTS

WEST LANDFILL EXCAVATION (DESIGN)		
NO.	UTM COORDINATES	
	NORTHING	EASTING
E01	7 394 883.6	571 224.8
E02	7 394 888.9	571 232.5
E03	7 394 879.9	571 251.4
E04	7 394 868.4	571 251.2
E05	7 394 860.9	571 230.6
E06	7 394 871.5	571 221.6

WEST LANDFILL (WEST LOBE) REGRADE (EXISTING)		
NO.	UTM COORDINATES	
	NORTHING	EASTING
E10	7 394 906.9	571 228.5
E11	7 394 946.4	571 248.0
E12	7 394 913.2	571 307.0
E13	7 395 027.3	571 356.3

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

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4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. DEPTH OF LANDFILL EXCAVATION TO EXTEND TO THE BASE OF THE DEBRIS. LIMIT AND DEPTH OF LANDFILL EXCAVATION TO BE FIELD VERIFIED BY CONFIRMATORY TESTING AND EXCAVATION OF TESTPITS.
7. FOR PERMANENT SURVEY CONTROL (BENCHMARK) INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.

Legend:

- BM-8 — PERMANENT BENCHMARK LOCATION (1)
- E01 — COORDINATE POINT
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- VERTICAL GROUND TEMPERATURE CABLE LOCATION (1)
- LANDFILL EXCAVATION AREA
- TYPE 1 GRANULAR FILL
- D — DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
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Date
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AECOM HATCH

SCALE - ECHELLE 20 10 0 20 40 60m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

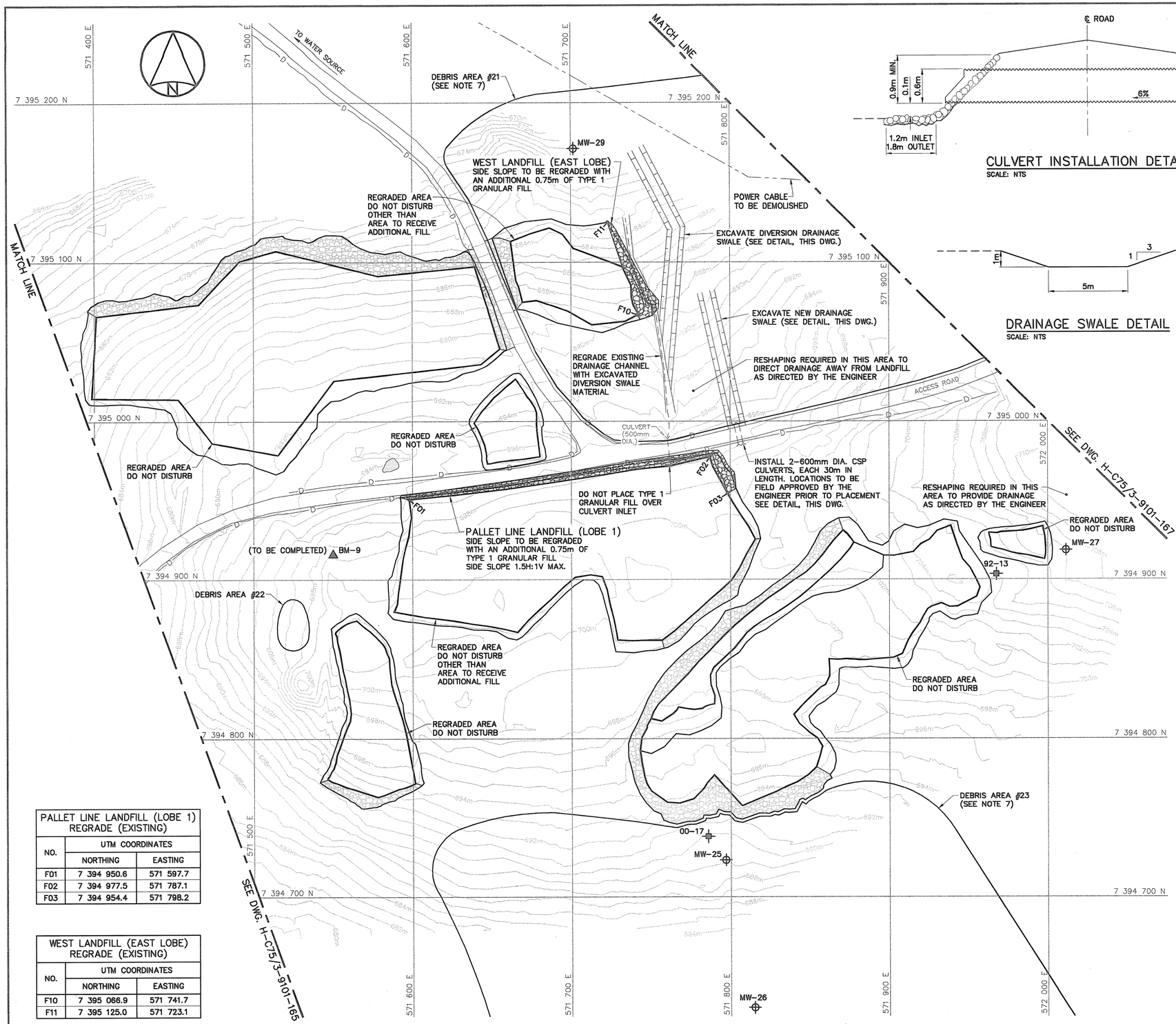
TRADE - METIER	DATE
SITING	2010-12-07

SUBJECT - SUJET
UPPER SITE
WEST OF STATION AREA
PLAN SHEET 1

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE DTM/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

DWG. NO. - DESSIN NO.
H-C75/3-9101-165

Canada



CULVERT INSTALLATION DETAIL

SCALE: NTS

DRAINAGE SWALE DETAIL

SCALE: NTS

PALLET LINE LANDFILL (LOBE 1) REGRADE (EXISTING)		
NO.	UTM COORDINATES	
	NORTHING	EASTING
F01	7 394 950.6	571 597.7
F02	7 394 977.5	571 787.1
F03	7 394 954.4	571 798.2

WEST LANDFILL (EAST LOBE) REGRADE (EXISTING)		
NO.	UTM COORDINATES	
	NORTHING	EASTING
F10	7 395 066.9	571 741.7
F11	7 395 125.0	571 723.1

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Quartier général

General Notes:

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4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR PERMANENT SURVEY CONTROL (BENCHMARK) INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.
7. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-160.

Legend:

- BM-9 — PERMANENT BENCHMARK LOCATION (1)
- F01 — COORDINATE POINT
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- TYPE 1 GRANULAR FILL
- —D— DITCH

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
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Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

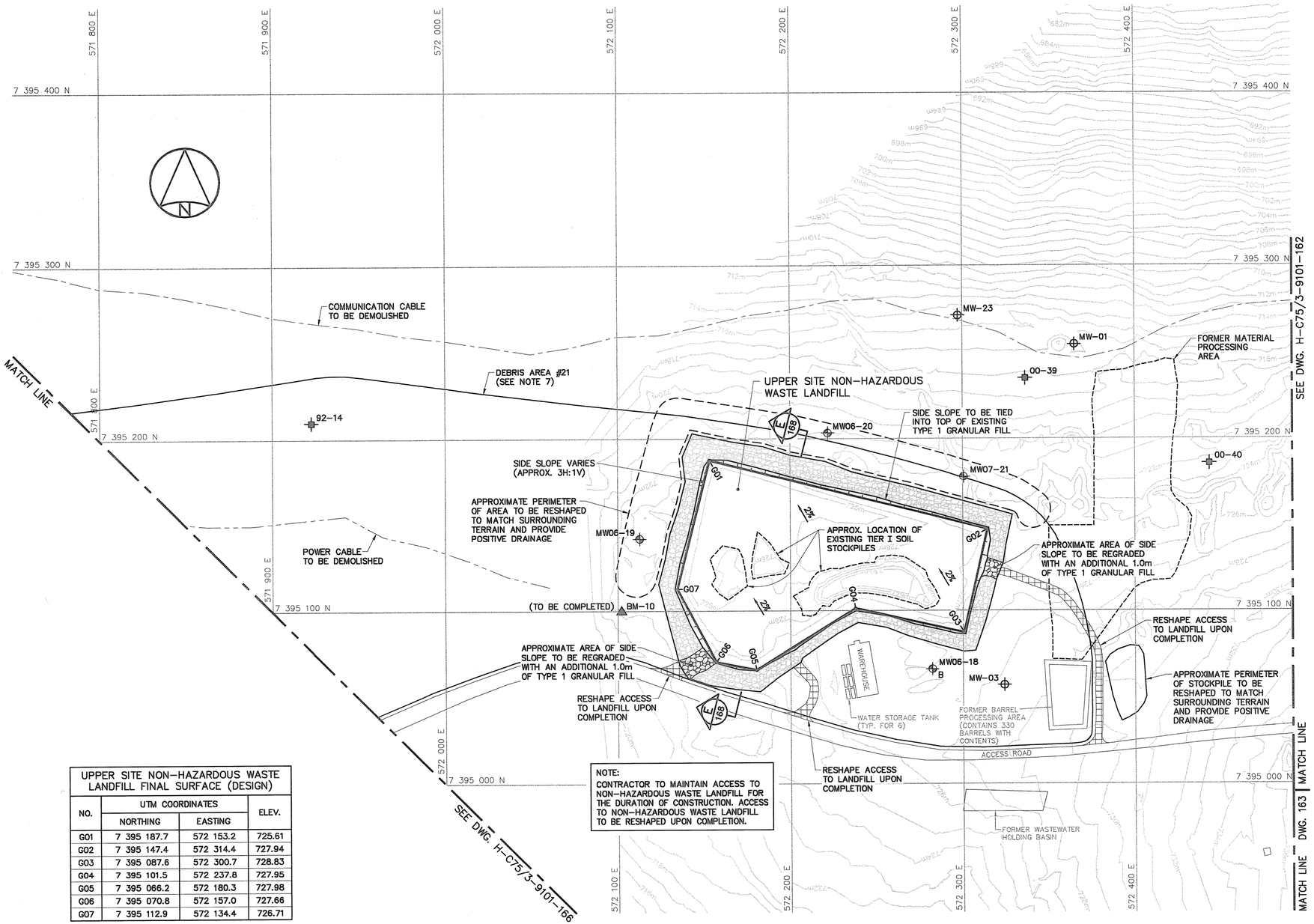
TRADE – METIER: SITING
DATE: 2010-12-07

SUBJECT – SUJET
UPPER SITE
WEST OF STATION AREA
PLAN SHEET 2

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAL/TIME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE DWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-166

Canada



UPPER SITE NON-HAZARDOUS WASTE LANDFILL FINAL SURFACE (DESIGN)			
NO.	UTM COORDINATES		ELEV.
	NORTHING	EASTING	
G01	7 395 187.7	572 153.2	725.61
G02	7 395 147.4	572 314.4	727.94
G03	7 395 087.6	572 300.7	728.83
G04	7 395 101.5	572 237.8	727.95
G05	7 395 066.2	572 180.3	727.98
G06	7 395 070.8	572 157.0	727.66
G07	7 395 112.9	572 134.4	726.71

NOTE:
CONTRACTOR TO MAINTAIN ACCESS TO NON-HAZARDOUS WASTE LANDFILL FOR THE DURATION OF CONSTRUCTION. ACCESS TO NON-HAZARDOUS WASTE LANDFILL TO BE RESHAPED UPON COMPLETION.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL NON-HAZARDOUS DEBRIS WITHIN PLAN AREA TO BE PLACED IN UPPER SITE NON-HAZARDOUS WASTE LANDFILL.
4. REFER TO TABLE 02219-1 IN SPECIFICATIONS FOR DESCRIPTION OF DEBRIS AREAS.
5. ALL SURFACE DEBRIS IS TO BE REMOVED FROM ALL CONTAMINATED SOIL AREAS AND EXISTING LANDFILL AREAS PRIOR TO ANY FILL PLACEMENT OR EXCAVATION TAKING PLACE.
6. FOR PERMANENT SURVEY CONTROL (BENCHMARK) INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.
7. FOR ENTIRE DEBRIS AREA LIMITS, SEE DWG. H-C75/3-9101-160.
8. USE STOCKPILED TIER I SOIL FOR INTERMEDIATE COVER AS REQUIRED.

Legend:

- BM-10 — PERMANENT BENCHMARK LOCATION (1)
- G01 — COORDINATE POINT
- TEST PIT LOCATION
- SITE INVESTIGATION MONITORING WELL LOCATION
- MONITORING WELL LOCATION (3)
- B — BACKGROUND MONITORING WELL LOCATION (1)
- TYPE 1 GRANULAR FILL

No.	DATE	REVISION	REVISION	APPR.

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Signature
Date
PERMIT NUMBER: P939
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER	DATE
SITING	2010-12-07

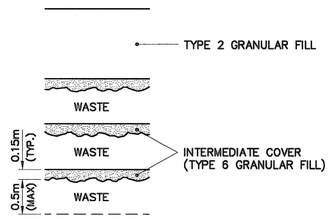
SUBJECT – SUJET
UPPER SITE
WEST OF STATION AREA
PLAN
SHEET 3

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTH/THE		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-167

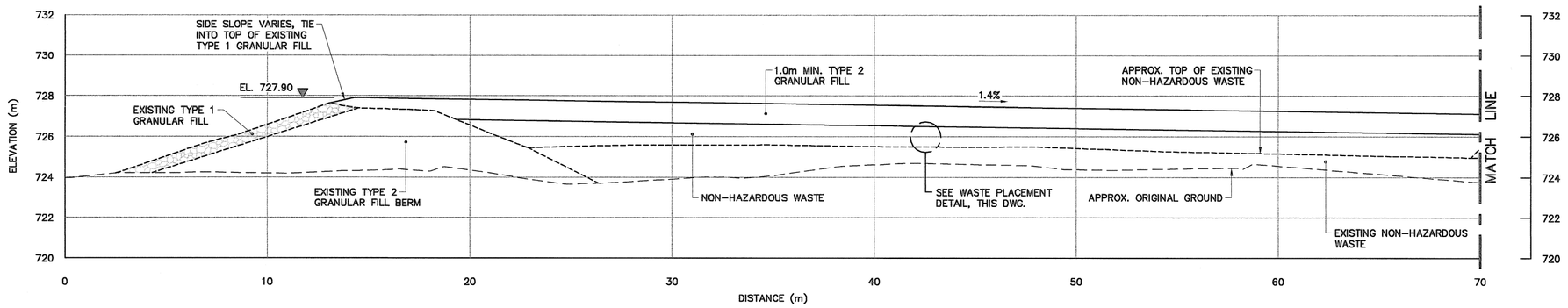
Canada

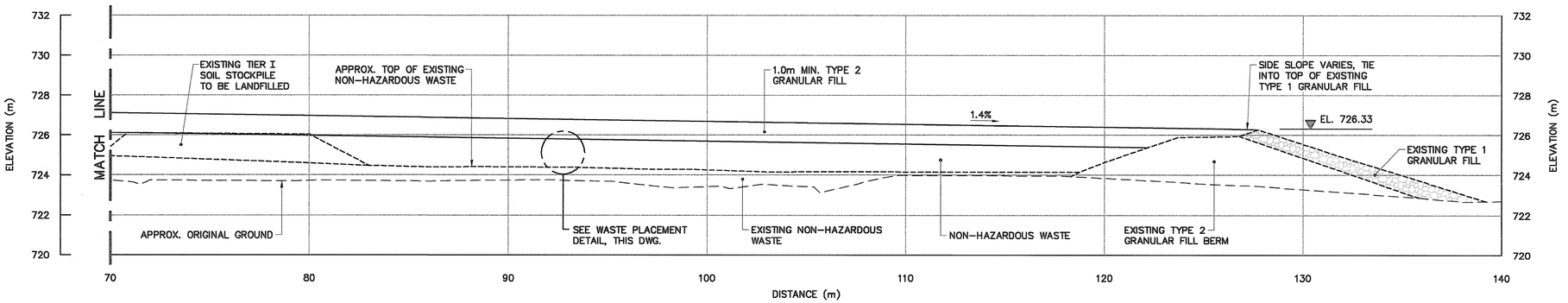
ADD ADDITIONAL WASTE LAYERS, AS REQUIRED, TO ACHIEVE THE NON-HAZARDOUS WASTE LANDFILL DESIGN ELEVATIONS.



WASTE PLACEMENT DETAIL

N.T.S.





SECTION E 167

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. VARIABLE SLOPE ON LANDFILL SURFACE PERMITTED. MINIMUM 2% – MAXIMUM 4%.

Legend:

- DESIGN REQUIREMENTS TO BE CONSTRUCTED
- GENERATED BASED ON EXISTING SURVEY INFORMATION
- GENERATED BASED ON ORIGINAL SURVEY INFORMATION

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
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Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

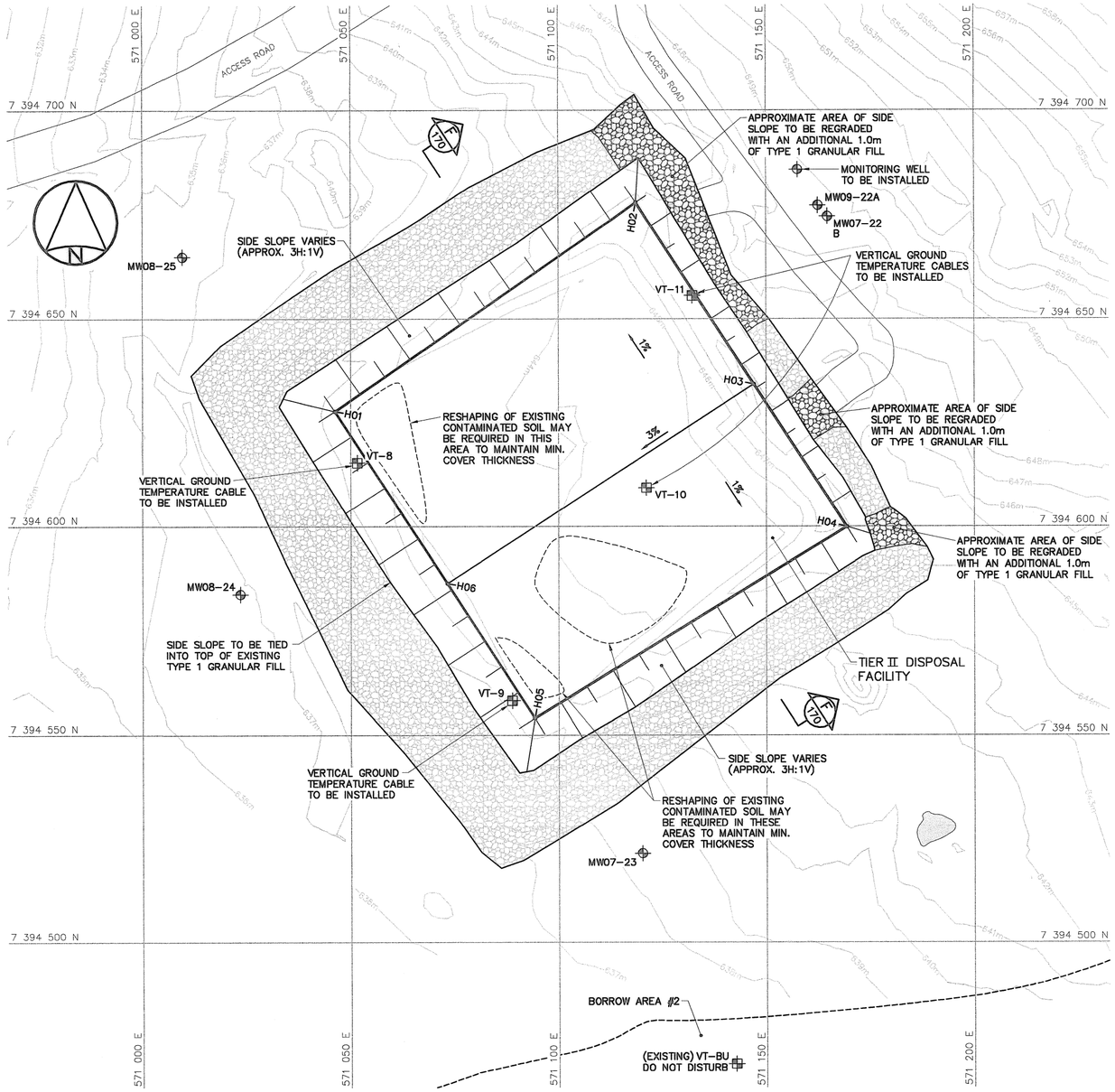
TRADE – METIER	DATE
SITING	2010-12-07

SUBJECT – SUJET
UPPER SITE
NON–HAZARDOUS WASTE LANDFILL
CROSS SECTION

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE DTAL/TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-168

Canada



UPPER SITE TIER II DISPOSAL FACILITY FINAL SURFACE (DESIGN)			
NO.	UTM COORDINATES		ELEV.
	NORTHING	EASTING	
H01	7 394 627.8	571 046.2	645.94
H02	7 394 677.9	571 118.6	648.55
H03	7 394 634.3	571 147.0	649.07
H04	7 394 599.9	571 169.3	648.66
H05	7 394 554.0	571 094.2	646.05
H06	7 394 586.3	571 073.2	646.43

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. FOR MONITORING WELL INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-191.
4. FOR VERTICAL GROUND TEMPERATURE CABLE INSTALLATION DETAILS, SEE DWG. H-C75/3-9101-190. EXACT LOCATIONS TO BE FIELD DETERMINED BY THE ENGINEER.

Legend:

- H01 — COORDINATE POINT
- MONITORING WELL LOCATION (5)
- B — BACKGROUND MONITORING WELL LOCATION (1)
- VERTICAL GROUND TEMPERATURE CABLE LOCATION (5)
- TYPE 1 GRANULAR FILL
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

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Date
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NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 10 5 0 10 20 30m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER	DATE
SITING	2010–12–07

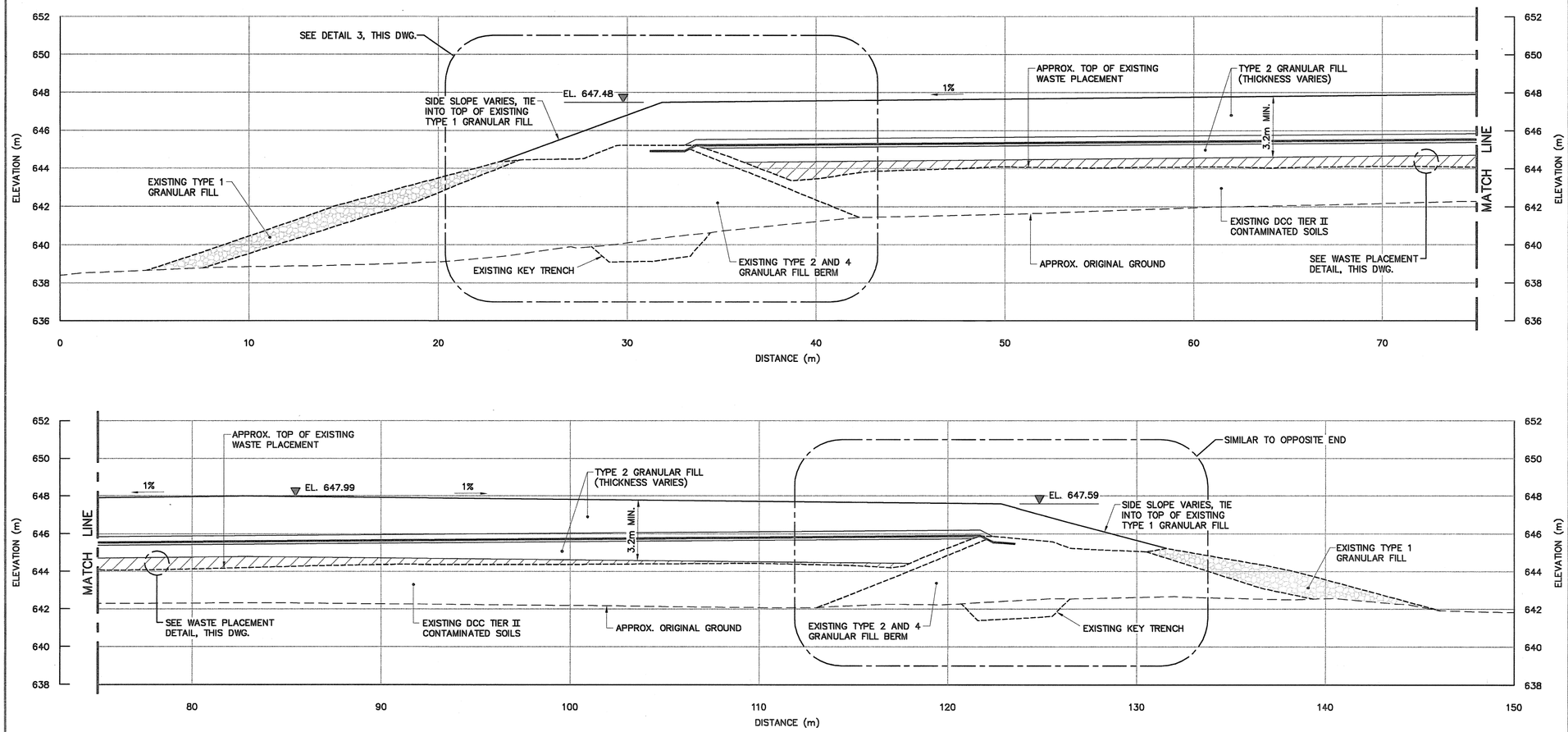
SUBJECT – SUJET

UPPER SITE TIER II DISPOSAL FACILITY GRADING/INSTRUMENTATION PLAN

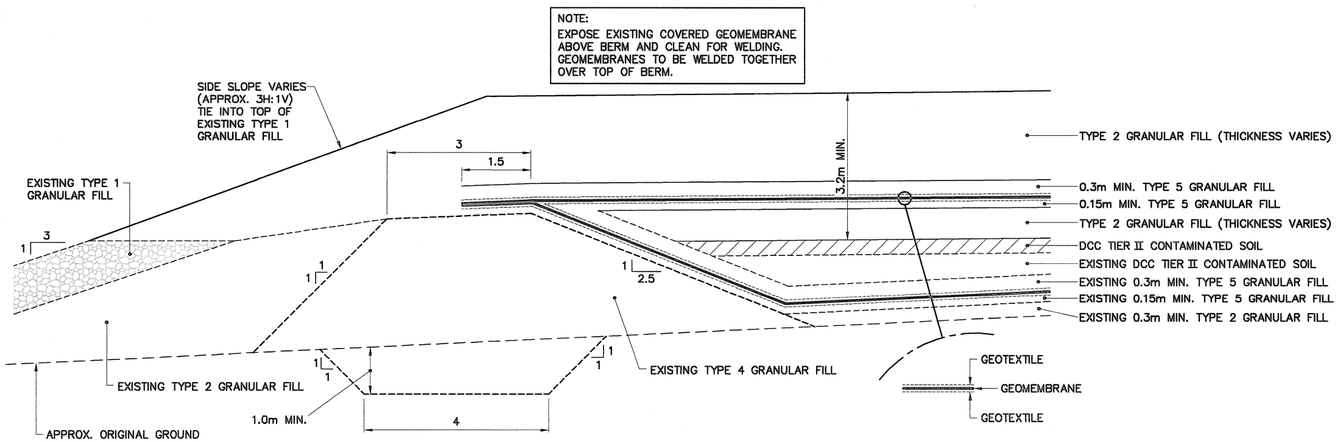
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-169

Canada

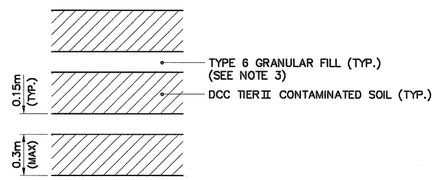


SECTION F 169



DETAIL 3 SCALE: NTS 170

ADD ADDITIONAL TIER II LAYERS, AS REQUIRED, TO ACHIEVE THE TIER II DISPOSAL FACILITY DESIGN ELEVATIONS.



WASTE PLACEMENT DETAIL
SCALE: NTS

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL COORDINATES ARE REFERENCED TO UTM ZONE 20N, NAD83. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL RELATIVE TO GEOID MODEL CANADIAN HT2_0.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. TYPE 6 INTERMEDIATE FILL ONLY REQUIRED FOR LANDFILLING OF ORGANIC OR WET SOILS, AS DIRECTED BY THE ENGINEER.
4. PROTECT GEOMEMBRANE LINERS DURING CONSTRUCTION.

Legend:

- DESIGN REQUIREMENTS TO BE CONSTRUCTED
- GENERATED BASED ON EXISTING SURVEY INFORMATION
- GENERATED BASED ON ORIGINAL SURVEY INFORMATION

No.	DATE	REVISION	REVISION	APPR.

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AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: SITING
DATE: 2010–12–07

SUBJECT – SUJET
UPPER SITE
TIER II DISPOSAL FACILITY
CROSS SECTION

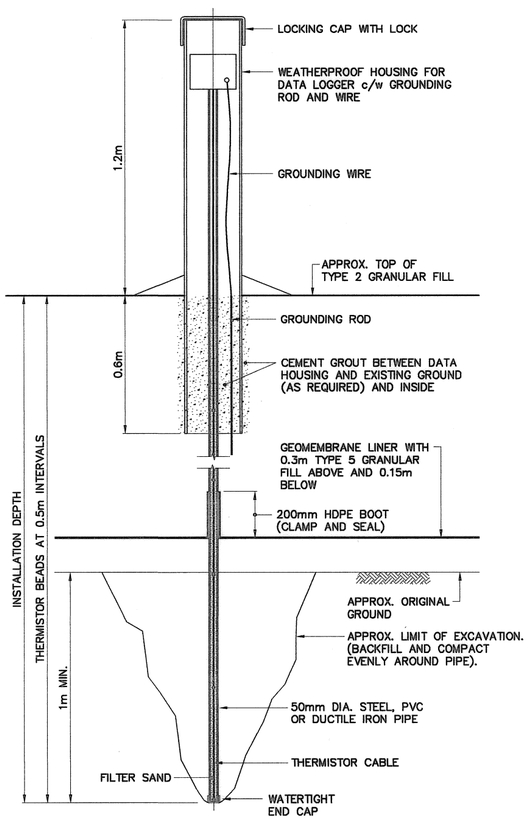
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED – ETUDIE DTM/ TME		DES OFF – AGENT CONCEPT
DRAWN – DESSINE IC/ CAE		SECT HD – CHEF SECT
CHECKED – VERIFIE BWF		DES MGR – GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–170

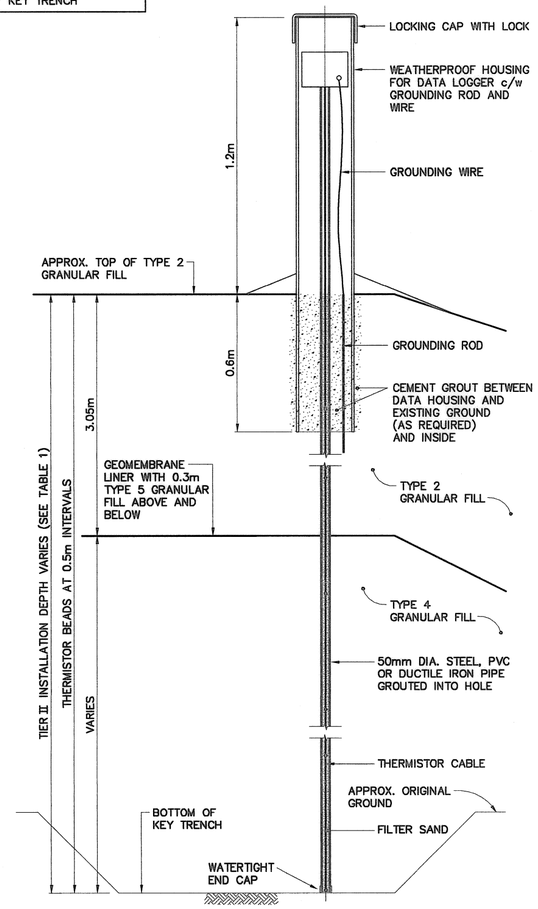
Canada

TABLE 1
VERTICAL GROUND TEMPERATURE CABLE INSTALLATION

INSTRUMENT No.	APPROXIMATE DEPTH BELOW FINAL GRADE (m)	COMMENTS
LOWER SITE – TIER II DISPOSAL FACILITY		
VT–1	7.5	INSTALL THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH
VT–2	4.7	PVC STANDPIPE PREVIOUSLY INSTALLED TO 1m ABOVE ELEVATION OF BOTTOM LINER
VT–3	4.5	INSTALL TO 1m ABOVE ELEVATION OF BOTTOM LINER
VT–4	6.7	INSTALL THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH
UPPER SITE – TIER II DISPOSAL FACILITY		
VT–8	7.6	INSTALL THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH
VT–9	8.8	INSTALL THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH
VT–10	5.3	INSTALL TO 1m ABOVE ELEVATION OF BOTTOM LINER
VT–11	6.0	INSTALL THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH



TYPICAL VERTICAL GROUND TEMPERATURE CABLE INSTALLATION – PLATEAU
SCALE: NTS
VT–2, VT–3 AND VT–10



TYPICAL VERTICAL GROUND TEMPERATURE CABLE INSTALLATION – TIER II
SCALE: NTS
LOWER AND UPPER SITE – TIER II DISPOSAL FACILITIES

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. APPROXIMATE LOCATIONS FOR INSTRUMENTATION TO BE INSTALLED ARE SHOWN ON THE DRAWINGS. INSTALLATION LOCATIONS TO BE FIELD CONFIRMED BY THE ENGINEER.
3. PROVIDE THERMISTOR BEADS AT 0.5m MAXIMUM INTERVALS, INCLUDING ONE AT THE BOTTOM OF THE INSTALLATION.

Legend:

No.	DATE	REVISION	REVISION	APPR.

Dec 15/10

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AECOM HATCH

SCALE – ECHELLE: AS SHOWN

PROJECT – PROJET: DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: SITING
DATE: 2010–12–07

SUBJECT – SUJET

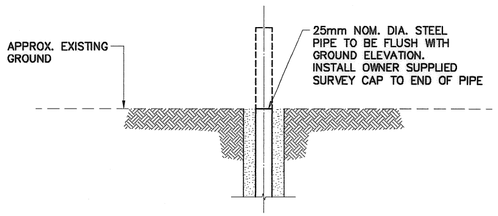
MISCELLANEOUS DETAILS
SHEET 1

PRODUCTION		CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE	DT/AL/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE	IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE	DWF		DES MGR GEST CONCEPT
COORDINATION	RRM	REVIEWED – REVU	

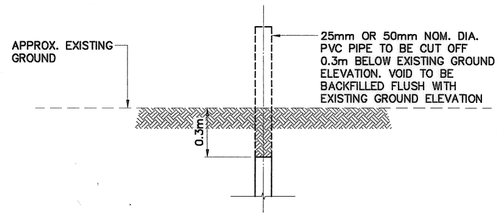
DWG. NO. – DESSIN NO.
H–C75/3–9101–190

Canada

NOTE:
6 PERMANENT SURVEY CONTROL MONUMENTS PREVIOUSLY INSTALLED.
5 PERMANENT SURVEY CONTROL MONUMENTS TO BE COMPLETED AT MIDDLE AND UPPER SITES.

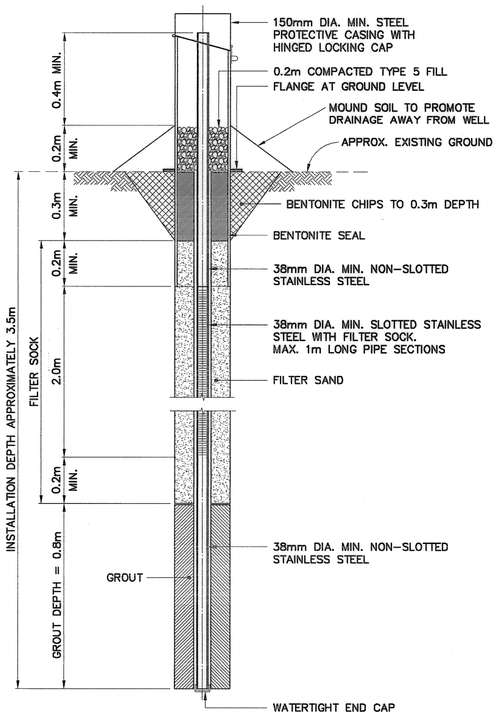


TYPICAL PERMANENT SURVEY CONTROL MONUMENT (BENCHMARK)
SCALE: NTS

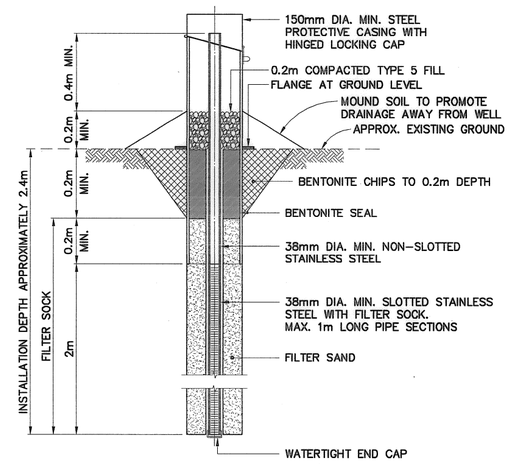


TYPICAL SITE INVESTIGATION MONITORING WELL
SCALE: NTS

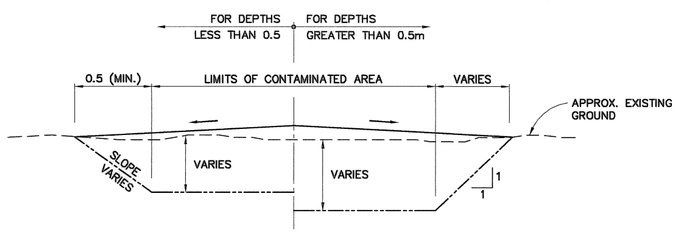
NOTE:
29 MONITORING WELLS PREVIOUSLY INSTALLED.
2 MONITORING WELLS TO BE INSTALLED. SEE NOTE 2.
2 MONITORING WELLS TO BE DECOMMISSIONED.



TYPICAL MONITORING WELL/ BACKGROUND MONITORING WELL
SCALE: NTS
FOR BEDROCK DEPTH > 0.7m



TYPICAL MONITORING WELL/ BACKGROUND MONITORING WELL
SCALE: NTS
FOR BEDROCK DEPTH < 0.7m



NOTE:
1. MATERIAL TO BE REMOVED: DCC TIER I SOILS TO BE DISPOSED OF IN THE NON-HAZARDOUS WASTE LANDFILLS. DCC TIER II SOILS TO BE DISPOSED OF IN THE TIER II SOIL DISPOSAL FACILITIES. HYDROCARBON TYPE B SOILS PLACED IN THE LANDFARM AND TREATED.
2. TYPE 3 GRANULAR MATERIAL TO BE PLACED IN EXCAVATION, COMPACTED AND MOUNDED TO 100mm ABOVE GROUND SURFACE TO PROMOTE DRAINAGE, UNLESS NOTED OTHERWISE.

TYPICAL CONTAMINATED SOIL EXCAVATION SECTION
SCALE: NTS

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. APPROXIMATE LOCATIONS FOR INSTRUMENTATION TO BE INSTALLED ARE SHOWN ON THE DRAWINGS. INSTALLATION LOCATIONS TO BE FIELD CONFIRMED BY THE ENGINEER.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
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Date
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NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE: AS SHOWN

PROJECT – PROJET: DYE–M CAPE DYER

DEW LINE CLEAN UP

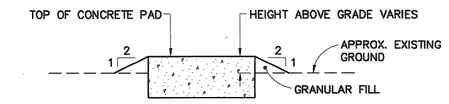
TRADE – METIER: SITING
DATE: 2010–12–07

SUBJECT – SUJET:
MISCELLANEOUS DETAILS
SHEET 2

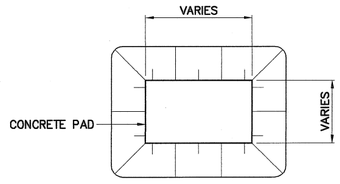
PRODUCTION		CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE	DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE	IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE	BWF		DES MGR GEST CONCEPT
COORDINATION	RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–191

Canada



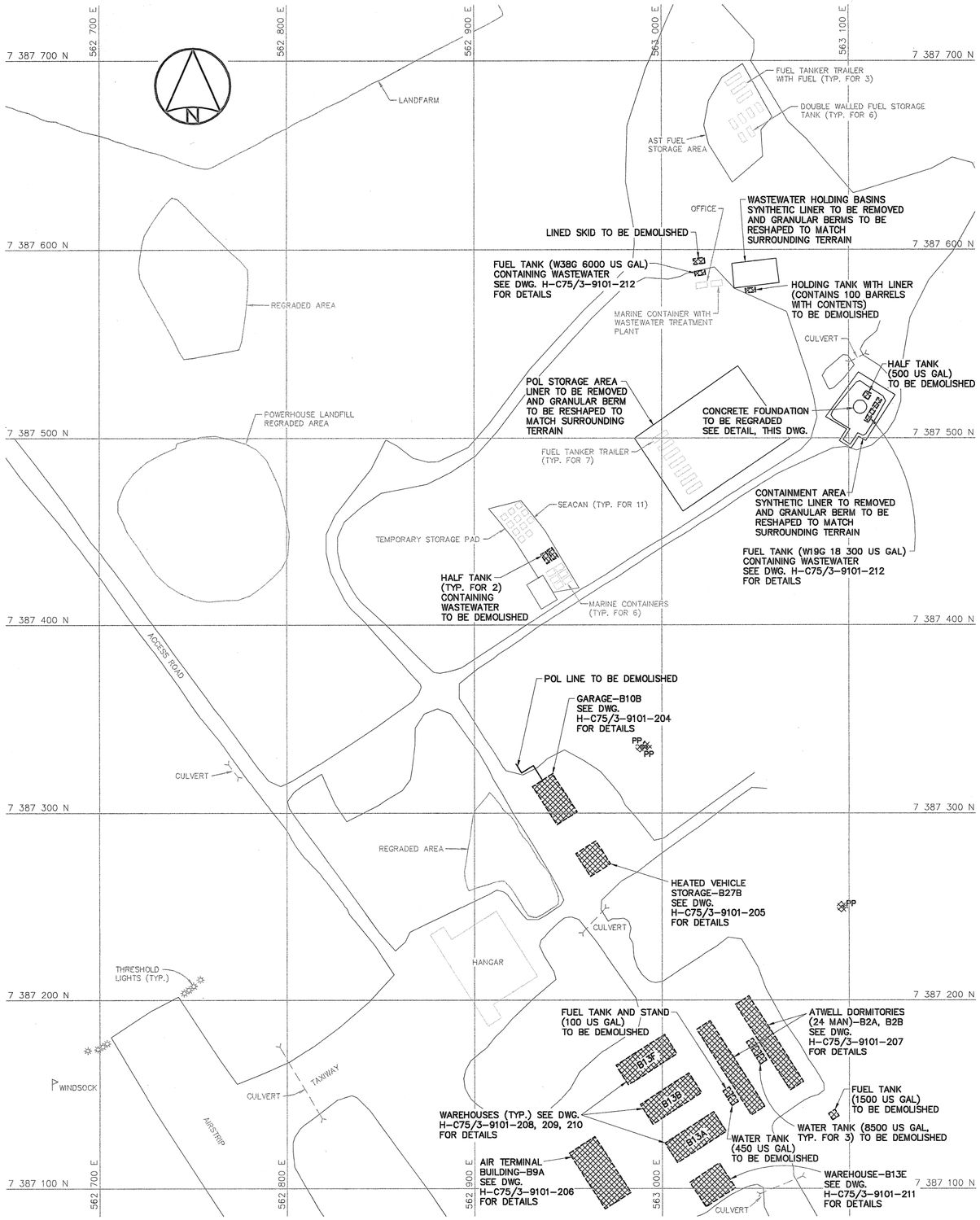
SECTION



PLAN

TYPICAL CONCRETE PAD REGRADING DETAIL

SCALE: NTS



National Défense / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL STRUCTURES DESIGNATED FOR DEMOLITION TO BE DEMOLISHED TO TOP OF CONCRETE FOUNDATIONS UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. THESE INCLUDE ALL BUILDINGS, STRUCTURES, ELECTRICAL POWER CABLES, FUEL STORAGE TANKS AND PIPELINES NOT SCHEDULED FOR DEMOLITION.
4. PIPELINES AND ANCILLARY EQUIPMENT TO BE REMOVED TO INCLUDE ALL ASSOCIATED PIPE SUPPORTS AND PIPELINE MARKERS.
5. PROVIDE REGRADING AROUND ALL CONCRETE THAT IS DESIGNATED TO REMAIN, AS PER TYPICAL DETAIL ON THIS DRAWING, UNLESS NOTED OTHERWISE.

Legend:

- TO BE DEMOLISHED
- PP — UTILITY POLE TO BE DEMOLISHED
- POL LINE TO BE DEMOLISHED

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 20 10 0 20 40 60m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER	DATE
STRUCTURAL	2010-12-07

SUBJECT – SUJET
LOWER SITE
STATION AREA
DEMOLITION SITE PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAL/TIME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-201

Canada

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL STRUCTURES DESIGNATED FOR DEMOLITION TO BE DEMOLISHED TO TOP OF CONCRETE FOUNDATIONS UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. THESE INCLUDE ALL BUILDINGS, STRUCTURES, ELECTRICAL POWER CABLES, FUEL STORAGE TANKS AND PIPELINES NOT SCHEDULED FOR DEMOLITION.
4. PIPELINES AND ANCILLARY EQUIPMENT TO BE REMOVED TO INCLUDE ALL ASSOCIATED PIPE SUPPORTS AND PIPELINE MARKERS.

Legend:

- TO BE DEMOLISHED
- PP — UTILITY POLE TO BE DEMOLISHED
- COMMUNICATION CABLE TO BE DEMOLISHED
- POWER CABLE TO BE DEMOLISHED
- POL LINE TO BE DEMOLISHED

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 10 5 0 10 20 30m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

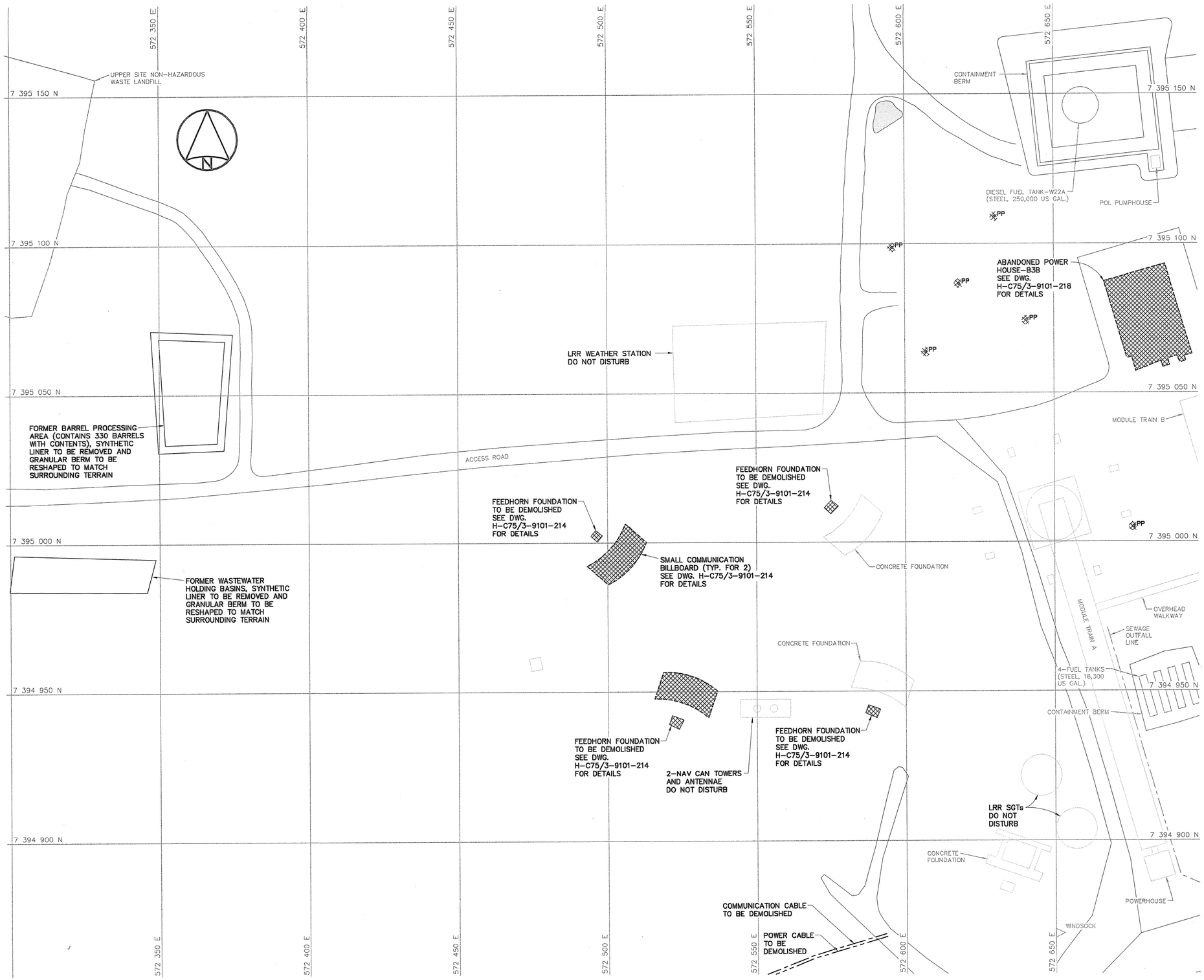
TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

SUBJECT – SUJET
UPPER SITE
DEW DROP AREA
DEMOLITION SITE PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DYAL/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CHE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–202

Canada



National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL STRUCTURES DESIGNATED FOR DEMOLITION TO BE DEMOLISHED TO TOP OF CONCRETE FOUNDATIONS UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. THESE INCLUDE ALL BUILDINGS, STRUCTURES, ELECTRICAL POWER CABLES, FUEL STORAGE TANKS AND PIPELINES NOT SCHEDULED FOR DEMOLITION.

Legend:

- TO BE DEMOLISHED
- PP — UTILITY POLE TO BE DEMOLISHED
- COMMUNICATION CABLE TO BE DEMOLISHED
- POWER CABLE TO BE DEMOLISHED
- BODY OF WATER

No.	DATE	REVISION	REVISION	APPR.

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Signature
Date
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NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 10 5 0 10 20 30m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

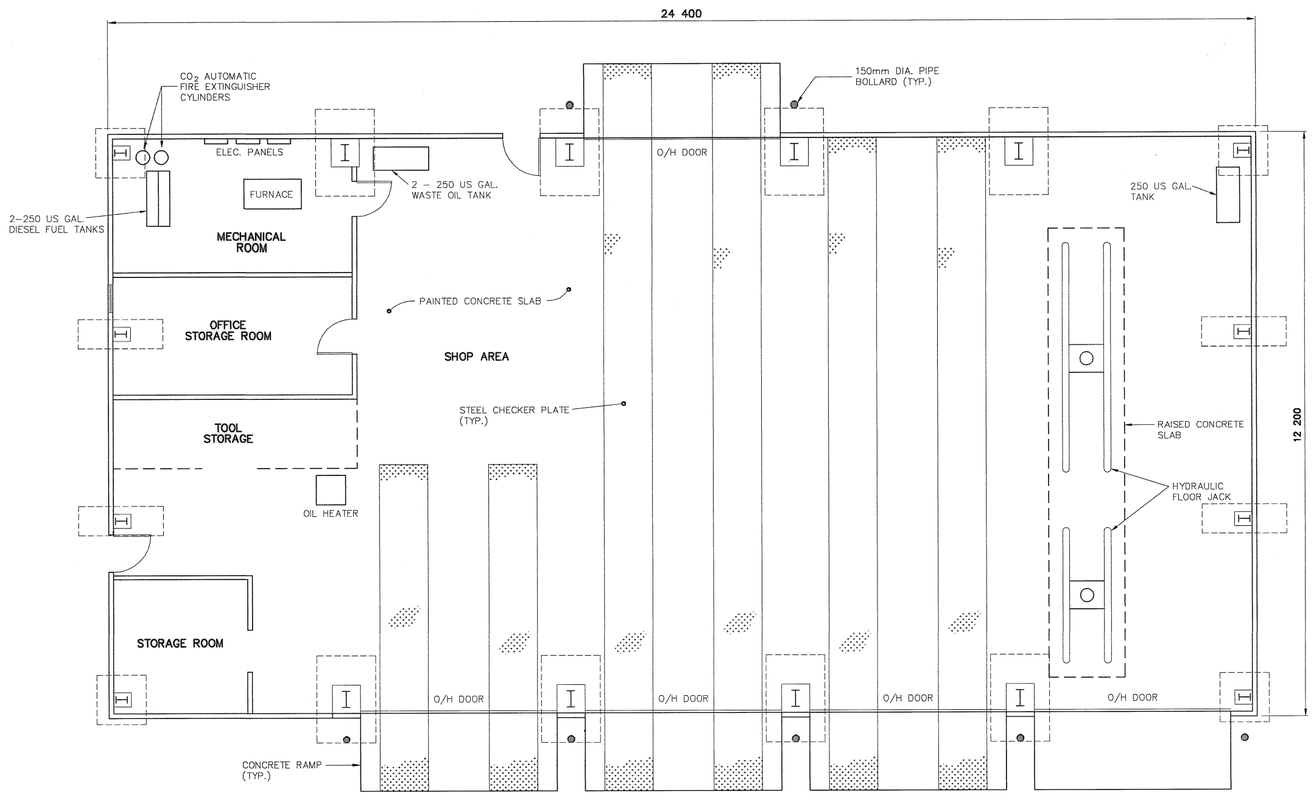
TRADE – METIER	DATE
STRUCTURAL	2010–12–07

SUBJECT – SUJET
UPPER SITE
STATION AREA
DEMOLITION SITE PLAN

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTH/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

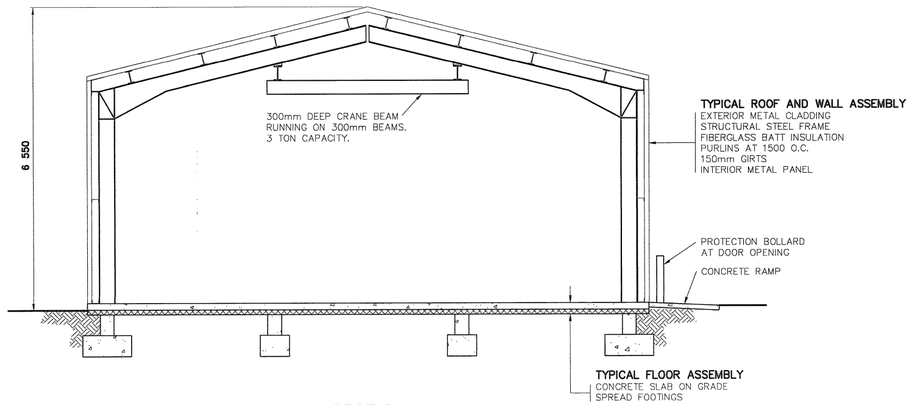
DWG. NO. – DESSIN NO.
H–C75/3–9101–203

Canada



FLOOR PLAN

NWSO NUMBER	COMMENTS
B10B	ASBESTOS REMOVAL REQUIRED.



SECTION

NOTE:
CONCRETE PAD AND RAMPS TO REMAIN AND BE REGRADED WITH 300mm TYPE 2 GRANULAR FILL MATERIAL AS CONTINUOUS COVER. REMOVE ALL PAINT FROM CONCRETE SLAB AND RAMPS PRIOR TO REGRADING.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

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Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 1 0.5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

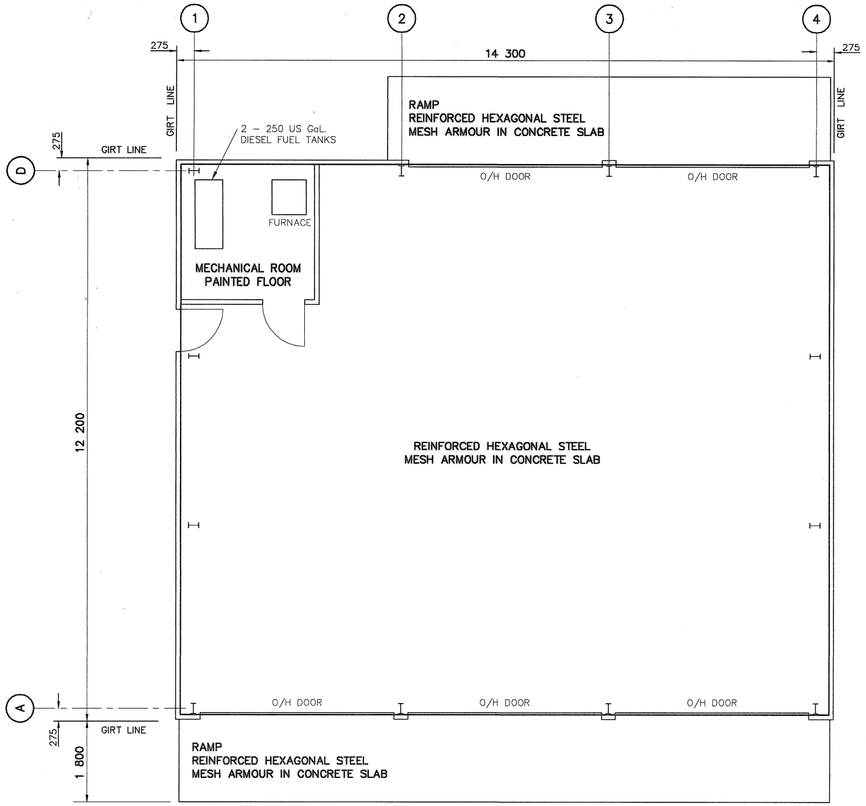
SUBJECT – SUJET

GARAGE
PLAN AND SECTION

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAL/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–204

Canada



PLAN

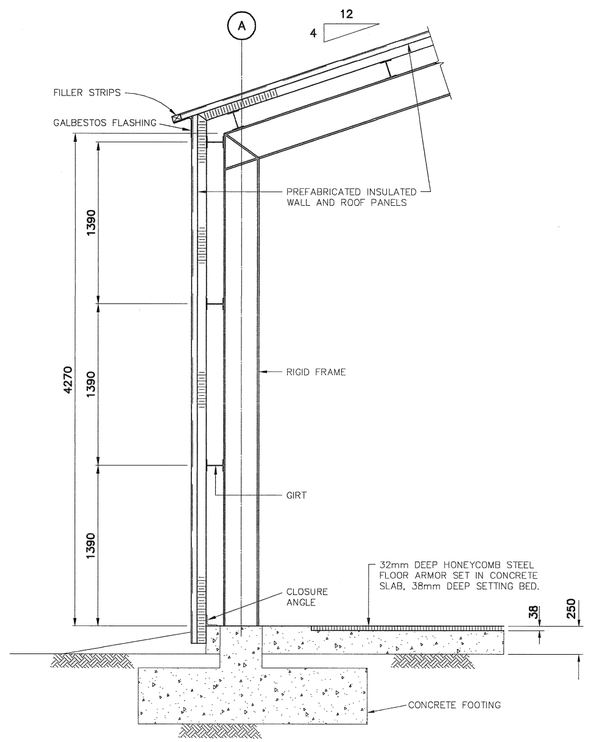
0 1 2 3m

1 0.5

NWSO NUMBER	COMMENTS
B27B	ASBESTOS REMOVAL REQUIRED.

NOTE:
REMOVE 10mm THICKNESS OF PCB CONTAMINATED CONCRETE FROM STAINED AREAS ON CONCRETE SLAB INSIDE NORTHWEST DOOR AND ON CONCRETE PAD NORTHWEST OF BUILDING.

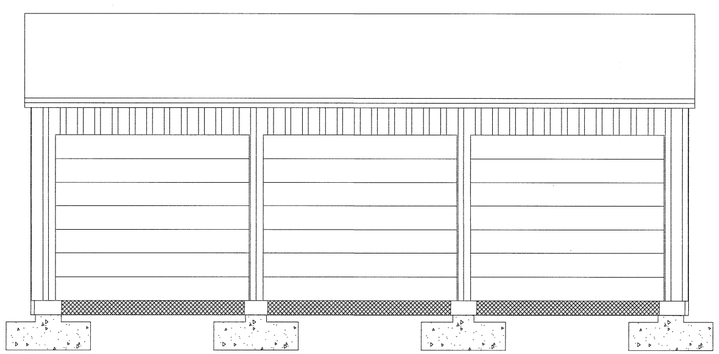
NOTE:
CONCRETE PAD AND RAMPS TO REMAIN AND BE REGRADED WITH 300mm TYPE 2 GRANULAR FILL MATERIAL AS CONTINUOUS COVER. REMOVE ALL PAINT FROM CONCRETE SLAB AND RAMPS PRIOR TO REGRADING.



SECTION

0 0.4 0.8 1.2m

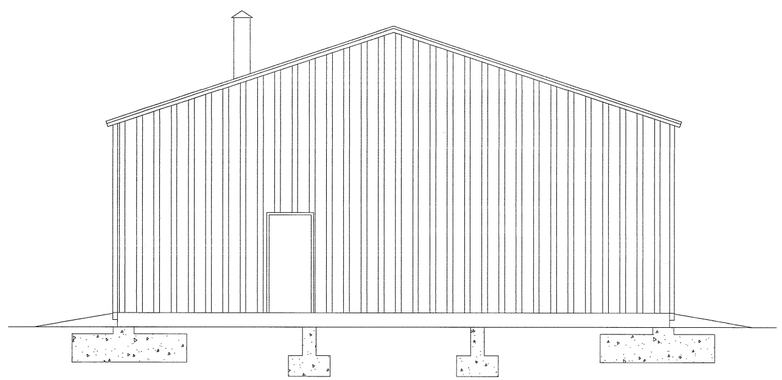
0.4 0.2



FRONT ELEVATION

0 1 2 3m

1 0.5



SIDE ELEVATION

0 1 2 3m

1 0.5

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

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AECOM HATCH

SCALE – ECHELLE
AS SHOWN

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

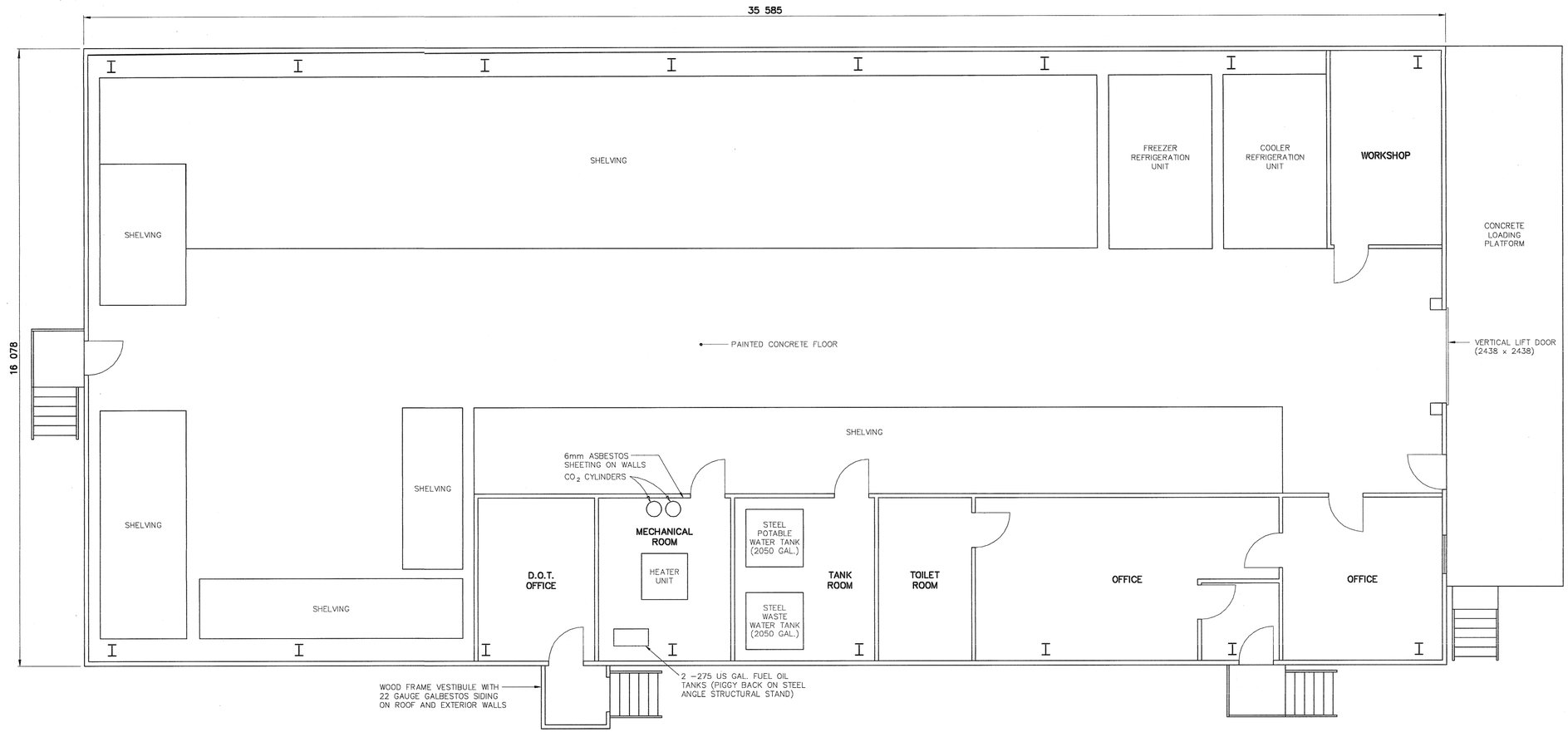
SUBJECT – SUJET

HEATED VEHICLE STORAGE
PLAN, SECTION AND ELEVATIONS

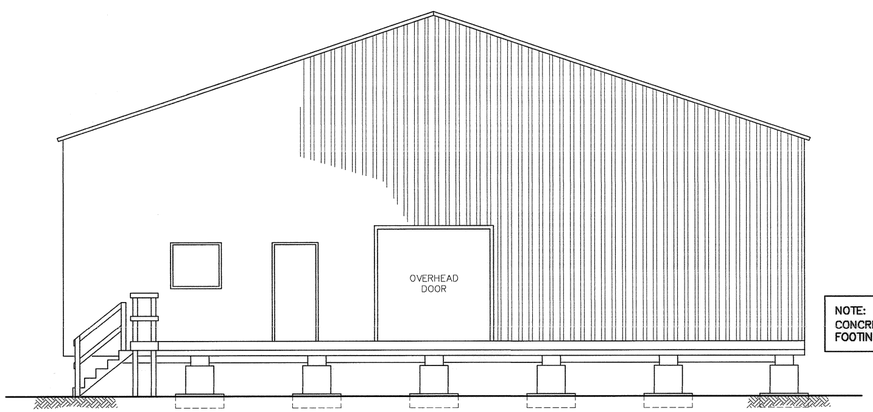
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAL/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–205

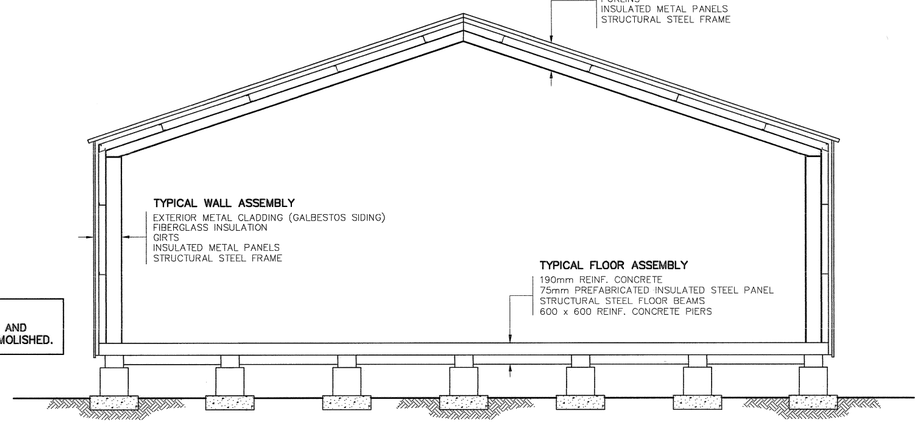
Canada



PLAN



ELEVATION



SECTION

NOTE:
CONCRETE COLUMNS AND FOOTINGS TO BE DEMOLISHED.

NWSO NUMBER	COMMENTS
B9A	ASBESTOS REMOVAL REQUIRED.

National Défense / Defence nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

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AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 1 0.5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

SUBJECT – SUJET

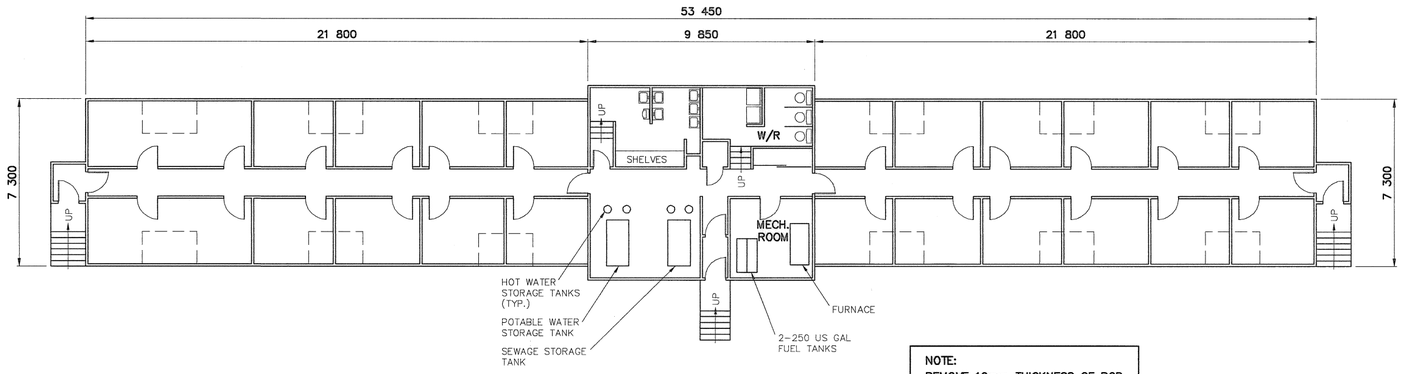
AIR TERMINAL BUILDING
PLAN, SECTION AND ELEVATION

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED – ETUDIE DTM/TME		DES OFF – AGENT CONCEPT
DRAWN – DESSINE IC/CAE		SECT HD – CHEF SECT
CHECKED – VERIFIE BWF		DES MGR – GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–206

Canada

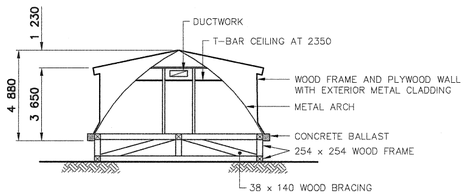
NWSO NUMBER	COMMENTS
B2A	CONCRETE FOOTINGS/POSTS. METAL ARCH. BUILDING WITH EXTERIOR WALLS AND PITCHED ROOF ADDED.
B2B	ASBESTOS REMOVAL REQUIRED. PCB CONTAMINATED CONCRETE IN MECHANICAL ROOMS.



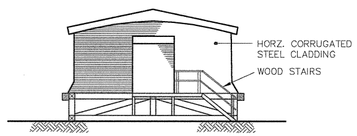
PLAN

NOTE:
REMOVE 10mm THICKNESS OF PCB CONTAMINATED CONCRETE FROM FLOORS OF MECHANICAL ROOMS.

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.



SECTION



END ELEVATION

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

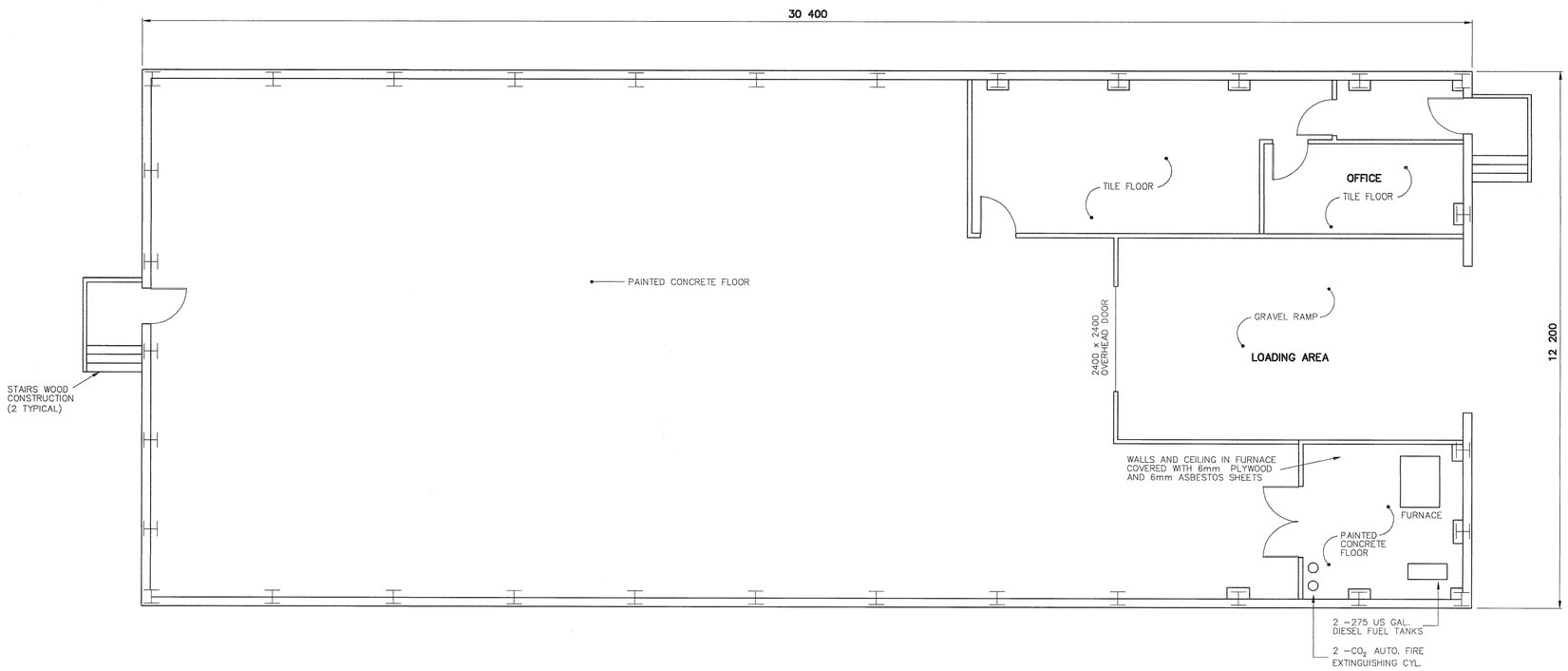
SUBJECT – SUJET

ATWELL DORMITORY
PLAN, SECTION AND ELEVATION

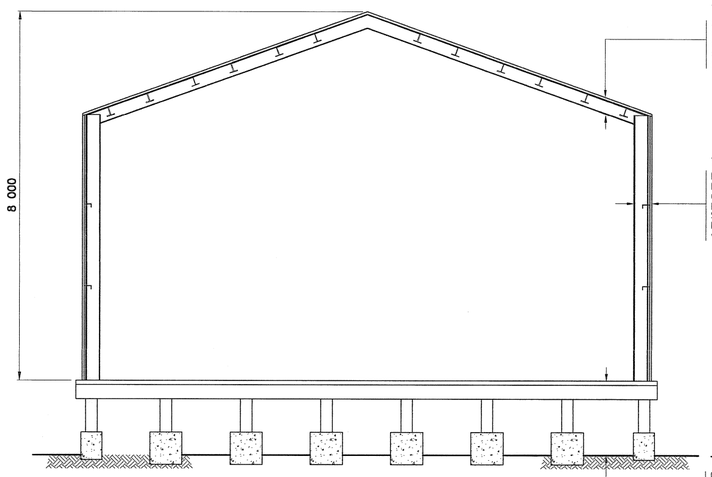
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CME		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–207

Canada



PLAN



TYPICAL ROOF ASSEMBLY
EXTERIOR METAL CLADDING
FIBERGLASS INSULATION
PURLINS AT 3050 o.c.
INTERIOR METAL PANELS
STRUCTURAL STEEL FRAME

TYPICAL WALL ASSEMBLY
EXTERIOR METAL CLADDING
FIBERGLASS INSULATION
GIRTS AT 3050 o.c.
EXTERIOR METAL PANELS
STRUCTURAL STEEL FRAME
INTERIOR PLYWOOD SHEATHING
w/ 50 x 100 STUDS AND GIRTS

TYPICAL FOUNDATION ASSEMBLY
CONCRETE FOUNDATION
TIMBER COLUMNS 50 x 250 x 720 HIGH
38 x 184 TIMBER BEAMS
600mm WIDE CONCRETE FOOTING

SECTION

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.

NWSO NUMBER	COMMENTS
B13A	ASBESTOS REMOVAL REQUIRED.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 1 0.5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

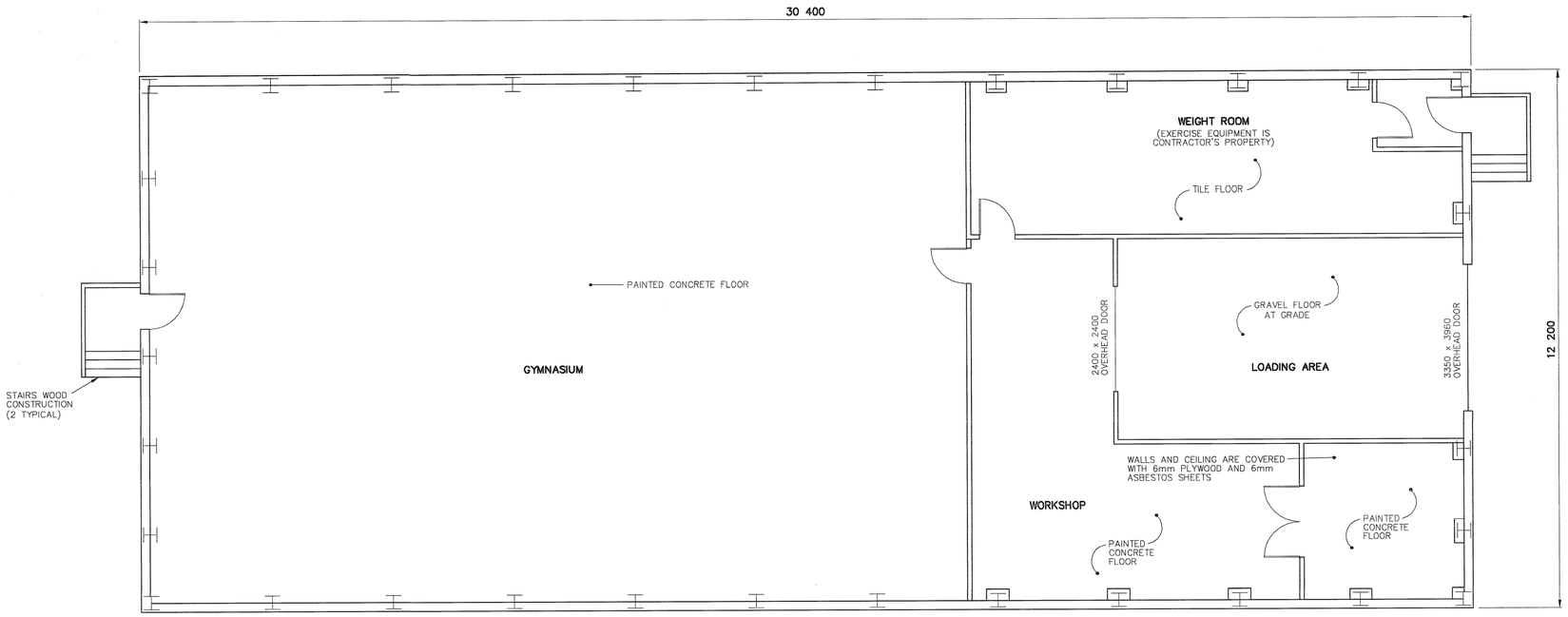
SUBJECT – SUJET

WAREHOUSE–B13A
PLAN AND SECTION

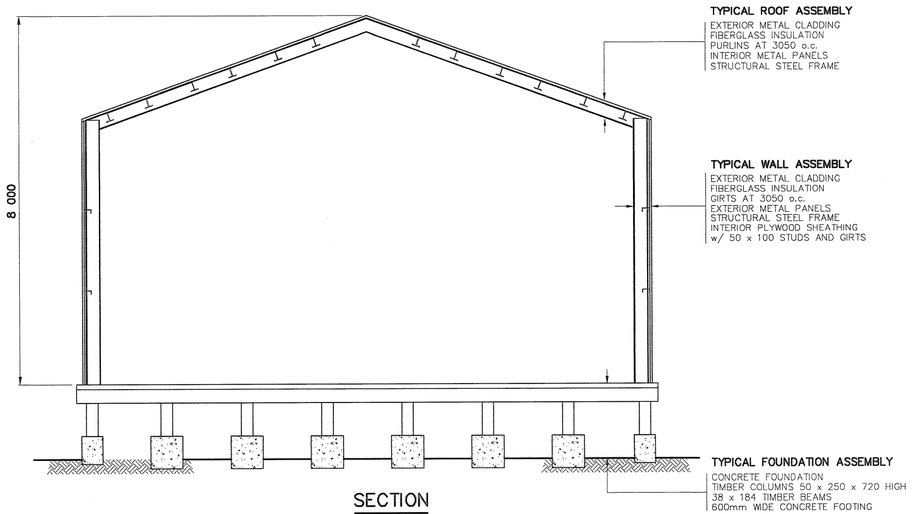
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE DTM/ TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/ CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–208

Canada



PLAN



SECTION

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.

NWSO NUMBER	COMMENTS
B13B	ASBESTOS REMOVAL REQUIRED.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 1 0,5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER	DATE
STRUCTURAL	2010–12–07

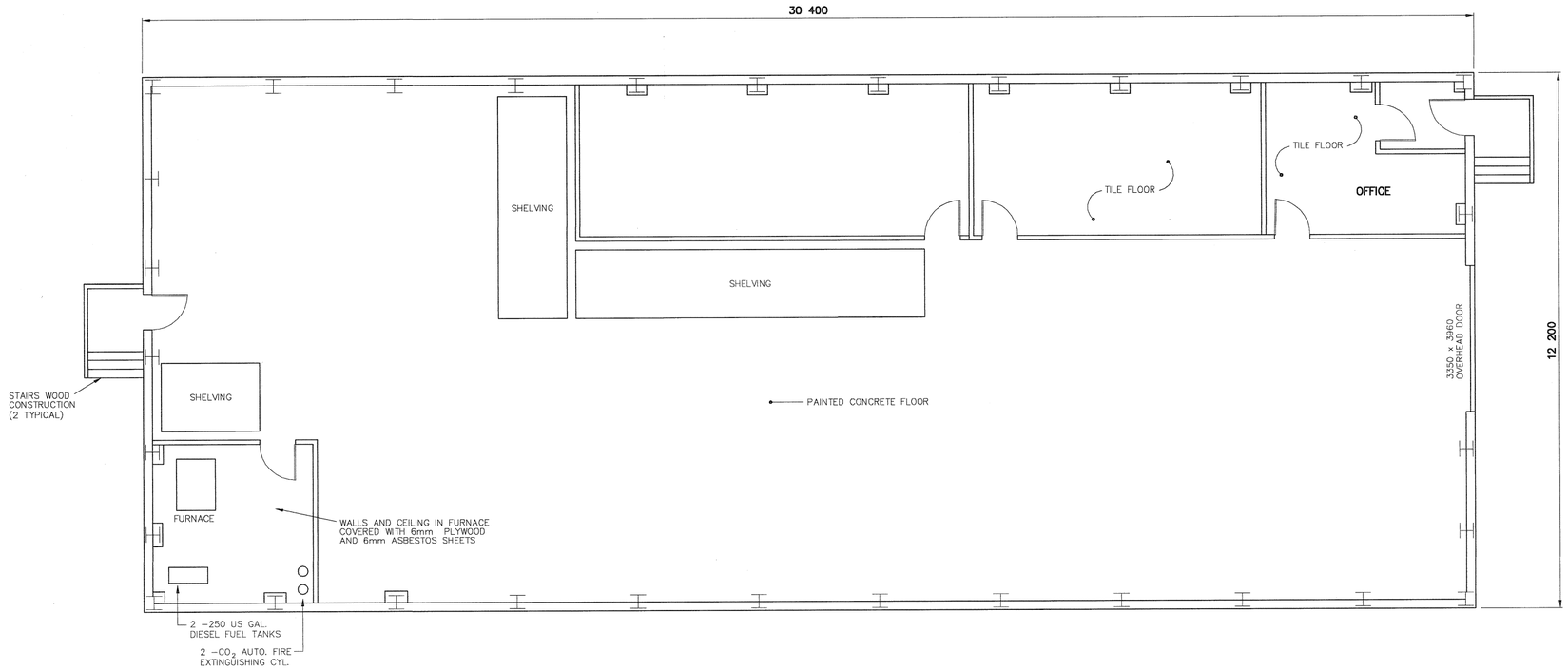
SUBJECT – SUJET

WAREHOUSE–B13B
PLAN AND SECTION

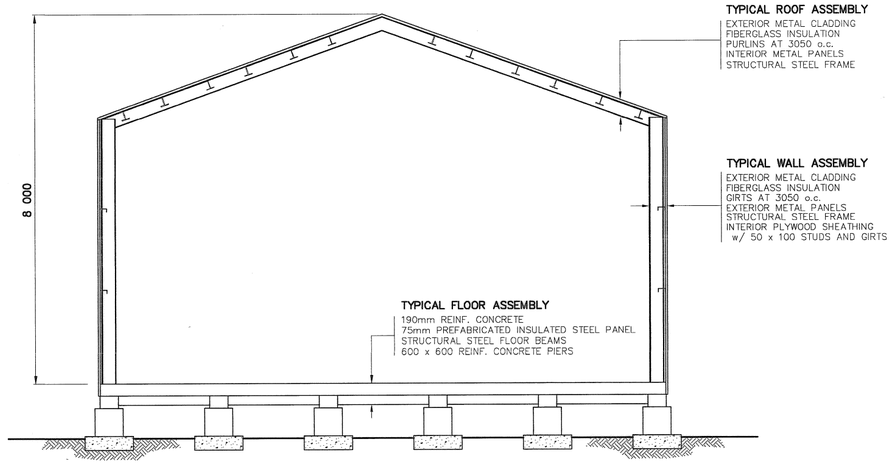
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION KRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–209

Canada



PLAN



SECTION

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.

NWSO NUMBER	COMMENTS
B13F	ASBESTOS REMOVAL REQUIRED. ADDITIONAL PORTIONS: 32.7m WOOD FRAME/PLYWOOD.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P839
NWT/NU Association of Professional Engineers and Geoscientists

Dec/10/10

AECOM HATCH

SCALE – ECHELLE 1 0.5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

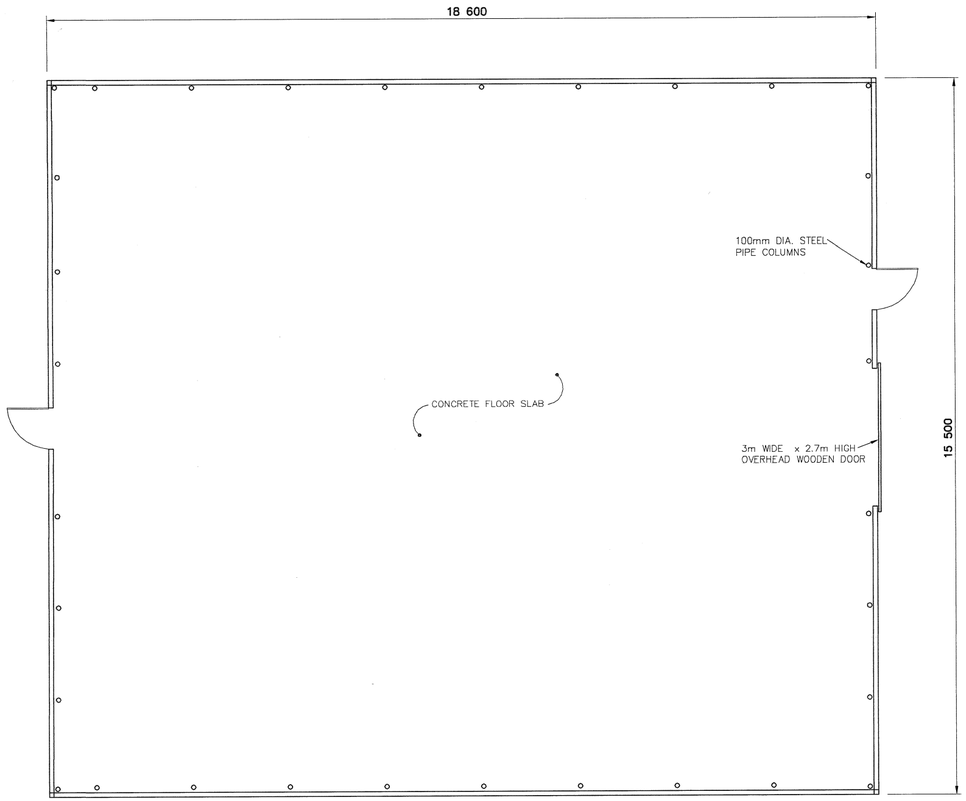
SUBJECT – SUJET

WAREHOUSE–B13F
PLAN AND SECTION

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE DTH/ TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/ CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

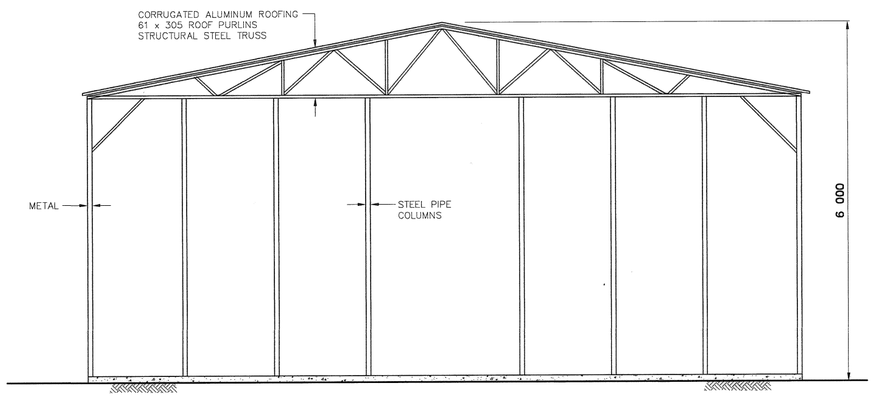
DWG. NO. – DESSIN NO.
H–C75/3–9101–210

Canada



PLAN

NWSO NUMBER	COMMENTS
B13E	AS SHOWN



SECTION

NOTE:
REMOVE BARRELS AND CONTAINERS IN STORAGE AND UNDERLYING GEOMEMBRANE LINER PRIOR TO DEMOLITION.

NOTE:
DEMOLISH STRUCTURE TO TOP OF CONCRETE FLOOR SLAB.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.
3. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
4. MECHANICAL EQUIPMENT/DUCTING NOT SHOWN.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE
N.T.S.

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

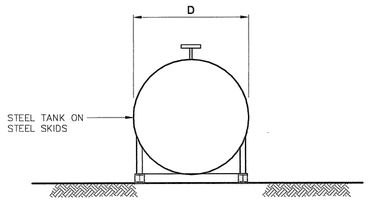
SUBJECT – SUJET

WAREHOUSE–B13E
PLAN AND SECTION

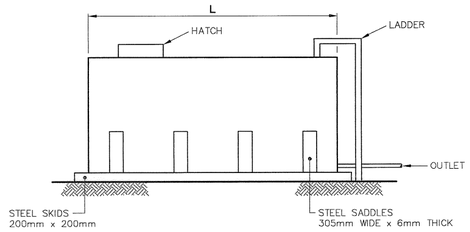
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE: DTAL/TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE: IC/CME		SECT HD / CHEF SECT
CHECKED / VERIFIE: BWF		DES MGR / GEST CONCEPT
COORDINATION: RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–211

Canada



FRONT ELEVATION

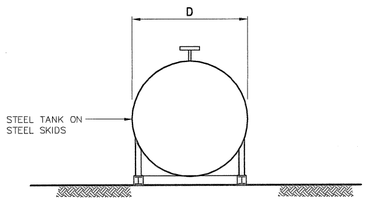


SIDE ELEVATION

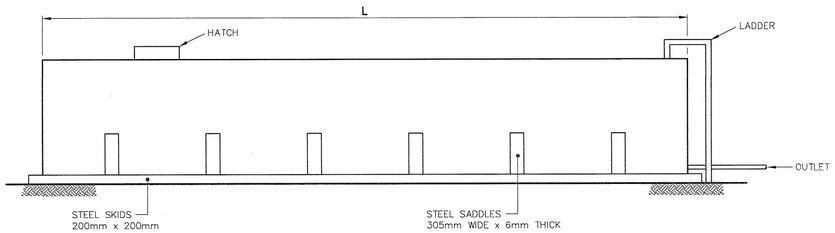
6000 GALLON FUEL TANK

N.T.S.

NWSO NUMBER	COMMENTS
W38G	6000 US GALLON CAPACITY (MOGAS) D = 2400mm ; L = 5400mm 4 – STEEL SADDLES AT 1400mm O.C.



FRONT ELEVATION



SIDE ELEVATION

18 300 GALLON FUEL TANK

N.T.S.

NWSO NUMBER	COMMENTS
W19G	18 300 US GALLON CAPACITY D = 2500mm ; L = 14 000mm 6 – STEEL SADDLES AT 2200mm o.c.

National Defence / Défense nationale

Headquarters
Quarter général

General Notes:

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3. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 1 0.5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

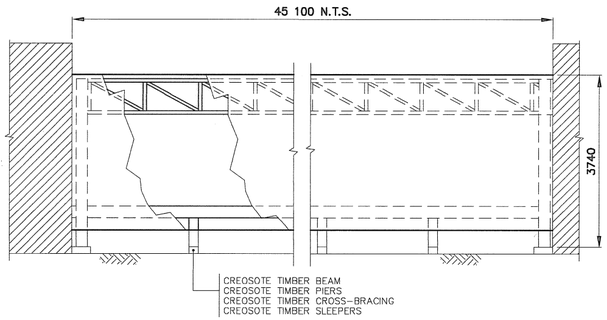
SUBJECT – SUJET

FUEL TANKS
ELEVATIONS

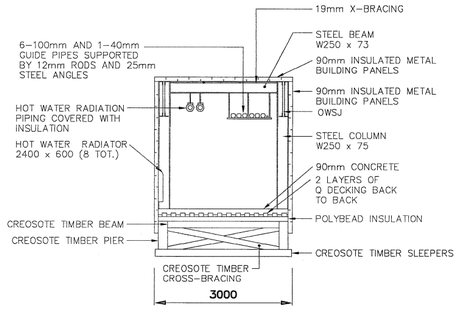
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED / ETUDIE DTAL/ TME		DES OFF / AGENT CONCEPT
DRAWN / DESSINE IC/ CAE		SECT HD / CHEF SECT
CHECKED / VERIFIE BWF		DES MGR / GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–212

Canada



ELEVATION



SECTION

BUILDING LINK

0 1 2 3m

1 0.5

NWSO NUMBER	COMMENTS
W42D	45m TOTAL LENGTH.

National Defence / Défense nationale

Headquarters
Quartier général

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Legend:

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PERMIT TO PRACTICE
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Signature
Date
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NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE: AS SHOWN

PROJECT – PROJET: DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL

DATE: 2010-12-07

SUBJECT – SUJET:

BUILDING LINK
SECTION AND ELEVATION

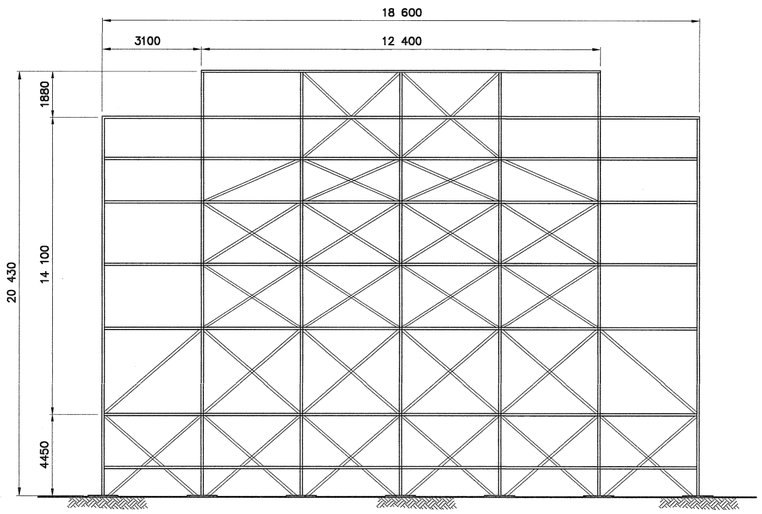
PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED – ETUDIE DTM/ THE		DES OFF – AGENT CONCEPT
DRAWN – DESSINE IC/ CAE		SECT HD – CHEF SECT
CHECKED – VERIFIE DWF		DES MGR – GEST CONCEPT
COORDINATION – RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H-C75/3-9101-213

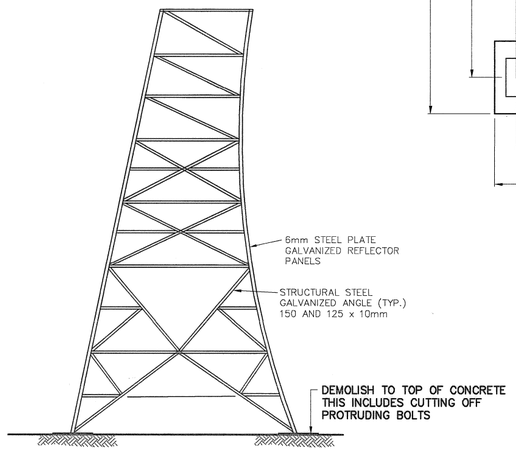
Canada

NOTE:
SMALL COMMUNICATION BILLBOARDS ARE OVERTURNED BESIDE CONCRETE FOUNDATIONS.

NWSO NUMBER	COMMENTS
W09C	RIBBED CLADDING ON REAR AND SIDES. (GALBESTOS)
W09C	NO CLADDING.



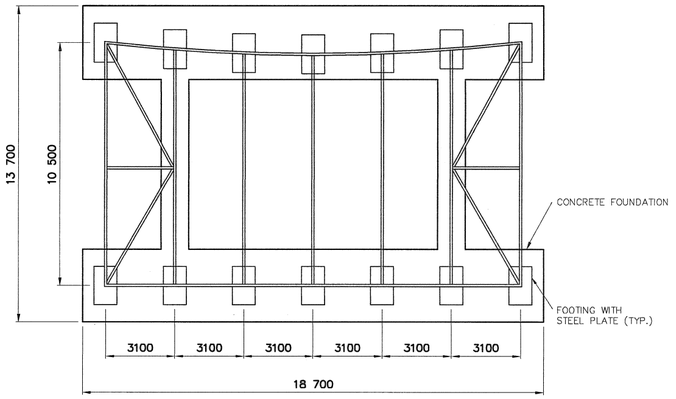
REAR ELEVATION



SECTION

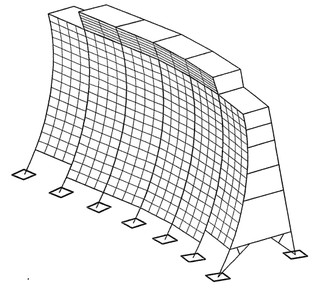
SMALL COMMUNICATION BILLBOARD

N.T.S.

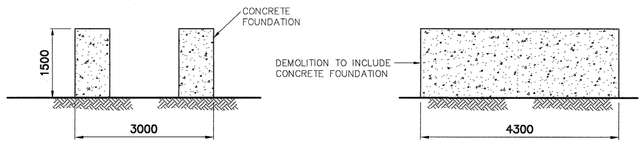


PLAN

NOTES:
1. VISIBLE FOUNDATIONS ARE 1300 x 1700 CONCRETE FOOTINGS AT GRADE.



ISOMETRIC VIEW



SIDE ELEVATION

END ELEVATION

TYPICAL FEEDHORN FOUNDATION (SMALL BILLBOARDS)

0 1 2 3m
1 0.5

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

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2. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
3. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE: AS SHOWN

PROJECT – PROJET: DYE–M CAPE DYER

DEW LINE CLEAN UP

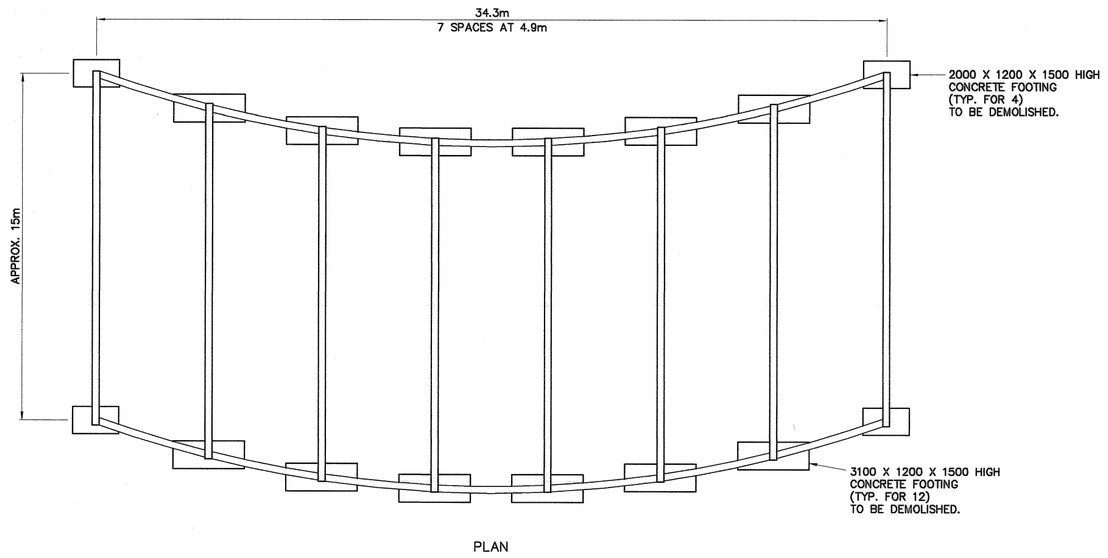
TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

SUBJECT – SUJET:
SMALL COMMUNICATION BILLBOARD, FEEDHORN FOUNDATION
PLAN, SECTION AND ELEVATIONS

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTAL/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–214

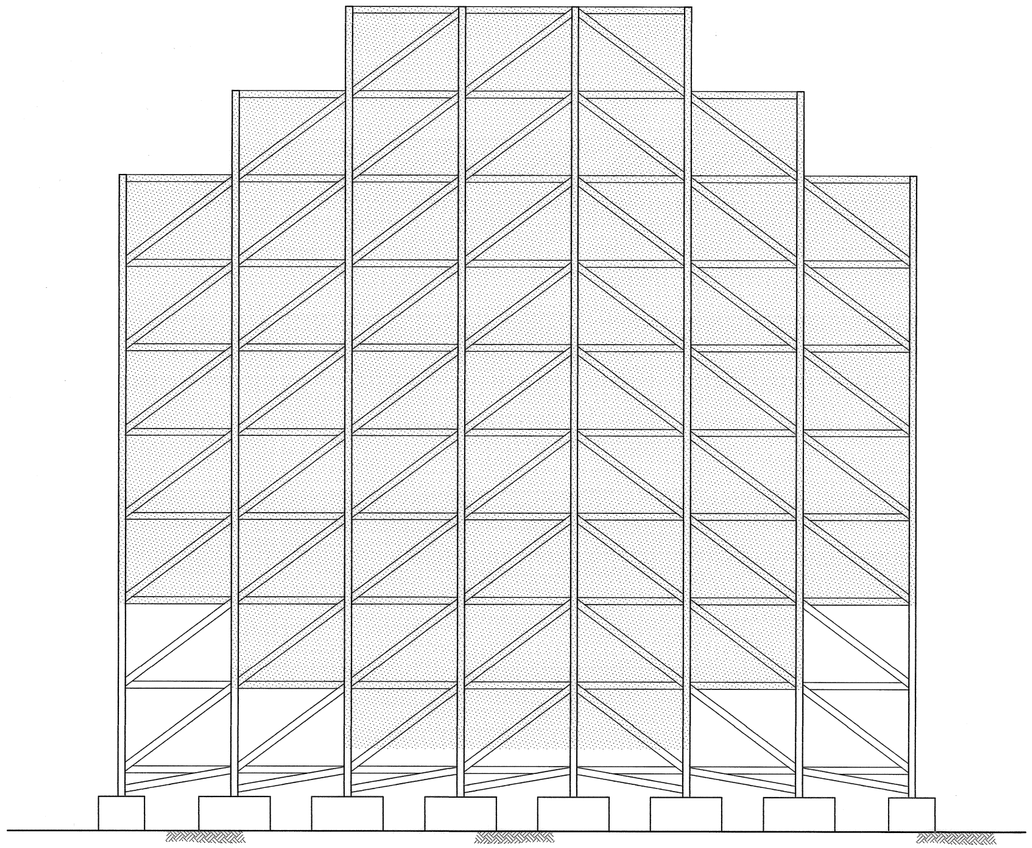
Canada 150



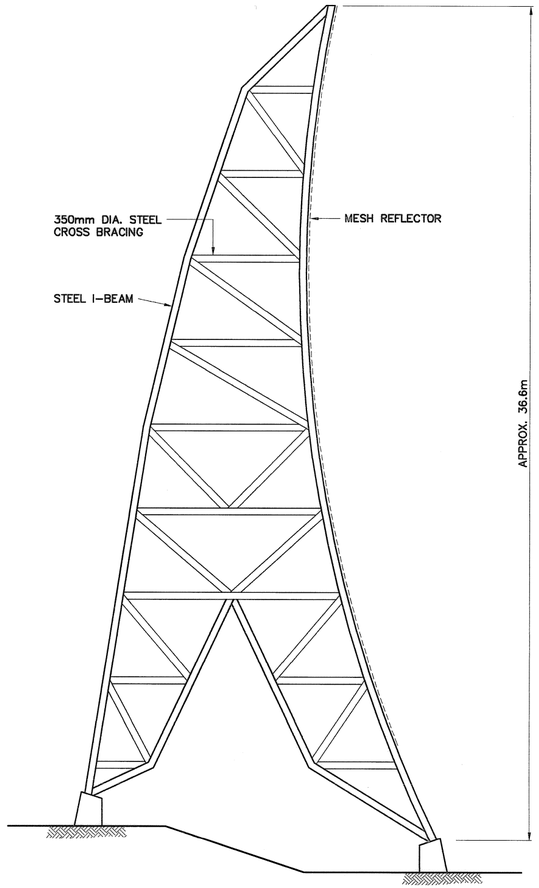
PLAN

NWSO NUMBER	COMMENTS
W09C	36.6m HIGH BILLBOARD (NOT ENCLOSED) WITH CONCRETE FOOTING FOUNDATIONS.
W09-C	MESH REFLECTORS ON CURVED PORTION.

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.



REAR ELEVATION



SECTION

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE - ECHELLE 3 1.5 0 3 6 9m

PROJECT - PROJET
DYE-M CAPE DYER

DEW LINE CLEAN UP

TRADE - METIER: STRUCTURAL
DATE: 2010-12-07

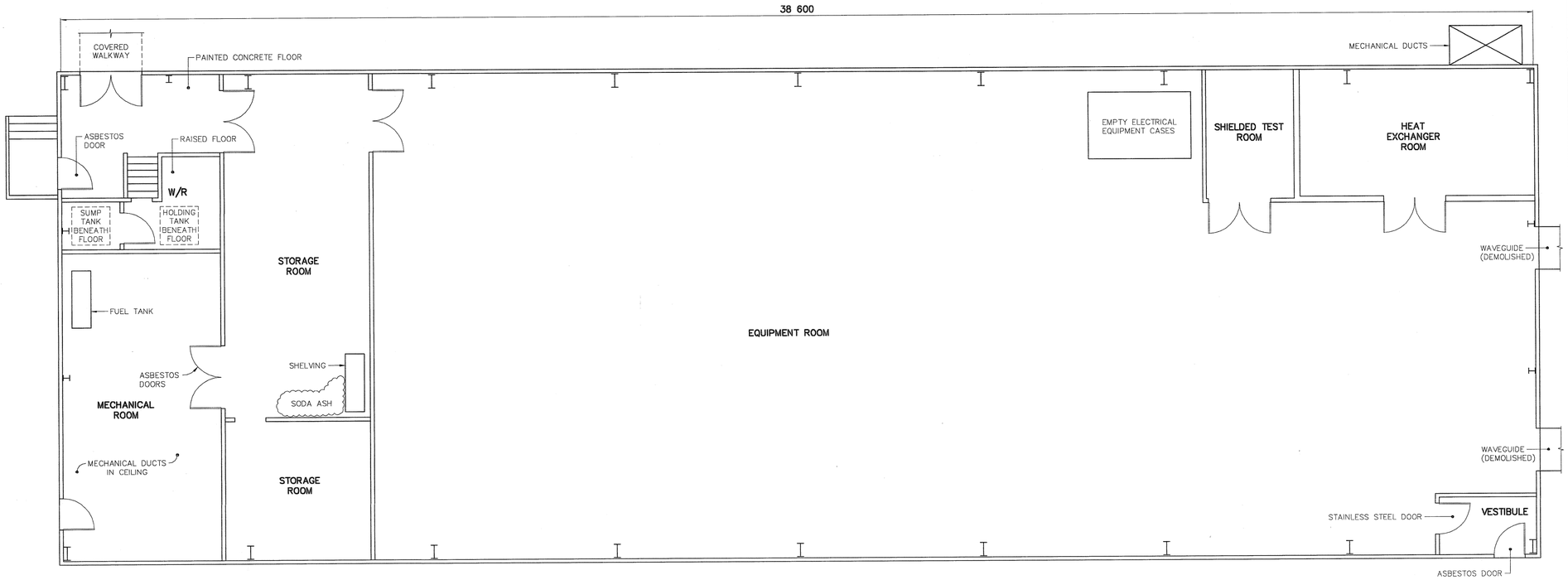
SUBJECT - SUJET

LARGE COMMUNICATION BILLBOARD PLAN, SECTION AND ELEVATION

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED - REVU	

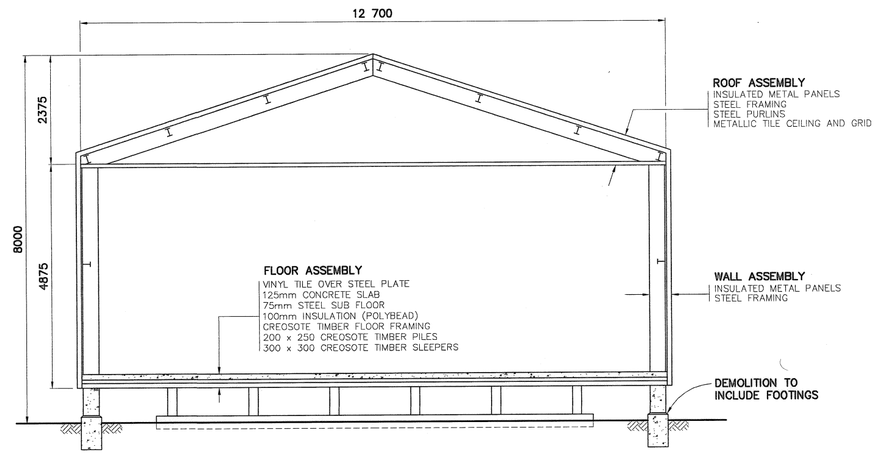
DWG. NO. - DESSIN NO.
H-C75/3-9101-215

Canada



PLAN

NWSO NUMBER	COMMENTS
B25D	AS SHOWN. ASBESTOS DOORS REMOVAL REQUIRED.



SECTION

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
3. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 1 0.5 0 1 2 3m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

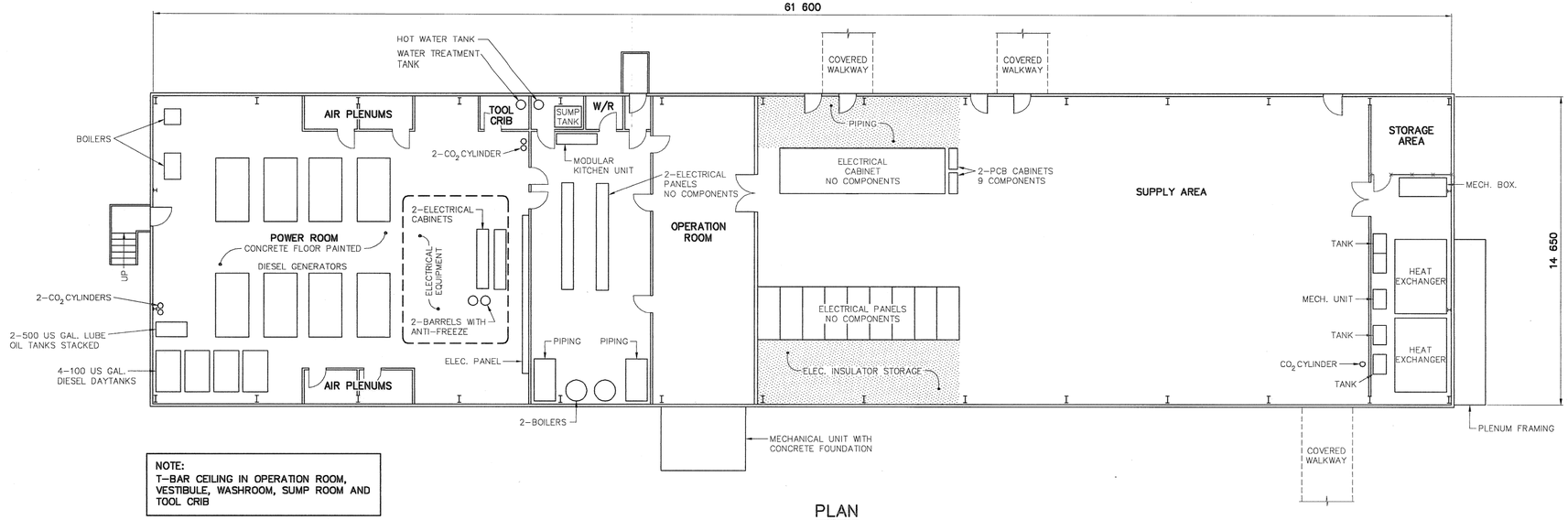
SUBJECT – SUJET
SWITCHING CENTRE AND COMMUNICATION BUILDING PLAN AND SECTION

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTM/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION KRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–216

Canada

NOTE:
DOORS ARE METAL UNLESS NOTED OTHERWISE.



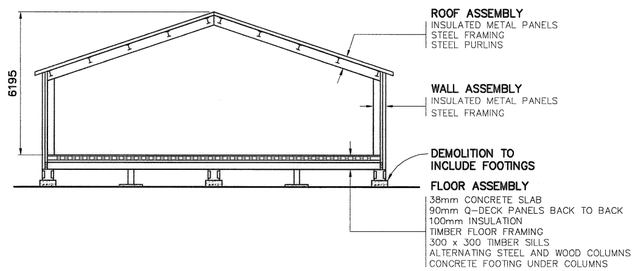
NOTE:
T–BAR CEILING IN OPERATION ROOM, VESTIBULE, WASHROOM, SUMP ROOM AND TOOL CRIB

PLAN

NWSO NUMBER	COMMENTS
B25A	AS SHOWN. ASBESTOS DOORS REMOVAL REQUIRED.

NOTE:
MASS CONCRETE FOUNDATIONS UNDER GENERATORS.

NOTE:
CONCRETE FOOTINGS TO BE DEMOLISHED.



SECTION

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. REFER TO DEMOLITION TABLES IN SPECIFICATIONS FOR LIST OF MAJOR BUILDING CONTENTS.
3. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE 2 1 0 2 4 6m

PROJECT – PROJET
DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL
DATE: 2010–12–07

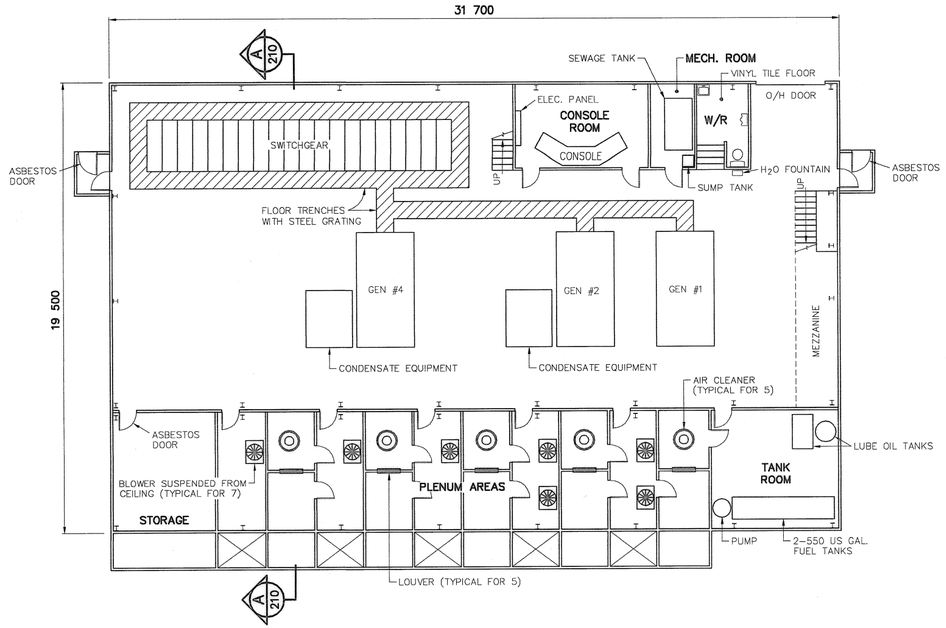
SUBJECT – SUJET

POWER AND EQUIPMENT BUILDING PLAN AND SECTION

PRODUCTION		CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE	DTAL/TME		DES OFF AGENT CONCEPT
DRAWN DESSINE	IC/CAE		SECT HD CHEF SECT
CHECKED VERIFIE	BWF		DES MGR GEST CONCEPT
COORDINATION	RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–217

Canada

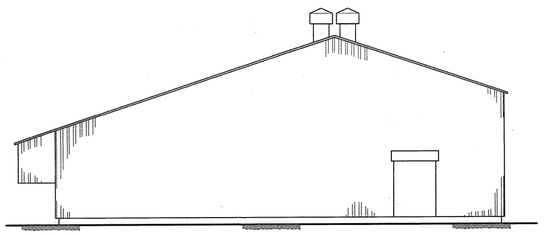


PLAN

0 2 4 6m

2 1

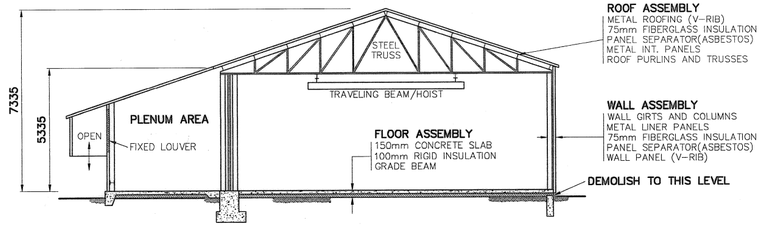
NWSO NUMBER	COMMENTS
B3B	ASBESTOS DOORS REMOVAL REQUIRED.



ELEVATION

0 2 4 6m

2 1



SECTION A 210

0 2 4 6m

2 1

National Defence / Défense nationale

Headquarters
Quartier général

General Notes:

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3. FACILITIES TO BE DEMOLISHED MAY CONTAIN PCB AND LEAD CONTAMINATED PAINT. REFER TO SECTION 02060 OF THE SPECIFICATIONS.

Legend:

No.	DATE	REVISION	REVISION	APPR.

PERMIT TO PRACTICE
AECOM Canada Ltd.
Signature
Date
PERMIT NUMBER: P639
NWT/NU Association of Professional Engineers and Geoscientists

AECOM HATCH

SCALE – ECHELLE: AS SHOWN

PROJECT – PROJET: DYE–M CAPE DYER

DEW LINE CLEAN UP

TRADE – METIER: STRUCTURAL

DATE: 2010–12–07

SUBJECT – SUJET

POWERHOUSE
PLAN, SECTIONS AND ELEVATION

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDIE DTH/ TME		DES OFF AGENT CONCEPT
DRAWN DESSINE IC/ CAE		SECT HD CHEF SECT
CHECKED VERIFIE BWF		DES MGR GEST CONCEPT
COORDINATION RRM	REVIEWED – REVU	

DWG. NO. – DESSIN NO.
H–C75/3–9101–218

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 **06-14-2010**	REPORT TIME **16h00**	☒ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER ____-_____
B	OCCURRENCE DATE: MONTH – DAY – YEAR **observed 06-11-2010**	OCCURRENCE TIME **observed 06-11-10**		

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, Nunavut**	REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN
E	LATITUDE DEGREES **66** MINUTES **39** SECONDS	LONGITUDE DEGREES **61** MINUTES **21** SECONDS
F	RESPONSIBLE PARTY OR VESSEL NAME **Defence Construction Canada**	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION **350 Albert, Suite 1720, Ottawa, Ontario, K1A 0K3**
G	ANY CONTRACTOR INVOLVED **None**	CONTRACTOR ADDRESS OR OFFICE LOCATION

H	PRODUCT SPILLED **Contact water**	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES **60,000**	U.N. NUMBER **None**
	SECOND PRODUCT SPILLED (IF APPLICABLE) **None**	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES **None**	U.N. NUMBER **None**
I	SPILL SOURCE **Land-farm**	SPILL CAUSE **Snow melt**	AREA OF CONTAMINATION IN SQUARE METRES **4500**
J	FACTORS AFFECTING SPILL OR RECOVERY **Weather: continued snow melt**	DESCRIBE ANY ASSISTANCE REQUIRED **None**	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT **None**

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

The land-farm area has overflowed its berms due to snow melt. Samples of contact water were taken 11 June 2010. No sheen was observed on the contact water.

As the initial mitigation measure to maintain the facility's stability, the contact water is being pumped outside the berm in a pre-approved discharge location, following appropriate approvals granted through the INAC inspector.

Analysis of contact water samples will be provided upon obtaining laboratory results.

L	REPORTED TO SPILL LINE BY **Robert Bellizzi**	POSITION **DLCU Env. Officer**	EMPLOYER **DCC**	LOCATION CALLING FROM **Ottawa**	TELEPHONE **613-998-7288**
M	ANY ALTERNATE CONTACT **Nahed Farah**	POSITION **Assoc. Proj. Mng**	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			

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

Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
101 Colonel By Drive
Ottawa ON K1A 0K2

Monday March 21, 2011

June 2010 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 June, 2010. A summary of the results for the parameters tested is provided below. Laboratory results are provided in Appendix A.

LOCATION: SEWAGE LAGOON – OLD CELL EAST SIDE
GPS COORDINATES: 563352 / 7386908
SAMPLE: 10-21252
DATE: June 15, 2010

Parameter	Allowable Maximum Average Concentration	Units	10-21252 (June 15, 2010)
pH	6.0 to 9.0	pH units	6.65
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	<10
BOD	120	mg/L	42
Faecal Coliforms	100,000	CFU/100mL	N/A
Total Coliforms	-	CFU/ 100 mL	>200

Photo 1 (DSC01109): Sample 10-21252 Dye-M Collecting a sample of wastewater from the sewage lagoon.

LOCATION: SEWAGE LAGOON - OLD CELL NORTH SIDE
GPS COORDINATES: 563352 / 7386908
SAMPLE: 10-21264
DATE: June 16, 2010

Parameter	Allowable Maximum Average Concentration	Units	10-21264 (June 26, 2010)
pH	6.0 to 9.0	pH units	6.39
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	20
BOD	120	mg/L	<3
Faecal Coliforms	100,000	CFU/100 mL	600
Total Coliforms	-	CFU/ 100 mL	19000

Photo 2 (DSC01287): Sample 10-21264 Dye-M Sampling Sewage Lagoon - Old cell North Side

Waste water from the Old Cell of the sewage lagoon was discharged to the ground on July 11 and 12, 2010. The water was discharged on the east side of the lagoon away from the main camp. (0563407, 7386908)

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 Looke, Kat White, Marc Ellemers, Andrea Ellis, Megan Lord (ESG)

APPENDIX A
LABORATORY RESULTS

ESG					ASG Login No:	20628
12 Verite Ave					Site:	DYE-M
Dept. of Chem. / Chem. Eng., RMC					Client Login No:	10-024
P.O. Box 17000, Stn. Forces					Samples Received:	16-Jun-10
Kingston, Ontario K7K 7B4					Date of analysis:	17-Jun-10
					Method No:	ASG 042
					Date Reported:	23-Jun-10
					Page:	1 of 1

RESULTS OF BOD ANALYSIS

Sample I.D.	Unit	BOD
21252	mg/L	42

*Averaged result of duplicates

~Readings conducted 10 hours past expected reading time.

LABORATORY QA/QC

Sample I.D.	Unit	BOD
Blank	mg/L	< 3
Control	mg/L	122
Control Target	mg/L	165

ASG Login No:	20628
rite Ave	
Site:	DYE-M
of Chem. / Chem. Eng., RMC	
Client No:	10-024
Box 17000, Stn. Forces	
Samples Received:	16-Jun-10
ton, Ontario K7K 7B4	
Date of analysis:	16-Jun-10
541-6000 ext 6567	
Date Reported:	18-Jun-10
(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 041 **Heterotrophic Plate Count** (CFU/mL)
21252*	> 200	99	> 200	> 500

*Averaged results of duplicates

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 041 **Heterotrophic Plate Count** (CFU/mL)
Blank	0	0	0	0
21252 ; Duplicate	> 200 ; > 200	88 ; 110	> 200	> 500 ; > 500
Control Sample	33	33	0	26
Control Target	34	34	0	34

ESG		ASG Login No:	20628
12 Verite Ave		Site:	Dye-M
Dept. of Chem. / Chem. Eng., RMC		Client No:	10-024
P.O. Box 17000, Stn. Forces		Samples Received:	16-Jun-10
Kingston, Ontario K7K 7B4		Date of analysis:	16-Jun-10
(613) 541-6000 ext 6567		Method No:	ASG 037
Fax: (613) 541-6596		Date Reported:	16-Jun-10
		Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21252	6.65

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00

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:	20628
Site:	Dye-M
Client Login No:	10-024
Samples Received:	16-Jun-10
Date of analysis:	17-Jun-10
Method No:	ASG 039
Date Reported:	18-Jun-10
Sheet:	1 of 1

RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
21252*	SE	mg/L	< 10

LABORATORY QA/QC

Duplicate ; 21252	SE ; SE	mg/L	< 10 ; < 10
Control	Control	mg/L	220
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent
* Averaged result of duplicates

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:	20679
Site:	Dye-M
Client Login No:	10-046
Samples Received:	28-Jun-10
Date of analysis:	5-Jul-10
Method No:	ASG 042
Date Reported:	5-Jul-10
Page:	1 of 1

RESULTS OF BOD ANALYSIS

Sample I.D.	Unit	BOD
21264*	mg/L	< 3

*Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	Unit	BOD
Duplicate ; **21264***	mg/L	< 3 ; < 3
Blank	mg/L	< 3
Control	mg/L	152
Control Target	mg/L	165

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:	20679
Site:	Dye-M
Client No:	10-046
Samples Received:	28-Jun-10
Date of analysis:	28-Jun-10
Method No:	ASG 037
Date Reported:	28-Jun-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21264	6.39

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21264 ; 21264	6.38 ; 6.40
Control	7.01
Control Target	7.00

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:	20679
Site:	Dye-M
Client Login No:	10-046
Samples Received:	28-Jun-10
Date of analysis:	29-Jun-10
Method No:	ASG 039
Date Reported:	29-Jun-10
Sheet:	1 of 1

RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
21264*	SE	mg/L	20

LABORATORY QA/QC

Duplicate ; 21264*	SE ; SE	mg/L	19 ; 20
Control	Control	mg/L	180
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

^SW =Surface Water, SI = Sewage Influent SE = Sewage Effluent
* Averaged result of duplicates

				ASG Login No:	20679
rite Ave				Site:	DYE-M
of Chem. / Chem. Eng., RMC				Client No:	10-046
Box 17000, Stn. Forces				Samples Received:	28-Jun-10
ton, Ontario K7K 7B4				Date of analysis:	28-Jun-10
541-6000 ext 6567				Date Reported:	30-Jun-10
(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)**
21264*	19 000	410	> 200 000	600

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	42	42	0	42
Control Sample Target	33	33	0	33

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

Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
101 Colonel By Drive
Ottawa ON K1A 0K2

Monday, March 21, 2011

RE: Analytical Results for Wastewater Samples Collected at DYE-M in June 2010

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

Parameter	Maximum Allowable Concentration	Units
pH	6-9	pH units
Total arsenic (As)	0.100	mg/L
Dissolved cadmium (Cd)	0.010	mg/L
Dissolved 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)	0.0006	mg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	0.500	mg/L
Oil & grease	5	mg/L
PCBs	1.0	mg/L
Phenols	-	-

Phenols
The wastewater samples collected by ESG at DYE-M in June, 2010 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

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

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

Twelve wastewater samples were collected at DYE-M and analyzed in June 2010. A summary of the details of these results follows. Laboratory results are provided in Appendix A.

LOCATION: UPPER SITE NON HAZARDOUS WASTE LANDFILL – WATER POOLED AT NORTHWEST SIDE OF FACILITY
GPS COORDINATES: 572148 / 7395163
SAMPLE: 10-21242
DATE: June 11, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21242
pH	6-9	pH units	7.88
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.026
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 1 (DSC00987): Sample 10-21242 Dye-M June 11th, 2010 Collecting a sample from the US NHWL

Waste water from the US -NHWL was discharged to the ground on June 16, 2010. The water was discharged to an INAC approved location, greater than 30m from natural drainage courses (571059 / 7394555)

LOCATION: UPPER SITE TIER II – WATER POOLED ALONG WESTSIDE OF FACILITY
GPS COORDINATES: 571054 / 7394618
SAMPLE: 10-21243
DATE: June 11, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21243
pH	6-9	pH units	8.08
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	<0.10
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 2 (DSC00996): Sample 10-21243 Collecting a sample from the US Tier II

Waste water from the US Tier II was discharged to the ground on June 16, 2010. The water was discharged to an INAC approved location, greater than 30m from natural drainage courses (571059 / 7394555)

LOCATION: LANDFARM – WATER POOLED AT THE NORTH SIDE
GPS COORDINATES: 562952 / 7387007
SAMPLE: 10-21241
DATE: June 10, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21241
pH	6-9	pH units	8.20
Total arsenic (As)	0.100	mg/L	N/A
Dissolved cadmium (Cd)	0.010	mg/L	N/A
Dissolved chromium (Cr)	0.100	mg/L	N/A
Dissolved cobalt (Co)	0.050	mg/L	N/A
Dissolved copper (Cu)	0.200	mg/L	N/A
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	N/A
Dissolved nickel (Ni)	0.200	mg/L	N/A
Total zinc (Zn)	0.500	mg/L	N/A
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

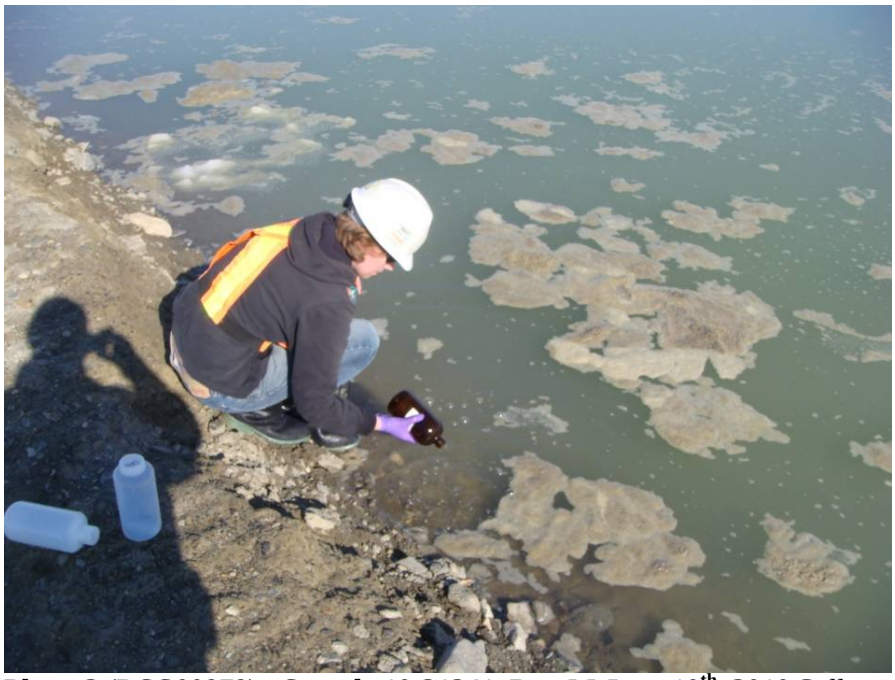

Photo 3 (DSC00979): Sample 10-21241 Dye-M June 10th, 2010 Collecting a sample from the landfarm

LOCATION: LANDFARM – OUTFLOW PIPE DISCHARGE
GPS COORDINATES: 562613 / 7387929
SAMPLE: 10-21244
DATE: June 11, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21244
pH	6-9	pH units	6.67
Total arsenic (As)	0.100	mg/L	N/A
Dissolved cadmium (Cd)	0.010	mg/L	N/A
Dissolved chromium (Cr)	0.100	mg/L	N/A
Dissolved cobalt (Co)	0.050	mg/L	N/A
Dissolved copper (Cu)	0.200	mg/L	N/A
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	N/A
Dissolved nickel (Ni)	0.200	mg/L	N/A
Total zinc (Zn)	0.500	mg/L	N/A
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 4 (DSC01014): Sample 10-21244 Dye-M Collecting a wastewater sample from the outflow pipes at the landfarm

LOCATION: LANDFARM – PUMP DISCHARGE
GPS COORDINATES: 562469 / 7387855
SAMPLE: 10-21245
DATE: June 11, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-24245
pH	6-9	pH units	6.66
Total arsenic (As)	0.100	mg/L	N/A
Dissolved cadmium (Cd)	0.010	mg/L	N/A
Dissolved chromium (Cr)	0.100	mg/L	N/A
Dissolved cobalt (Co)	0.050	mg/L	N/A
Dissolved copper (Cu)	0.200	mg/L	N/A
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	N/A
Dissolved nickel (Ni)	0.200	mg/L	N/A
Total zinc (Zn)	0.500	mg/L	N/A
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 5 (DSC01027): Sample 10-21245 Dye-M Collecting a wastewater sample from the pump discharging water from the landfill

LOCATION: DITCH BY LANDFARM – LANDFARM DISCHARGE WATER DOWNSTREAM OF DISCHARGE LOCATION
GPS COORDINATES: 562405 / 7387850
SAMPLE: 10-21246
DATE: June 11, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21246
pH	6-9	pH units	6.65
Total arsenic (As)	0.100	mg/L	N/A
Dissolved cadmium (Cd)	0.010	mg/L	N/A
Dissolved chromium (Cr)	0.100	mg/L	N/A
Dissolved cobalt (Co)	0.050	mg/L	N/A
Dissolved copper (Cu)	0.200	mg/L	N/A
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	N/A
Dissolved nickel (Ni)	0.200	mg/L	N/A
Total zinc (Zn)	0.500	mg/L	N/A
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 6 (DCS01028): Sample 10-21246 Dye-M Collecting a sample from culvert down-stream of landfarm discharge - Northeast culvert at crossroads (MPA 4)

Waste water from the Landfarm area (10-21241, 44, 45, 46) began on June 11, prior to receiving analytical results. Samples were collected downgradient along the drainage course to ensure there were no impacts to the receiving environment. All results were below criteria, and discharge continued on June 16th, 2010.

LOCATION: LOWER SITE – BPA – POOLED WATER IN THE NORTHEAST CORNER.
GPS COORDINATES: 563026 / 7387524
SAMPLE: 10-21247
DATE: June 12, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21247
pH	6-9	pH units	6.39
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.134
Oil & grease	5	mg/L	**11.5**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 7 (DSC01040): Sample 10-21247 Dye-M Sample bottles collected from the BPA

Water from the Lower Site BPA was over the criteria for Oil and Grease and therefore was not discharged to land. The wastewater was placed in a tote tanks for further treatment/sampling, and was later placed back into the BPA.

LOCATION: LOWER SITE – TIER II – POOLED WATER ON THE NORTH SIDE OF THE NEW CELL
GPS COORDINATES: 561898 / 7388331
SAMPLE: 10-21248
DATE: June 11, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21248
pH	6-9	pH units	6.56
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.016
Oil & grease	5	mg/L	2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 8 (DSC01049): Sample 10-21248 Dye-M Collecting a sample from the LS Tier II

Waste water from the Lower Site - Tier II was discharged to the ground on June 16, 2010. The water was discharged to an area greater than 30m from natural drainage courses (561898 / 7388338).

LOCATION: LS NHWL – WASTEWATER SAMPLE COLLECTED FROM THE NORTHEAST CORNER
GPS COORDINATES: 562952 / 7387007
SAMPLE: 10-21249
DATE: June 14, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21249
pH	6-9	pH units	7.23
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.006
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.013
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

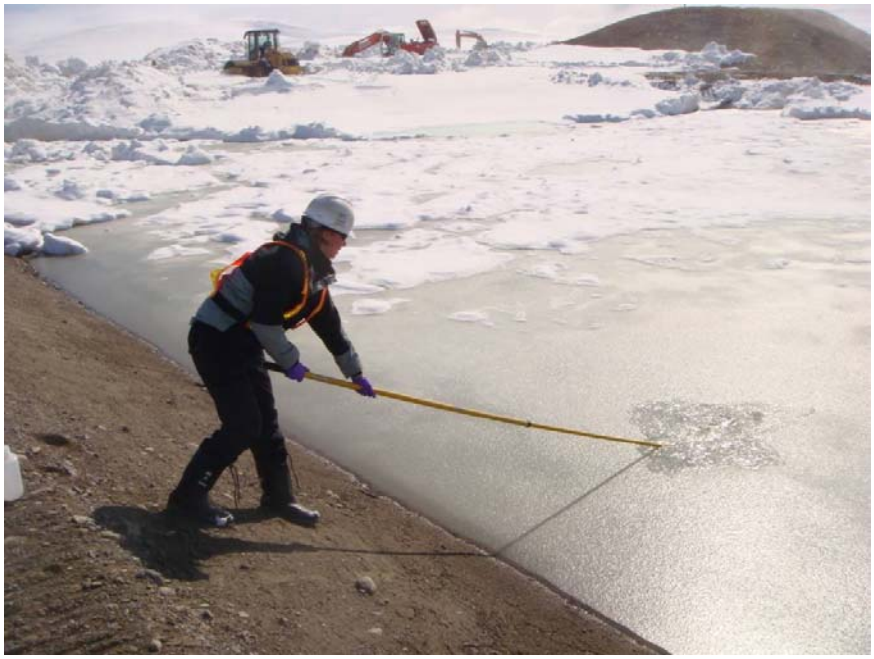

Photo 9 (DSC01086): Sample 10-21249 Dye-M Collecting a sample of wastewater from the LS NHWL

Waste water from the LS NHWL was discharged to the ground on June 21, 2010. (562931 / 7387009)

LOCATION: LS FORMER BPA – WASTEWATER SAMPLE COLLECTED FROM THE NORTH SIDE
GPS COORDINATES: 5631011 / 7387530
SAMPLE: 10-21250 (Duplicate sample 10-21251)
DATE: June 14, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21250
pH	6-9	pH units	7.08
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.014
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

SAMPLE: 10-21251 (Duplicate sample 10-21250)
DATE: June 14, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21251
pH	6-9	pH units	7.18
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.4
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.013
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 10 (DSC01089): Sample 10-21250/51 Dye-M Bottles of water collected from the former BPA (LS)

Waste water from the LS Former BPA was discharged to the ground on June 21, 2010. (563129 / 7387533)

LOCATION: UPPER SITE BPA – SAMPLE WAS COLLECTED FROM THE NORTH SIDE
GPS COORDINATES: 563352 / 7386908
SAMPLE: 10-21254
DATE: June 22, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21254
pH	6-9	pH units	6.31
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.001
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.028
Oil & grease	5	mg/L	**5.3**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 11 (DSC01244): Sample 10-21254 Dye-M Collecting a sample from the US BPA

Water from the Upper Site BPA was over the criterion for Oil and Grease and therefore was not discharged to land. The level of water in the Upper Site BPA decreased over the summer and no discharge events were required.

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 Ellemers, Megan Lord, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

ASU #	12752		**Report ID:**	Dye-M W7
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	14-Jun-10
Site:	Dye-M		**Date:**	15-Jun-10
	10-010		**Matrix:**	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
10-21241	<2.0			
Blank	<2.0			
Control	13.9			
Control Target	15.7			

ASU #	12752		**Report ID:**	Dye-M W8
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	14-Jun-10
Site:	Dye-M		**Date:**	15-Jun-10
	10-010		**Matrix:**	water
Report of Analysis				
Sample	Dissolved Lead			
	mg/L			
10-21241	<0.010			
Blank	<0.010			
Control	8.10			
Control Target	8.00			

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Fax: (613) 541-6596

ASG Login No: 20605
Site: Dye-M
Client No: 10-010
Samples Received: 12-Jun-10
Date of analysis: 14-Jun-10
Method No: ASG 015
Date Reported: 15-Jun-10
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21241*	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Duplicate ; 21241*	mg/L	< 0.003 ; < 0.003	< 0.003 ; < 0.003
	Control Sample	mg/L	< 0.003	0.014
	Control Sample Target	mg/L	< 0.003	0.015

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

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ASG Login No: 20609
Site: Dye-M
Client No: 10-011
Samples Received: 13-Jun-10
Date of analysis: 14-Jun-10
Method No: ASG 014
Date Reported: 14-Jun-10
Sheet: 1 of 1

RESULTS OF MERCURY ANALYSIS

Sample ID	Mercury ug/L
10-21242*	< 0.4

*Average result of duplicates.

LABORATORY QA/QC

Sample ID	Mercury ug/L
Duplicate ; 10-21242*	< 0.4 ; < 0.4
Blank	< 0.4
Control Target	4.00
Control Sample	4.10

ASU #	12750		**Report ID:**	Dye-M W4
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	14-Jun-10
Site:	Dye-M		**Date:**	15-Jun-10
	10-011		**Matrix:**	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
10-21242	<2.0			
Blank	<2.0			
Control	13.8			
Control Target	15.7			

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21242	mg/L	< 0.003	< 0.003

* Average result of duplicate

Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.014
	Control Sample Target	mg/L	< 0.003	0.015

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

ASU #	12750		**Report ID:**	Dye-M W3				
Client:	ESG		**Date Submitted:**	14-Jun-10				
			Date tested:	14-Jun-10				
Site:	Dye-M		**Date:**	15-Jun-10				
	10-011		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21242	-	-	-	-	-	0.026	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.05	0.82	0.78
Control Target	-	-	-	-	-	3.00	0.80	0.80
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21242	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.61	1.62	1.61	0.79	8.10	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

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ASG Login No: 20610
Site: Dye-M
Client No: 10-012
Samples Received: 13-Jun-10
Date of analysis: 14-Jun-10
Method No: ASG 014
Date Reported: 14-Jun-10
Sheet: 1 of 1

RESULTS OF MERCURY ANALYSIS

Sample ID	Mercury ug/L
10-21243*	< 0.4

*Average result of duplicates.

LABORATORY QA/QC

Sample ID	Mercury ug/L
Duplicate ; 10-21243*	< 0.4 ; < 0.4
Blank	< 0.4
Control Target	4.00
Control Sample	4.10

ASU #	12751		**Report ID:**	Dye-M W5
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	14-Jun-10
Site:	Dye-M		**Date:**	15-Jun-10
	10-012		**Matrix:**	water

Report of Analysis

Sample	Oil & Grease
	mg/L
10-21243	<2.0
Blank	<2.0
Control	13.9
Control Target	15.7

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ASG Login No:	20610
Site:	Dye-M
Client No:	10-012
Samples Received:	13-Jun-10
Date of analysis:	14-Jun-10
Method No:	ASG 015
Date Reported:	15-Jun-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21243	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.014
	Control Sample Target	mg/L	< 0.003	0.015

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

ASU #	12751		**Report ID:**	Dye-M W6				
Client:	ESG		**Date Submitted:**	14-Jun-10				
			Date tested:	14-Jun-10				
Site:	Dye-M		**Date:**	15-Jun-10				
	10-012		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21243	-	-	-	-	-	<0.010	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.05	0.82	0.78
Control Target	-	-	-	-	-	3.00	0.80	0.80
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21243	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.61	1.62	1.61	0.79	8.10	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

ASU #	12758		**Report ID:**	Dye-M W9
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	14-Jun-10
Site:	Dye-M		**Date:**	15-Jun-10
	10-018		**Matrix:**	water
Report of Analysis				
Sample	Dissolved Lead			
	mg/L			
10-21244	<0.010	*		
10-21245	<0.010			
10-21246	<0.010			
Blank	<0.010			
10-21244	<0.010			
10-21244	<0.010			
Control	8.10			
Control Target	8.00			

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ASG Login No: 20613
Site: Dye-M
Client No: 10-018
Samples Received: 14-Jun-10
Date of analysis: 14-Jun-10
Method No: ASG 015
Date Reported: 15-Jun-10
Sheet No: 1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21244	mg/L	< 0.003	< 0.003
W	21245	mg/L	< 0.003	< 0.003
W	21246	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.014
	Control Sample Target	mg/L	< 0.003	0.015

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

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ASG Login No: 20613
Site: Dye-M
Client No: 10-018
Samples Received: 14-Jun-10
Date of analysis: 14-Jun-10
Method No: ASG 037
Date Reported: 15-Jun-10
Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21244*	6.67
21245	6.66
21246	6.65

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21244 ; 21244	6.67 ; 6.66
Control	6.98
Control Target	7.00

ASU #	12758		**Report ID:**	Dye-M W10
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	16-Jun-10
Site:	Dye-M		**Date:**	17-Jun-10
	10-018		**Matrix:**	water

Report of Analysis

Sample	Oil & Grease
	mg/L
10-21244	<2.0
10-21245	<2.0
10-21246	<2.0
Blank	<2.0
Control	13.6
Control Target	15.7

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ASG Login No:	20616
Site:	Dye-M
Client No:	10-019
Samples Received:	14-Jun-10
Date of analysis:	14-Jun-10
Method No:	ASG 014
Date Reported:	15-Jun-10
Sheet:	1 of 1

RESULTS OF MERCURY ANALYSIS

Sample ID	Mercury ug/L
10-21247	< 0.4
10-21248*	< 0.4

*Average result of duplicates.

LABORATORY QA/QC

Sample ID	Mercury ug/L
Duplicate ; 10-21248*	< 0.4 ; < 0.4
Blank	< 0.4
Control Target	4.00
Control Sample	4.20

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ASG Login No:	20616
Site:	Dye-M
Client No:	10-019
Samples Received:	14-Jun-10
Date of analysis:	14-Jun-10
Method No:	ASG 037
Date Reported:	15-Jun-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21247	6.39
21248	6.56

LABORATORY QA/QC

Sample I.D.	pH
Control	6.98
Control Target	7.00

ASU #	12747		**Report ID:**	Dye-M W1
Client:	ESG		**Date Submitted:**	14-Jun-10
			Date tested:	14-Jun-10
Site:	Dye-M		**Date:**	15-Jun-10
	10-019		**Matrix:**	water

Report of Analysis

Sample	Oil & Grease
	mg/L
10-21247	11.5
10-21248	<2.0
Blank	<2.0
Control	13.9
Control Target	15.7

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ASG Login No:	20616
Site:	Dye-M
Client No:	10-019
Samples Received:	14-Jun-10
Date of analysis:	14-Jun-10
Method No:	ASG 015
Date Reported:	15-Jun-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21247	mg/L	< 0.003	< 0.003
W	21248	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.014
	Control Sample Target	mg/L	< 0.003	0.015

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

ASU #	12747		**Report ID:**	Dye-M W2				
Client:	ESG		**Date Submitted:**	14-Jun-10				
			Date tested:	14-Jun-10				
Site:	Dye-M		**Date:**	15-Jun-10				
	10-019		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21247	-	-	-	-	-	0.134	<0.005	<0.003
10-21248	-	-	-	-	-	0.016	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
10-21248	-	-	-	-	-	0.016	<0.005	<0.003
10-21248	-	-	-	-	-	0.015	<0.005	<0.003
Control	-	-	-	-	-	3.05	0.82	0.78
Control Target	-	-	-	-	-	3.00	0.80	0.80
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21247	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21248	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21248	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21248	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.61	1.62	1.61	0.79	8.10	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

ESG						ASG Login No:	20627
12 Verite Ave						Site:	Dye-M
Dept. of Chem. / Chem. Eng., RMC						Client No:	10-023
P.O. Box 17000, Stn. Forces						Samples Received:	16-Jun-10
Kingston, Ontario K7K 7B4						Date of analysis:	17-Jun-10
(613) 541-6000 ext 6567						Method No:	ASG 021
Fax: (613) 541-6596						Date Reported:	18-Jun-10
						Sheet:	1 of 1

RESULTS OF MERCURY ANALYSIS

Sample ID	Mercury ug/L
21249	< 0.4
21250	< 0.4
21251*	< 0.4

*Average result of duplicates.

LABORATORY QA/QC

Sample ID	Mercury ug/L
Duplicate ; 21251*	< 0.4 ; < 0.4
Blank	< 0.4
Control Target	4.00
Control Sample	4.20

ESG						ASG Login No:	20627
12 Verite Ave						Site:	Dye-M
Dept. of Chem. / Chem. Eng., RMC						Client No:	10-023
P.O. Box 17000, Stn. Forces						Samples Received:	16-Jun-10
Kingston, Ontario K7K 7B4						Date of analysis:	17-Jun-10
(613) 541-6000 ext 6567						Method No:	ASG 015
Fax: (613) 541-6596						Date Reported:	18-Jun-10
						Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21249*	mg/L	< 0.003	< 0.003
W	21250	mg/L	< 0.003	< 0.003
W	21251	mg/L	< 0.003	< 0.003

* Average result of duplicate

Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Duplicate ; 21249*	mg/L	< 0.003 ; < 0.003	< 0.003 ; < 0.003
	Control Sample	mg/L	< 0.003	0.013
	Control Sample Target	mg/L	< 0.003	0.015

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

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ASG Login No:	20627
Site:	Dye-M
Client No:	10-023
Samples Received:	16-Jun-10
Date of analysis:	16-Jun-10
Method No:	ASG 037
Date Reported:	16-Jun-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21249	7.23
21250	7.08
21251*	7.18

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21252* ; Duplicate	7.18 ; 7.17
Control	7.01
Control Target	7.00

ASU #	12768		**Report ID:**	Dye-M W15				
Client:	ESG		**Date Submitted:**	16-Jun-10				
			Date tested:	17-Jun-10				
Site:	Dye-M		**Date:**	18-Jun-10				
	10-023		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21249	-	-	-	-	-	0.013	0.006	<0.003
10-21250	-	-	-	-	-	0.014	<0.005	<0.003
10-21251	-	-	-	-	-	0.013	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.04	0.83	0.77
Control Target	-	-	-	-	-	3.00	0.80	0.80
10-21251						0.013	<0.005	<0.003
10-21251						0.013	<0.005	<0.003
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21249	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21250	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21251	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.63	1.63	1.61	0.81	8.12	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-
10-21251	<0.005	<0.005	<0.003	<0.001	<0.010			
10-21251	<0.005	<0.005	<0.003	<0.001	<0.010			

ASU #	12768		**Report ID:**	Dye-M W14
Client:	ESG		**Date Submitted:**	16-Jun-10
			Date tested:	16-Jun-10
Site:	Dye-M		**Date:**	17-Jun-10
	10-023		**Matrix:**	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
10-21249	<2.0			
10-21250	<2.0			
10-21251	<2.0			
Blank	<2.0			
Control	13.6			
Control Target	15.7			

ASU #	12811		**Report ID:**	Dye-M W17
Client:	ESG		**Date Submitted:**	25-Jun-10
			Date tested:	26-Jun-10
Site:	Dye-M		**Date:**	28-Jun-10
	10-054		**Matrix:**	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
10-21254	5.3			
Blank	<2.0			
Control	14.3			
Control Target	15.7			
Results relate only to the items tested				

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ASG Login No:	20668
Site:	Dye-M
Client No:	10-054
Samples Received:	25-Jun-10
Date of analysis:	25-Jun-10
Method No:	ASG 015
Date Reported:	28-Jun-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21254	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.011
	Control Sample Target	mg/L	< 0.003	0.015

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

ASU #	12811	**Report ID:**	Dye-M W16
Client:	ESG	**Date Submitted:**	25-Jun-10
		Date tested:	28-Jun-10
Site:	Dye-M	**Date:**	28-Jun-10
	10-054	**Matrix:**	Water

Report of Analysis

Total Metals Results in mg/L

SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21254	-	-	-	-	-	0.028	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.08	0.83	0.79
Control Target	-	-	-	-	-	3.00	0.80	0.80

Dissolved Metals Results in mg/L

SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21254	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.62	1.64	1.63	0.81	8.12	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

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:	20668
Site:	Dye-M
Client No:	10-054
Samples Received:	25-Jun-10
Date of analysis:	28-Jun-10
Method No:	ASG 014
Date Reported:	28-Jun-10
Sheet:	1 of 1

RESULTS OF MERCURY ANALYSIS

Sample ID	Mercury mg/L
21254	< 0.0004

LABORATORY QA/QC

Sample ID	Mercury mg/L
Blank	< 0.0004
Control Target	0.0040
Control Sample	0.0042

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:	20668
Site:	Dye-M
Client No:	10-054
Samples Received:	25-Jun-10
Date of analysis:	25-Jun-10
Method No:	ASG 037
Date Reported:	28-Jun-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21254	6.31

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21254 ; 21254	6.30 ; 6.32
Control	7.01
Control Target	7.00

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

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

Monday, March 21, 2011

August 2010 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.

No samples were collected from the DYE-M sewage lagoons in July.

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 Looke, Kat White, Marc Ellemers, Andrea Ellis, Megan Lord (ESG)

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

Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
101 Colonel By Drive
Ottawa ON K1A 0K2

Monday, March 21, 2011

RE: Analytical Results for Wastewater Samples Collected at DYE-M in July 2010

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
Dissolved 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)	0.0006	mg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	0.500	mg/L
Oil & grease	5	mg/L
PCBs	1.0	mg/L
Phenols	-	-

Phenols

The wastewater samples collected by ESG at DYE-M in July, 2010 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

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

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

Fourteen wastewater samples were collected at DYE-M and analyzed in July 2010. A summary of the details of these results follows. Laboratory results are provided in Appendix A.

LOCATION: TREATMENT CELL/HOLDING BASIN #1
GPS COORDINATES: 0563052 7387584
SAMPLE: 10-21286
DATE: JULY 9, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21286
pH	6-9	**Units**	6.98
Total Arsenic	0.100	pH units	<0.003
Dissolved Cadmium	0.010	mg/L	<0.001
Total Chromium	0.100	mg/L	0.006
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	0.0006	mg/L	<0.0004
Dissolved Nickel	0.200	mg/L	<0.005
Total Zinc	0.500	mg/L	<0.010
Oil & Grease	5	mg/L	3.7
PCBs	1.0	mg/L	<0.003
Phenols	-	mg/L	N/A

LOCATION: TREATMENT CELL/HOLDING BASIN #2
GPS COORDINATES: 0563039 7387593
SAMPLE: 10-21287
DATE: JULY 9, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21287
pH	6-9	pH units	6.60
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	<0.010
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

LOCATION: TREATMENT CELL/HOLDING BASIN #3
GPS COORDINATES: 0563055 7387596
SAMPLE: 10-21288
DATE: JULY 9, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21288
pH	6-9	pH units	6.57
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.011
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 1 (DSCN5709) Sample 10-21286/87/88 Dye-M Sampling treatment cells

Wastewater from the Holding Basins was below criteria for all parameters in 2010. Water from the holding basins can be discharged to land in 2011.

LOCATION: TANKER W19G
GPS COORDINATES: 563112 7387514
SAMPLE: 10-21297
DATE: JULY 9, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21297
pH	6-9	pH units	6.77
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	<0.010
Oil & grease	5	mg/L	**5.2**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

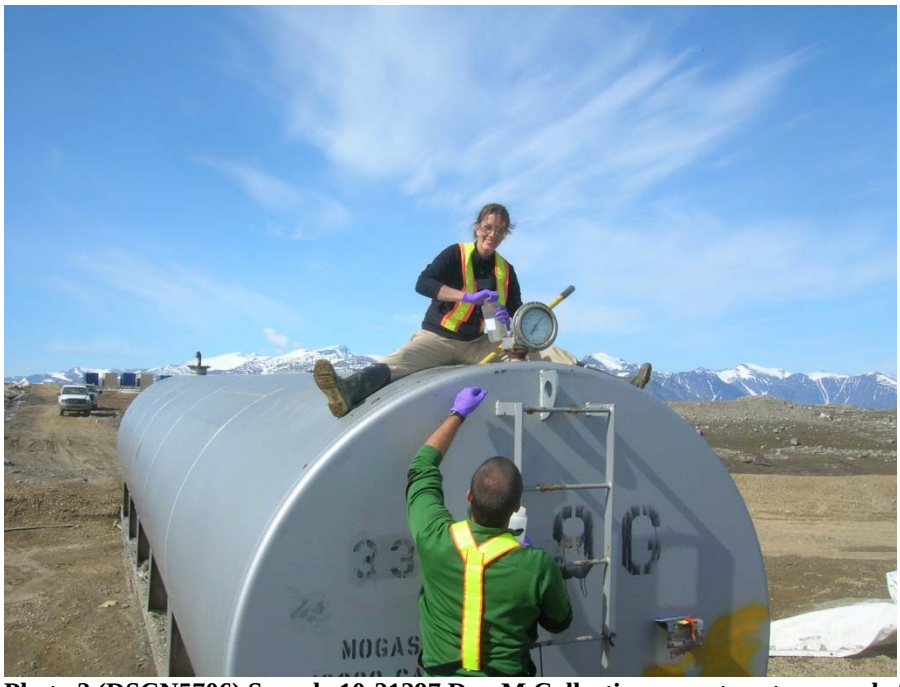

Photo 2 (DSCN5706) Sample 10-21297 Dye-M Collecting a wastewater sample from W19G (in former LS BPA)

Wastewater from tanks W19G was above criteria for oil and grease and was not discharged to the ground in 2010.

LOCATION: LS BPA – SAMPLE CAME FROM A TOTE WHICH WAS FILLED WITH WATER FROM THE LS PBA.
GPS COORDINATES: 563030 7387479
SAMPLE: 10-21298
DATE: JULY 14, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21298
pH	6-9	pH units	**5.77**
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.018
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.140
Oil & grease	5	mg/L	**114**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 3 (DSC01464) Sample 10-21298 Dye-M Collecting a sample from a tote in LS BPA (full of ponded water from LS BPA

Wastewater from the tote tank in the LS BPA was above criteria for oil and grease and was below the pH range. The wastewater was not discharged to the ground in 2010.Water from the tote tank was placed back in the LS BPA before winter.

LOCATION: LS BPA – RE-SAMPLED / COMPOSITE SAMPLE FROM THREE DIFFERENT AREAS IN THE BPA
GPS COORDINATES: 1) 563044 7387485
2) 536060 7387506
3) 563035 7387528
SAMPLE: 10-21299
DATE: JULY 14, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21299
pH	6-9	pH units	6.19
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.010
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.347
Oil & grease	5	mg/L	**29.7**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 4 (DSC01466) Sample 10-21299 Dye-M Collecting a composite sample of ponded water from LS BPA - South side

Wastewater in the LS-BPA was above criteria for oil and grease and was not discharged to the ground in 2010

LOCATION: LS BPA – TANKER 6451 NORTH CHAMBER
GPS COORDINATES: N/A
SAMPLE: 10-21309
DATE: JULY 16, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21309
pH	6-9	pH units	**5.93**
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.006
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.125
Oil & grease	5	mg/L	**63200**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 5 (DSC01497) Sample 10-21309 Dye-M Collecting a sample from Tanker 6451 - north side.

LOCATION: LS BPA – TANKER 6451 SOUTH CHAMBER
GPS COORDINATES: 563008 7387491
SAMPLE: 10-21310
DATE: JULY 16, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21310
pH	6-9	pH units	**5.85**
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.006
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.126
Oil & grease	5	mg/L	**42300**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

SAMPLE: 10-21311
DATE: JULY 16, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21311
pH	6-9	pH units	**5.84**
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.006
Dissolved cobalt (Co)	0.050	mg/L	<0.00
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.126
Oil & grease	5	mg/L	**69000**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 6 (DSC01499) Sample 10-21310/11 Dye-M Collecting a sample from Tanker 6451 - south side

LOCATION: LS BPA – TANKER 6451 MIDDLE CHAMBER
GPS COORDINATES: N/A
SAMPLE: 10-21312
DATE: JULY 16, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21312
pH	6-9	pH units	**5.96**
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	0.004
Dissolved chromium (Cr)	0.100	mg/L	0.006
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.126
Oil & grease	5	mg/L	**25200**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Wastewater from Tanker 6451 (LS-BPA) was above criteria for oil and grease and was below the pH range. The wastewater was not discharged to the ground in 2010.

LOCATION: US NHWL - WASTEWATER POOLED IN FACILITY
GPS COORDINATES: 572150 7395171
SAMPLE: 10-21324
DATE: JULY 31, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21324
pH	6-9	pH units	7.30
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	**0.037**
Dissolved chromium (Cr)	0.100	mg/L	0.011
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.706
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 7 (DSC01626) Sample 10-21324 Dye-M US NHWL - Collecting a sample from the pooled water in the northwest corner.

Waste water from the US NHWL was discharged to the ground on August 5, 2010, before results were received with permission from the Water Board. The water was discharged to an INAC approved location (572140 7395185). All results were below criteria.

LOCATION: US TIER II - WASTEWATER POOLED IN FACILITY
GPS COORDINATES: 571057 7394617
SAMPLE: 10-21325
DATE: JULY 31, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21325
pH	6-9	pH units	7.15
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	0.002
Dissolved chromium (Cr)	0.100	mg/L	0.011
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.035
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 8 (DSC01637) Sample 10-21325 Dye-M US Tier II - Collecting a sample from the pooled water on the west side of the facility

Waste water from the US Tier II was discharged to the ground on August 5, 2010, before results were received with permission from the Water Board. The water was discharged to an INAC approved location (571047 7394637). All results were below criteria.

LOCATION: LS TIER II - WASTEWATER POOLED IN FACILITY
GPS COORDINATES: 561864 7388309
SAMPLE: 10-21326
DATE: JULY 31, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21326
pH	6-9	pH units	7.10
Total arsenic (As)	0.100	mg/L	0.004
Dissolved cadmium (Cd)	0.010	mg/L	0.002
Dissolved chromium (Cr)	0.100	mg/L	0.085
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.075
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 9 (DSC01646) Sample 10-21326 Dye-M Collecting a sample from pooled water in the LS Tier II - Water pooled all along the north berm

Waste water from the LS Tier II was discharged to the ground on August4, 2010, before results were received with permission from the Water Board. The water was discharged to an INAC approved location (561902 7388362). All results were below criteria.

LOCATION: LS NHWL - WASTEWATER POOLED IN FACILITY
GPS COORDINATES: 562990 7387010
SAMPLE: 10-21327
DATE: JULY 31, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21327
pH	6-9	pH units	6.82
Total arsenic (As)	0.100	mg/L	<0.03
Dissolved cadmium (Cd)	0.010	mg/L	<0.001
Dissolved chromium (Cr)	0.100	mg/L	0.042
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.082
Oil & grease	5	mg/L	<2.0
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 10 (DSC01670) Sample 10-21327 Dye-M Collecting a sample from the LS NHWL - water pooled in the North east side of the new cell.

Waste water from the LS NHWL was discharged to the ground on August4, 2010, before results were received with permission from the Water Board.. All results were below criteria.

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 Ellemers, Megan Lord, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

ESG		ASG Login No:	20751
12 Verite Ave		Site:	Dye-M
Dept. of Chem. / Chem. Eng., RMC		Client No:	10-106
P.O. Box 17000, Stn. Forces		Samples Received:	12-Jul-10
Kingston, Ontario K7K 7B4		Date of analysis:	12-Jul-10
(613) 541-6000 ext 6567		Method No:	ASG 037
Fax: (613) 541-6596		Date Reported:	12-Jul-10
		Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21286*	5.52
21287	5.70
21288	5.78
21297	5.55

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21286* ; Duplicate	5.52 ; 5.52
Control	7.00
Control Target	7.00

ASU #	12886		**Report ID:**	Dye-M W18
Client:	ESG		**Date Submitted:**	12-Jul-10
			Date tested:	12-Jul-10
Site:	Dye-M		**Date:**	13-Jul-10
	10-106		**Matrix:**	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
10-21286	3.7			
10-21287	<2.0			
10-21288	<2.0			
10-21297	5.2			
Blank	<2.0			
Control	14.0			
Control Target	15.9			

ESG							ASG Login No:	20751	
12 Verite Ave							Site:	Dye-M	
Dept. of Chem. / Chem. Eng., RMC							Client No:	10-106	
P.O. Box 17000, Stn. Forces							Samples Received:	12-Jul-10	
Kingston, Ontario K7K 7B4							Date of analysis:	13-Jul-10	
(613) 541-6000 ext 6567							Method No:	ASG 021	
Fax: (613) 541-6596							Date Reported:	13-Jul-10	
							Sheet:		

RESULTS OF MERCURY ANALYSIS

Sample ID	Mercury^ mg/L
21286*	< 0.0004
21287	< 0.0004
21288	< 0.0004
21297	0.0004

*Average result of duplicates.
^ Acid digestion performed.
# Reported at 0.0004 mg/L detection limit.

LABORATORY QA/QC

Sample ID	Mercury^ mg/L
Duplicate ; 21286*	< 0.0004 ; < 0.0004
Blank	< 0.0004
Control Target	0.0040
Control Sample	0.0040

ASU #	12886		**Report ID:**	Dye-M W19				
Client:	ESG		**Date Submitted:**	12-Jul-10				
			Date tested:	13-Jul-10				
Site:	Dye-M		**Date:**	14-Jul-10				
	10-106		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21286	-	-	-	-	-	<0.010	0.006	<0.003
10-21287	-	-	-	-	-	<0.010	<0.005	<0.003
10-21288	-	-	-	-	-	0.011	<0.005	<0.003
10-21297	-	-	-	-	-	<0.010	<0.005	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.07	0.81	0.78
Control Target	-	-	-	-	-	3.00	0.80	0.80
10-21297	-	-	-	-	-	<0.010	<0.005	<0.003
10-21297	-	-	-	-	-	<0.010	<0.005	<0.003
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21286	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21287	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21288	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21297	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.58	1.62	1.61	0.80	7.96		-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-
10-21297	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21297	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-

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

ASG Login No:	20751
Site:	Dye-M
Client No:	10-106
Samples Received:	12-Jul-10
Date of analysis:	13-Jul-10
Method No:	ASG 006
Date Reported:	14-Jul-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21286	mg/L	< 0.003	< 0.003
W	21287	mg/L	< 0.003	< 0.003
W	21288	mg/L	< 0.003	< 0.003
W	21297	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.018
	Control Sample Target	mg/L	< 0.003	0.016

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

ASU #	12914		**Report ID:**	Dye-M W20				
Client:	ESG		**Date Submitted:**	19-Jul-10				
			Date tested:	20-Jul-10				
Site:	Dye-M		**Date:**	20-Jul-10				
	10-131		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21298	-	-	-	-	-	0.140	0.018	<0.003
10-21299	-	-	-	-	-	0.347	0.010	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	3.09	0.83	0.78
Control Target	-	-	-	-	-	3.00	0.80	0.80
10-21299	-	-	-	-	-	0.349	0.011	<0.003
10-21299	-	-	-	-	-	0.344	0.010	<0.003
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21298	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21299	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.55	1.65	1.64	0.83	8.24	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-
10-21299	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
10-21299	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-

ESG
12 Verite Ave
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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:	20781
Site:	Dye-M
Client No:	10-131
Samples Received:	19-Jul-10
Date of analysis:	20-Jul-10
Method No:	ASG 021
Date Reported:	20-Jul-10
Sheet:	1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample ID	Mercury^ mg/L
21298*	< 0.0004
21299	< 0.0004
21309	< 0.0004
21310	< 0.0004
21311	< 0.0004
21312	< 0.0004

*Average result of duplicates.
^ Acid digestion performed.
# Reported at 0.0004 mg/L detection limit.

LABORATORY QA/QC

Sample ID	Mercury^ mg/L
Duplicate ; 21298*	< 0.0004 ; < 0.0004
Blank	< 0.0004
Control Target	0.0040
Control Sample	0.0040

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

ASG Login No:	20781
Site:	Dye-M
Client No:	10-131
Samples Received:	19-Jul-10
Date of analysis:	20-Jul-10
Method No:	ASG 037
Date Reported:	20-Jul-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21298*	5.77
21299	6.19
21309	5.93
21310	5.85
21311	5.84
21312	5.96

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21298* ; Duplicate	5.76 ; 5.78
Control	7.01
Control Target	7.00

ASU #	12914	**Report ID:**	Dye-M W21
Client:	ESG	**Date Submitted:**	19-Jul-10
		Date tested:	19-Jul-10
Site:	Dye-M	**Date:**	21-Jul-10
	10-131	**Matrix:**	water

Report of Analysis

Sample	Oil & Grease
	mg/L
10-21298	114
10-21299	29.7
10-21309**	63200
10-21310**	42300
10-21311**	69000
10-21312**	25200
Blank	<2.0
Control	14.4
Control Target	15.9

Results relate only to the items tested

** samples had significant layer of free product on top, sample was treated as a whole and the water layer was not extracted for oil & grease.

ESG
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Fax: (613) 541-6596

ASG Login No:	20781
Site:	Dye-M
Client No:	10-131
Samples Received:	19-Jul-10
Date of analysis:	19-Jul-10
Method No:	ASG 015
Date Reported:	21-Jul-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21298*	mg/L	< 0.003	< 0.003
W	21299	mg/L	< 0.003	< 0.003
W	^ 21309	mg/L	< 0.003	< 0.003
W	^ 21310	mg/L	< 0.003	< 0.003
W	^ 21311	mg/L	< 0.003	< 0.003
W	^ 21312	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM
^ Sample recived with both aqueus and organic phases. Analysis performed on aqueus phase.

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Duplicate ; 21298*	mg/L	< 0.003 ; < 0.003	< 0.003 ; < 0.003
	Control Sample	mg/L	< 0.003	0.015
	Control Sample Target	mg/L	< 0.003	0.015

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

ASU #	12914		**Report ID:**	Dye-M W22					
Client:	ESG		**Date Submitted:**	19-Jul-10					
			Date tested:	23-Jul-10					
Site:	Dye-M		**Date:**	23-Jul-10					
	10-131		**Matrix:**	Water					

Report of Analysis

Total Metals Results in mg/L

SAMPLE**	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
10-21309	-	-	-	-	-	0.125	0.006	<0.003	
10-21310	-	-	-	-	-	0.126	0.006	<0.003	
10-21311	-	-	-	-	-	0.126	0.006	<0.003	
10-21312	-	-	-	-	-	0.126	0.006	<0.003	*
Blank	-	-	-	-	-	<0.010	<0.005	<0.003	
Control	-	-	-	-	-	2.97	0.84	0.76	
Control Target	-	-	-	-	-	3.00	0.80	0.80	
10-21312	-	-	-	-	-	0.126	0.006	<0.003	
10-21312	-	-	-	-	-	0.126	0.006	<0.003	

Dissolved Metals Results in mg/L

SAMPLE**	Cu	Ni	Co	Cd	Pb	Zn	Cr	As	
10-21309	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
10-21310	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
10-21311	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
10-21312	<0.005	<0.005	<0.003	0.004	<0.010	-	-	-	*
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-	
Control	1.46	1.64	1.64	0.80	8.16	-	-	-	
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-	
10-21312	<0.005	<0.005	<0.003	0.004	<0.010	-	-	-	
10-21312	<0.005	<0.005	<0.003	0.004	<0.010	-	-	-	

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:	20863
Site:	Dye-M
Client No:	10-218
Samples Received:	4-Aug-10
Date of analysis:	5-Aug-10
Method No:	ASG 037
Date Reported:	5-Aug-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21324*	7.30
21325	7.15
21326	7.10
21327	6.82

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
21324* ; Duplicate	7.29 ;7.31
Control	7.01
Control Target	7.00

ASU #	12997		**Report ID:**	Dye-M W25
Client:	ESG		**Date Submitted:**	4-Aug-10
			Date tested:	4-Aug-10
Site:	Dye-M		**Date:**	5-Aug-10
	10-218		**Matrix:**	water

Report of Analysis

Sample	Oil & Grease
	mg/L
10-21324	<2.0
10-21325	<2.0
10-21326	<2.0
10-21327	<2.0
Blank	<2.0
Control	14.9
Control Target	15.9

ESG
12 Verite Ave
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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:	20863
Site:	Dye-M
Client No:	10-218
Samples Received:	4-Aug-10
Date of analysis:	5-Aug-10
Method No:	ASG 021
Date Reported:	5-Aug-10
Sheet:	1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample ID	Mercury^ mg/L
21234*	< 0.0004
21325	< 0.0004
21326	< 0.0004
21327	< 0.0004

*Average result of duplicates.
^ Acid digestion performed.
# Reported at 0.0004 mg/L detection limit.

LABORATORY QA/QC

Sample ID	Mercury^ mg/L
Duplicate ; 21234*	< 0.0004 ; < 0.0004
Blank	< 0.0004
Control Target	0.0040
Control Sample	0.0039

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12 Verite Ave
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Fax: (613) 541-6596

ASG Login No:	20863
Site:	Dye-M
Client No:	10-218
Samples Received:	4-Aug-10
Date of analysis:	4-Aug-10
Method No:	ASG 015
Date Reported:	5-Aug-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21324	mg/L	< 0.003	< 0.003
W	21325	mg/L	< 0.003	< 0.003
W	21326	mg/L	< 0.003	< 0.003
W	21327*	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Duplicate ; 21327*	mg/L	< 0.003 ; < 0.003	< 0.003 ; < 0.003
	Control Sample	mg/L	< 0.003	0.012
	Control Sample Target	mg/L	< 0.003	0.015

ASU #	12997		**Report ID:**	Dye-M W23				
Client:	ESG		**Date Submitted:**	4-Aug-10				
			Date tested:	6-Aug-10				
Site:	Dye-M		**Date:**	6-Aug-10				
	10-218		**Matrix:**	Water				
Report of Analysis								
Total Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21324	-	-	-	-	-	0.706	0.011	<0.003
10-21325	-	-	-	-	-	0.035	0.017	<0.003
10-21326	-	-	-	-	-	0.075	0.085	0.004
10-21327	-	-	-	-	-	0.082	0.042	<0.003
Blank	-	-	-	-	-	<0.010	<0.005	<0.003
Control	-	-	-	-	-	2.89	0.78	0.74
Control Target	-	-	-	-	-	3.00	0.80	0.80
Dissolved Metals	Results in mg/L							
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr	As
10-21324	<0.005	<0.005	<0.003	0.037	<0.010	-	-	-
10-21325	<0.005	<0.005	<0.003	0.002	<0.010	-	-	-
10-21326	<0.005	<0.005	<0.003	0.002	<0.010	-	-	-
10-21327	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-	-
Control	1.42	1.56	1.54	0.77	7.76	-	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-	-

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

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

Monday, March 21, 2011

August 2010 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.

One sewage lagoon sample was collected and analyzed from DYE-M in August, 2010 (See table). Laboratory results are provided in Appendix A.

LOCATION: SEWAGE LAGOON - NEW CELL
GPS COORDINATES: 563352 7386915
SAMPLE: 10-21328
DATE: AUGUST 3, 2010

Parameter	Allowable Maximum Average Concentration	Units	Sample# 10-21328
pH	6.0 to 9.0	pH units	**9.76**
Oil & Grease	None Visible	-	None Visible
Total Suspended Solids (TSS)	180	mg/L	60
BOD	120	mg/L	35
Faecal Coliforms	100,000	CFU/100 mL	500
Total Coliforms	-	CFU/ 100 mL	13,000

Photo 1 (DSC17525) Sample 10-21328 Dye-M Collecting a sample from the new cell of the sewage lagoon.

Sample 10-21328 was above the pH range and was not discharged to land in 2010. Additional sampling will be required in 2011.

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 Looke, Kat White, Marc Ellemers, Andrea Ellis, Megan Lord (ESG)

APPENDIX A
LABORATORY RESULTS

ESG	ASG Login No: 20862
12 Verite Ave	Site: DYE-M
Dept. of Chem. / Chem. Eng., RMC	Client No: 10-219
P.O. Box 17000, Stn. Forces	Samples Received: 4-Aug-10
Kingston, Ontario K7K 7B4	Date of analysis: 4-Aug-10
(613) 541-6000 ext 6567	Date Reported: 5-Aug-10
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)**
21328*	13 000	100	9 000	500

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	34	34	0	35
Control Sample Target	34	34	0	34

ESG	ASG Login No: 20862
12 Verite Ave	Site: Dye-M
Dept. of Chem. / Chem. Eng., RMC	Client No: 10-219
P.O. Box 17000, Stn. Forces	Samples Received: 4-Aug-10
Kingston, Ontario K7K 7B4	Date of analysis: 5-Aug-10
(613) 541-6000 ext 6567	Method No: ASG 037
Fax: (613) 541-6596	Date Reported: 5-Aug-10
	Page: 1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21328*	9.76

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00

ESG	ASG Login No: 20862
12 Verite Ave	Site: Dye-M
Dept. of Chem. / Chem. Eng., RMC	Client Login No: 10-219
P.O. Box 17000, Stn. Forces	Samples Received: 4-Aug-10
Kingston, Ontario K7K 7B4	Date of analysis: 6-Aug-10
(613) 541-6000 ext 6567	Method No: ASG 039
Fax: (613) 541-6596	Date Reported: 6-Aug-10
	Sheet: 1 of 1

RESULTS OF TOTAL SUSPENDED SOLIDS ANALYSIS

Sample I.D.	Sample Type^	Unit	Total Suspended Solids
21328*	SE	mg/L	60

LABORATORY QA/QC

Duplicate ; 21328*	SE ; SE	mg/L	59 ; 61
Control	Control	mg/L	190
Control Target	Control	mg/L	200
Blank	Control	mg/L	< 1

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

* Averaged result of duplicates

ESG	ASG Login No: 20862
12 Verite Ave	Site: Dye-M
Dept. of Chem. / Chem. Eng., RMC	Client Login No: 10-219
P.O. Box 17000, Stn. Forces	Samples Received: 4-Aug-10
Kingston, Ontario K7K 7B4	Date of analysis: 9-Aug-10
(613) 541-6000 ext 6567	Method No: ASG 042
Fax: (613) 541-6596	Date Reported: 9-Aug-10
	Page: 1 of 1

RESULTS OF BOD ANALYSIS

Sample I.D.	Unit	BOD
21328*	mg/L	35

*Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	Unit	BOD
Duplicate ; 21328*	mg/L	34 ; 36
Blank	mg/L	< 3
Control	mg/L	160
Control Target	mg/L	165

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

Tamara Van Dyck
Environmental Officer
Defence Construction Canada
DEW Line Cleanup PMO
101 Colonel By Drive
Ottawa ON K1A 0K2

Monday, March 21, 2011

RE: Analytical Results for Wastewater Samples Collected at DYE-M in August 2010

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
Dissolved 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)	0.0006	mg/L
Dissolved nickel (Ni)	0.200	mg/L
Total zinc (Zn)	0.500	mg/L
Oil & grease	5	mg/L
PCBs	1.0	mg/L
Phenols	-	-

Phenols

The wastewater samples collected by ESG at DYE-M in August, 2010 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

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

(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

One wastewater sample was collected at DYE-M and analyzed in August 2010. A summary of the details of the results follows. Laboratory results provided in Appendix A.

LOCATION: LS TANK FARM AREA – METAL CONTAINER FULL OF WASTEWATER
GPS COORDINATES: 562937 7387449
SAMPLE: 10-21336
DATE: AUGUST 3, 2010

Parameter	Maximum Allowable Concentration	Units	Sample # 10-21336
pH	6-9	pH units	6.86
Total arsenic (As)	0.100	mg/L	<0.003
Dissolved cadmium (Cd)	0.010	mg/L	0.002
Dissolved chromium (Cr)	0.100	mg/L	<0.005
Dissolved cobalt (Co)	0.050	mg/L	<0.003
Dissolved copper (Cu)	0.200	mg/L	<0.005
Dissolved lead (Pb)	0.050	mg/L	<0.010
Total mercury (Hg)	0.0006	mg/L	<0.0004
Dissolved nickel (Ni)	0.200	mg/L	<0.005
Total zinc (Zn)	0.500	mg/L	0.176
Oil & grease	5	mg/L	**29.4**
PCBs	1.0	mg/L	<0.003
Phenols	-	-	N/A

Photo 1 (DSC01722) Sample 10-21336 Dye –M Collecting a sample from a metal container containing wastewater at the tank-farm.

Sample 10-21336 was over criteria for Oil and Grease and was not discharged to ground in 2010.

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 Ellemers, Megan Lord, Andrea Ellis (ESG)

APPENDIX A
LABORATORY RESULTS

ASU #	12999		**Report ID:**	Dye-M W26
Client:	ESG		**Date Submitted:**	4-Aug-10
			Date tested:	4-Aug-10
Site:	Dye-M		**Date:**	5-Aug-10
	10-221		**Matrix:**	water
Report of Analysis				
Sample	Oil & Grease			
	mg/L			
10-21336**	29.4			
Blank	<2.0			
Control	14.9			
Control Target	15.9			
Results relate only to the items tested				
** some sample lost due to bottle cracking and leaking during analysis				

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:	20864
Site:	Dye-M
Client No:	10-221
Samples Received:	4-Aug-10
Date of analysis:	5-Aug-10
Method No:	ASG 021
Date Reported:	5-Aug-10
Sheet:	1 of 1

RESULTS OF MERCURY IN WATER ANALYSIS

Sample ID	Mercury^ mg/L
21336*	< 0.0004

*Average result of duplicates.
^ Acid digestion performed.
# Reported at 0.0004 mg/L detection limit.

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ASG Login No:	20864
Site:	Dye-M
Client No:	10-221
Samples Received:	4-Aug-10
Date of analysis:	4-Aug-10
Method No:	ASG 015
Date Reported:	5-Aug-10
Sheet No:	1 of 1

RESULTS OF PCB IN WATER ANALYSIS

Sample Type **	Sample I.D.	Unit	Aroclor 1254	Aroclor 1260
W	21336	mg/L	< 0.003	< 0.003

* Average result of duplicate
Report Values in PPM

LABORATORY QA/QC

	Blank	mg/L	< 0.003	< 0.003
	Control Sample	mg/L	< 0.003	0.012
	Control Sample Target	mg/L	< 0.003	0.015

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

ASU #	12999		**Report ID:**	Dye-M W24			
Client:	ESG		**Date Submitted:**	4-Aug-10			
			Date tested:	6-Aug-10			
Site:	Dye-M		**Date:**	6-Aug-10			
	10-221		**Matrix:**	Water			

Report of Analysis

Total Metals	Results in mg/L						
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr
10-21336	-	-	-	-	-	0.176	<0.005
Blank	-	-	-	-	-	<0.010	<0.005
Control	-	-	-	-	-	2.89	0.78
Control Target	-	-	-	-	-	3.00	0.80

Dissolved Metals	Results in mg/L						
SAMPLE	Cu	Ni	Co	Cd	Pb	Zn	Cr
10-21336	<0.005	<0.005	<0.003	0.002	<0.010	-	-
Blank	<0.005	<0.005	<0.003	<0.001	<0.010	-	-
Control	1.42	1.56	1.54	0.77	7.76	-	-
Control Target	1.60	1.60	1.60	0.80	8.00	-	-

Results relate only to the items tested

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ASG Login No:	20864
Site:	Dye-M
Client No:	10-221
Samples Received:	4-Aug-10
Date of analysis:	5-Aug-10
Method No:	ASG 037
Date Reported:	6-Aug-10
Page:	1 of 1

RESULTS OF pH ANALYSIS

Sample I.D.	pH
21336	6.86

* Averaged result of duplicates

LABORATORY QA/QC

Sample I.D.	pH
Control	7.01
Control Target	7.00

PHOTOGRAPHIC LOG

Site Name:	Site Location:	Project No.
DYE-M, Cape Dyer	Nunavut	60153669

Photo No.	Date:
1	2010

Direction Photo Taken:

Description:
View of Beach Area including Temporary Storage Area and Debris Area 4.

Photo No.	Date:
2	2010

Direction Photo Taken:

Description:
View of Lower Site Station Area and Debris Area 5.

PHOTOGRAPHIC LOG

Site Name:	Site Location:	Project No.
DYE-M, Cape Dyer	Nunavut	60153669

Photo No.	Date:
3	2010

Direction Photo Taken:

Description:

Garage and Heated Vehicle Storage Area Contaminated Soil Areas

Photo No.	Date:
4	2010

Direction Photo Taken:

Description:

Contaminated Soil Area near Garage

PHOTOGRAPHIC LOG

Site Name:	Site Location:	Project No.
DYE-M, Cape Dyer	Nunavut	60153669

Photo No.	Date:
5	2010

Direction Photo Taken:

Description:
Overview of DEW Drop Area Containing Several Contaminated Soil Areas

Photo No.	Date:
6	2010

Direction Photo Taken:

Description:
Lower Site Non-Hazardous Waste Landfill Looking North from West Berm

PHOTOGRAPHIC LOG

Site Name:	Site Location:	Project No.
DYE-M, Cape Dyer	Nunavut	60153669

Photo No.	Date:
7	2010

Direction Photo Taken:

Description:

Lower Site Tier II Disposal Facility

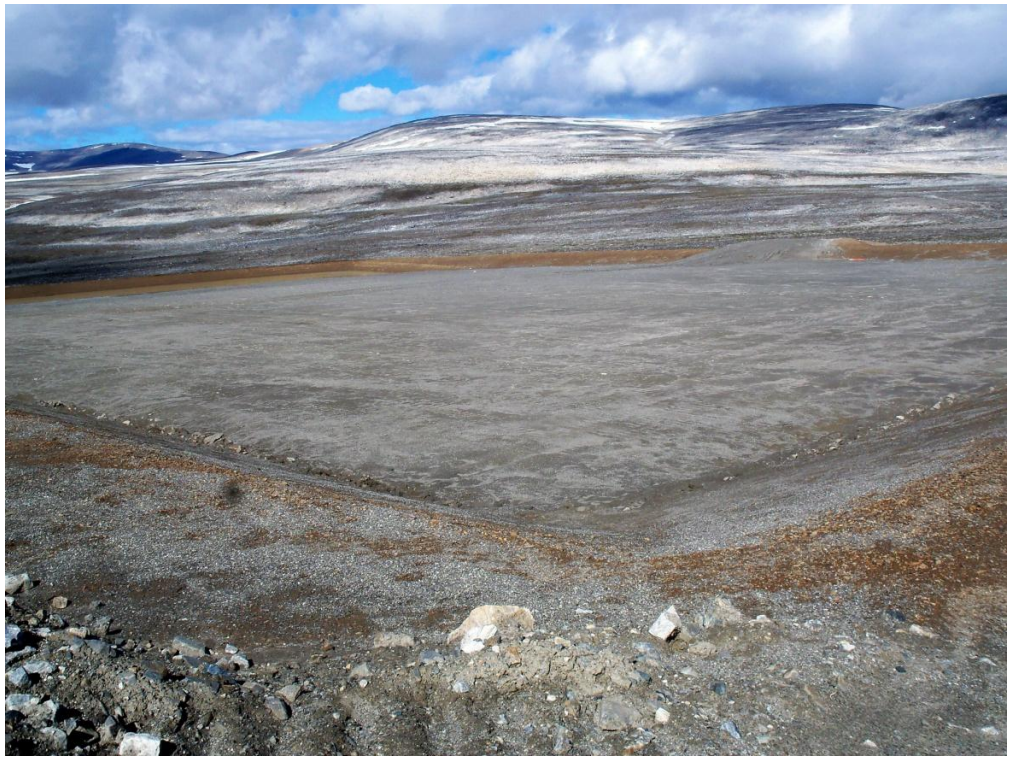


Photo No.	Date:
8	2010

Direction Photo Taken:

Description:
Looking South over Landfarm.

PHOTOGRAPHIC LOG

Site Name:	Site Location:	Project No.
DYE-M, Cape Dyer	Nunavut	60153669

Photo No.	Date:
9	2010

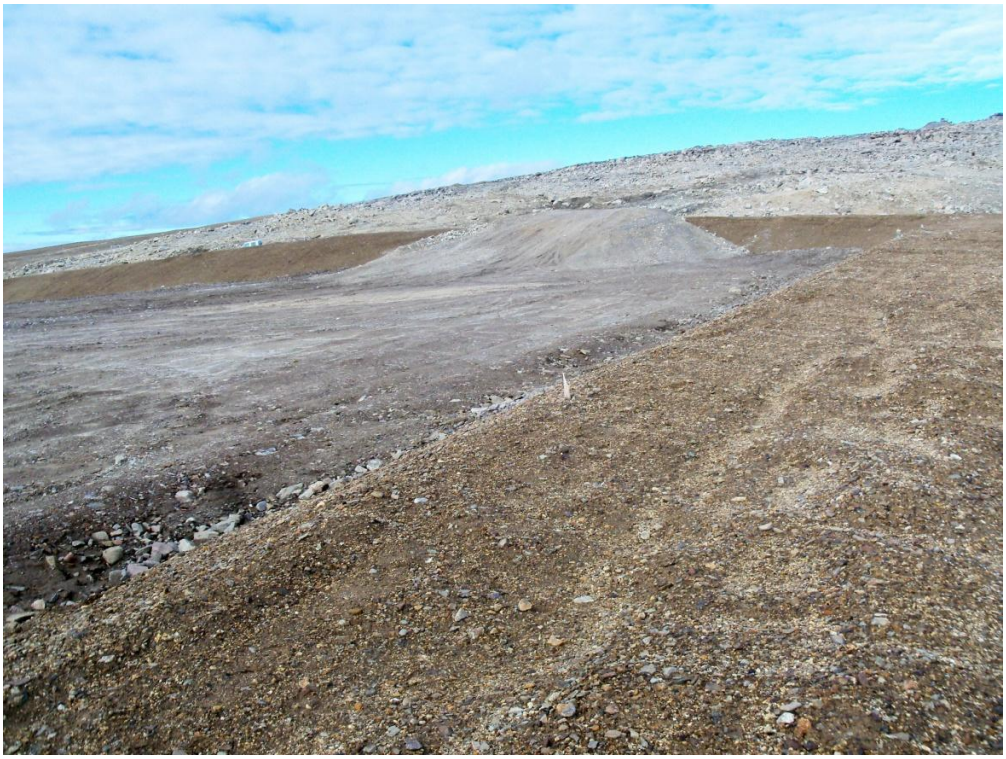
Direction Photo Taken:

Description:
Upper Site Non-Hazardous Waste Landfill Looking Southwest from Northeast Corner.

Photo No.	Date:
10	2010

Direction Photo Taken:

Description:
Upper Site Tier II Disposal Facility View of Access Ramp



PHOTOGRAPHIC LOG

Site Name:	Site Location:	Project No.
DYE-M, Cape Dyer	Nunavut	60153669

Photo No.	Date:
11	2010

Direction Photo Taken:

Description:
Temporary Storage Area, Beach Site

Photo No.	Date:
12	2010

Direction Photo Taken:

Description:

Lower Site, PCB Storage Area