

Certificate of Analysis

Nunatta Environmental Services Inc.

P.O. Box 267
Iqaluit, NU X0A0H0
Attn: Jim Wilson

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

Client PO:
Project: Water Land Farm
Custody: 86973

Report Date: 10-Aug-2011
Order Date: 5-Aug-2011

Order #: 1132189

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1132189-01	#1 - Black Tank
1132189-02	#2 - Green Tank
1132189-03	#3 - Cell #4

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Client: Nunatta Environmental Services Inc.

Report Date: 10-Aug-2011

Client PO:

Project Description: Water Land Farm

Order Date: 5-Aug-2011

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX	EPA 624 - P&T GC-MS	5-Aug-11	7-Aug-11
CCME PHC F1	CWS Tier 1 - P&T GC-FID	5-Aug-11	7-Aug-11
CCME PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	5-Aug-11	6-Aug-11

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Report Date: 10-Aug-2011

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Client PO:

Project Description: Water Land Farm

Client ID:	#1 - Black Tank	#2 - Green Tank	#3 - Cell #4	-
Sample Date:	02-Aug-11	02-Aug-11	02-Aug-11	-
Sample ID:	1132189-01	1132189-02	1132189-03	-
MDL/Units	Water	Water	Water	-

Volatiles

Benzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	-
Toluene-d8	Surrogate	87.8%	87.9%	88.7%	-

Hydrocarbons

F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	-
F1 + F2 PHCs	125 ug/L	<125	<125	<125	-
F3 + F4 PHCs	200 ug/L	<200	<200	<200	-

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Project Description: Water Land Farm

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Volatiles									
Benzene	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: Toluene-d8	28.5		ug/L		89.0	50-140			

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Report Date: 10-Aug-2011

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Client PO:

Project Description: Water Land Farm

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND				30	
Volatiles									
Benzene	ND	0.5	ug/L	ND				30	
Ethylbenzene	ND	0.5	ug/L	ND				30	
Toluene	ND	0.5	ug/L	ND				30	
m,p-Xylenes	ND	0.5	ug/L	ND				30	
o-Xylene	ND	0.5	ug/L	ND				30	
Surrogate: Toluene-d8	28.7		ug/L	ND	89.8	50-140			

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Project Description: Water Land Farm

Order Date: 5-Aug-2011

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	2100	25	ug/L	ND	105	68-117			
F2 PHCs (C10-C16)	1410	100	ug/L	ND	88.0	60-140			
F3 PHCs (C16-C34)	3580	100	ug/L	ND	89.4	60-140			
F4 PHCs (C34-C50)	2540	100	ug/L	ND	106	60-140			
Volatiles									
Benzene	44.0	0.5	ug/L	ND	110	60-130			
Ethylbenzene	41.0	0.5	ug/L	ND	103	60-130			
Toluene	46.0	0.5	ug/L	ND	115	60-130			
m,p-Xylenes	72.6	0.5	ug/L	ND	90.8	60-130			
o-Xylene	42.0	0.5	ug/L	ND	105	60-130			
Surrogate: Toluene-d8	31.0		ug/L		97.0	50-140			

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Sample and QC Qualifiers Notes

None

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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Client Name: <u>Nunatta Environmental Service</u>	Project Reference: <u>Water Land Farm</u>	TAT: <input checked="" type="checkbox"/> Regular <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day <input type="checkbox"/> Same Day Date Required: _____
Contact Name: <u>Jim Wilson</u>	Quote #	
Address: <u>1575 Federal Rd</u>	PO # <u>Box 267</u> <u>X04-0H0</u>	
Telephone: <u>867-979-1488</u>	Email Address: <u>nunatta@noulhuastel.net</u>	

Samples Submitted Under: ☐ O. Reg. 153/04 Table ☐ O. Reg 511/09 Table ☐ PWQO ☒ CCME ☐ Sewer Use (Storm) ☐ Sewer Use (Sanitary) ☐ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

Paracel Order Number:		Matrix	Air Volume	# of Containers	Sample Taken		F1 - F4	B - Y												
Sample ID/Location Name					Date	Time														
1	#1 - Black tank	W			Aug 2	10:45														/
2	#2 - Green tank	W			Aug 2	10:50														/
3	#3 - cell #4	W			Aug 2	10:55														/
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Comments:

Method of Delivery:

Av

Relinquished By (Print & Sign): <u>Jim Wilson</u>	Received by Driver/Depot: <u>M. Brouse</u>	Received at Lab: <u>SUNBELORN</u>	Verified By: <u>M/C</u>
Date/Time: <u>Aug 2nd / 11:10</u>	Date/Time: <u>05/08/11 1:45 PM</u>	Date/Time: <u>AUG 05, 11 2:30</u>	Date/Time: <u>Aug 5/11 2:46</u>
Temperature: _____ °C	Temperature: _____ °C	Temperature: <u>9.8</u> °C	pH Verified By: <u>N/A</u>