Baffinland
Iron Mines Corporation

FILE COPY

March 16, 2009

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Email: licensing@nunavutwaterboard.org

Re: Submission of Bulk Fuel Storage Facility As-Built, Mary River Camp
Type B Water License #2BB-MRY0710, Part J, Item 4
Mary River Project

Dear Ms. Beaulieu,

Baffinland Iron Mines Corporation (BIM) is pleased to submit, herewith, the required as-built documentation for the Mary River Bulk Fuel Storage Facility, which is a requirement of the above referenced water licence.

Please contact me should you have any questions concerning this submission at 902-495-0490 or by e-mail at jim.millard@baffinland.com.

Yours sincerely,
Baffinland Iron Mines Corporation

ORIGINAL COPY SIGNED

Jim Millard, M.Sc., P.Geo.
Environmental Superintendent

Cc. David McCann, BIM
Dick Matthews, BIM
Cheryl Wray, BIM

Attachment: As-Built Report for Mary River Bulk Fuel Storage Facility (Genivar)

GENIVAR

834 Mountjoy Street South
P.O. Box 120
Timmins, Ontario P4N 7C5
Tel. (705) 264-9413
Fax. (705) 267-2725

March 15, 2009

Jim Millard, M. Sc., P. Geo.
Environmental Superintendent
Mary River Project
Baffinland Iron Mines Corporation
Suite 1016, 120 Adelaide Street West
Toronto, Ontario M5H 1T1

Dear Jim,

RE:

MARY RIVER PROJECT
BULK FUEL STORAGE FACILITY AT MARY RIVER CAMP
AS-BUILT CONSTRUCTION REPORT
OUR REFERENCE NO. 09-058

Genivar Consultants LP (Genivar) was retained by Baffinland Iron Mines Corporation (BIMC) to design the Bulk Fuel Storage Facility at their Mary River Camp site in Nunavut, provide limited QA/QC services during construction and subsequently to compile the required documentation of as-built conditions of the storage facility.

BACKGROUND

Part J, Part J (3), of the Water Licence (#2BB-MRY0710) for the Mary River Project issued by the Nunavut Water Board (NWB) states that:

> *"The Licensee shall provide as-built plans and drawings, stamped and sealed by a professional Engineer registered in Nunavut, within ninety (90) days of completion of all construction works, including ....iii. Bulk Storage of fuel Facilities."*

During 2007 and 2008, bulk fuel for the Mary River Project has been delivered to the Milne Inlet port. A Bulk Fuel Storage Facility has been built to contain all the required fuel at Milne Inlet camp. The as-built construction report for this facility was submitted to the NWB in December 2007. The plan in 2008 and 2009 is to transfer fuel from the Milne Inlet facility by tanker truck to the Mary River Camp

(approximately 100 km from Milne Inlet along the Milne Inlet Tote Road). Bulk fuel at the Mary River Camp is/will be stored in the Mary River Bulk Fuel Storage Facility which is the subject of the report, herein.

PROPOSED DESIGN OF THE FACILITIES AT MARY RIVER CAMP SITE

Figure 1 shows the site map indicating the Mary River Project sites from Steensby in the south to Mary River Camp in the north and Milne Inlet Camp in the north. Figure 2 shows the site plan arrangements at Mary River Camp Site.

Fuel was shipped via ocean tankers from the port of Montreal to Milne Inlet. All bulk fuel at Milne inlet has been stored in the Milne Inlet Bulk Fuel Storage Facility consisting of 74 fuel bladders within a lined and bermed containment. Bulk fuel is transferred by tanker truck from Milne Inlet to the Mary River bulk fuel storage facility. Figures 3 and 4 included in Appendix 1 show the construction design details of the Bulk Fuel Storage Facility design at the Mary River Camp Site. The Fuel bladders are identified in NIRB's Northern Remote Site Protocols document (Dillon, 1998) and have been used by both private companies and the federal government in Nunavut, Yukon and other arctic regions of the world. The fuel bladders were supplied by Raymac Industries and engineered by SEI Industries. Detailed arrangement of the fuel bladders in the containment as well as piping arrangement is included in Appendix 2.

As shown in the related drawings in Appendix 1, the fuel storage facility was designed with an earthen berm lined with a petroleum-resistant geomembrane liner (Hazgard HZ-500) that meets ULC/ORD-C58.9-1997 specifications for Underground and Aboveground flammable and combustible liquid storage tanks. The liner was to be covered with approximately 300mm of granular material to protect it from damage.

The containment was designed to hold 110% of total aggregate capacity of the fuel facility as per the CCME's "Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum and Allied Petroleum Products" and "National Fire Code of Canada" standards. As well, the containments design consisted of a sump for collection of precipitation. The containments floors were designed to grade towards the sump. The sump was designed to be periodically pumped and contaminated water treated by an appropriate portable treatment unit. The treatment process involves oil water separator, filtration through two types of media, and polishing using activated carbon if required. The clean water from the process (that meets Water Licence Criteria) was designed to be discharged to the receiving environment while the oil and filter media was to be collected in drums and subsequently shipped offsite for recycling.

The Mary River Bulk Fuel Storage Facility was designed to contain 16 bladders, each containing 113,560 litres. Two to four of the bladders were to be used for

the storage of aviation fuel while the remaining bladders were to be used for the storage of diesel fuel.

The fuel facility was designed to be equipped with dispensing stations consisting of electric pumps and shut-off valves in a lined pad backfilled with granular material. The precipitation within this area was to be collected in a sump and treated as required. Any fuel spills was designed to be contained within the lined areas which can then be excavated, tested and treated as necessary at the end of the project.

AS-CONSTRUCTED CONDITIONS OF THE FACILITY

Containment construction

The containment for the Bulk Fuel Storage Facility was constructed in general conformance with the design. For details on the plans and sections of the containment construction, please refer to Figure 5 in Appendix 1 for as-constructed drawing of the Mary River Bulk Fuel Storage Facility.

The material used for the containment berms and base was obtained from nearby borrow sources. The material was free of any deleterious substances and was approved by the liner construction staff. A certificate of acceptance is included in Appendix 2 by Raymac/Layfield who was the supplier and contractor for the containment liner.

The liner was installed and welded as per the design criteria as well as liner manufacturer's recommendations. The liner was a nominal 40-mil impermeable material (commercially known as Hazgard 50). Quality Assurance and Quality Control was provided by Layfield (the liner material supplier) and a QA/QC report is included in Appendix 2.

Mechanical (bladders, pipes, valves…)

All mechanical components of the Bulk Fuel Storage Facility including the bladders (fuel tanks), the piping network within the containment, valves, the sump, oil/water separator, the piping from the shore to the Bulk Fuel Storage Facility, and the contaminated water treatment system were designed by SEI Industries and constructed by Raymac Inc.

Design drawing of the mechanical components of the Bulk Fuel Storage Facility at the Mary River Camp Site is included in Appendix 2.

It is our opinion that the Bulk Fuel Storage Facility containment was designed and built in general conformance with CCME's "Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products" as well as "National Fire Code of Canada".

The following requirements have either been followed or shall be followed by BIMC in order to ensure compliance with CCME and NFC guidelines prior to the operation of the facility:

Tank Registration

Each storage tank (bladder) will be registered with the Fire Marshal in 2009. The registration document will include the name of owner, address of owner, type of facility, location of the tanks, storage capacity of the tank, type of product stored, year of installation, ULC standard of tank (bladder), type of storage material, type of piping material, type of corrosion protection (if any), type of pumps, description of leak detection system, type of secondary containment, name of operator, name of land owner, name of installer, manufacturer of storage tanks as per CCME, item 2.4.2.

Visual Leak Detection

BIMC conducts periodic visual inspections of each fuel bladder in accordance with the fuel management practice and schedule that has been developed for the Project. An inventory reconciliation plan has been developed for facility operations as part of the leak detection system.

Spill Contingency plan

The Bulk Fuel Storage Facility operation shall comply with the guidelines set forth by the Spill Contingency Planning and Reporting Regulations. This spill Contingency Plan has been provided by BIMC to the Nunavut Water Board and a copy is available at each site.

Bladder and Product Identification

Each tank/bladder should be identified in conformance with the Canadian Petroleum Products Institute (CPPI) "using the CPPI Colour-symbol system to mark equipment and vehicles for product identification".

Fire Protection

At least two (2) fire extinguishers, each having a rating of not less than 80-B:C, has been provided at the truck loading pad and at the fuel intake to the Bulk Fuel Storage Facility.

Please note that in all cases, the authority having jurisdiction is as follows:

Fire Marshall
Department of Community Government & Transportation
Government of Nunavut
P.O. Box 1000, Station 700
Iqaluit, Nunavut X0A 0H0
Tel. 879-975-5310
Fax. 867-979-4221

We trust this report is satisfactory and meets your requirements. However, should you have any questions, please do not hesitate to contact the undersigned for further discussion.

Yours truly,

Genivar Consultants LP

F. G. Kord

Marz G. Kord, P. Eng., M.Sc., MBA

APPENDIX 1

DRAWINGS

Baffinland

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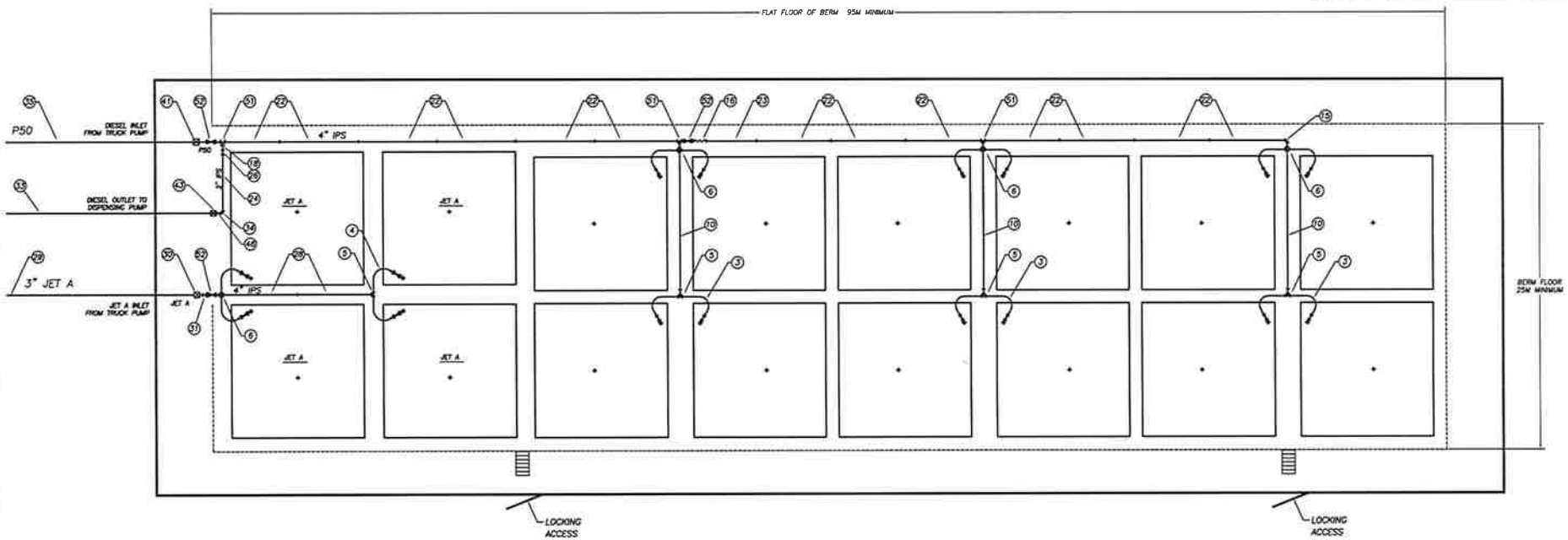
PROJECT LOCATION MAP

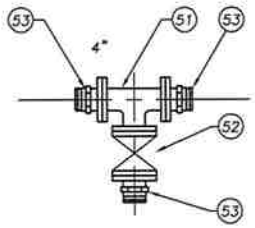
Knight Piésold CONSULTING

P/A NO.	REF.	REV.
NB102-00181/15	NB09-00192	0

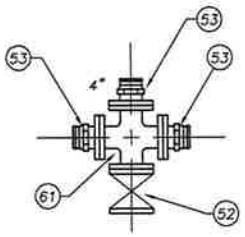
ᑎᑎᕆᔭᕐᓚᐅᖅ FIGURE 1

NO.	REVISION DESCRIPTION	BY	DATE	APP'D
P1	PRELIMINARY	G.B.	07/02/09	
P2	FITTINGS AND HOSE ONLY	G.B.	07/MAR/01	
P3	OUTLETS AND PIPE ADDED	G.B.	07/APR/01	
P4	ALL PUMPS MOVED TO ONE END	G.B.	07/MAY/01	
0	RELEASED FOR PRODUCTION	G.B.	07/MAY/01	G.B.





ASSEMBLY 5



ASSEMBLY 6

ITEM	QTY	DESCRIPTION	MATERIAL	PART_NO.	U/M	T.QTY
61	4	CROSS, 4" 150# FLANGED	S.S.	-	EA	4
53	24	CAMLOCK ADAPTER, 4" 150# FLANGE	ALUMINUM	-	EA	24
52	11	BALL VALVE, 4" 150# FLANGED	S.S.	-	EA	11
51	7	TEE, 4" 150# FLANGED	S.S.	-	EA	7
46	1	CONC. REDUCER, 2" x 1-1/2", 150#	S.S. SCH. 10S FLANGED	-	EA	1
43	2	1-1/2" DRYBREAK ASSEMBLY	ALUMINUM	-	EA	2
41	2	4" DRYBREAK ASSEMBLY	ALUMINUM	-	EA	2
35	1	DIESEL HOSE ASS'Y, 4" X 25' LONG	ARCTIC GRADE, SCOVILLS	-	EA	1
34	1	ELBOW, 2" 150# FLANGED	S.S.	-	EA	1
33	1	DIESEL HOSE ASS'Y, 1-1/2" X 25' LONG	ARCTIC GRADE, SCOVILLS	-	EA	1
31	1	CONC. REDUCER, 4" x 3", 150#	S.S. SCH. 10S FLANGED	-	EA	1
30	2	3" DRYBREAK ASSEMBLY	ALUMINUM	-	EA	2
29	1	AVIATION HOSE ASS'Y, 3" X 25' LONG	API 1529	-	EA	1
28	2	PIPE SECTION, 4"x 17'-7", 150#	S.S. SCH. 10S FLANGED	-	EA	2
26	1	BALL VALVE, 2" 450# FLANGED	S.S.	-	EA	1
24	1	PIPE SECTION, 3"x 16'-0", 150#	S.S. SCH. 10S FLANGED	-	EA	1
23	1	PIPE SECTION, 4"x 16'-8-1/2", 150#	S.S. SCH. 10S FLANGED	-	EA	1
22	13	PIPE SECTION, 4"x 18'-11-1/2", 150#	S.S. SCH. 10S FLANGED	-	EA	13
18	1	CONC. REDUCER, 4"x 3", 150#	S.S. SCH. 10S FLANGED	-	EA	1
16	1	EXPANSION ASSEMBLY, 4" x 18" LONG	3S FLEX SECTION, FLANGED	-	EA	1
15	1	ELBOW, 4" 150# FLANGED	S.S.	-	EA	1
10	3	DIESEL HOSE ASS'Y, 4"ø x 35 FT. LONG	ARCTIC GRADE	-	EA	3
6	4	CROSS ASSEMBLY, 4" CAMLOCK	S.S. AND ALUMINUM	-	EA	4
5	4	TEE ASSEMBLY, 4" CAMLOCK	S.S. AND ALUMINUM	-	EA	4
4	4	AVIATION HOSE ASS'Y, 4"ø x 12 FT. LONG	LOW TEMP, ALUMINUM C's	-	EA	4
3	12	DIESEL HOSE ASS'Y, 4"ø x 12FT. LONG	ARCTIC GRADE, ALUMINUM C's	-	EA	12
2	16	TANK ASSEMBLY, LEFT HAND, 30,000USG	ARCTIC KING	-	EA	16
1	16	TANK ASSEMBLY, RIGHT HAND, 30,000USG	ARCTIC KING	-	EA	16

SEI INDUSTRIES
7400 WILSON AVE.
DELTA, B.C., CANADA V4G 1E5
PHONE: (604) 946-3131
FAX (604) 940-9066

UNLESS OTHERWISE SPECIFIED
X" = ± 2° X = ± .030
± = ± 1/16 XX = ± .010
XXX = ± .005

DRAWN: G.B. 07.03.28
APPROVED: 07
TITLE: TANK FARM MANIFOLD PIPE ASSEMBLY
MARY RIVER SITE
SHEET 1/1 | UNITS IN | SCALE NTS | SIZE | DRAWING No. TT-D-434 | PART NO. TT-D-434 | REV. 0

➢ APPENDIX 2

AS-CON STRUCTED REPORTS (QA/QC)
PHOTOGRAPHS

MARY RIVER

LAYFIELD

CERTIFICATE OF ACCEPTANCE OF SOIL SUBGRADE SURFACE

PROJECT NAME: Fuel Farm
PROJECT NUMBER: 07C-015
OWNER: Baffinland Iron Mines
LOCATION: Mary River

I, the undersigned, a duly appointed representative of Layfield Environmental Systems Ltd. (LESL), have visually observed the soil subgrade described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the surface of the subgrade only. No subterranean inspections or tests have been performed by Layfield Environmental Systems, and LESL makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Layfield Environmental Systems accepts no responsibility for conformance of the subgrade to this project's specifications.

The soil subgrade accepted on this date refers to its present condition. Any changes in the subgrade condition that result from the effects of inclement weather and/or other forces beyond the control of Layfield Environmental Systems and remedial work to correct the resulting deficiencies, will be the direct responsibility of the General Contractor.

Area Being Accepted: Areas under panels A1-A4 and panel B1 & B2, uncompacted surface & berms, some rock & snow, generally sand

LAYFIELD ENVIRONMENTAL SYSTEMS REPRESENTATIVE:

Date: October 18, 2007
Signature:
Name: Allan McKinnon
Title: Project Supervisor

OWNERS REPRESENTATIVE:

Date: Oct 18/2007
Signature:
Name: BOWEN LAWDRY
Title: PROJECT MNGR
Company: BAFFINLAND IRON MINES

LAYFIELD

CERTIFICATE OF FINAL INSPECTION AND ACCEPTANCE

PROJECT NAME: Fuel Farm
PROJECT NUMBER: 07C-015 **DATE:** Oct. 18, 2007
OWNER: Baffinland Iron Mines
LOCATION: Mary River

Scope of Installation(s): THE WORK
Installed, welded/repaired/tested approx 3,880 sq. metres of Hazgard 500. Installed approx 8,150 sq. metres of LP-16 textile as an overlay & underlay. Lined 1 sump as per owner. Cleaned up area of garbage upon completion

Part 1 – LAYFIELD ENVIRONMENTAL SYSTEMS LTD.

I, Allan McKinnon, a duly appointed representative of Layfield Environmental Systems Ltd. (LESL), have visually observed the installations (as outlined above), and have found the Work to be complete and free of defects and declare that the Work was completed in accordance with the project specifications, Layfield Environmental Systems' QC program and the terms and conditions of the contract.

Layfield Environmental Systems Representative:

Name: Allan McKinnon
Title: Project Supervisor
Date: Oct. 18, 2007 **Signature:** Allan McKinnon

Part 2 – OWNER (or Representative)

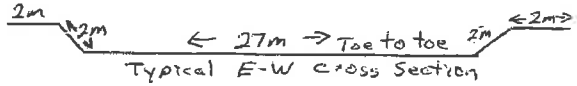
I, ROLAND LANDRY, a duly appointed representative of BAFFINLAND IRON MINES, do hereby take over and accept the installation(s) described above, and confirm that the work has been completed in accordance with the project specifications and the terms of the conditions of the contract.

I have evaluated and measured the work together with the Layfield Environmental Systems representative, and agree that the measurements shown are both true and correct, and that the installation has met our approval.

Owners Representative:

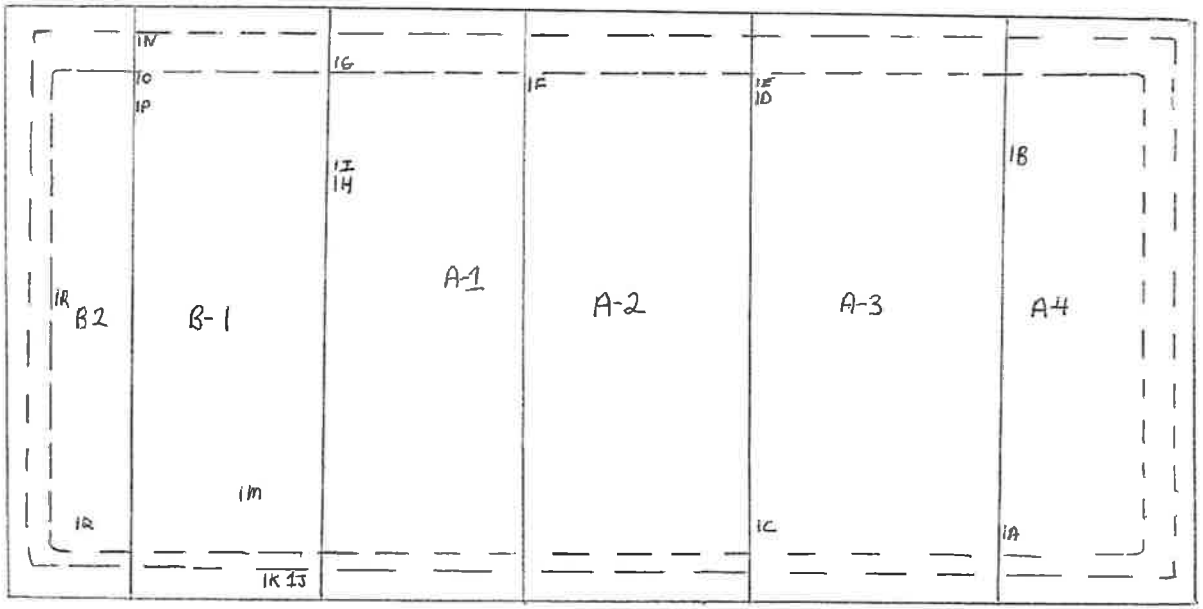
Name: ROLAND LANDRY
Title: PROJECT MANAGER
Company: BAFFINLAND IRON MINES
Date: OCT 18/07 **Signature:** Roland Landry

Comments:



Typical E-W cross Section

N



Checklist

1. North Arrow ? ✓
2. Repair Numbers & Locations ? ✓
3. Site Dimensions ? _____
4. Slope Lengths ? _____
5. Title Blocks Completed ? _____
6. Cert. of Subgrade Acceptance ? _____
7. Cert. of Final Acceptance ? _____

Notes:

1) Seam numbers shown on testing log sheets represent the adjacent panel numbers.

LEGEND

- —— —— Change in Grade
- ———— Liner Field Seam
- - - - - - - - Anchor Trench
- P3 Panel Number
- ⊗ Pipe Penetration
- R2 Repair Number
- △ Patch
- ××× Extrusion Bead (or Weld)

LAYFIELD PLASTICS

Project Name, Client, Location, Mat'l Type, etc.
Raymac
Baffinland Iron mines
Mary River Fuel Farm
Hazgard 500

SCALE: N.T.S.	PROJECT No. 07C-015
DWG: 1 OF 1	
DWN: AM CHKD:	APPD.
DATE: October 28, 2007	

GEOSYNTHETICS INVENTORY LOG

PROJECT NUMBER: 07C-015 PROJECT TITLE: Fuel Farm
OWNER: Baffinland Iron Mines CONTRACTOR: _____
LOCATION: Mary River SHEET NUMBER: 1 of 1

MATERIAL TYPE: (GEOMEMBRANE) GEONET (GEOTEXTILE) OTHER _____
DATE OF ARRIVAL: _____ DATE OF INVENTORY: Sept. 29, Oct. 16, 2007
UNLOADING METHOD: _____ INVENTORY BY: ASM
PRODUCT TYPE: LP-16 & Hazgard 500 CONDITION IN TRUCK: _____
MATERIAL MANUFACTURER: _____

Panel / Roll Number	Material Dimensions			QC Certificate Available Y / N	Conf. Sample Removed Y / N	Other _____	Remarks
	Length	Width	Thickness or Weight				
A-4	38.5m	19.28m	Haz 500		N		
A-3	38.5 m	19.28m	Haz 500		N		
A-2	38.5 m	19.28m	Haz 500		N		
A-1	38.5m	19.28m	Haz 500		N		
B-1	38.5 m	18.4m	Haz 500		N		
B-2	38.5m	18.4m	Haz 500		N		
	150'	15'	LP-16				45 rolls

SUBMITTED BY: ASM
DATE: October 26, 2007

LAYFIELD

GEOMEMBRANE TRIAL SEAM LOG

PROJECT NUMBER: 07C-015
OWNER: Baffinland
LOCATION: Mary River

PROJECT TITLE: Fuel Farm
CONTRACTOR:
SHEET NUMBER: 1

✓ TF - # FUSION   ____ TX - # = EXTRUSION   ____ TS - # = SOLVENT

SAMPLE NUMBER	APPROX. TIME & DATE	WELDING MACHINE NUMBER	WELD TECH.	TEMPERATURES: AMBIENT AIR TEMP.	TEMPERATURES: PREHEAT OR MACHINE SPEED	TEMPERATURES: EXTRUDER	TEMPERATURES: WEDGE TEMP.	TEST RESULTS: INSIDE PEEL MODE / STRENGTH	TEST RESULTS: OUTSIDE PEEL MODE / STRENGTH	TEST RESULTS: SHEAR MODE / STRENGTH	PASS OR RETEST	CHECKED BY	REMARKS
TF-1	10-8 1645	Demtech 20610	Am	-3°C	50%		825°	38 / 29 / 41 31 / / / 36	/ / / / / / / /	109 / / 99	P	Am	Cloudy
TF-2	10-9 1245	Demtech 20610	Am	-5°C	50%		825°	37 / 33 / 39 31 / / / 34	/ / / / / / / /	103 / / 106	P	Am	
TF-3	10-14 1235	Demtech 20610	Am	-3°C	50%		825°	39 / 31 / 40 42 / / / 36	/ / / / / / / /	111 / / 108	P	Am	Overcast
TF-4	10-15 1330	Demtech 20610	Am	-2°C	50%		825°	43 / 32 / 36 31 / / / 33	/ / / / / / / /	110 / / 97	P	Am.	
								/ / / / / / / /	/ / / / / / / /	/ /			
								/ / / / / / / /	/ / / / / / / /	/ /			
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								/ / / / / / / /	/ / / / / / / /	/ /			

SUBMITTED BY: Oct. 26, 2007
DATE: Asm.

LAYFIELD

GEOMEMBRANE SEAM LOG

PROJECT NUMBER: 07C-015 PROJECT TITLE: Fuel Farm.

OWNER: Baffinland Iron Mine CONTRACTOR:

LOCATION: Mary River

PASSING TRIAL SEAMS

	NO.	TIME	TECH ID
✓ FUSION	TF-1	1645	AM.
EXTRUSION			
SOLVENT			

SHEET NUMBER: 1

DATE: October 8, 2007

SEAM NUMBER	SEAM SECTION * START POINT	SEAM SECTION * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	APPROX. LENGTH WELDED	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE TEST DATE	NON-DESTRUCTIVE CHECKED BY
A4/A3	WEOS	-EEOS	1710	-3°C	AM	50%	825° -	-	37 m		AM		10-8	AM.
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
							DAILY TOTAL		37 m					

* *REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.*

SUBMITTED BY: ASM

DATE: October 26, 2007

LAYFIELD

GEOMEMBRANE SEAM LOG

PROJECT NUMBER: 07C-015 **PROJECT TITLE:** Fuel Farm

OWNER: Baffinland Iron Mines **CONTRACTOR:**

LOCATION: Mary River

PASSING TRIAL SEAMS

	NO.	TIME	TECH ID
✓ FUSION	TF-2	1245	A.M
EXTRUSION			
SOLVENT			

SHEET NUMBER: 2

DATE: Oct. 9, 2007

SEAM NUMBER	SEAM SECTION * START POINT	SEAM SECTION * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	APPROX. LENGTH WELDED	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE TEST DATE	NON-DESTRUCTIVE CHECKED BY
A3/A2	WEOS	EEOS	1303	-5	AM	50%	825°	-	36.9 m		AM		10-9	AM
A2/A1	WEOS	EEOS	1359	-5	AM	50%	825°	-	36.7 m		AM		10-9	AM
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						
/	-						-	-						

DAILY TOTAL 73.6m

* *REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.*

SUBMITTED BY: ASM

DATE: October 26, 2007

LAYFIELD

GEOMEMBRANE SEAM LOG

PROJECT NUMBER: 07C-015 **PROJECT TITLE:** Fuel Farm

OWNER: Baffinland Iron Mines **CONTRACTOR:**

LOCATION: Mary River

PASSING TRIAL SEAMS

	NO.	TIME	TECH ID
✓ FUSION	TF3	1235	AM
EXTRUSION			
SOLVENT			

SHEET NUMBER: 3

DATE: October 14, 2007

SEAM NUMBER	SEAM SECTION * START POINT	SEAM SECTION * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	APPROX. LENGTH WELDED	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE TEST DATE	NON-DESTRUCTIVE CHECKED BY
A1B1	WEOS	EEOS	1308	-3°C	Am	50%	825°	-	35.3m		Am		10-14	A m.
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
								DAILY TOTAL	35.3m					

* *REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.*

SUBMITTED BY: ASM

DATE: October 26, 2007

LAYFIELD

GEOMEMBRANE SEAM LOG

PROJECT NUMBER: 07C-015 **PROJECT TITLE:** Fuel Form

OWNER: Baffinland Iron Mines **CONTRACTOR:**

LOCATION: Mary River

PASSING TRIAL SEAMS

	NO.	TIME	TECH ID
✓ FUSION	TF-4	1330	Am
EXTRUSION			
SOLVENT			

SHEET NUMBER: 4

DATE: October 15, 2007

SEAM NUMBER	SEAM SECTION * START POINT	SEAM SECTION * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	MACHINE TEMPERATURES DIGITAL SET WEDGE OR BARREL	APPROX. LENGTH WELDED	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE TEST DATE	NON-DESTRUCTIVE CHECKED BY
B21B1	EEOS-WEOS		1410	-2°C	Am	50%	825 -	-	349m		Am		10-15	Am
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
1	-						-	-						
							DAILY TOTAL		34.9m					

* *REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.*

SUBMITTED BY: Asm

DATE: October 26, 2007

LAYFIELD

GEOMEMBRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 07C-015 **PROJECT TITLE:** Fuel Farm

OWNER: Baffinland Iron Mines **CONTRACTOR:**

LOCATION: Mary River **DATE:**

VACUUM BOX _____ **AIR LANCE** ✓ **SHEET NUMBER:** 1

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	SEAM COMPLETE NO	SEAM COMPLETE YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
A3-A4	WEOS - EEOS	10-8	AM			✓	AM		1A	10-8	AM		AM	
A3-A2	WEOS - EEOS	10-9	AM			✓	AM		1B	10-8	AM		AM	
A2-A1	WEOS - EEOS	10-9	AM			✓	AM		1C	10-8	AM		AM	
A1-B1	WEOS - EEOS	10-14	AM			✓	AM		1D	10-9	AM		AM	
B2-B1	WEOS - EEOS	10-15	AM			✓	AM		1E	10-9	AM		AM	
	-								1F	10-9	AM		AM	
	-								1G	10-14	AM		AM	
	-								1H	10-14	AM		AM	
	-								1I	10-14	AM		AM	
	-								1J	10-14	AM		AM	
	-								1K	10-14	AM		AM	
	-								1L	10-14	AM		AM	
	-								1M	10-14	AM		AM	
	-								1N	10-15	AM		AM	
	-								1O	10-15	AM		AM	
	-								1P	10-15	AM		AM	
	-								1Q	10-15	AM		AM	
	-								1R	10-17	AM		AM	
	-													
	-													

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

SUBMITTED BY: ASM

DATE: October 26, 2007

LAYFIELD

GEOMEMBRANE DEFECT / REPAIR LOG

PROJECT NUMBER: 07C-015 **PROJECT TITLE:** Fuel Farm

OWNER: Baffinland **CONTRACTOR:**

LOCATION: Mary River **SHEET NUMBER:** 1

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.	REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION							
1A	10-8	Seam A4-A3	11.4m from WEOS	WR	P	AM	10-8		10-8	AM
1B	10-8	Seam A4-A3	28.1m from WEOS	WR	P	AM	10-8		10-8	AM
1C	10-9	Seam A3-A2	9m from WEOS	XS		AM	10-9	welded flap	10-9	AM
1D	10-9	Seam A3-A2	30.1m from WEOS	WR	P	AM	10-9		10-9	AM
1E	10-9	Seam A3-A2	32.3m from WEOS	WR	P	AM	10-9		10-9	AM
1F	10-9	Seam A2-A1	east toe	XS		AM	10-9	welded flap.	10-9	AM
1G	10-14	Seam A1-B1	3.8m from EEOS	WR	P	AM	10-14		10-14	AM
1H	10-14	Seam A1-B1	22.1m from WEOS	WR	P	AM	10-14		10-14	AM
1I	10-14	Seam A1-B1	23.6m from WEOS	WR	P	AM	10-14		10-14	AM
1J	10-14	Panel B1	West crest	SR	P	AM	10-14	2.3m from S A1-B1	10-14	AM
1K	10-14	Panel B1	West crest	SR	P	AM	10-14	3.6m from S A1-B1	10-14	AM
1L	10-14	Panel B1	22.1m from Wedge	SR	P	AM	10-14	4.1m N of SA1-B1	10-14	AM
1M	10-14	Panel B1	8m from W edge	SR	P	AM	10-14	12.2m N of SA1-B1	10-14	AM
1N	10-15	Seam B1-B2	East crest	WR		AM	10-15	welded flap	10-15	AM
1O	10-15	Seam B1-B2	East toe	WR	P	AM	10-15		10-15	AM
1P	10-15	Seam B1-B2	6.2m from EEOS	WR		AM	10-15	welded flap	10-15	AM
1Q	10-15	Panel B2	7m from N edge	SR	P	AM	10-15	4m from W toe	10-15	AM
1R	10-17	Panel B2	.8m from N toe	Sump		AM	10-17	13m from E toe	10-17	AM

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE; B - UNDISPERSED RESIN BEAD; BO - FUSION WELDER BURN; BS - BOOT/SKIRT FROM FML PENETRATION; CO - CHANGE OF OVERLAP; CR - CREASE; D - INSTALLATION DAMAGE; DS# - DESTRUCTIVE TEST NUMBER; EE - EARTHWORK EQUIPMENT DAMAGE; EXT - EXTENSION; FM - FISHMOUTH; FS - FAILED SEAM LENGTH; FTS - FIELD TEST STRIP; HT - HEAT TACK BURN; IO - INSUFFICIENT OVERLAP (UNDER SPEC.); MD - MANUFACTURER DELIVERY DAMAGE; PT - PRESSURE TEST CUT; SI - SOIL SURFACE IRREGULARITY; SL - SLAG ON TEXTURED SHEET; T - THREE PANEL INTERSECTION; VL - VACUUM TEST LEAK; WR - WRINKLE; WS - WELDER RESTART; OTHER: SR - snow removal

REPAIR TYPE: P - PATCH, C - CAP, RS - RECONSTRUCTED SEAM, GRW - GRIND/WELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.

SUBMITTED BY: ASM

DATE: Oct. 26, 2007

Photo 1: Mary River aerial view. The Bulk Fuel Storage Facility is seen above.

Photo 2: The slopes of the berms are prepared as per the design.

Photo 3: The base of the containment area is being prepared.

Photo 4: The slopes and the base are ready for the installation of the liner.

Photo 5: The liner material is shown above.


Photo 6: The liner is being installed within the containment and slopes.

Photo 7: Liner is installed over the slopes. The slopes and the base of the liner will then be protected with appropriate thickness of granular material.

Photo 8: Granular material is being placed over the liner.

Photo 9: Appropriate amount of cover is being placed over the liner.

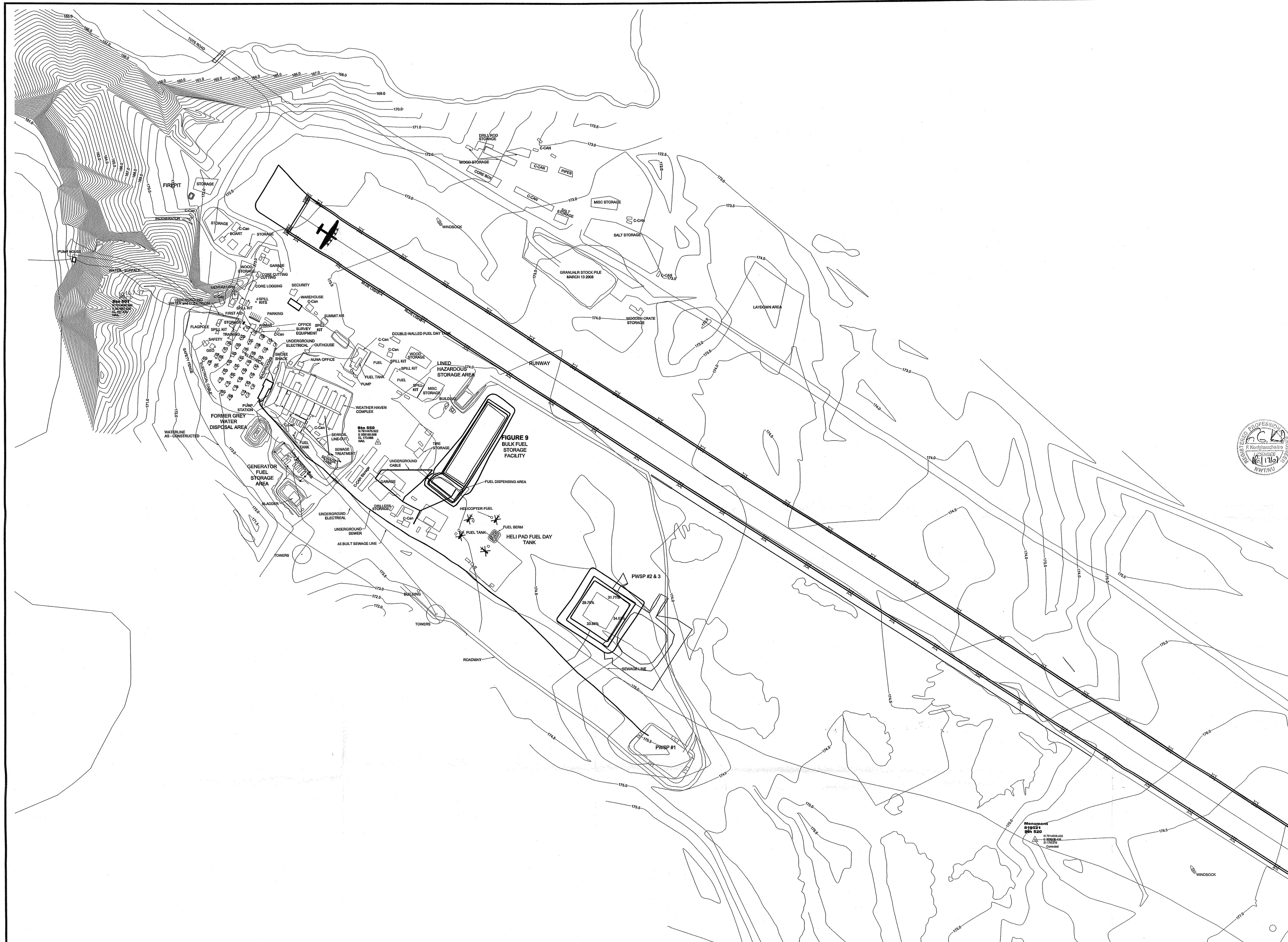
Photo 10: Completed containment is seen above.

Photo 11: Fuel bladders are placed at their appropriate locations as per the design.

Photo 12: Fuel dispensing area is being prepared.

Photo 13: Mechanical crew installing the piping as per the design by SEI.

Photo 14: Bulk Fuel Storage Facility at completion.



AS CONSTRUCTED SITE PLAN

SCALE 1:2000

Description	Date	No.

Revisions and Issues

NORTH

APR 17 2009

Date Printed

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MECHANICAL | ELECTRICAL

Project

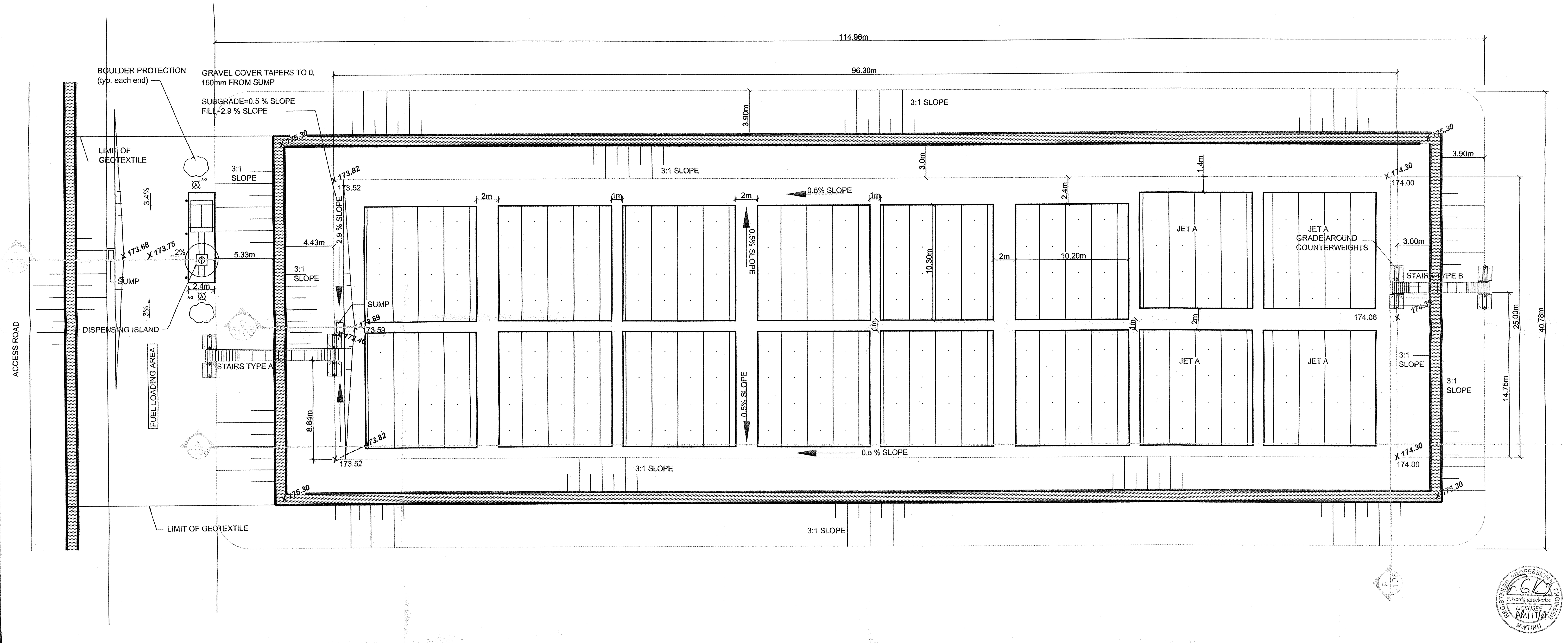
MARY RIVER PROJECT BAFFINLAND IRON MINES CORPORATION

BAFFIN ISLAND NUNAVUT

Drawing

AS CONSTRUCTED MARY RIVER SITE PLAN

Date: MARCH 2009	CADD File Number: REPORT/FUEL FARM/
Scale: 1:2000	Job Number: **09-058**
Drawn: SO	
Checked: MK	Drawing Number
Approved	**FIGURE 2**



NOTES:
12 DIESEL TANKS 10.2m X 10.3m
4 JET FUEL TANKS 10.2m X 10.3m
CONNECTION PIPES BY OTHERS

LEGEND

X 174.30 PROPOSED ELEVATION

174.00 EXISTING ELEVATION

Description	Date	No.
ISSUED FOR CONSTRUCTION	July 03,2007	1
ISSUED FOR TENDER/REVIEW	Mar. 25,2007	0

Revisions and Issues

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MARY RIVER PROJECT BAFFINLAND IRON MINES CORPORATION

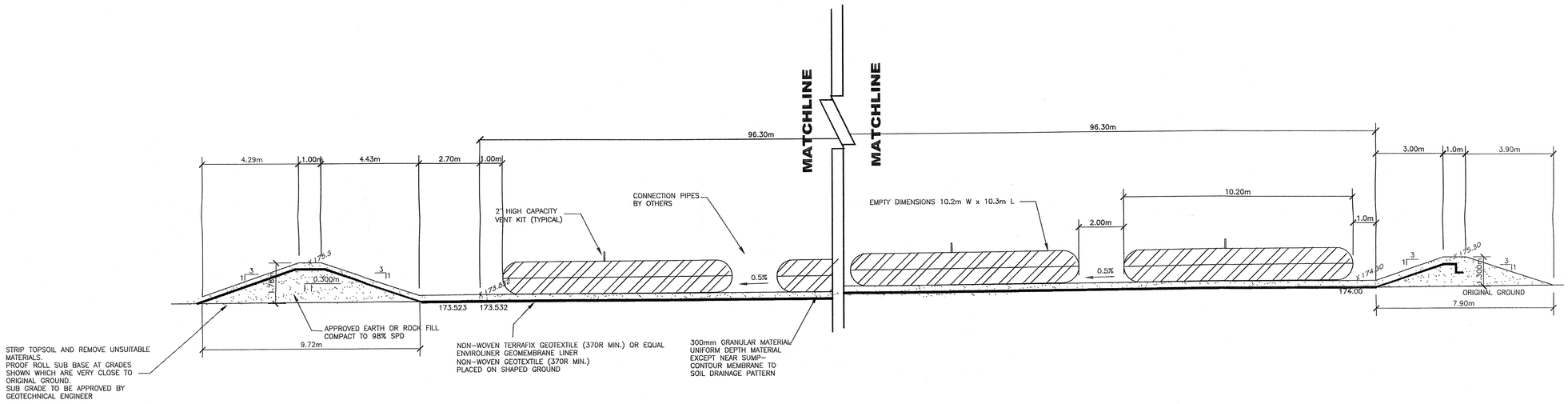
BAFFIN ISLAND, NUNAVUT

Drawing

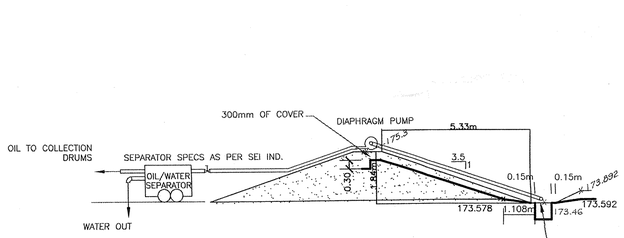
MARY RIVER BULK FUEL STORAGE FACILITY PLAN

Date: MARCH 2009	CADD File Number: REPORT/FUEL FARM
Scale: 1:200	Job Number: 09-058
Drawn: SO/CM	
Checked: MK	Drawing Number: FIGURE 3
Approved	

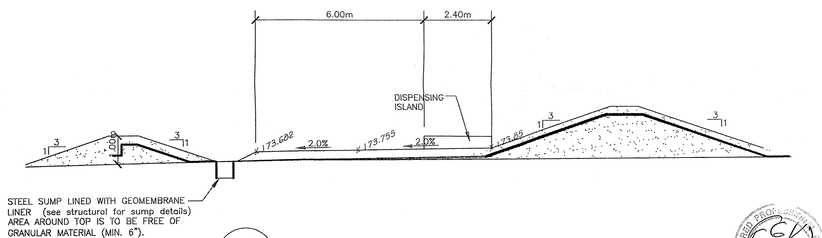
SITE BENCH MARK



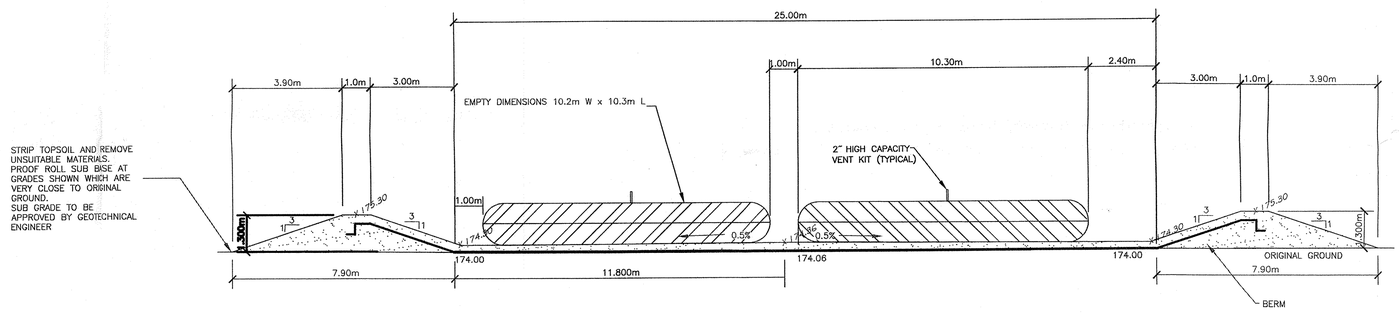
A C105 **CROSS-SECTION**
SCALE 1 TO 100



C C105 **SUMP DETAIL**



D C105 **FUEL LOADING AREA DETAIL**



B C105 **CROSS-SECTION**
SCALE 1 TO 100

SCALE
5.0m 0 5.0m

THE POSITION OF POLE LINES , CONDUITS, WATERMAINS, SEWERS, AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THIS DRAWING AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

Description	Date	No.
ISSUED FOR CONSTRUCTION	July 03,2007	1
ISSUED FOR TENDER/REVIEW	Mar. 25,2007	0

Revisions and Issues

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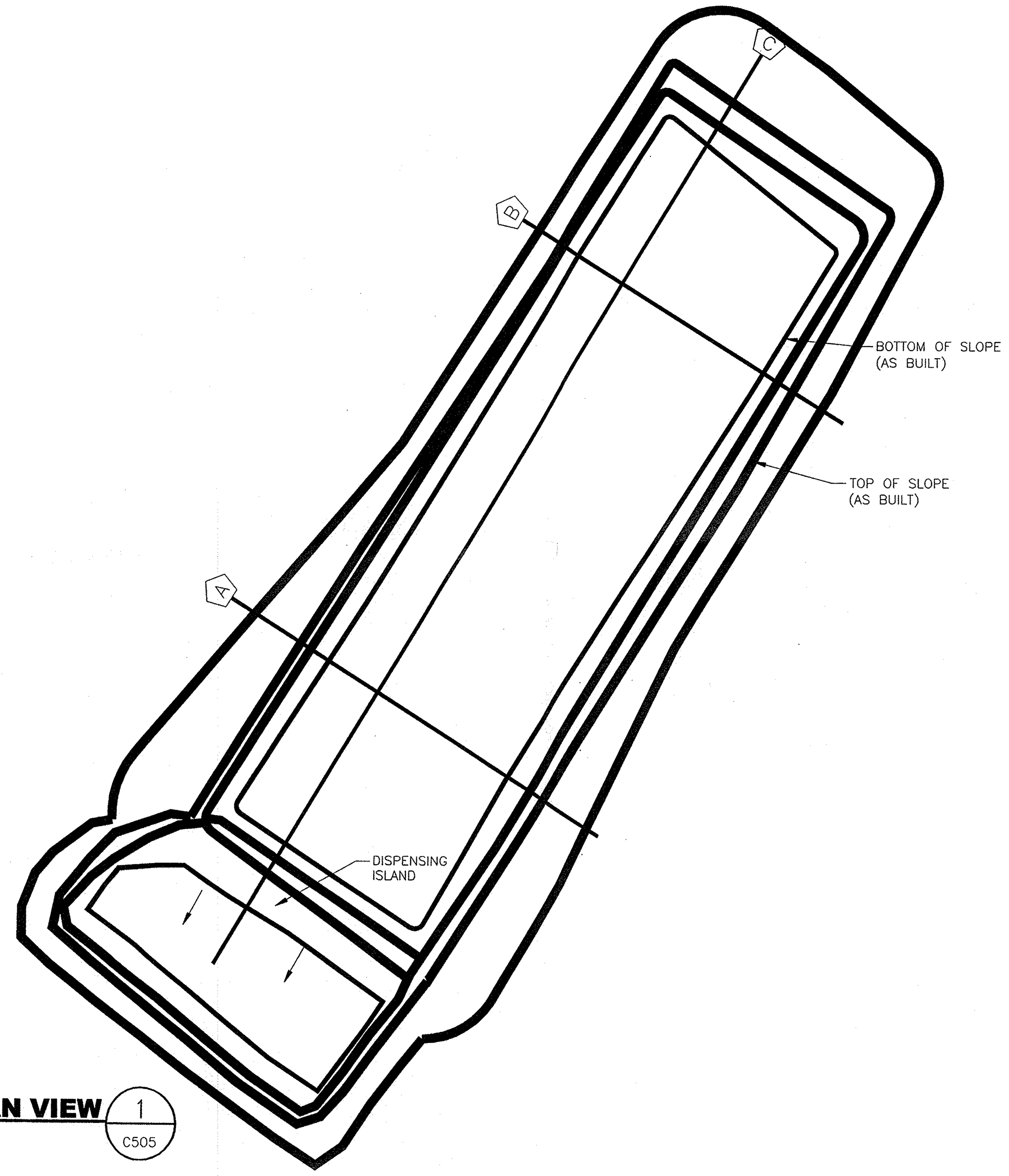
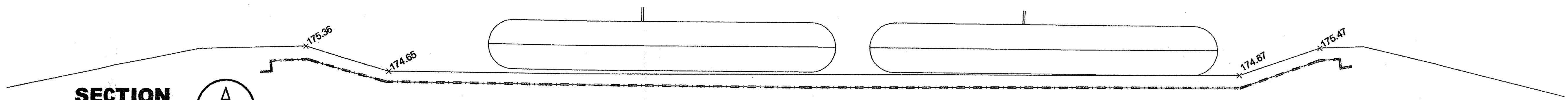
Drawing
MARY RIVER BULK FUEL STORAGE FACILITY SECTION AND DETAILS

Date	CADD File Number
MARCH 2009	REPORT/FIG3_FARM
Scale 1:100	Job Number 09-058
Drawn SO/CM	
Checked MK	Drawing Number FIGURE 4
Approved	



FUEL FARM B PLAN VIEW 1 / C505
1:500



SECTION A / C505
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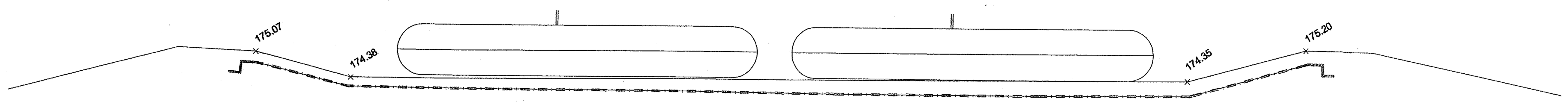

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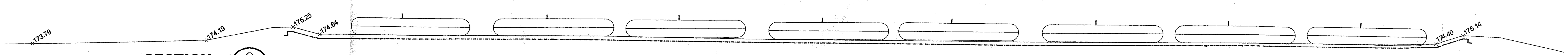

SECTION C / C505
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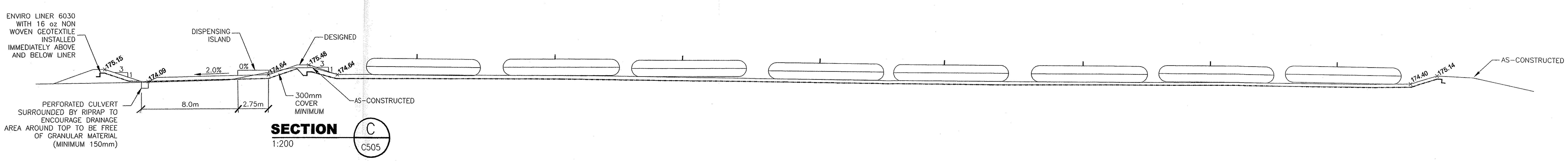

SECTION C / C505
1:200

Description	Date	No.

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Drawing
MARY RIVER BULK FUEL STORAGE FACILITY AS-CONSTRUCTED DRAWING

Date: MARCH 2009	CADD File Number: REPORT/FUEL FARM/
Scale: AS NOTED	Job Number: **09-058**
Drawn: S.S	
Checked: CHECKED	Drawing Number
Approved: APPROVED	**FIGURE 5**