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Certificate of Analysis

Nunatta Environmental Services Inc.
P.O. Box 267
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Attn: Jim Wilson

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Client PO:
Project: Land Farm Samples
Custody: 70194

Report Date: 5-Jul-2011
Order Date: 28-Jun-2011
Order #: 1127164

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

Paracel ID	Client ID
1127164-01	1 East
1127164-02	1 West
1127164-03	1 Middle
1127164-04	#2 East
1127164-05	#2 West
1127164-06	#2 Middle
1127164-07	Cell #1 Front
1127164-08	Cell #1 Back
1127164-09	Cell #2
1127164-10	Cell #4

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO: Project Description: Land Farm Samples

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Anions	EPA 300.1 - IC, water extraction	5-Jul-11	5-Jul-11
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	30-Jun-11	4-Jul-11
BTEX	EPA 8260 - P&T GC-MS	30-Jun-11	1-Jul-11
CCME PHC F1	CWS Tier 1 - P&T GC-FID	30-Jun-11	1-Jul-11
CCME PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	30-Jun-11	1-Jul-11
Chromium, hexavalent	MOE E3056 - Extraction, colourimetric	29-Jun-11	30-Jun-11
Mercury	EPA 7471A - CVAA, digestion	30-Jun-11	30-Jun-11
Metals	EPA 6020 - Digestion - ICP-MS	30-Jun-11	30-Jun-11
Nitrogen as N, total	Calculation	5-Jul-11	5-Jul-11
PAHs by GC-MS, standard scan	EPA 8270 - GC-MS, extraction	4-Jul-11	4-Jul-11
PCBs, total	SW846 8082A - GC-ECD	4-Jul-11	4-Jul-11
Phosphorus, total	EPA 365.4 - Auto Colour, digestion	4-Jul-11	5-Jul-11
Solids, %	Gravimetric, calculation	5-Jul-11	5-Jul-11
Total Kjeldahl Nitrogen	based on EPA351.2 - Auto Colour, digestion	4-Jul-11	5-Jul-11

PARACEL LABORATORIES LTD.

Order #: 1127164

Certificate of Analysis

Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO:

Project Description: Land Farm Samples

	Client ID:	1 East	1 West	1 Middle	#2 East
	Sample Date:	23-Jun-11	23-Jun-11	23-Jun-11	23-Jun-11
	Sample ID:	1127164-01	1127164-02	1127164-03	1127164-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	94.8	93.1	93.2	96.9
General Inorganics					
Nitrogen, Total	21 ug/g	601	514	585	515
Phosphorus, total	1.00 ug/g dry	1030	507	656	584
Total Kjeldahl Nitrogen	10 ug/g dry	599	500	583	514
Anions					
Nitrate as N	1 ug/g dry	2	14	2	1
Metals					
Antimony	1 ug/g dry	<1	<1	<1	<1
Arsenic	1 ug/g dry	1	1	1	1
Barium	1 ug/g dry	41	33	33	34
Beryllium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Boron, available	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5 ug/g dry	25	23	20	22
Chromium (VI)	0.4 ug/g dry	<0.4	<0.4	<0.4	<0.4
Cobalt	1 ug/g dry	6	6	6	6
Copper	5 ug/g dry	16	15	15	15
Iron	200 ug/g dry	22400	22100	20800	21500
Lead	1 ug/g dry	15	14	14	16
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1 ug/g dry	2	<1	<1	<1
Nickel	5 ug/g dry	9	9	9	9
Potassium	200 ug/g dry	604	686	651	582
Selenium	1 ug/g dry	1	<1	<1	<1
Silver	0.3 ug/g dry	0.3	<0.3	<0.3	<0.3
Thallium	1 ug/g dry	<1	<1	<1	<1
Tin	5 ug/g dry	<5	<5	<5	<5
Uranium	1 ug/g dry	<1	<1	<1	<1
Vanadium	10 ug/g dry	50	46	41	45
Zinc	20 ug/g dry	41	46	40	39
Volatiles					
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05

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Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO:

Project Description: Land Farm Samples

	Client ID:	1 East	1 West	1 Middle	#2 East
	Sample Date:	23-Jun-11	23-Jun-11	23-Jun-11	23-Jun-11
	Sample ID:	1127164-01	1127164-02	1127164-03	1127164-04
	MDL/Units	Soil	Soil	Soil	Soil
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	72.2%	74.3%	80.8%	74.4%
Hydrocarbons					
F1 PHCs (C6-C10)	10 ug/g dry	<10	<10	<10	<10
F2 PHCs (C10-C16)	10 ug/g dry	49	44	472	101
F3 PHCs (C16-C34)	10 ug/g dry	205	321	337	163
F4 PHCs (C34-C50)	10 ug/g dry	50	77	66	45
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	0.04	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	0.03	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	0.02	<0.02	0.04	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.02	<0.02
Biphenyl	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	0.03	<0.02	0.05	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.04	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	0.02	<0.02
Pyrene	0.02 ug/g dry	0.04	<0.02	0.07	<0.02
2-Fluorobiphenyl	Surrogate	67.3%	66.2%	72.0%	72.5%
Terphenyl-d14	Surrogate	84.7%	86.4%	89.6%	94.7%
PCBs					
PCBs, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Decachlorobiphenyl	Surrogate	110%	122%	112%	-

PARACEL LABORATORIES LTD.

Order #: 1127164

Certificate of Analysis

Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO:

Project Description: Land Farm Samples

	Client ID:	#2 West	#2 Middle	Cell #1 Front	Cell #1 Back
	Sample Date:	23-Jun-11	23-Jun-11	23-Jun-11	23-Jun-11
	Sample ID:	1127164-05	1127164-06	1127164-07	1127164-08
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	93.0	92.0	95.4	92.9
General Inorganics					
Nitrogen, Total	11 ug/g	-	-	221	208
Nitrogen, Total	21 ug/g	563	600	-	-
Phosphorus, total	1.00 ug/g dry	502	506	581	461
Total Kjeldahl Nitrogen	10 ug/g dry	563	600	221	207
Anions					
Nitrate as N	1 ug/g dry	<1	<1	<1	1
Metals					
Antimony	1 ug/g dry	<1	<1	<1	<1
Arsenic	1 ug/g dry	1	<1	1	<1
Barium	1 ug/g dry	31	34	25	21
Beryllium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Boron, available	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5 ug/g dry	24	21	21	20
Chromium (VI)	0.4 ug/g dry	<0.4	<0.4	<0.4	<0.4
Cobalt	1 ug/g dry	6	6	6	4
Copper	5 ug/g dry	15	16	12	9
Iron	200 ug/g dry	23000	19700	20100	20000
Lead	1 ug/g dry	14	15	8	8
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1 ug/g dry	<1	<1	<1	<1
Nickel	5 ug/g dry	9	9	8	7
Potassium	200 ug/g dry	600	593	474	466
Selenium	1 ug/g dry	<1	<1	<1	<1
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1 ug/g dry	<1	<1	<1	<1
Tin	5 ug/g dry	<5	<5	<5	<5
Uranium	1 ug/g dry	<1	<1	<1	<1
Vanadium	10 ug/g dry	47	41	41	44
Zinc	20 ug/g dry	40	39	24	22
Volatiles					
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

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Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO:

Project Description: Land Farm Samples

	Client ID:	#2 West	#2 Middle	Cell #1 Front	Cell #1 Back
	Sample Date:	23-Jun-11	23-Jun-11	23-Jun-11	23-Jun-11
	Sample ID:	1127164-05	1127164-06	1127164-07	1127164-08
	MDL/Units	Soil	Soil	Soil	Soil
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	73.5%	73.6%	72.7%	71.9%
Hydrocarbons					
F1 PHCs (C6-C10)	10 ug/g dry	<10	23	<10	<10
F2 PHCs (C10-C16)	10 ug/g dry	181	652	122	119
F3 PHCs (C16-C34)	10 ug/g dry	374	528	67	187
F4 PHCs (C34-C50)	10 ug/g dry	69	80	19	45
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Biphenyl	0.02 ug/g dry	<0.02	0.05	0.07	<0.02
Chrysene	0.02 ug/g dry	0.03	0.03	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.16	<0.02
2-Methylnaphthalene	0.02 ug/g dry	0.04	<0.02	0.04	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	0.06	<0.04	0.20	<0.04
Naphthalene	0.02 ug/g dry	0.03	0.02	<0.02	<0.02
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	0.04	0.04	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	61.7%	66.8%	64.4%	68.7%
Terphenyl-d14	Surrogate	78.4%	82.5%	80.5%	79.9%

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Client PO:

Project Description: Land Farm Samples

	Client ID:	#2 West	#2 Middle	Cell #1 Front	Cell #1 Back
	Sample Date:	23-Jun-11	23-Jun-11	23-Jun-11	23-Jun-11
	Sample ID:	1127164-05	1127164-06	1127164-07	1127164-08
	MDL/Units	Soil	Soil	Soil	Soil
PCBs					
PCBs, total	0.05 ug/g dry	-	-	<0.05	<0.05
Decachlorobiphenyl	Surrogate	-	-	110%	126%

Certificate of Analysis

Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO:

Project Description: Land Farm Samples

	Client ID:	Cell #2	Cell #4	-	-
	Sample Date:	23-Jun-11	23-Jun-11	-	-
	Sample ID:	1127164-09	1127164-10	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	91.1	92.7	-	-
General Inorganics					
Nitrogen, Total	21 ug/g	476	613	-	-
Phosphorus, total	1.00 ug/g dry	593	683	-	-
Total Kjeldahl Nitrogen	10 ug/g dry	476	613	-	-
Anions					
Nitrate as N	1 ug/g dry	<1	<1	-	-
Metals					
Antimony	1 ug/g dry	<1	<1	-	-
Arsenic	1 ug/g dry	<1	<1	-	-
Barium	1 ug/g dry	25	25	-	-
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	-
Boron, available	0.5 ug/g dry	<0.5	<0.5	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5 ug/g dry	18	18	-	-
Chromium (VI)	0.4 ug/g dry	<0.4	<0.4	-	-
Cobalt	1 ug/g dry	5	5	-	-
Copper	5 ug/g dry	11	11	-	-
Iron	200 ug/g dry	20400	19000	-	-
Lead	1 ug/g dry	15	12	-	-
Mercury	0.1 ug/g dry	<0.1	<0.1	-	-
Molybdenum	1 ug/g dry	<1	<1	-	-
Nickel	5 ug/g dry	7	7	-	-
Potassium	200 ug/g dry	461	410	-	-
Selenium	1 ug/g dry	<1	<1	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1 ug/g dry	<1	<1	-	-
Tin	5 ug/g dry	<5	<5	-	-
Uranium	1 ug/g dry	<1	<1	-	-
Vanadium	10 ug/g dry	41	37	-	-
Zinc	20 ug/g dry	34	35	-	-
Volatiles					
Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-

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Client PO:

Project Description: Land Farm Samples

	Client ID:	Cell #2	Cell #4	-	-
	Sample Date:	23-Jun-11	23-Jun-11	-	-
	Sample ID:	1127164-09	1127164-10	-	-
	MDL/Units	Soil	Soil	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	66.8%	67.4%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	10 ug/g dry	51	48	-	-
F2 PHCs (C10-C16)	10 ug/g dry	634	658	-	-
F3 PHCs (C16-C34)	10 ug/g dry	465	240	-	-
F4 PHCs (C34-C50)	10 ug/g dry	77	56	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	0.05	0.06	-	-
Benzo [a] pyrene	0.02 ug/g dry	0.03	0.03	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.04	0.04	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.02	0.03	-	-
Biphenyl	0.02 ug/g dry	0.04	0.11	-	-
Chrysene	0.02 ug/g dry	0.06	0.06	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	0.06	0.10	-	-
Fluorene	0.02 ug/g dry	<0.02	0.03	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	0.16	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	0.07	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	0.23	-	-
Naphthalene	0.02 ug/g dry	0.06	0.17	-	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	-	-
Pyrene	0.02 ug/g dry	0.08	0.09	-	-
2-Fluorobiphenyl	Surrogate	65.2%	70.1%	-	-
Terphenyl-d14	Surrogate	77.5%	76.9%	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Nitrate as N	ND	1	ug/g						
General Inorganics									
Phosphorus, total	ND	1.00	ug/g						
Total Kjeldahl Nitrogen	ND	10	ug/g						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	10	ug/g						
F2 PHCs (C10-C16)	ND	10	ug/g						
F3 PHCs (C16-C34)	ND	10	ug/g						
F4 PHCs (C34-C50)	ND	10	ug/g						
Metals									
Antimony	ND	1	ug/g						
Arsenic	ND	1	ug/g						
Barium	ND	1	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.4	ug/g						
Chromium	ND	5	ug/g						
Cobalt	ND	1	ug/g						
Copper	ND	5	ug/g						
Iron	ND	200	ug/g						
Lead	ND	1	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1	ug/g						
Nickel	ND	5	ug/g						
Potassium	ND	200	ug/g						
Selenium	ND	1	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1	ug/g						
Tin	ND	5	ug/g						
Uranium	ND	1	ug/g						
Vanadium	ND	10	ug/g						
Zinc	ND	20	ug/g						
PCBs									
PCBs, total	ND	0.05	ug/g						
Surrogate: Decachlorobiphenyl	*0.114*		*ug/g*		*114*	*43-142*			
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Biphenyl	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.02	ug/g						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	*1.14*	*0.01*	*ug/g*		*85.3*	*32-156*			
Surrogate: Terphenyl-d14	*1.18*	*0.01*	*ug/g*		*88.6*	*39-146*			
Volatiles									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	*2.83*		*ug/g*		*70.6*	*50-140*			

Certificate of Analysis

Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO: Project Description: Land Farm Samples

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Phosphorus, total	997	10.0	ug/g dry	1030			3.0	10	
Total Kjeldahl Nitrogen	606	20	ug/g dry	599			1.2	10	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	10	ug/g dry	ND				40	
F2 PHCs (C10-C16)	79	10	ug/g dry	75			5.0	50	
F3 PHCs (C16-C34)	73	10	ug/g dry	71			2.6	50	
F4 PHCs (C34-C50)	ND	10	ug/g dry	ND				50	
Metals									
Antimony	ND	1	ug/g dry	ND				26	
Arsenic	ND	1	ug/g dry	1.2			0.0	35	
Barium	41.0	1	ug/g dry	41.1			0.2	34	
Beryllium	ND	0.5	ug/g dry	ND				25	
Boron, available	0.62	0.5	ug/g dry	1.11			56.7	35	QR-01
Cadmium	ND	0.5	ug/g dry	ND				33	
Chromium (VI)	ND	0.4	ug/g dry	ND				35	
Chromium	24.2	5	ug/g dry	24.8			2.6	32	
Cobalt	6.0	1	ug/g dry	6.0			0.0	32	
Copper	16.1	5	ug/g dry	15.8			1.5	32	
Iron	23800	200	ug/g dry	22400			6.0	32	
Lead	14.3	1	ug/g dry	14.6			2.4	44	
Mercury	ND	0.1	ug/g dry	ND				35	
Molybdenum	1.0	1	ug/g dry	1.8			52.8	29	
Nickel	9.3	5	ug/g dry	9.5			1.5	29	
Potassium	50000000	200	ug/g dry	604			200.0	28	
Selenium	ND	1	ug/g dry	1.3			0.0	28	
Silver	ND	0.3	ug/g dry	0.34			0.0	28	
Thallium	ND	1	ug/g dry	ND				27	
Tin	ND	5	ug/g dry	ND				27	
Uranium	ND	1	ug/g dry	ND				27	
Vanadium	49.7	10	ug/g dry	49.9			0.5	27	
Zinc	42.8	20	ug/g dry	40.5			5.3	27	
PCBs									
PCBs, total	ND	0.05	ug/g dry	ND				35	
Surrogate: Decachlorobiphenyl	*0.122*		*ug/g dry*	*ND*	*114*	*43-142*			
Physical Characteristics									
% Solids	85.5	0.1	% by Wt.	84.7			0.9	25	
Semi-Volatiles									
Acenaphthene	0.022	0.02	ug/g dry	0.036			51.1	50	
Acenaphthylene	0.078	0.02	ug/g dry	0.047			50.2	50	
Anthracene	0.132	0.02	ug/g dry	0.129			2.6	50	
Benzo [a] anthracene	0.388	0.02	ug/g dry	0.366			5.8	50	
Benzo [a] pyrene	0.290	0.02	ug/g dry	0.271			6.8	50	
Benzo [b] fluoranthene	0.291	0.02	ug/g dry	0.264			9.5	50	
Benzo [g,h,i] perylene	0.174	0.02	ug/g dry	0.205			16.7	50	
Benzo [k] fluoranthene	0.154	0.02	ug/g dry	0.121			24.2	50	
Biphenyl	ND	0.02	ug/g dry	ND				50	
Chrysene	0.408	0.02	ug/g dry	0.378			7.5	50	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND				50	
Fluoranthene	0.509	0.02	ug/g dry	0.550			7.8	50	
Fluorene	0.038	0.02	ug/g dry	0.051			29.4	50	
Indeno [1,2,3-cd] pyrene	0.158	0.02	ug/g dry	0.185			15.5	50	
1-Methylnaphthalene	0.113	0.02	ug/g dry	0.090			22.4	50	
2-Methylnaphthalene	0.149	0.02	ug/g dry	0.106			33.5	50	
Naphthalene	0.305	0.02	ug/g dry	0.244			22.3	50	

Certificate of Analysis

Report Date: 05-Jul-2011

Client: **Nunatta Environmental Services Inc.**

Order Date:28-Jun-2011

Client PO: Project Description: Land Farm Samples

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Phenanthrene	0.376	0.02	ug/g dry	0.454			18.7	50	
Pyrene	0.346	0.02	ug/g dry	0.400			14.6	50	
Surrogate: 2-Fluorobiphenyl	*1.10*	*0.01*	*ug/g dry*	*ND*	*76.7*	*32-156*			
Surrogate: Terphenyl-d14	*1.37*	*0.01*	*ug/g dry*	*ND*	*95.8*	*39-146*			
Volatiles									
Benzene	ND	0.02	ug/g dry	ND				50	
Ethylbenzene	ND	0.05	ug/g dry	ND				50	
Toluene	ND	0.05	ug/g dry	ND				50	
m,p-Xylenes	ND	0.05	ug/g dry	ND				50	
o-Xylene	ND	0.05	ug/g dry	ND				50	
Surrogate: Toluene-d8	*3.77*		*ug/g dry*	*ND*	*77.8*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Nitrate as N	9.37	1	ug/g	ND	93.4	83-109			
General Inorganics									
Phosphorus, total	62.3	1.00	ug/g	ND	99.6	57-139			
Total Kjeldahl Nitrogen	246	10	ug/g	ND	98.5	79-130			
Hydrocarbons									
F1 PHCs (C6-C10)	90	10	ug/g	ND	89.7	80-120			
F2 PHCs (C10-C16)	70	10	ug/g	ND	87.5	61-129			
F3 PHCs (C16-C34)	184	10	ug/g	ND	92.2	61-129			
F4 PHCs (C34-C50)	115	10	ug/g	ND	95.6	61-129			
Metals									
Antimony	55.3		ug/L	ND	111	80-120			
Arsenic	55.6		ug/L	ND	111	80-120			
Barium	49.6		ug/L	ND	99.1	80-120			
Beryllium	49.0		ug/L	ND	98.0	80-120			
Boron, available	5.55	0.5	ug/g	ND	111	70-122			
Cadmium	53.1		ug/L	ND	106	80-120			
Chromium (VI)	4.5	0.4	ug/g	ND	90.5	89-123			
Chromium	50.6		ug/L	ND	101	80-120			
Cobalt	50.4		ug/L	ND	101	80-120			
Copper	52.7		ug/L	ND	105	80-120			
Iron	795		ug/L	ND	79.5	80-120			
Lead	51.0		ug/L	ND	102	80-120			
Mercury	1.30	0.1	ug/g	ND	86.6	72-128			
Molybdenum	51.5		ug/L	ND	103	80-120			
Nickel	50.5		ug/L	ND	101	80-120			
Potassium	869		ug/L	ND	86.9	80-120			
Selenium	55.8		ug/L	ND	112	80-120			
Silver	50.2		ug/L	ND	100	80-120			
Thallium	54.6		ug/L	ND	109	80-120			
Tin	48.5		ug/L	ND	96.9	80-120			
Uranium	51.3		ug/L	ND	103	80-120			
Vanadium	49.0		ug/L	ND	98.1	80-120			
Zinc	48.7		ug/L	ND	97.5	80-120			
PCBs									
PCBs, total	0.483	0.05	ug/g	ND	121	58-147			
Surrogate: Decachlorobiphenyl	*0.120*		*ug/g*		*120*	*43-142*			
Semi-Volatiles									
Acenaphthene	0.108	0.02	ug/g	ND	64.9	31-121			
Acenaphthylene	0.124	0.02	ug/g	ND	74.1	26-124			
Anthracene	0.123	0.02	ug/g	ND	73.5	29-128			
Benzo [a] anthracene	0.177	0.02	ug/g	ND	106	29-129			
Benzo [a] pyrene	0.118	0.02	ug/g	ND	70.6	29-111			
Benzo [b] fluoranthene	0.121	0.02	ug/g	ND	72.8	26-111			
Benzo [g,h,i] perylene	0.084	0.02	ug/g	ND	50.2	23-128			
Benzo [k] fluoranthene	0.111	0.02	ug/g	ND	66.9	23-135			
Biphenyl	0.110	0.02	ug/g	ND	65.9	31-107			
Chrysene	0.171	0.02	ug/g	ND	103	28-136			
Dibenzo [a,h] anthracene	0.047	0.02	ug/g	ND	28.2	20-131			
Fluoranthene	0.140	0.02	ug/g	ND	84.1	24-131			
Fluorene	0.123	0.02	ug/g	ND	74.0	28-123			
Indeno [1,2,3-cd] pyrene	0.073	0.02	ug/g	ND	44.0	20-128			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1-Methylnaphthalene	0.129	0.02	ug/g	ND	77.3	24-127			
2-Methylnaphthalene	0.127	0.02	ug/g	ND	76.0	21-127			
Naphthalene	0.115	0.02	ug/g	ND	69.0	29-118			
Phenanthrene	0.120	0.02	ug/g	ND	71.8	34-108			
Pyrene	0.134	0.02	ug/g	ND	80.1	29-131			
Surrogate: 2-Fluorobiphenyl	*0.979*	0.01	*ug/g*		*73.4*	*32-156*			
Surrogate: Terphenyl-d14	*1.18*	0.01	*ug/g*		*88.2*	*39-146*			
Volatiles									
Benzene	0.692	0.02	ug/g	ND	74.1	60-130			
Ethylbenzene	1.93	0.05	ug/g	ND	86.9	60-130			
Toluene	9.92	0.05	ug/g	ND	91.8	60-130			
m,p-Xylenes	6.31	0.05	ug/g	ND	93.8	60-130			
o-Xylene	2.61	0.05	ug/g	ND	96.8	60-130			
Surrogate: Toluene-d8	*3.31*		*ug/g*		*82.7*	*50-140*			

Sample and QC Qualifiers Notes

2- QR-01 : Duplicate RPD is high, however, the sample result is less than 10x the MDL.

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.
Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

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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Chain of Custody
(lab use only)

Nº 70194

Reg. Drinking Water

Client Name: Nunatta Environmental	Project Ref: Land farm Samples	Waterworks Name:	Page 1 of 1
Contact Name: Jim Wilson	Quote #	Waterworks Number:	Sample Taken by:
Address: P.O Box 267 Iqaluit NU X0A-0H0	PO #	Address:	Print Name: Jim Wilson
	E-mail Address: nunatta@northwestel.net	After hours Contact:	Signature:
Telephone: 867-977-1488	Fax: 867 979-1478	Public Health Unit:	TAT: [ ] 1-day [ ] 2-day [x] Reg.

Matrix Types: S–Soil/Sed. GW–Ground Water SW–Surface Water SS–Storm/Sanitary Sewer DW-Drinking Water RDW-Regulated Drinking Water P- Paint A-Air O-Other

Samples submitted under: (Indicate **ONLY** one)
☐ O. Reg 153 (511) Table ___ ☐ O. Reg 170/03 ☐ O. Reg 318/08 ☐ Private well
☑ CCME ____ ☐ O. Reg 243/07 ☐ O. Reg 319/08 ☐ Other: _____

Type of DW Sample: R = Raw; T = Treated; D = Distribution
Location Types: S = Surface Water; G = Ground Water

Paracel Order Number: 1127164

	Sample ID / Location Name	Matrix	Air Volume	Type of Sample	# of Containers	Sample Taken: Date	Sample Taken: Time	Free / Combined Chlorine Residual mg/L	Heavy Metals	F1-F4	P.C.B.	Organism type/count	N.P.K. → nitrogen, Phosphorus, potassium	B-Tex	PAH.		
1	EAST	S			1	June 23	5pm		X	X	X		X	X	X		
2	West				1				X	X	X		X	X	X		
3	middle				1				X	X	X		X	X	X		
4	#2 east				1				X	X			X	X	X		
5	#2 west				1				X	X			X	X	X		
6	#2 middle				1				X	X			X	X	X		
7	Cell #1 front		now		1				X	X	X		X	X	X		
8	Cell #1 Back				1				X	X	X		X	X	X		
9	Cell #2				1				X	X			X	X	X		
10	Cell #4				1				X	X			X	X	X		

10 Unit

Comments: Analysis as per Jim. SC June 28/11
Required testing to satisfy Regulatory Board advise please

Preservation Verification: pH N/A Temperature 15.6°
Verified by: _____

Relinquished By (Print & Sign): Jim Wilson
Date/Time: June 27/11 11:00

Lab Use Only:

Received By Driver/Depot:	Received at Lab:	Verified By:
Date/Time: 27/06/11 12:26 pm	Date/Time: June 27/11 1:57 pm	Date/Time: June 29/11 10:58 am