

# Nunavut Water Board

## Standard Form for Annual Reporting Requirements of NWB2 Exploration Water Licenses

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Under the terms of your water licence issued by the Nunavut Water Board ("NWB") for the use of water and the disposal of waste into water associated with mineral exploration (NWB2 Licenses), Licensees are required to submit to the NWB an Annual Report no later than March 31st of the year following the calendar year being reported.

In order to aid the Licensee with the preparation of the Annual Report and facilitate its review by the NWB, Licensees are **required** to use the following form.

### Recommendation and Helpful tips for use:

**Metric units shall be used to report any relevant data.**

**How to Add additional space within Text boxes** - Right click mouse on the row number (directly to the left of your screen) which falls within the text box range and click insert. **Do not drag or drop text box to modify size of the text box because formatting will not be maintained and data will be lost.** If you have large amounts of data recommend adding additional worksheets. Go to the help menu for assistance.

**Electronic versions should be submitted in Adobe to ensure protection of your information.** If you do not have shortcut keys to save as a PDF. Go to print menu . Choose to print "Entire Worksheet" then select printer option Adobe PDF and you will be prompted to save the document as a PDF document. Reminder ensure you have saved your document in Excel so that future changes can be made.

**Modify the Header** - Select "View" then "Header" from the main menu. Select "Custom Header" and change to reflect the valid Water Licence No.

Textboxes denoted with \* are optional.

Annual Reports shall be submitted by either fax, mail or email in adobe acrobat or Excel format to:

Nunavut Water Board  
c/o Manager of Licensing  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0  
Tel: 867-360-6338  
Fax: 867-360-6369  
Email: [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)

## NWB Annual Report

Year being reported: 2009



License No: NWB4NUN0511 - Type "B"

Issued Date: September 13, 2005

Expiry Date: December 13, 2011

Project Name: Nunatta Environmental Services "Landfarm"

Licensee: Nunatta Environmental Services

Mailing Address:

Box 267,  
Iqaluit, Nunavut  
X0A 0H0

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

## General Background Information on the Project (\*optional):

Nunatta Environmental Services Inc. (Nunatta) owns and operates a Hydrocarbon-Impacted Soil Landfarm Facility in the City of Iqaluit, Nunavut. This treatment facility is commonly referred to as a 'landfarm'. Nunatta operations consist in accepting soils impacted with petroleum products at various concentrations at the landfarm's geosynthetic lined cells and allow indigenous soil microorganisms with the assistance of fertilizers to degrade petroleum products into compounds such as water, carbon dioxide and hydrogen sulfide. Soils accepted at the landfarm are contaminated with diesel fuel, gasoline and other automotive oils.

Licence Requirements: the licensee must provide the following information in accordance with

Part B



Item 1



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

Water Source(s): Run-off water, contaminated water from clean-up site

Water Quantity:		Quantity Allowable Domestic (cu.m)
		Actual Quantity Used Domestic (cu.m)
		Quantity Allowable Drilling (cu.m)
		Total Quantity Used Drilling (cu.m)

## Waste Management and/or Disposal

- ☐ Solid Waste Disposal
- ☐ Sewage
- ☐ Drill Waste
- ☐ Greywater
- ☐ Hazardous

☐ Hazardous

☒ Other:

Hydrocarbon Contaminated Soils

Additional Details:

18 cubic meters of water was received into landfarm from outside sources. These waters were used inside the cells to wet soils . This was a very dry year and no surface water was collected or pumped off during the summer months.

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

Spill No.:  (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

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

#### 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:

#### Progressive Reclamation Work Undertaken

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

There was a total of 1021 Meters received at landfarm in 2009 giving us a grand total of 7478 meters

Soils taken in and placed in cell # 1. Large rocks were removed and soils were piled into cell #2 to be further screened out next summer. Cell #3 had soils lightly treated with fertilizer and put into windrows. Rocks were removed from soils will be aerated and rocks cleaned. Limited space inside cells prompted construction of a holding or staging cell ( referred to as cell #4) as we had an unusual number of spills in 2009 and contaminated soil has to be removed from spill site in order to remediate.The new cell was constructed using a 30mm liner and in accordance to preapproved Engineering Drawings prepared by Dillon Engineering. The construction was supervised by Axel D Have P Eng. Several photographs were taken at various stages during the construction and are attached to this report. Not enough sand was located to complete inside, will be completed in 2010

**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;**

Not Applicable (N/A)



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 described below



Additional Details:

Cell#1 N 63-45-816 W 068-32-667	
Cell #2 N 63-45-825 W068-32-708	These coordinates are to center of cells Corner locations are included in attachment.
Cell#3 N 63-45-828 W068-32-738	
Cell #4 N 63-45-781 W 068-32-705	This cell was added as a temporary storage cell but as we worked into the project it developed into full scale cell as construction proceeded.

**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**

November of 2008 after a change in Management, Franz Environmental was contracted to install 4 new Monitoring wells around the perimeter of the landfarm

In order to fit the new overflow cell we removed one of the test wells this well was installed as MW08-4. new mapping referred to as WM6

**Date Submitted:**

Jan 19th 2011

**Submitted/Prepared by:**

Nunatta Environmental Services Inc, Iqaluit, Nu

**Contact Information:****Tel:** 867-979-1488**Fax:** 867-979-1478**email:** [nunatta@northwestel.net](mailto:nunatta@northwestel.net)



Nunatta Environmental Services Inc.  
P.O. Box 267  
Iqaluit, NU X0A 0H0

Tel: (867) 979-1488  
Fax: (867) 979-1478

**RECEIPT OF OIL - IMPACTED SOILS  
BY CLIENT & JOB #  
AS AT 31/12/09**

<b>Date of Invoice</b>	<b>Customer</b>	<b>Job #</b>	<b>Details (Cu. Mtrs. Received)</b>
Jan 30/09	NP REIT	08-850	26.0
August 6/09	Meeka Mike	09-851-2	70.4
Oct 28/09	GN I Finance	09-900	54.0
Sept 18/09	Neevee Wilkins	09-901	7.0
Oct 1/09	NorhwesTel	09-904	17.0
April 07/09	NP REIT	09-906	108.0
Dec 31/09	City of Iqaluit	09-907	159.4
Oct 23/09	NorhwesTel	09-908	4.0
Oct 28/09	NP REIT	09-910	49.3
Oct 28/09	Frosty Refriger.	09-914	82.5
Oct 28/09	Chris Thomas	09-917	46.0
Nov 8/09	Qikiqtaaluk C.	09-921	158.2
Dec 31/09	Lena Evic-Twerdin	09-926	86.0
Dec 31/09	NP REIT	09-934	13.5
Dec 31/09	City of Iqaluit	09-935	90.0
Oct 7/09	City of Iqaluit	09-939	40.0
Oct 7/09	Kudlik Constr.	09-942	8.0
Dec 22/09	Qudlik Energy	09-943	2.0

**Total Cubic Meters of Oil-impacted Soil Received:**

**1,021.3**

## Soil Remediation - Deferred Revenue Calculations Annual Reconciliation

Year	Details	Average	Extended	Remediation Period:						
			Price	2003	2004	2005	2006	2007	2008	
Soil	(Cu. Mtrs. Received)	Price	Per Invoice							
2003	3919.6	\$ 174.46	#####	#####	#####	#####	#####	#####	#####	\$ -
2004	708	\$ 289.27	#####	\$ -	\$ 40,960	\$ 40,960	\$ 40,960	\$ 40,960	\$ 40,960	\$ 40,960
2005	377.8	\$ 198.01	\$ 74,800	\$ -	\$ -	\$ 14,960	\$ 14,960	\$ 14,960	\$ 14,960	\$ 14,960
2006	164.0	\$ 212.47	\$ 34,845	\$ -	\$ -	\$ -	\$ 6,969	\$ 6,969	\$ 6,969	\$ 6,969
2007	525.1	\$ 248.86	#####	\$ -	\$ -	\$ -	\$ -	\$ 26,132	\$ 26,132	\$ 26,132
2008	1077.3	\$ 250.19	#####	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 53,903	\$ 53,903
2009	1021.3	\$ 250.00	#####	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals	5694.4	#####	#####	#####	#####	#####	#####	#####	#####	#####

<b>Year-end Balances: 2003:</b>  <b>2004:</b>  <b>2005:</b>	<b>Total Revenue for Year:</b> ##### <b>Revenue Applicable to 2003:</b> ##### Yr 1 <b>Deferred Revenue at Year-end - 2003:</b> ##### <u>Agreed to Balance</u>  <b>Opening Balance from Previous Year:</b> ##### <b>Less Revenue Applicable to Year 2003:</b> ##### Yr 2 <b>Plus Revenue for 2004</b> ##### <b>Less Revenue Applicable to Year 2004:</b> -\$40,960 Yr 1 <b>Deferred Revenue at Year-end - 2004:</b> ##### <u>Agreed to Balance</u>  <b>Opening Balance from Previous Year:</b> ##### <b>Less Revenue Applicable to Year 2003:</b> ##### Yr 3 <b>Less Revenue Applicable to Year 2004:</b> -\$40,960 Yr 2 <b>Plus Revenue for 2005</b> \$74,800 <b>Less Revenue Applicable to Year 2005:</b> -\$14,960 Yr 1 <b>Deferred Revenue at Year-end - 2005:</b> ##### <u>Agreed to Balance</u>
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**Nunatta Environmental Services Inc.**  
**Soil Remediation - Deferred Revenue Calculations**  
**Annual Reconciliation**

<b>2006:</b>	<b>Opening Balance from Previous Year:</b>	#####	
	<b>Less Revenue Applicable to Year 2003:</b>	#####	Yr 4
	<b>Less Revenue Applicable to Year 2004:</b>	-\$40,960	Yr 3
	<b>Less Revenue Applicable to Year 2005:</b>	-\$14,960	Yr 2
	<b>Plus Revenue for 2006</b>	\$34,845	
	<b>Less Revenue Applicable to Year 2006:</b>	-\$6,969	Yr 1
	<b>Deferred Revenue at Year-end - 2006:</b>	<u>#####</u>	<b>Agreed to Balance</b>
<b>2007:</b>	<b>Opening Balance from Previous Year:</b>	#####	
	<b>Less Revenue Applicable to Year 2003:</b>	#####	Yr 5
	<b>Less Revenue Applicable to Year 2004:</b>	-\$40,960	Yr 4
	<b>Less Revenue Applicable to Year 2005:</b>	-\$14,960	Yr 3
	<b>Less Revenue Applicable to Year 2006:</b>	-\$6,969	Yr 2
	<b>Plus Revenue for 2007</b>	#####	
	<b>Less Revenue Applicable to Year 2007:</b>	-\$26,132	Yr 1
	<b>Deferred Revenue at Year-end - 2007:</b>	<u>#####</u>	<b>Out of Balance by \$</b>
<b>2008:</b>	<b>Opening Balance from Previous Year:</b>	#####	
	<b>Less Revenue Applicable to Year 2004:</b>	-\$40,960	Yr 5
	<b>Less Revenue Applicable to Year 2005:</b>	-\$14,960	Yr 4
	<b>Less Revenue Applicable to Year 2006:</b>	-\$6,969	Yr 3
	<b>Less Revenue Applicable to Year 2007:</b>	-\$26,132	Yr 2
	<b>Plus Revenue for 2008</b>	#####	
	<b>Less Revenue Applicable to Year 2008:</b>	-\$53,903	Yr 1
	<b>Deferred Revenue at Year-end - 2008:</b>	<u>#####</u>	<b>Agreed to Balance</b>
<b>2009:</b>	<b>Opening Balance from Previous Year:</b>	#####	Yr 5
	<b>Less Revenue Applicable to Year 2005:</b>	-\$14,960	Yr 4
	<b>Less Revenue Applicable to Year 2006:</b>	-\$6,969	Yr 3
	<b>Less Revenue Applicable to Year 2007:</b>	-\$26,132	Yr 2
	<b>Less Revenue Applicable to Year 2008:</b>	-\$53,903	
	<b>Plus Revenue for 2009</b>	#####	
	<b>Less Revenue Applicable to Year 2009:</b>	-\$51,065	
	<b>Deferred Revenue at Year-end - 2009:</b>	<u>#####</u>	<b>Agreed to Balance</b>



2009	2010	2011	2012	2013	Liability at Y/E
\$ -	\$ -	\$ -	\$ -	\$ -	#####
\$ -	\$ -	\$ -	\$ -	\$ -	#####
\$ 14,960	\$ -	\$ -	\$ -	\$ -	#####
\$ 6,969	\$ 6,969	\$ -	\$ -	\$ -	#####
\$ 26,132	\$ 26,132	\$ 26,132	\$ -	\$ -	#####
\$ 53,903	\$ 53,903	\$ 53,903	\$ 53,903	\$ -	#####
\$ 51,065	\$ 51,065	\$ 51,065	\$ 51,065	\$ 51,065	#####
#####	#####	#####	#####	#####	#####

Sheet

Sheet

Sheet

Sheet

\$1,000

Sheet

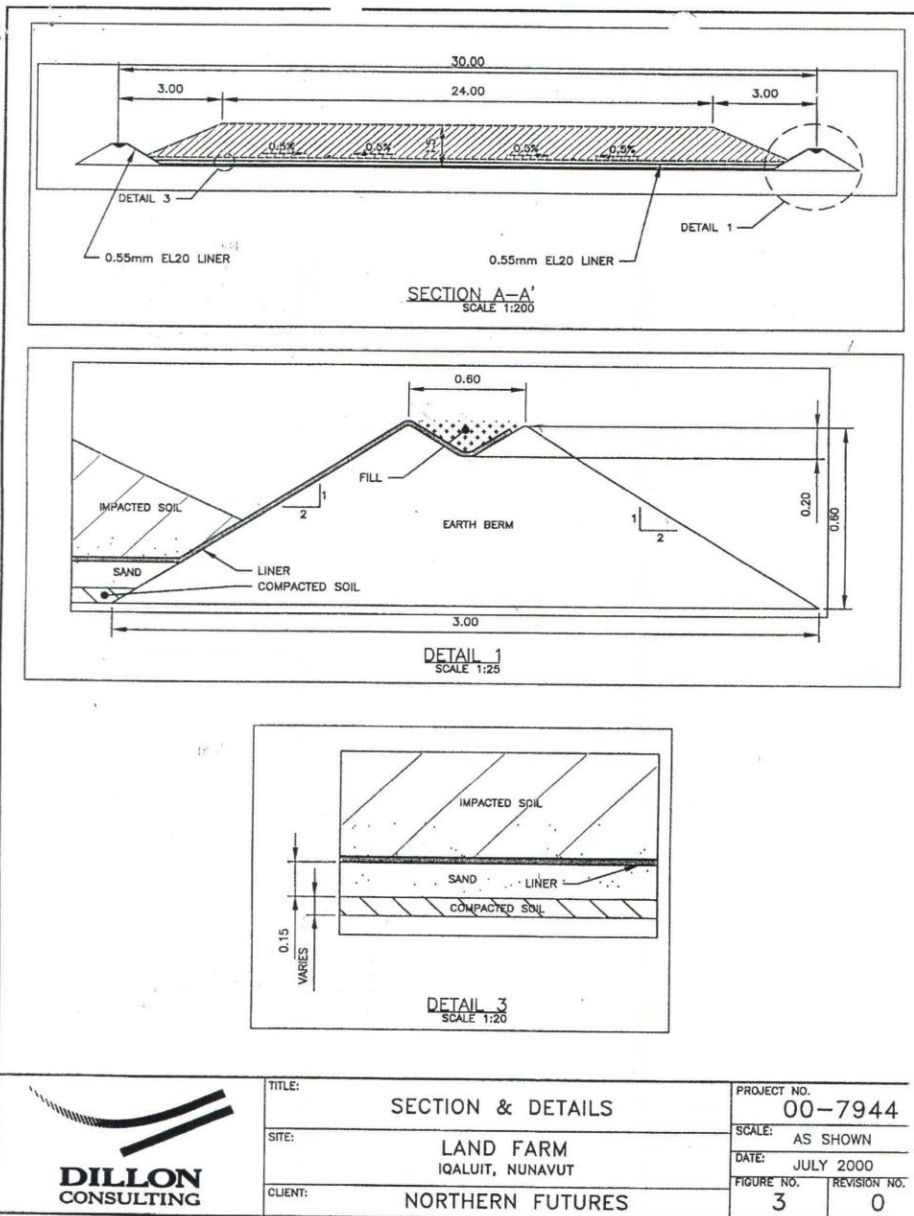
Sheet

### GPS Coordinates for water sources utilized

[illegible]

### GPS Locations of areas of waste disposal

[illegible]



**DILLON**  
CONSULTING

TITLE: SECTION & DETAILS  
SITE: LAND FARM  
IQUALUIT, NUNAVUT  
CLIENT: NORTHERN FUTURES

PROJECT NO. 00-7944  
SCALE: AS SHOWN  
DATE: JULY 2000  
FIGURE NO. 3  
REVISION NO. 0

This is a scanned copy of the original engineers drawings used  
In the construction of the new Cell #4

This design has proven to work very well here in the North  
with the soil types we have to work with.

All the Cells at Nunatta were constructed using this design and have  
proven very strong and stable.





During the warm months of 2009 we began the construction of an overflow cell. This was in response to an unusual number of fuel tank ruptures in Iqaluit. We began by digging out large rocks and putting down a layer of screened out material.





All work was monitored by Axel Have (P.eng)  
Approved Cell construction drawings were Engineered by Dillon and have been the model used in constructing of all cells on Nunatta Landfarm as it has proven to be a good design for this northern location and soils we have to work with.  
Length, Width and Grade was checked with the use of transit



Sand was brought in and put through a shaker to remove all rocks down to less than  $\frac{1}{2}$  inch





This was placed on an already smooth base and compacted, then another layer added and compacted again. Grade was corrected throughout this process.



Walls were constructed of waste rocks in bottom and soils that pack on top to make for firm walls





Excavator and loader used to carry materials and to pack walls tight



Small stones were raked out of inside cells and walls were covered with screened sand.  
To complete the formation of cell containment area.



The whole area was raked and picked clean of any small debris that could puncture the liner.  
The transition from floor to wall was shaped so as not to have sharp angle which could cause a rip





The opening in the end wall was to allow passage of man and machine.  
We thought it best to keep access until liner was installed then fill in hole.  
This position later became a ramp to allow access into cell.  
One of two access points into cell #4



This is the new liner uncrated.  
Total weight 2200 pounds or 1000Kg



**LAYFIELD****Flexible Membrane Liner****80M**

UNROLL

LENGTH

Customer Name:

**NUNATTA ENV.**

Material:

**Enviro Liner 6030 Blk**Sales Order  
191266

Liner Size:

**80M X 30.48**Stockcode  
03LE1030

QC Number

**191266**

Panel Number

**1**

PULLOUT

WIDTH

**30.48**DATE; **Sen 02. 2005****Made In Canada**

Showing liner label.

This was adhered to side of roll.

Kept in file as proof of purchase





Unrolling of liner prior to unfolding across the width of the cell area



Shows length of cell area, liner unrolled and ready to unfold across the cell wall (left on photo)





First couple folds out.  
Takes many hands to pull liner evenly into position.



Liner in position and placing of sand on top of walls underway to keep the wind from getting under liner  
Equipment cannot drive on liner with out sand to aid in spreading out weight over larger area.  
Plans call for 6 inches of compacted sand over liner.  
We feel more than this is required and will add 16-18 inches.



Screening plant and stacker used to get sand into new cell without damaging the liner. Sand was shoveled out until no more sand was available. Completion of cell will continue Summer of 2010 when city will allow removal of more sand from pit.

Paracel Laboratory	Client Nunatta Environmental Services Inc.
Certificate of Analysis	Attention Ivan Charalambij
Work Order: 092	Reference Preferred Supplier Pricing
Report Date: 7/21/2009	Project Number 09-923

*Note: This is not the original data. Please refer to PDF / Hardcopy report.*

LAB ID	Parameter	Units	MRL	0929062-01	0929062-02	0929062-03
CLIENT ID				Cell 3 - 2009 - 3	Cell 3 - 2009 - 3	Cell 3 - 2009 - 3
DATE SAMPLED				09-Jul-09	09-Jul-09	09-Jul-09
DATE RECEIVED				14-Jul-09	14-Jul-09	14-Jul-09
MATRIX				Soil	Soil	Soil
	% Solids	% by Wt.	0.1	91.3	91.1	89.2
	Benzene	ug/g	0.03	<0.03	<0.03	<0.03
	Ethylbenzene	ug/g	0.05	<0.05	0.05	0.06
	Toluene	ug/g	0.05	0.05	0.07	0.06
	m,p-Xylenes	ug/g	0.05	0.27	0.26	0.26
	o-Xylene	ug/g	0.05	0.11	0.11	0.14
	F1 PHCs (C6-C10)	ug/g	10	<10	<10	<10
	F2 PHCs (C10-C16)	ug/g	10	1530	1640	1300
	F3 PHCs (C16-C34)	ug/g	10	721	1030	991
	F4 PHCs (C34-C50)	ug/g	10	83	50	92



Work Order: 0938209 Preferred Supplier Pricing  
 Report Date/Project Number 08-852

*Note: This is not the original data. Please refer to PDF / Hardcopy report.*

Parameter	Units	MRL	0938209-0	0938209-0	0938209-0	0938209-0	0938209-0	0938209-0
LAB ID			0938209-0	0938209-0	0938209-0	0938209-0	0938209-0	0938209-0
CLIENT ID			Cell 1 - 09-	Cell 1 - 09-	Cell 1 - 09-	Cell 2 - 09-	Cell 2 - 09-	Cell 2 - 09-
DATE SAMPLED			15-Sep-09	15-Sep-09	15-Sep-09	15-Sep-09	15-Sep-09	15-Sep-09
DATE RECEIVED			17-Sep-09	17-Sep-09	17-Sep-09	17-Sep-09	17-Sep-09	17-Sep-09
MATRIX			Soil	Soil	Soil	Soil	Soil	Soil
% Solids	% by Wt.	0.1	91.5	92.9	95	92.4	92.1	91.8
Antimony	ug/g dry	1	<1	<1	<1	<1	<1	<1
Arsenic	ug/g dry	1	1	1	1	<1	<1	<1
Barium	ug/g dry	10	31	26	31	33	29	31
Beryllium	ug/g dry	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron, available	ug/g dry	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	ug/g dry	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	ug/g dry	5	23	25	25	24	27	26
Chromium (VI)	ug/g dry	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Cobalt	ug/g dry	1	5	5	5	6	5	5
Copper	ug/g dry	5	12	12	11	14	12	13
Iron	ug/g dry	200	24800	25800	26000	24900	27900	25300
Lead	ug/g dry	1	21	26	15	14	12	17
Mercury	ug/g dry	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/g dry	1	<1	<1	<1	<1	<1	<1
Nickel	ug/g dry	5	8	8	8	9	9	9
Selenium	ug/g dry	1	<1	<1	<1	<1	<1	<1
Silver	ug/g dry	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	ug/g dry	1	<1	<1	<1	<1	<1	<1
Tin	ug/g dry	5	<5	<5	<5	<5	<5	<5
Vanadium	ug/g dry	10	48	52	54	48	59	54
Zinc	ug/g dry	20	47	48	41	47	45	52
F1 PHCs (C6-C10)	ug/g	10	<10	<10	22	<10	<10	<10
F2 PHCs (C10-C16)	ug/g	10	1220	666	366	776	1050	849
F3 PHCs (C16-C34)	ug/g	10	743	666	436	452	428	519
F4 PHCs (C34+)	ug/g	10	42	125	72	65	87	133



0938209-0	0938209-0	0938209-09
Cell 3 - 09	Cell 3 - 09	Cell 3 - 09-3
15-Sep-09	15-Sep-09	15-Sep-09
17-Sep-09	17-Sep-09	17-Sep-09
Soil	Soil	Soil
89.1	89.4	93.1
<1	3	2
<1	<1	<1
50	46	36
<0.5	<0.5	<0.5
<0.5	<0.5	<0.5
<0.5	<0.5	<0.5
26	26	26
<0.4	<0.4	<0.4
8	8	6
25	30	15
26300	26800	27300
20	9	33
<0.1	<0.1	<0.1
<1	<1	<1
11	11	9
<1	<1	<1
<0.3	<0.3	<0.3
<1	<1	<1
<5	<5	<5
60	66	58
54	50	45
<10	<10	<10
1140	1670	1640
1410	1150	704
224	76	142

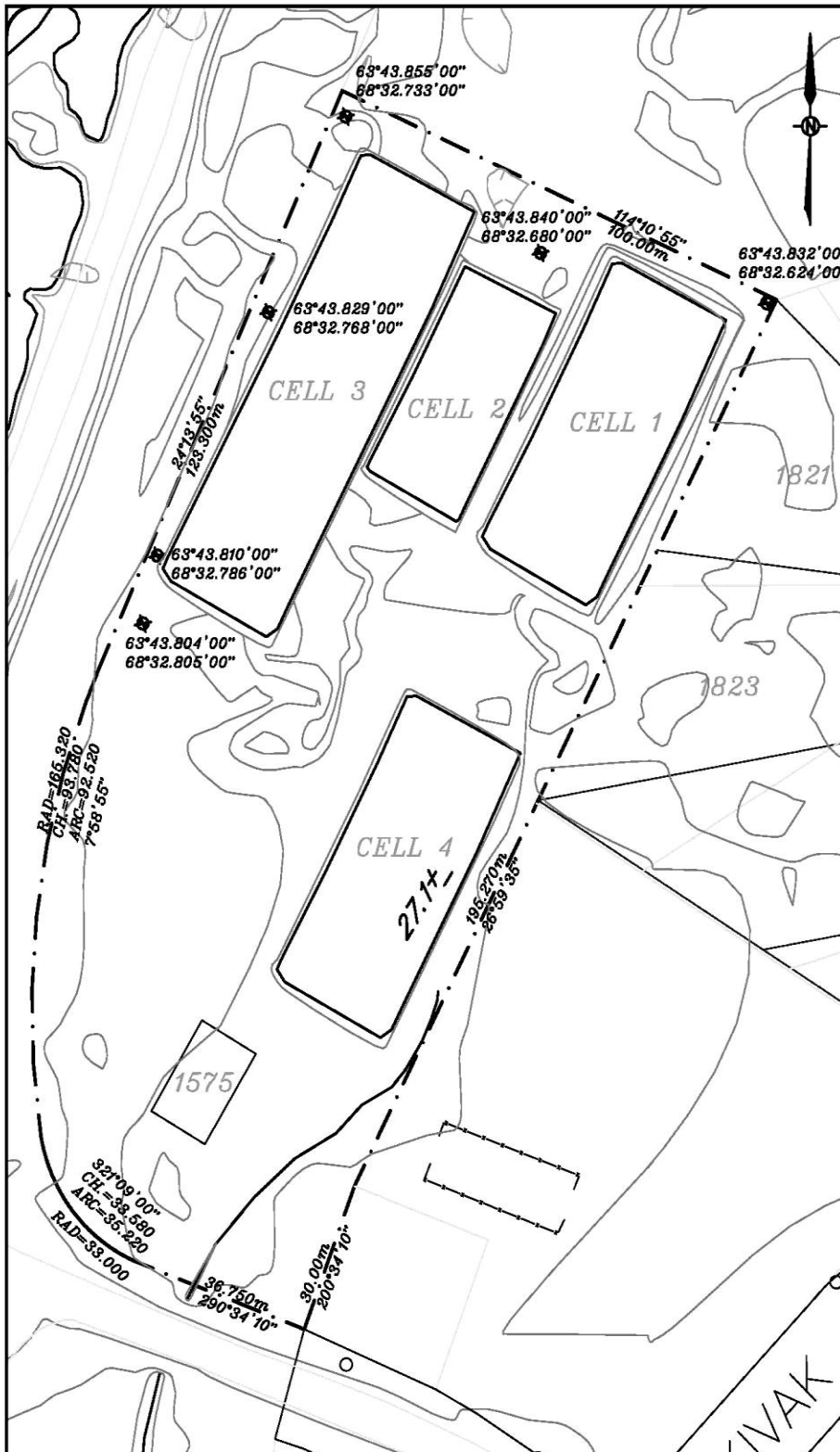
Paracel Laboratories Ltd.  
 Certificate of Analysis  
 Work Order: 0929063  
 Report Date: 7/20/2009 1:37:43

Client Nunatta Environmental Services Inc.  
 Attention Ivan Charalambij  
 Reference Preferred Supplier Pricing  
 Project Number 09-923

*Note: This is not the original data. Please refer to PDF / Hardcopy report.*

LAB ID	Parameter	Units	MRL	
CLIENT ID				0929063-01
DATE SAMPLED				MW08 - 04
DATE RECEIVED				13-Jul-09
MATRIX				14-Jul-09
				Water
	Aluminum	ug/L	10	942
	Antimony	ug/L	1	<1
	Arsenic	ug/L	10	<10
	Barium	ug/L	10	14
	Boron	ug/L	50	<50
	Cadmium	ug/L	1	<1
	Calcium	ug/L	200	41300
	Chromium	ug/L	50	<50
	Copper	ug/L	5	7
	Iron	ug/L	200	1310
	Lead	ug/L	1	<1
	Manganese	ug/L	50	<50
	Mercury	ug/L	0.1	<0.1
	Selenium	ug/L	5	<5
	Sodium	ug/L	200	3690
	Uranium	ug/L	5	<5
	Zinc	ug/L	20	<20
	Benzene	ug/L	0.5	<0.5
	Bromodichloromethane	ug/L	0.4	<0.4
	Bromoform	ug/L	0.5	<0.5
	Bromomethane	ug/L	0.7	<0.7
	Carbon Tetrachloride	ug/L	0.5	<0.5
	Chlorobenzene	ug/L	0.4	<0.4
	Chloroethane	ug/L	1	<1.0
	Chloroform	ug/L	0.5	<0.5
	Chloromethane	ug/L	3	<3.0
	Dibromochloromethane	ug/L	0.5	<0.5
	1,2-Dibromoethane	ug/L	1	<1.0
	1,2-Dichlorobenzene	ug/L	0.4	<0.4
	1,3-Dichlorobenzene	ug/L	0.4	<0.4
	1,4-Dichlorobenzene	ug/L	0.4	<0.4
	1,1-Dichloroethane	ug/L	0.5	<0.5
	1,2-Dichloroethane	ug/L	0.5	<0.5
	1,1-Dichloroethylene	ug/L	0.5	<0.5
	cis-1,2-Dichloroethylene	ug/L	0.4	<0.4
	trans-1,2-Dichloroethylene	ug/L	1	<1.0
	1,2-Dichloropropane	ug/L	0.5	<0.5
	cis-1,3-Dichloropropylene	ug/L	0.4	<0.4
	trans-1,3-Dichloropropylene	ug/L	0.5	<0.5
	Ethylbenzene	ug/L	0.5	<0.5
	Methylene Chloride	ug/L	4	<4.0
	Styrene	ug/L	0.4	<0.4

1,1,1,2-Tetrachloroethane	ug/L	0.5	<0.5
1,1,2,2-Tetrachloroethane	ug/L	0.6	<0.6
Tetrachloroethylene	ug/L	0.5	<0.5
Toluene	ug/L	0.5	<0.5
1,1,1-Trichloroethane	ug/L	0.4	<0.4
1,1,2-Trichloroethane	ug/L	0.6	<0.6
Trichloroethylene	ug/L	0.4	<0.4
Trichlorofluoromethane	ug/L	1	<1.0
1,3,5-Trimethylbenzene	ug/L	0.5	<0.5
Vinyl chloride	ug/L	0.4	<0.4
m,p-Xylenes	ug/L	0.5	<0.5
o-Xylene	ug/L	0.5	<0.5
F2 PHCs (C10-C16)	ug/L	100	<100
F3 PHCs (C16-C34)	ug/L	100	<100
F4 PHCs (C34-C50)	ug/L	100	<100
Acenaphthene	ug/L	0.05	<0.05
Acenaphthylene	ug/L	0.05	<0.05
Anthracene	ug/L	0.01	<0.01
Benzo[a]anthracene	ug/L	0.01	<0.01
Benzo[a]pyrene	ug/L	0.01	<0.01
Benzo[b]fluoranthene	ug/L	0.05	<0.05
Benzo[g,h,i]perylene	ug/L	0.05	<0.05
Benzo[k]fluoranthene	ug/L	0.05	<0.05
Biphenyl	ug/L	0.05	<0.05
Chrysene	ug/L	0.05	<0.05
Dibenzo[a,h]anthracene	ug/L	0.05	<0.05
Fluoranthene	ug/L	0.01	<0.01
Fluorene	ug/L	0.05	<0.05
Indeno[1,2,3-cd]pyrene	ug/L	0.05	<0.05
1-Methylnaphthalene	ug/L	0.05	<0.05
2-Methylnaphthalene	ug/L	0.05	<0.05
Naphthalene	ug/L	0.05	<0.05
Phenanthrene	ug/L	0.05	<0.05
Pyrene	ug/L	0.01	<0.01
PCBs, total	ug/L	0.05	<0.05



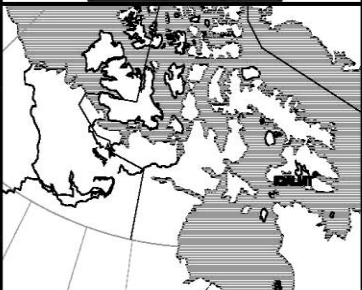
**GENERAL NOTES:**

- 1 ALL PROPERTY LINE BEARINGS AND DIMENSIONS HAVE BEEN PROVIDED BY THE CITY OF IQUALUIT
- 2 CONTRACTOR IS TO REPORT IMMEDIATELY ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER.

**LEGEND:**

- PROPERTY LINE
- EXISTING GRADE ELEVATION
- EXISTING LIGHT POLE
- ENTRANCE/EXIT
- EXISTING POWER POLE
- PROPOSED GRADE ELEVATION
- NEW LIGHT POLE
- WATER TEST WELLS

ALL SITE INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY OF:  
**LOT 1, BLOCK 229**  
 SOURCE: CITY OF IQUALUIT  
 LOT AREA = 20,233.27m<sup>2</sup>



1  
G3

**AV PLAN**

SCALE: 1:1200

**PROJECT:**  
**SITE SURVEY AND ELEVATIONS**

**CLIENT DEPARTMENT:**  
**NUNATTA ENVIRONMENTAL INC.**

**COMMUNITY:**  
**IQUALUIT, NU**

**LOT 1, BLOCK 229**

**DATE:**  
**OCTOBER 2009**

**DRAWN BY:**  
**T.STOKES**

**SPG.3**



This is an over view of the land farm with  
Overflow cell #4 in place.

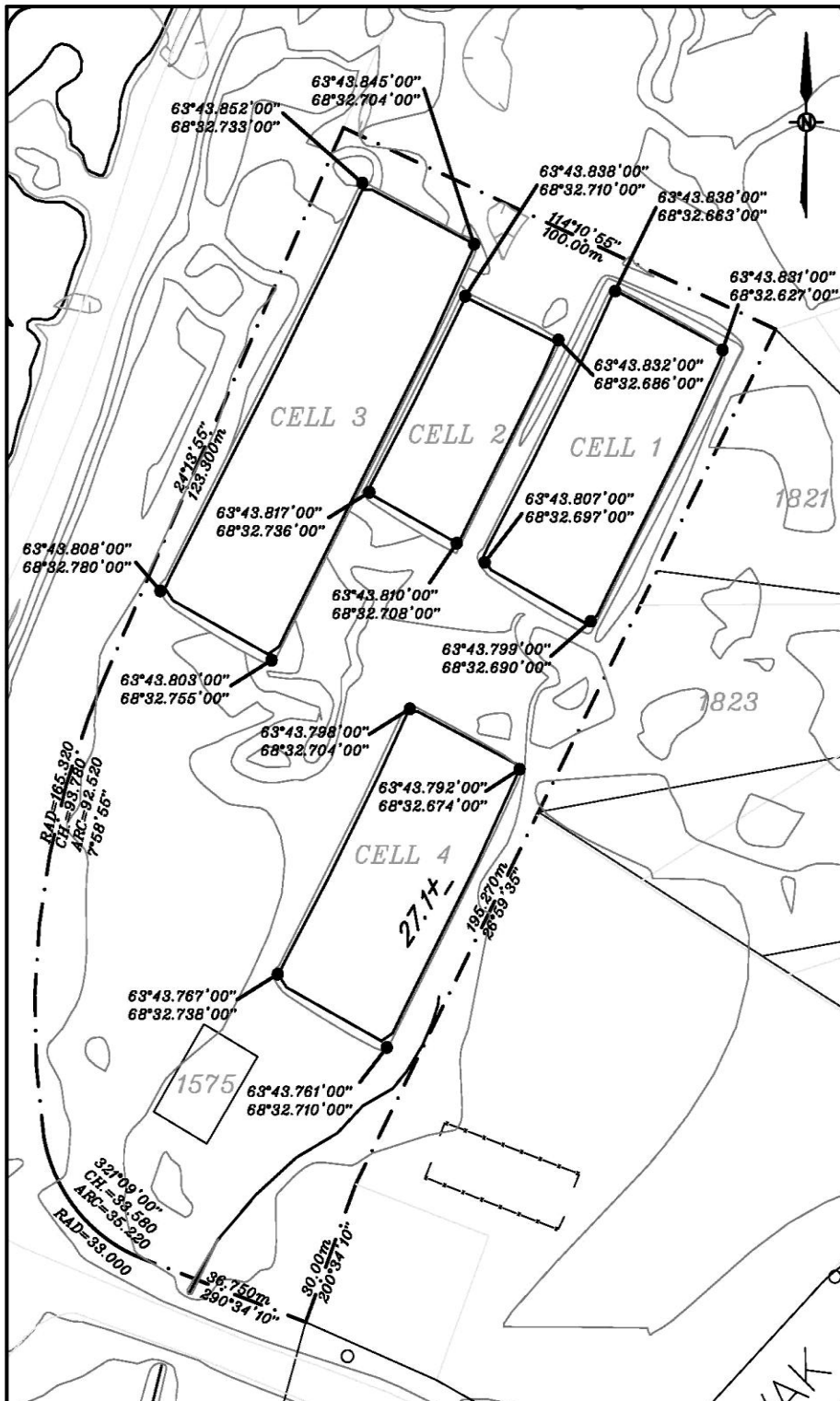
Water Monitoring well #MW 6  
( previously refered to asMW 08-4)







Land farm elevations shown in meters



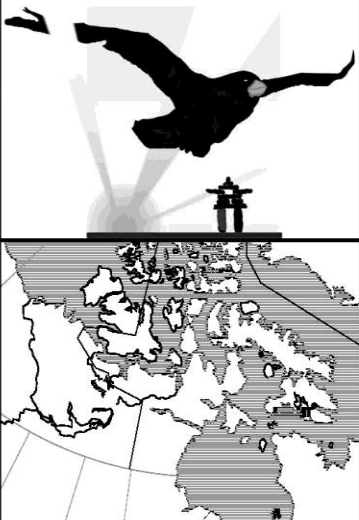
# GENERAL NOTES:

1. ALL PROPERTY LINE BEARINGS AND DIMENSIONS HAVE BEEN PROVIDED BY THE CITY OF IQUALUIT.
2. CONTRACTOR IS TO REPORT IMMEDIATELY ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER.

## LEGEND:

- PROPERTY LINE
- EXISTING GRADE ELEVATION
- EXISTING LIGHT POLE
- ENTRANCE/EXIT
- EXISTING POWER POLE
- PROPOSED GRADE ELEVATION
- NEW LIGHT POLE
- WATER TEST WELLS

ALL SITE INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY OF:  
 LOT 1, BLOCK 229  
 SOURCE: CITY OF IQUALUIT  
 LOT AREA = 20,239.27m<sup>2</sup>



1  
G6

GPS LOCATION

SCALE: 1:1200

PROJECT:  
SITE SURVEY AND ELEVATIONS

CLIENT DEPARTMENT:  
NUNATTA ENVIRONMENTAL INC.

COMMUNITY:  
IQUALUIT, NU

LOT 1, BLOCK 229

DATE:  
2009

DRAWN BY:  
T.STOKES

SPG.6

GPS coordinates of cell corners