



Photo 3: Site A and borrow pit, looking north



Photo 4: Water in borrow pit at Site A

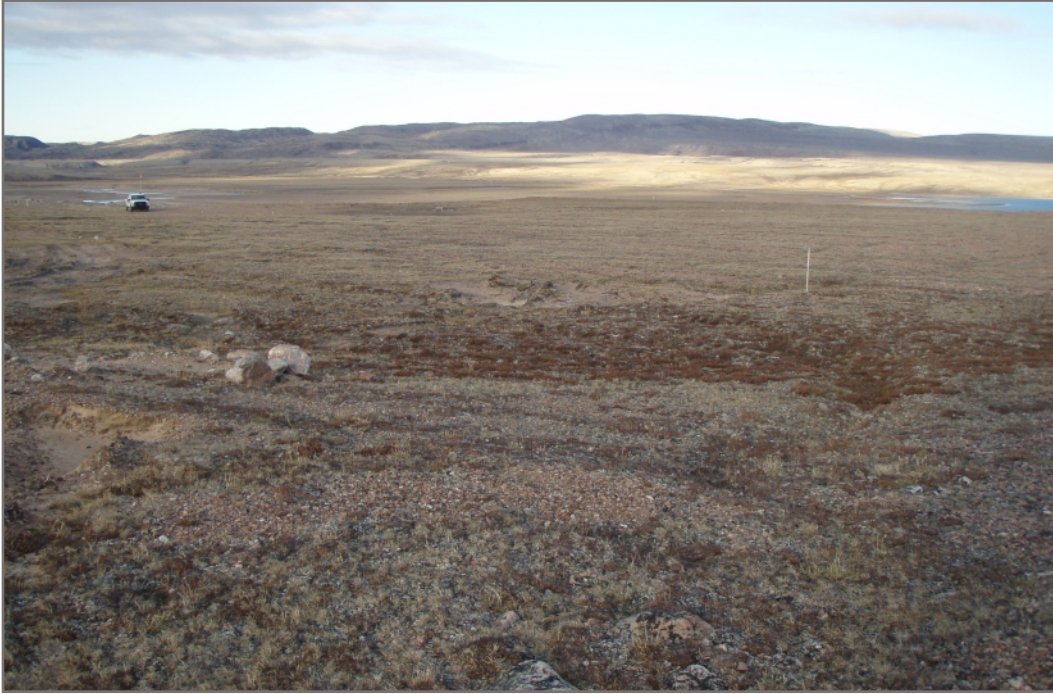


Photo 5: Site B looking northwest at tote road



Photo 6: Site B looking west towards tote road



Photo 7: Borrow pit, sample pit @ 2km



Photo 8: Borrow pit, sample pit @ 4km

Client: Baffinland Iron Mines Corporation
120 Adelaide Street West, Suite 1016

Toronto, ON
M5H 1T1

Attention: Mr. Jim Millard

Report Number: 1121314
Date: 2011-09-20
Date Submitted: 2011-09-13

Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746426

			LAB ID:	910347	910348	910349	910350	910351	GUIDELINE		
			Sample Date:	2011-09-07	2011-09-07	2011-09-07	2011-09-07	2011-09-07			
			Sample ID:	Bag 18	Bag 54	Bag 70	Bag 50	Bag 52			
PARAMETER	UNITS	MRL							TYPE	LIMIT	UNITS
PERCENT MOISTURE											
Moisture	□	0.1	10.4	9.5	12.0	13.3	9.0				
VOLATILE ORGANIC COMPOUNDS - VOCs											
Ethylbenzene	ug/g	0.1	<0.1	0.4	<0.1	<0.1	<0.1				
Toluene	ug/g	0.1	<0.1	0.2	<0.1	<0.1	<0.1				
Benzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05				
m/p-xylene	ug/g	0.2	<0.2	8.8	<0.2	<0.2	<0.2				
o-xylene	ug/g	0.1	<0.1	5.6	<0.1	<0.1	<0.1				
VOC SURROGATES											
Toluene-d8	□		81	117	90	91	93				
CCME Total Petroleum Hydrocarbons											
F1 (C6-C10)	ug/g	10	<10	200	<10	20	<10				
F1-BTEX (C6-C10)	ug/g	10	<10	180	<10	20	<10				
F2 (C10-C16)	ug/g	10	<10	1010	170	940	<10				
F3 (C16-C34)	ug/g	20	<20	130	200	240	<20				
F4 (C34-C50)	ug/g	20	<20	<20	<20	<20	<20				

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

Comment:

APPROVAL: _____
Mina Nasirai
Organic Lab Supervisor

Methods references and/or additional □A/□C information available on request.

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Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746426

			LAB ID:	910353	910354	910355	910356	910357	GUIDELINE		
			Sample Date:	2011-09-07	2011-09-07	2011-09-07	2011-09-07	2011-09-07			
			Sample ID:	Bag 15	Bag 14	Bag 66	Bag 47	Bag 11			
PARAMETER	UNITS	MRL							TYPE	LIMIT	UNITS
PERCENT MOISTURE											
Moisture	□	0.1	9.1	13.7	8.9	11.8	10.6				
VOLATILE ORGANIC COMPOUNDS - VOCs											
Ethylbenzene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
Toluene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
Benzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05				
m/p-xylene	ug/g	0.2	<0.2	<0.2	0.9	<0.2	<0.2				
o-xylene	ug/g	0.1	<0.1	<0.1	0.5	<0.1	<0.1				
VOC SURROGATES											
Toluene-d8	□		98	93	97	99	84				
CCME Total Petroleum Hydrocarbons											
F1 (C6-C10)	ug/g	10	<10	<10	50	<10	<10				
F1-BTEX (C6-C10)	ug/g	10	<10	<10	50	<10	<10				
F2 (C10-C16)	ug/g	10	280	1790	280	80	130				
F3 (C16-C34)	ug/g	20	60	60	70	40	30				
F4 (C34-C50)	ug/g	20	<20	<20	<20	<20	<20				

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Organic Lab Supervisor

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Attention: Mr. Jim Millard

Report Number: 1121314
Date: 2011-09-20
Date Submitted: 2011-09-13

Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746426

			LAB ID:	910358						GUIDELINE		
			Sample Date:	2011-09-07								
			Sample ID:	Bag 8								
PARAMETER	UNITS	MRL								TYPE	LIMIT	UNITS
PERCENT MOISTURE												
Moisture	□	0.1	9.5									
VOLATILE ORGANIC COMPOUNDS - VOCs												
Ethylbenzene	ug/g	0.1	<0.1									
Toluene	ug/g	0.1	<0.1									
Benzene	ug/g	0.05	<0.05									
m/p-xylene	ug/g	0.2	<0.2									
o-xylene	ug/g	0.1	<0.1									
VOC SURROGATES												
Toluene-d8	□		82									
CCME Total Petroleum Hydrocarbons												
F1 (C6-C10)	ug/g	10	<10									
F1-BTEX (C6-C10)	ug/g	10	<10									
F2 (C10-C16)	ug/g	10	10									
F3 (C16-C34)	ug/g	20	20									
F4 (C34-C50)	ug/g	20	<20									

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Comment:

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Organic Lab Supervisor

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Client: Baffinland Iron Mines Corporation
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Toronto, ON
M5H 1T1

Attention: Mr. Jim Millard

Report Number: 1121315
Date: 2011-09-20
Date Submitted: 2011-09-13

Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746427

			LAB ID:	910359	910360	910361	910362	910363	GUIDELINE		
			Sample Date:	2011-09-07	2011-09-07	2011-09-07	2011-09-07	2011-09-07			
			Sample ID:	Bag 6	Bag 42	Bag 59	Bag 62	Bag 27			
PARAMETER	UNITS	MRL							TYPE	LIMIT	UNITS
PERCENT MOISTURE											
Moisture	□	0.1	10.1	9.3	6.4	9.3	8.2				
VOLATILE ORGANIC COMPOUNDS - VOCs											
Ethylbenzene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
Toluene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
Benzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
m/p-xylene	ug/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2			
o-xylene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
VOC SURROGATES											
Toluene-d8	□		83	84	96	82	105				
CCME Total Petroleum Hydrocarbons											
F1 (C6-C10)	ug/g	10	<10	<10	<10	<10	<10	<10			
F1-BTEX (C6-C10)	ug/g	10	<10	<10	<10	<10	<10	<10			
F2 (C10-C16)	ug/g	10	<10	20	9350	10	2510				
F3 (C16-C34)	ug/g	20	<20	<20	4200	20	1330				
F4 (C34-C50)	ug/g	20	<20	<20	40	<20	<20				

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Organic Lab Supervisor

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Toronto, ON
M5H 1T1

Attention: Mr. Jim Millard

Report Number: 1121315
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Date Submitted: 2011-09-13

Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746427

			LAB ID:	910364	910365	910366	910367	910368	GUIDELINE		
			Sample Date:	2011-09-07	2011-09-07	2011-09-07	2011-09-07	2011-09-07			
			Sample ID:	Bag 57	Jet 12	Jet 7	Jet 5	Jet 3			
PARAMETER	UNITS	MRL							TYPE	LIMIT	UNITS
PERCENT MOISTURE											
Moisture	□	0.1	6.6	8.9	6.4	6.4	9.5				
VOLATILE ORGANIC COMPOUNDS - VOCs											
Ethylbenzene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
Toluene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
Benzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05				
m/p-xylene	ug/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2				
o-xylene	ug/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
VOC SURROGATES											
Toluene-d8	□		82	81	83	94	82				
CCME Total Petroleum Hydrocarbons											
F1 (C6-C10)	ug/g	10	<10	<10	<10	<10	<10				
F1-BTEX (C6-C10)	ug/g	10	<10	<10	<10	<10	<10				
F2 (C10-C16)	ug/g	10	270	50	30	200	40				
F3 (C16-C34)	ug/g	20	230	70	80	120	50				
F4 (C34-C50)	ug/g	20	<20	<20	<20	<20	<20				

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Comment:

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Organic Lab Supervisor

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Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746427

			LAB ID:	910369						GUIDELINE		
			Sample Date:	2011-09-07								
			Sample ID:	Jet 1								
PARAMETER	UNITS	MRL								TYPE	LIMIT	UNITS
PERCENT MOISTURE												
Moisture	□	0.1	6.9									
VOLATILE ORGANIC COMPOUNDS - VOCs												
Ethylbenzene	ug/g	0.1	<0.1									
Toluene	ug/g	0.1	<0.1									
Benzene	ug/g	0.05	<0.05									
m/p-xylene	ug/g	0.2	<0.2									
o-xylene	ug/g	0.1	0.1									
VOC SURROGATES												
Toluene-d8	□		90									
CCME Total Petroleum Hydrocarbons												
F1 (C6-C10)	ug/g	10	60									
F1-BTEX (C6-C10)	ug/g	10	60									
F2 (C10-C16)	ug/g	10	1510									
F3 (C16-C34)	ug/g	20	470									
F4 (C34-C50)	ug/g	20	<20									

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Comment:

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Mina Nasirai
Organic Lab Supervisor

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M5H 1T1

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Date Submitted: 2011-09-13

Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746426

			LAB ID:	910347	910358				GUIDELINE		
			Sample Date:	2011-09-07	2011-09-07						
			Sample ID:	Bag 18	Bag 8						
PARAMETER	UNITS	MRL							TYPE	LIMIT	UNITS
pH				8.1	7.9						
Total Organic Carbon	□	0.01		0.18	0.79						
Antimony	ug/g	1		<1	<1						
Arsenic	ug/g	1		<1	1						
Barium	ug/g	1		5	9						
Beryllium	ug/g	1		<1	<1						
Boron	ug/g	1		6	16						
Boron (hot water extract)	ug/g	0.5		0.5	0.6						
Cadmium	ug/g	0.5		<0.5	<0.5						
Chromium	ug/g	1		4	14						
Cobalt	ug/g	1		1	3						
Copper	ug/g	1		2	4						
Hexavalent Chromium (Cr(VI))	ug/g	0.5		<0.50	<0.50						
Lead	ug/g	1		2	5						
Mercury	ug/g	0.1		<0.1	<0.1						
Molybdenum	ug/g	1		<1	<1						
Nickel	ug/g	1		3	9						
Selenium	ug/g	1		<1	<1						
Silver	ug/g	0.2		<0.2	<0.2						
Thallium	ug/g	1		<1	<1						
Uranium	ug/g	0.5		<0.5	0.8						
Vanadium	ug/g	2		5	13						
Zinc	ug/g	2		8	14						
Soil > 200 mesh	□	1		97	94						
Soil < 200 mesh	□	1		3	6						
Texture - Coarse Med/Fine				COARSE	COARSE						

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

Comment:

Samples were subcontracted for TOC analysis.

APPROVAL: _____
Lorna Wilson
Inorganic Lab Supervisor

Methods references and/or additional □A/□C information available on request.

Client: Baffinland Iron Mines Corporation
120 Adelaide Street West, Suite 1016

Toronto, ON
M5H 1T1

Attention: Mr. Jim Millard

Report Number: 1121315
Date: 2011-09-20
Date Submitted: 2011-09-13

Project: Milne Inlet Bladder Farm

P.O. Number: E1401092/290380
Matrix: Soil

Chain of Custody Number: 746427

			LAB ID:	910364	910369				GUIDELINE		
			Sample Date:	2011-09-07	2011-09-07						
			Sample ID:	Bag 57	Jet 1						
PARAMETER	UNITS	MRL							TYPE	LIMIT	UNITS
pH				8.1	7.9						
Total Organic Carbon	□	0.01		0.04	0.26						
Antimony	ug/g	1		<1	<1						
Arsenic	ug/g	1		1	1						
Barium	ug/g	1		8	9						
Beryllium	ug/g	1		<1	<1						
Boron	ug/g	1		14	14						
Boron (hot water extract)	ug/g	0.5		<0.5	<0.5						
Cadmium	ug/g	0.5		<0.5	<0.5						
Chromium	ug/g	1		14	16						
Cobalt	ug/g	1		2	3						
Copper	ug/g	1		4	5						
Hexavalent Chromium (Cr(VI))	ug/g	0.5		<0.50	<0.50						
Lead	ug/g	1		4	5						
Mercury	ug/g	0.1		<0.1	<0.1						
Molybdenum	ug/g	1		<1	<1						
Nickel	ug/g	1		8	10						
Selenium	ug/g	1		<1	<1						
Silver	ug/g	0.2		<0.2	<0.2						
Thallium	ug/g	1		<1	<1						
Uranium	ug/g	0.5		0.7	0.8						
Vanadium	ug/g	2		12	14						
Zinc	ug/g	2		13	18						
Soil > 200 mesh	□	1		92	95						
Soil < 200 mesh	□	1		8	5						
Texture - Coarse Med/Fine				COARSE	COARSE						

MRL = Method Reporting Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

Comment:

Samples were subcontracted for TOC analysis.

APPROVAL: _____
Lorna Wilson
Inorganic Lab Supervisor

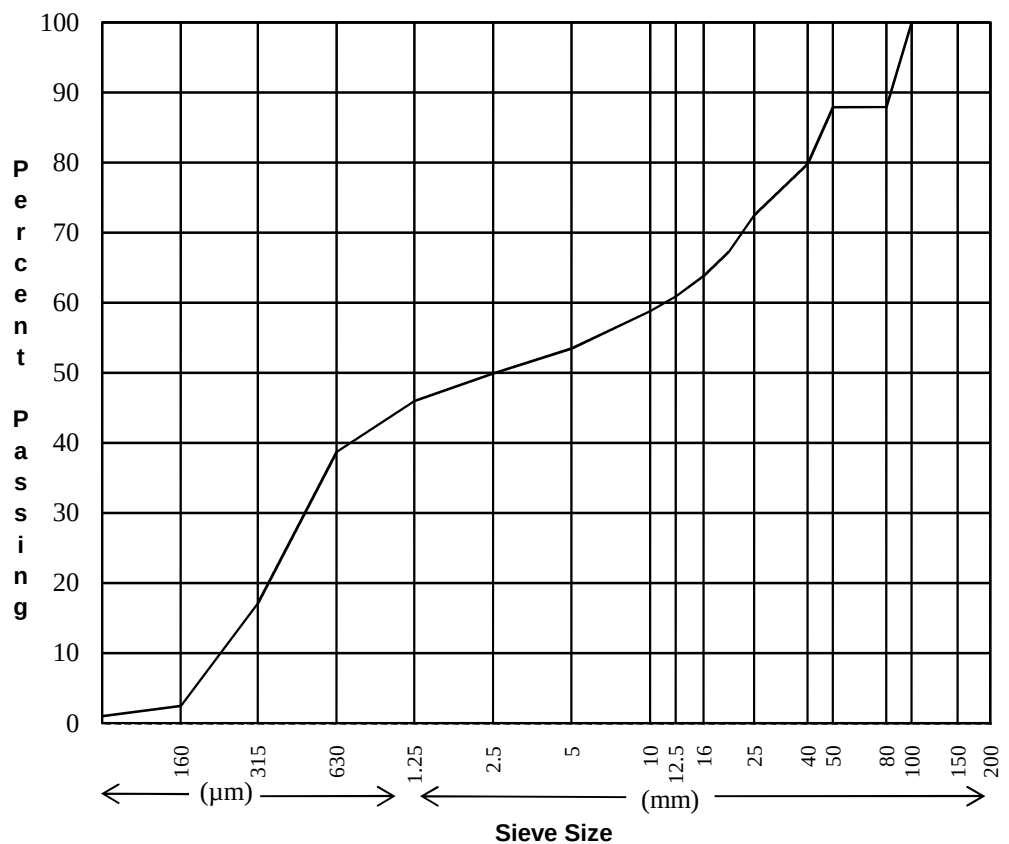
Methods references and/or additional □A/□C information available on request.

AGGREGATE ANALYSIS TEST REPORT

ASTM C136, C117

Project: Milne Inlet Contaminated Soil Treatment Plan Sample No.: 5573-1
 Client: Baffinland Iron Mines Corporation Date Sampled: September 8, 2011
 Project No.: E14101092 Sampled By: DF
 Attention: Dick Matthews Date Tested: September 26, 2011
 Description: Sand, gravelly, some cobbles, trace fines (silt/clay) Tested By: AR Lab: Yellowknife
 Source: Milne Inlet No. Crushed Faces: N/A
 Location: Site A Pit Moisture Content: 1.4%
 Specification: No Spec Band Provided

Sieve Size	Percent Passing
200 mm	
150 mm	
100 mm	100
80 mm	88
50 mm	88
40 mm	80
25 mm	73
20 mm	67
16 mm	64
12.5 mm	61
10 mm	59
5 mm	53
2.5 mm	50
1.25 mm	46
630 μ m	39
315 μ m	17
160 μ m	2
80 μ m	1.0



Remarks:

Reviewed By: _____ P.Eng.

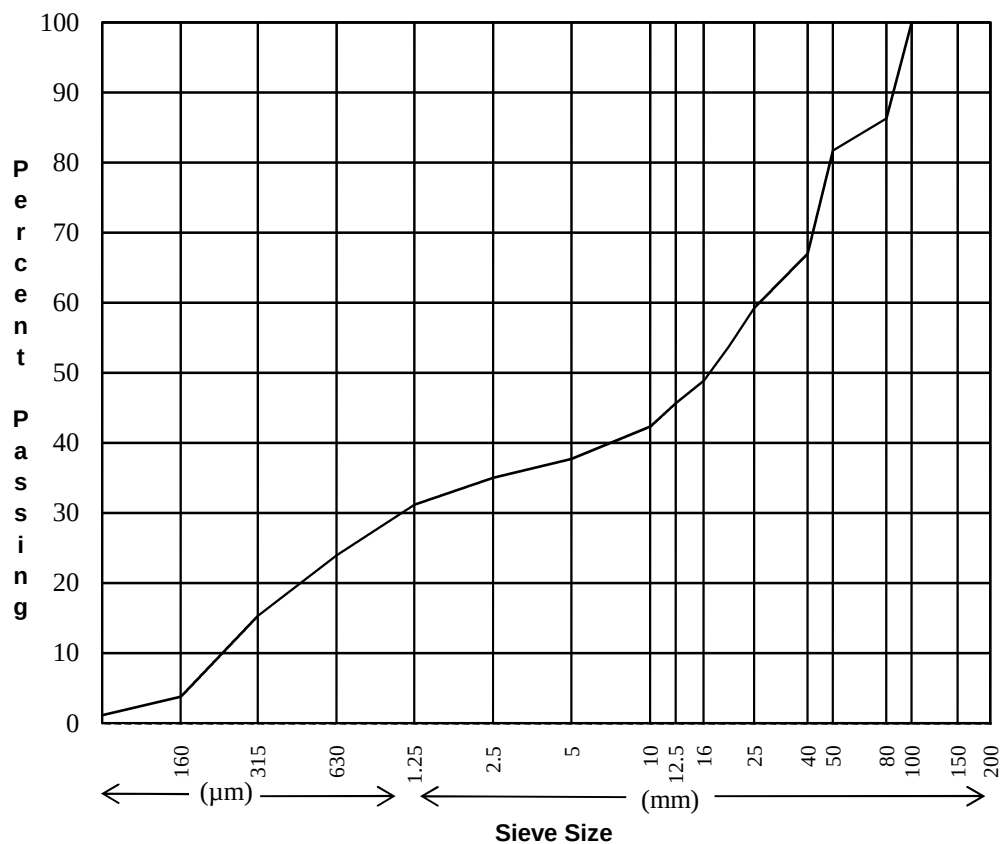
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AGGREGATE ANALYSIS TEST REPORT

ASTM C136, C117

Project:	Milne Inlet Contaminated Soil Treatment Plan	Sample No.:	5573-2
Client:	Baffinland Iron Mines Corporation	Date Sampled:	September 8, 2011
Project No.:	E14101092	Sampled By:	DF
Attention:	Dick Matthews	Date Tested:	September 26, 2011
Description:	GRAVEL and SAND, some cobbles, trace fines	Tested By:	AR Lab: Yellowknife
Source:	Milne Inlet	No. Crushed Faces:	N/A
Location:	Site B Pit	Moisture Content:	1.2%
Specification:	No Spec Band Provided		

Sieve Size	Percent Passing
200 mm	
150 mm	
100 mm	100
80 mm	86
50 mm	82
40 mm	67
25 mm	59
20 mm	54
16 mm	49
12.5 mm	46
10 mm	42
5 mm	38
2.5 mm	35
1.25 mm	31
630 µm	24
315 µm	15
160 µm	4
80 µm	1.1



Remarks:

Reviewed By: _____ P.Eng.

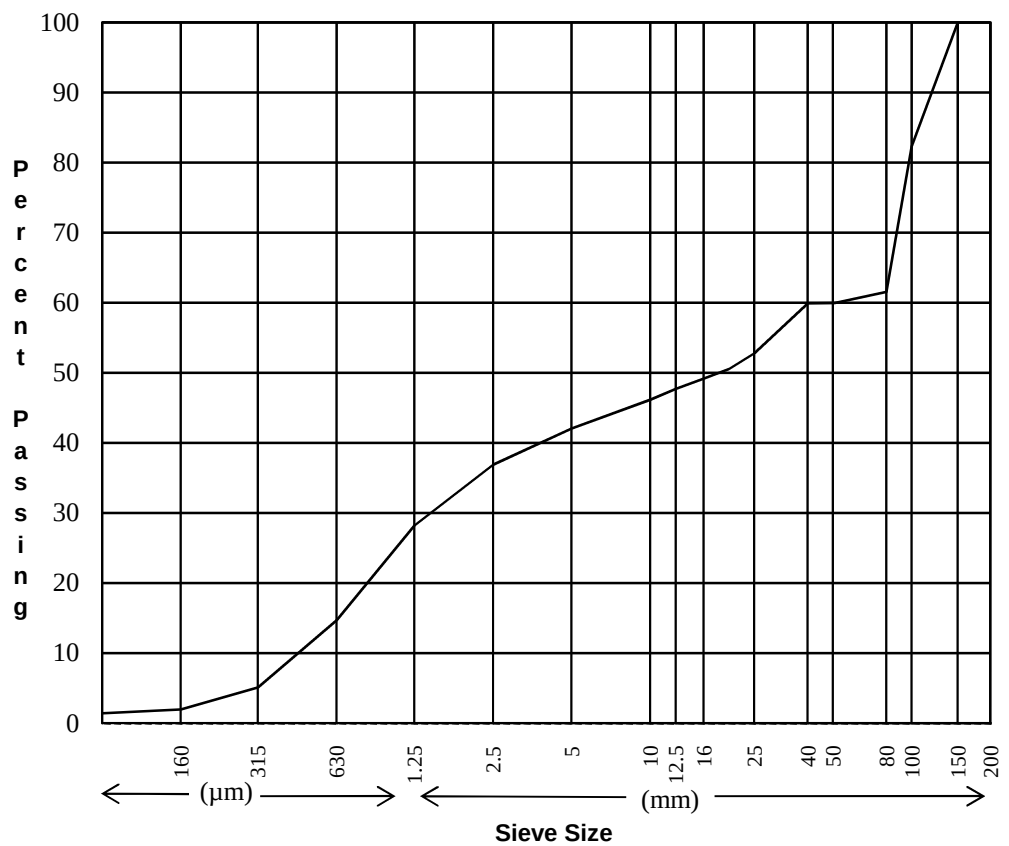
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AGGREGATE ANALYSIS TEST REPORT

ASTM C136, C117

Project: Milne Inlet Contaminated Soil Treatment Plan Sample No.: 5573-3
 Client: Baffinland Iron Mines Corporation Date Sampled: September 6, 2011
 Project No.: E14101092 Sampled By: DF
 Attention: Dick Matthews Date Tested: September 26, 2011
 Description: SAND and COBBLES, some gravel, trace fines Tested By: AR Lab: Yellowknife
 Source: Milne Inlet No. Crushed Faces: N/A
 Location: Pit at km 104, Landfill Moisture Content: 1.2%
 Specification: No Spec Band Provided

Sieve Size	Percent Passing
200 mm	
150 mm	100
100 mm	82
80 mm	62
50 mm	60
40 mm	60
25 mm	53
20 mm	51
16 mm	49
12.5 mm	48
10 mm	46
5 mm	42
2.5 mm	37
1.25 mm	28
630 μ m	15
315 μ m	5
160 μ m	2
80 μ m	1.4



Remarks:

Reviewed By: _____ P.Eng.

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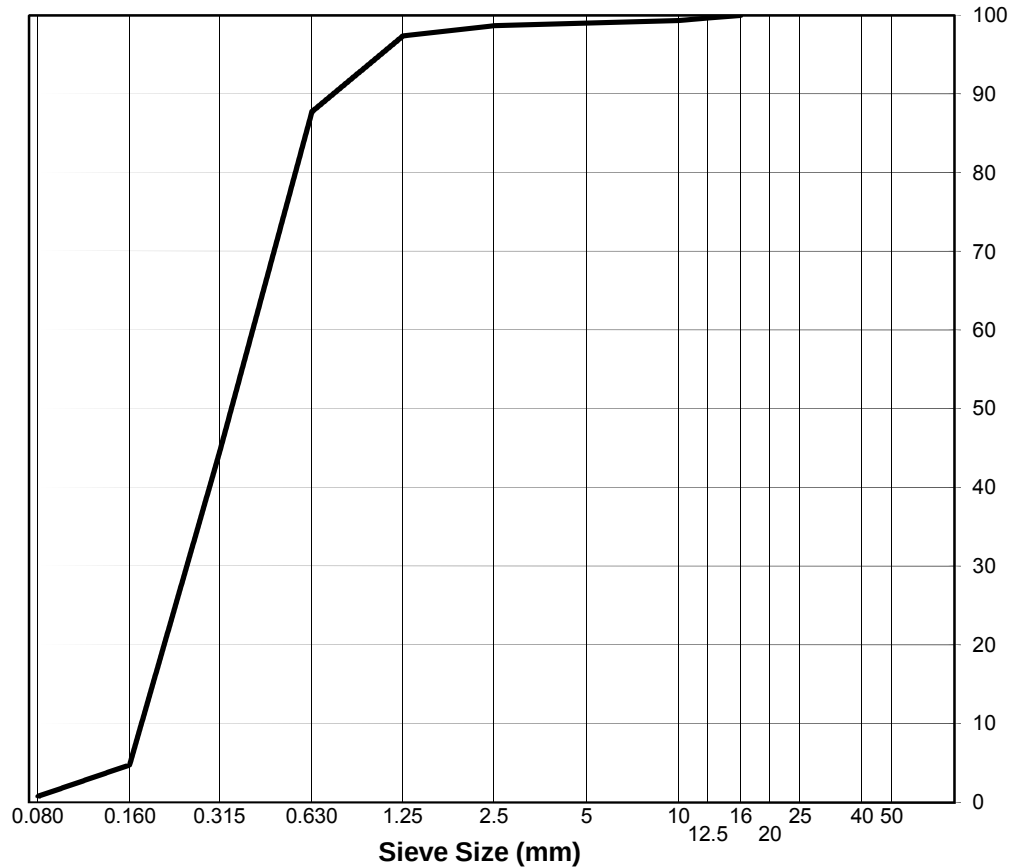
SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101092
Project: Milne Inlet Contaminated Soil Treatment Plan
Client: Baffinland Iron Mines Corporation
Attention: Dick Matthews
Email: dick.matthews@baffinland.com
Description: SAND, trace gravel, trace fines (silt / clay)
Source: Pit at km. 2
Supplier: N/A
Sample Location: Milne Inlet
Specification: _____

Sample No.: 5573-4
Date Sampled: September 6, 2011
Sampled by: DF
Date Tested: September 23, 2011
Tested by: AR Office: Yellowknife
Moisture Content (as received): 4.1
No. Crushed Faces: Two (2) or Three (3)
By Particle Mass: _____

Sieve Size	Percent Passing
16	100
12.5	100
10	99
5	99
2.5	99
1.25	97
0.630	88
0.315	45
0.160	5
0.080	0.8



Remarks: _____

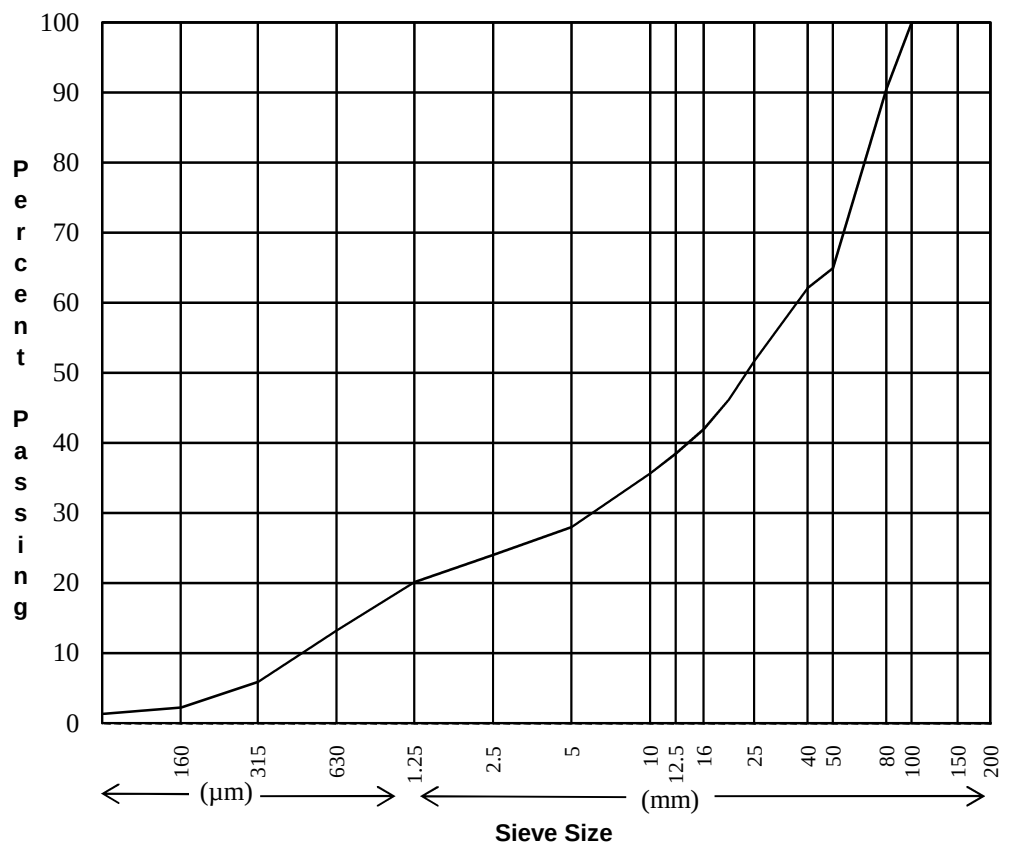
Reviewed By: _____

AGGREGATE ANALYSIS TEST REPORT

ASTM C136, C117

Project:	Milne Inlet Contaminated Soil Treatment Plan	Sample No.:	5573-5
Client:	Baffinland Iron Mines Corporation	Date Sampled:	September 6, 2011
Project No.:	E14101092	Sampled By:	DF
Attention:	Dick Matthews	Date Tested:	September 26, 2011
Description:	GRAVEL, sandy, trace cobbles, trace fines	Tested By:	AR Lab: Yellowknife
Source:	Milne Inlet	No. Crushed Faces:	N/A
Location:	Pit at km 4	Moisture Content:	1.0%
Specification:	No Spec Band Provided		

Sieve Size	Percent Passing
200 mm	
150 mm	
100 mm	100
80 mm	91
50 mm	65
40 mm	62
25 mm	52
20 mm	46
16 mm	42
12.5 mm	39
10 mm	36
5 mm	28
2.5 mm	24
1.25 mm	20
630 μ m	13
315 μ m	6
160 μ m	2
80 μ m	1.3



Remarks:

Reviewed By: _____ P.Eng.

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Determination of the Soluble Salt Content of Soils by Refractometer

ASTM D4542

Project No: E14101092
Project: Milne Inlet Contaminated Soil Treatment Plan
Client: Baffinland Iron Mines Corporation
Attention: _____
Fax: _____
Ph: _____

Sample No.: As shown
Date Sampled: _____
Sampled By: EBA
Date Tested: 26-Sep-11
Tested By: KTP
Office: Edmonton

Borehole No	Depth (m)	Moisture Content (%)	Soil Type	Salinity (ppt)
Pit □ 2 Km		4	SAND	1.5
Pit □ 104 Km		1.4	SAND, trace gravel	0.0

Remarks: _____

Reviewed By: _____

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**EBA Engineering
Consultants Ltd.**





EBA ENG CONSULTANTS LTD
ATTN: DANIELA FELSKÉ
14940 123 AVE NORTH BLDG
EDMONTON AB T5V 1B4

Date Received: 26-SEP-11
Report Date: 04-OCT-11 13:17 (MT)
Version: FINAL

Client Phone: 780-451-2121

Certificate of Analysis

Lab Work Order #: L1063521
Project P.O. #: NOT SUBMITTED
Job Reference: E1410192
C of C Numbers: 08-006882
Legal Site Desc:


Catherine Evaristo-Cordero
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1063521-1 SITE A PIT Sampled By: CLIENT Matrix: SOIL Miscellaneous Parameters pH (1:2 soil:water)	9.34		0.10	pH		03-OCT-11	R2262573
L1063521-2 SITE B PIT Sampled By: CLIENT Matrix: SOIL Miscellaneous Parameters pH (1:2 soil:water)	8.57		0.10	pH		03-OCT-11	R2262573
L1063521-3 PIT AT KM 104 Sampled By: CLIENT Matrix: SOIL Miscellaneous Parameters pH (1:2 soil:water)	9.17		0.10	pH		03-OCT-11	R2262573
L1063521-4 PIT AT KM 2 Sampled By: CLIENT Matrix: SOIL Miscellaneous Parameters pH (1:2 soil:water)	9.25		0.10	pH		03-OCT-11	R2262573
L1063521-5 PIT AT KM 4 Sampled By: CLIENT Matrix: SOIL Miscellaneous Parameters pH (1:2 soil:water)	8.75		0.10	pH		03-OCT-11	R2262573

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PH-1:2-ED	Soil	pH 1:2 H2O Extract	CSSS 16.2 - PH OF 1:2 WATER EXTRACT

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

08-006882

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1063521

Report Date: 04-OCT-11

Page 1 of 2

Client: EBA ENG CONSULTANTS LTD
14940 123 AVE NORTH BLDG
EDMONTON AB T5V 1B4

Contact: DANIELA FELSKA

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-1:2-ED	Soil							
Batch	R2262573							
WG1361087-2 DUP		L1064078-12						
pH (1:2 soil:water)		7.35	7.41	J	pH	0.06	0.3	03-OCT-11
WG1361087-1 IRM		ED-SAL_NAT1						
pH (1:2 soil:water)			6.75		pH		6.57-7.17	03-OCT-11
WG1361087-3 LCS								
pH (1:2 soil:water)			4		%		4-4	03-OCT-11
WG1361087-4 LCS								
pH (1:2 soil:water)			7.04		pH		6.9-7.1	03-OCT-11
WG1361087-5 LCS								
pH (1:2 soil:water)			10		%		10-10	03-OCT-11

Quality Control Report

Workorder: L1063521

Report Date: 04-OCT-11

Client: EBA ENG CONSULTANTS LTD
14940 123 AVE NORTH BLDG
EDMONTON AB T5V 1B4
Contact: DANIELA FELSKÉ

Page 2 of 2

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Environmental Division

Page 1 of 1

Report to: DANIELA FOLSKO			Report Format / Distribution			Service Requested: (rush - subject to availability)														
Company: EBA A TEMA TECH COMPANY			Standard: ☒ Other: ☐			☒ Regular (Default)														
Contact: DANIELA FOLSKO			Select: PDF ☒ Excel ☐ Digital ☐			Priority (2-3 Business Days) - 50% Surcharge														
Address: 14440 - 123 AV CAMBODIA			Email 1: D.FOLSKO @ EBA.CA			Emergency (1 Business Day) - 100% Surcharge														
Phone: 780-451-2133 Fax: 780-451-5688			Email 2: K.FORSBERG @ EBA.CA			For Emergency < 1 Day, ASAP or Weekend - Contact ALS														
Invoice To: Same as Report? ☒ Yes ☐ No?			Client / Project Information:			Analysis Request														
Company:			Job #: E14101092			(Indicate Filtered or Preserved, F/P)														
Contact:			PO / AFE:																	
Address:			Legal Site Description:																	
Phone:			Quote #:																	
Lab Work Order # (lab use only) L1063521			ALS Contact:			Sampler:														
Sample #	Sample Identification (This description will appear on the report)		Date	Time	Sample Type															
	SITE A PIT				BAG															
	SITE B PIT																			
	PIT AT Km 104																			
	PIT AT Km 2																			
	PIT AT Km 4																			
Special Instructions / Regulations / Hazardous Details																				
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																				
By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.																				
SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)														
Released by:	Date & Time:		Received by:	Date:	Time:	Temperature:	Verified by:	Date & Time:		Observations: Yes / No ? If Yes attach SIF										
			EPO	26-SEP-11	15:34															

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ENVIRONMENTAL REPORT

This report incorporates and is subject to these [General Conditions]

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APPENDIX B

SIREM BIOTREATMENT STUDY

Prepared for:

EBA Engineering
A Tetra Tech Company
Environment Practice
14940-123 Avenue
Edmonton, AB T5V 1B4

Final Report

Laboratory Biotreatability Study to Evaluate Biodegradation of Petroleum Hydrocarbons

Milne Inlet, Nunavut

Prepared by:



130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3

SiREM Ref: TL0307B

17 July 2012

siremlab.com

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LIST OF ABBREVIATIONS

CCME	Canadian Council of Ministers of Environment
°C	degrees Celsius
DI	deionized
DAP	diammonium phosphate
EBA	EBA Engineering
g	grams
mg/kg	milligram per kilogram
mL	milliliter
mL/g	milliliter per gram
NH ₃	ammonia
%	percent
PHC	petroleum hydrocarbons
SiREM	SiREM Laboratory
WHC	water holding capacity

1. INTRODUCTION

EBA Engineering (EBA) retained SiREM Laboratories (SiREM) to perform a laboratory biotreatability study to evaluate the potential for *in situ* degradation of petroleum hydrocarbons (PHC) in soil from a site in Baffinland, Canada (the Site). As discussed in SiREM's proposal, Si-1434, the purpose of the study was to evaluate the natural and enhanced aerobic degradation processes for PHC using soil from one Site location.

The study design included aerobic active and aerobic tilling controls and two different treatments to evaluate the degradation of PHC at low temperature (10 degrees Celsius (°C)). The treatments evaluated included 1) a tilling and nutrient amended treatment, and 2) a tilling and waste sludge amended treatment. The controls and treatments are summarized in Table 1 shown below, with further details on the amendments provided in Table 2.

Table 1: Summary of Microcosm Controls and Treatments

	Treatment/Control	Description	Number of Microcosm Replicates
1	Aerobic Active Control	Un-amended	2
2	Aerobic Tilling Control	Un-amended + Tilling	2
3	Aerobic Nutrient Amended Tilling Treatment	Amended with nitrogen and phosphorus + Tilling	2
4	Aerobic Waste Sludge Amended Tilling Treatment	Amended with waste sludge + Tilling	2
Number of Microcosms			8

Soil was collected from the Site on December 5, 2011 by EBA and was received by SiREM on December 6, 2011 and stored at 4 °C until required for testing. The waste sludge used in this study was also provided to SiREM by EBA. The initial set up and baseline analysis of the sludge consumed the majority of the sludge; therefore a second shipment of waste sludge was required for the actual weekly amendments. The second batch of sludge was received by SiREM on February 28, 2012. The chain of custody documentation related to these samples is provided in Appendix A.

The remainder of this report is divided into two sections. Section 2 presents the experimental materials and methods and Section 3 presents the results of the biotreatability study.

2. MATERIALS AND METHODS

The following sections summarize the methods for microcosm construction and incubation (Section 2.1); and microcosm sampling and analysis (Section 2.2).

2.1 Microcosm Construction and Incubation

Two controls and two treatments were evaluated in this study (Table 1). Forty microcosms were constructed to allow for sacrificial sampling of duplicate microcosms for each sampling event. Table 2 summarizes the details of microcosm construction and amendments for the treatment and control microcosms. Microcosms were incubated for 139 days in an incubator at 10°C. On December 21, 2011 sub-samples of the material were collected for baseline PHC, total kjeldahl nitrogen (TKN), nitrite, nitrate, phosphorus, pH, Canadian Council of Ministers of Environment (CCME) and major metals, and salinity package analysis to verify the material as received was representative of Site PHC concentrations (Tables 3A-3D). The waste sludge provided by EBA was also sub-sampled for sewage chemistry analysis (Tables 3E and 3F). The remainder of the soil material and waste sludge was stored in a cold room at 4 °C until microcosm construction.

On January 10, 2012 (Day 0), the material was removed from the cold room and was transferred to a laboratory fume hood. The soil was combined and mixed by hand to improve reproducibility between microcosm replicates. The homogenized soil was sub-divided into clean plastic bags for preparation of the treatment and control microcosms. For each of the two treatments 2,800 grams (g) of soil was required and for each of the two controls 3,000 g of soil was required to have sufficient material for the required replicates. After amendments were added to the soil, it was mixed well and dispensed in 200 g amounts into 250 milliliter (mL) glass wide-mouth bottles. The bottles were plugged with sterile foam bungs in order to allow oxygen transfer into the bottles and the bottles were stored in an incubator at 10°C.

In order to provide sufficient moisture for biodegradation deionized (DI) water was added to the bulk soil. Typically the target dosage amount in these studies is up to 50 percent (%) of the water holding capacity (WHC) without creating free standing water. The WHC was determined to be 0.45 milliliters per gram (mL/g) (Appendix B) and given the amount of moisture in the material it was determined that 25 mL of DI water was required per 200 g of soil to reach 50% of the WHC (Appendix C). However, it was observed that beyond 25% of the WHC the soil became saturated (observed presence of free standing liquid). Therefore a volume of 12.5 mL of DI water per 200 g of soil was used. The DI water was added to the bulk homogenized soil prior to constructing the microcosms. A volume of 187.5 mL of DI water was added to the bulk soil (3,000 g) to reach 25% of the WHC for the control microcosms.

For the nutrient amended tilling treatment, nitrogen and phosphorus were evaluated as the nutrient source. Typical nutrient loading rates are based on a carbon:nitrogen:phosphorous ratio of 100:10:1. The baseline soil PHC concentrations were used to determine the approximate amount of carbon present in the soil. The amount of nitrogen required to achieve the ratio of 100:10:1 was calculated to be 221 milligram per kilogram (mg/kg) (Appendix C). Diammonium phosphate (DAP) was used to provide both nitrogen and phosphorus. A weight of

2.9 g of DAP was added to 175 mL of DI water. This solution was added to the bulk homogenized soil (2,800 g) designated for the nutrient amended tilling treatment to reach both the target nutrient concentration and 25% of the WHC.

For the tilling waste sludge amended treatment; water was not added to bring up the WHC because the waste sludge acted as the water source. A volume of 12.5 mL of waste sludge per 200g soil was used to provide both moisture and nutrients. A volume of 175 mL waste sludge was added to the bulk homogenized soil (2,800 g) to reach 25% of the WHC. Based on baseline analysis of the waste sludge and the volume of waste sludge added, the concentration of TKN in the soil was 25 mg/Kg after waste sludge amendment (Appendix C).

All treatment and control microcosms were weighed after the addition of soil and amendments to record a baseline weight at Time zero. The tilling treatment bottles were stirred and weighed once a week for the duration of the study. When a decrease in weight of greater than 10 % was observed, DI water or waste sludge as appropriate was added to the corresponding treatment or control bottles. Note that DI water was added to the waste sludge treatment for the first six weeks until fresh waste sludge was received on February 28, 2012. This was done to increase the weight back to the original weight and maintain the bottles at their original moisture content (25% WHC). The intrinsic control microcosms were only stirred when re-amended with DI water to replace any lost moisture. All other controls and treatments were stirred once a week to represent tilling.

2.2 Microcosm Sampling and Analysis

2.2.1 Baseline Analysis and Waste Sludge Chemistry Analysis

Analysis of the target PHC (F2-F4 Hydrocarbons) was conducted by an external laboratory, Maxxam Analytics Inc. (Mississauga, ON). On December 21, 2011, a sub-sample of the bulk homogenized soil was collected in two 250 mL (nominal volume) glass wide-mouth bottles. The samples were placed on ice packs in a cooler and submitted to Maxxam Analytics for PHC (F2-F4 Hydrocarbons), salinity package, CCME Metals, pH, TKN, nitrate, and nitrite analysis (Tables 3A-D). On Day 0 a subsample of the waste sludge used in the initial dosing of the waste sludge treatment microcosms was sent to Maxxam Analytics Inc. for sewage chemistry analysis (Tables 3E-F).

2.2.2 Petroleum Hydrocarbon, pH and Moisture Content Analysis

On Days 0, 28, 84, and 139, sacrificial bottles from both sets of control microcosms were sampled for PHC, pH (with the exception of Day 0 for the aerobic active control) and moisture content analysis. For both treatments, sacrificial microcosms were sampled on Days 0, 14, 28, 57, 84, 112, and 139 for PHC, pH (with the exception of Day 14) and moisture content analysis. At each sampling event the sacrificial bottles were shipped in a cooler with ice packs and couriered overnight to Maxxam Analytics Inc.

2.2.3 Nitrogen, TKN and phosphorus, analysis

Analysis of nitrogen (nitrate, nitrite, nitrate + nitrite), TKN, and phosphorous was also conducted by Maxxam Analytics Inc.

On Days 0, 28, 57, 84, 112 and 139 microcosms from both treatments were sacrificed and sampled for nitrogen (nitrate, nitrite, nitrate + nitrite), TKN and phosphorus analysis. The aerobic active control sacrificial microcosms were sampled for nitrogen (nitrate, nitrite, nitrate + nitrite), TKN and phosphorus analysis on Days 28 and 139. The aerobic tilling control sacrificial microcosms were sampled for nitrogen (nitrate, nitrite, nitrate + nitrite), TKN and phosphorus analysis on Days 0, 28 and 139. At each sampling event, sacrificial bottles were placed in a cooler with ice packs and couriered overnight to Maxxam Analytics Inc.

3. RESULTS

Table 4 provides PHC (F2-F4), pH, moisture content, nitrogen (nitrate, nitrite, nitrate + nitrite), TKN and phosphorous results from the control and treatment microcosms over the incubation period of the study. Table 5 provides a summary of the % PHC removal for each control and treatment. Figures 1 through 4 present trends in the concentrations of PHC concentrations in the control and treatment microcosms over the incubation period of the study.

Refer to Appendix B for the baseline WHC and moisture content results, Appendix C for amendment calculations and Appendix D for the Maxxam Analytics Inc. analytical reports.

Report Prepared by: Ximena Druar
Ximena Druar, Laboratory Technician

Date: 25 June 2012

Report Reviewed by: Jeff Roberts
Jeff Roberts, Laboratory Manager

Date: 26 June 2012

Report Reviewed by: Sandra Dworatzek
Sandra Dworatzek, Senior Manager

Date: 26 June 2012

TABLES

TABLE 2: SUMMARY OF MICROCOSM CONTROLS, TREATMENTS AND AMENDMENTS
Milne Inlet, Nunavut

SiREM

Microcosm Name	Number of Bottles	Description
Aerobic Active Control	6	No amendments added. Amended with DI water throughout the duration of the study to maintain the % moisture (25% WHC) present at the beginning of the study. Soil was only mixed when DI water was added to maintain % moisture.
Aerobic Tilling Control	6	No amendments added. Amended with DI water throughout the duration of the study to maintain the % moisture (25% WHC) present at the beginning of the study. Soil was mixed weekly to represent tilling.
Aerobic Tilling and Nutrient Amended Treatment	14	Amended with 213 mg DAP/200 g soil to a target concentration of 226 mg/kg as Nitrogen on Day 0. Amended with DI water throughout the duration of the study to maintain the % moisture (25% WHC).
Aerobic Tilling and Waste Sludge Amended Treatment	14	Amended with 12.5 mL of waste sludge /200 g soil giving a TKN concentration in soil of 25 mg/Kg. Treatment microcosms were amended with waste sludge throughout the duration of the study to maintain the % moisture (25% WHC) present at the beginning of the study*.

Notes: * From week 1 to week 6 the moisture amendment of this treatment was done with DI water as there was not enough waste sludge left over after the initial bottle set up. On February 28, 2012 SiREM received a new batch of waste sludge from the client and from that date until the end of the study all moisture amendments were made with the waste sludge.

DAP – diammonium phosphate
DI - deionized
g – gram
mg – milligram
mg/kg – milligram per kilogram
mL - milliliter
TKN – Total Kjehldahl Nitrogen
WHC – water holding capacity
% - percent

TABLE 3A:SUMMARY OF BASELINE SOIL INORGANIC RESULTS
Milne Inlet, Nunavut

SiREM

Inorganics	Units	Replicate		Average
		Replicate 1	Replicate 2	
Moisture	%	12	12	12
Available (CaCl ₂) pH	pH	7.51	7.42	7.45
Total Kjeldahl Nitrogen	ug/g	228	283	265
Nitrite (N)	ug/g	0.1 U	0.1 U	NA
Nitrate (N)	ug/g	0.4 U	0.4 U	NA
Nitrate + Nitrite	ug/g	0.6 U	0.6 U	NA

Notes:

% - percent

ug/g - micrograms/gram

U - the compound was analyzed for but not detected, the associated value is the detection limit

Table 3B: SUMMARY OF BASELINE SOIL CCME METALS RESULTS
Milne Inlet, Nunavut

SiREM

Metals	Units	Replicate		Average
		Replicate 1	Replicate 2	
Acid Extractable Sulphur (S)	ug/g	170	150	157
Acid Extractable Aluminum (Al)	ug/g	3200	3300	3267
Acid Extractable Antimony (Sb)	ug/g	0.040 U	0.040 U	NA
Acid Extractable Arsenic (As)	ug/g	0.93 J	0.92 J	NA
Acid Extractable Barium (Ba)	ug/g	9.2	9.0	9.1
Acid Extractable Beryllium (Be)	ug/g	0.28	0.30	0.29
Acid Extractable Bismuth (Bi) (1)	ug/g	<1.0	<1.0	NA
Acid Extractable Boron (B)	ug/g	6.3	6.4	6.4
Acid Extractable Cadmium (Cd)	ug/g	0.020 U	0.023 J	NA
Acid Extractable Calcium (Ca)	ug/g	17000	18000	17667
Acid Extractable Chromium (Cr)	ug/g	8.1	8.5	8.4
Acid Extractable Cobalt (Co)	ug/g	2.6	2.6	2.6
Acid Extractable Copper (Cu)	ug/g	5.3	5.5	5.4
Acid Extractable Iron (Fe)	ug/g	7400	7400	7400
Acid Extractable Lead (Pb)	ug/g	4.4	4.4	4.4
Acid Extractable Magnesium (Mg)	ug/g	10000	11000	10667
Acid Extractable Manganese (Mn)	ug/g	120	120	120
Acid Extractable Molybdenum (Mo)	ug/g	0.13 J	0.16 J	NA
Acid Extractable Nickel (Ni)	ug/g	4.9	5.2	5.1
Acid Extractable Phosphorus (P)	ug/g	200	230	220
Acid Extractable Potassium (K)	ug/g	540	560	553
Acid Extractable Selenium (Se)	ug/g	0.23 J	0.29 J	NA
Acid Extractable Silver (Ag)	ug/g	0.040 U	0.040 U	NA
Acid Extractable Sodium (Na)	ug/g	160	150	153
Acid Extractable Strontium (Sr)	ug/g	9.3	9.7	10
Acid Extractable Thallium (Tl)	ug/g	0.083	0.079	0.080
Acid Extractable Tin (Sn) (1)	ug/g	<5.0	<5.0	NA
Acid Extractable Uranium (U)	ug/g	0.68	0.73	0.71
Acid Extractable Vanadium (V)	ug/g	11	11	11
Acid Extractable Zinc (Zn)	ug/g	15	14	14
Acid Extractable Mercury (Hg) (1)	ug/g	<0.050	<0.050	NA

Notes:

µg/g - micrograms/gram

g - gram

U - the compound was analyzed for but not detected, the associated value is the detection limit

J - The reported value was obtained from a reading that was less than the quantitation limit but greater than or equal to the method detection limit

< - compound not detected, the associated value is the detection limit

NA - not applicable

TABLE 3C: SUMMARY OF BASELINE SOIL PETROLEUM HYDROCARBONS RESULTS

Milne Inlet, Nunavut

SiREM

F2-F4 Hydrocarbons	Units	Replicate		Average
		Replicate 1	Replicate 2	
F2 (C10-C16 Hydrocarbons)	ug/g	1700	2000	1850
F3 (C16-C34 Hydrocarbons)	ug/g	790	860	825
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	NA
Reached Baseline at C50	ug/g	Yes	Yes	NA

Notes:

% - percent

µg/g - micrograms/gram

U - the compound was analyzed for but not detected, the associated value is the detection limit

NA - not applicable

TABLE 3D: SUMMARY OF BASELINE SOIL SALINITY RESULTS

SiREM

Milne Inlet, Nunavut

Parameters	Units	Replicate		Average
		Replicate 1	Replicate 2	
Calculated Parameters				
Anion Sum	meq/L	11	9.9	10
Cation Sum	meq/L	15	16	16
Ion Balance	meq/L	1.4	1.6	1.5
Soluble Parameters				
Soluble Chloride (Cl)	mg/L	360	330	345
Soluble Conductivity	dS/m	1.5	1.4	1.5
Soluble (CaCl ₂) pH	NA	7.26	7.18	7.22
Sodium Adsorption Ratio	NA	2.9	2.8	2.9
Soluble Calcium (Ca)	mg/L	100	110	105
Soluble Magnesium (Mg)	mg/L	42	46	44
Soluble Sodium (Na)	mg/L	140	140	140
Soluble Potassium (K)	mg/L	7.8	14	11
Saturation %	%	27	26	27
Soluble Sulphate (SO ₄)	mg/L	24	30	27

Notes:

mg/L - milligrams per liter

meq/L - milliequivalents per liter

dS/m - deciSiemens per metre

% - percent

ha - hectare

NA - not applicable

< - compound not detected, the associated value is the detected limit

TABLE 3E: SUMMARY OF BASELINE WASTE SLUDGE INORGANIC RESULTS

Milne Inlet, Nunavut

SiREM

Inorganics	Units	Waste Sludge
Conductivity	umho/cm	2100
Total Kjeldahl Nitrogen (TKN)	mg/L	400
pH	pH	7.14
Nitrite (N)	mg/L	0.003 J
Nitrate (N)	mg/L	0.02 U
Nitrate + Nitrite	mg/L	0.02 U

Notes:

mg/L - milligrams per liter

umho/cm - micromho per centimeter

U - the compound was analyzed for but not detected, the associated value is the detection limit

J - The reported value was obtained from a reading that was less than the quantitation limit but greater than or equal to the method detection limit

TABLE 3F:SUMMARY OF BASELINE WASTE SLUDGE METALS RESULTS

Milne Inlet, Nunavut

Metals	Units	Waste Sludge
Total Aluminum (Al)	µg/L	850000
Total Antimony (Sb)	µg/L	54
Total Arsenic (As)	µg/L	17
Total Barium (Ba)	µg/L	560
Total Beryllium (Be)	µg/L	5.0 U
Total Bismuth (Bi)	µg/L	81
Total Boron (B)	µg/L	100 U
Total Cadmium (Cd)	µg/L	22
Total Calcium (Ca)	µg/L	140000
Total Chromium (Cr)	µg/L	180
Total Cobalt (Co)	µg/L	15
Total Copper (Cu)	µg/L	1400
Total Iron (Fe)	µg/L	61000
Total Lead (Pb)	µg/L	120
Total Lithium (Li)	µg/L	50 U
Total Magnesium (Mg)	µg/L	42000
Total Manganese (Mn)	µg/L	1000
Total Molybdenum (Mo)	µg/L	51
Total Nickel (Ni)	µg/L	200
Total Phosphorus (P))	µg/L	290000
Total Potassium (K)	µg/L	34000
Total Silicon (Si)	µg/L	15000
Total Selenium (Se)	µg/L	49
Total Silver (Ag)	µg/L	7.2
Total Sodium (Na)	µg/L	420000
Total Strontium (Sr)	µg/L	370
Total Tellurium (Te)	µg/L	10 U
Total Thallium (Tl)	µg/L	0.50 U
Total Tin (Sn)	µg/L	70
Total Titanium (Ti)	µg/L	290
Total Tungsten (W)	µg/L	12
Total Uranium (U)	µg/L	18
Total Vanadium (V)	µg/L	33
Total Zinc (Zn)	µg/L	23000
Total Zirconium (Zr)	µg/L	50
Total Cesium (Cs)	µg/L	1.3 J
Total Rubidium (Rb)	µg/L	49

Notes:

µg/L - micrograms per liter

U - the compound was analyzed for but not detected, the associated value is the detection limit

J - The reported value was obtained from a reading that was less than the quantitation limit but greater than or equal to the method detection limit

TABLE 4: SUMMARY OF MICROCOSM TPH, NITROGEN, PHOSPHORUS, pH and % MOISTURE RESULTS
Milne Inlet, Nunavut

SIREM

Treatment	Date	Day	Treatment Replicate	bottle #	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Nitrite (N)	Nitrate (N)	Nitrate + Nitrite	TKN	Phosphorus	pH	Moisture
					µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	S.U.	%
Aerobic Active Control	10-Jan-12	0	AAC -1	1	770	340	<2.0	--	--	--	--	--	--	15
			AAC-2	2	820	370	<2.0	--	--	--	--	--	--	12
			Average		795	355	ND	--	--	--	--	--	--	14
	7-Feb-12	28	AAC -1	1	680	370	<2.0	<0.10	<0.40	<0.60	242	260	7.68	6.5
			AAC-2	2	840	430	<2.0	0.20J	<0.40	<0.60	281	320	7.63	5.8
			Average		760	400	ND	0.21	ND	ND	262	290	7.66	6.2
	3-Apr-12	84	AAC -1	1	310	250	<2.0	--	--	--	--	--	7.54	6.9
			AAC-2	2	310	240	<2.0	--	--	--	--	--	7.60	5.0
			Average		310	245	ND	--	--	--	--	--	7.57	6.0
	28-May-12	139	AAC -1	1	110	180	<2.0	0.20J	<0.40	<0.60	205	180	7.42	11
			AAC-2	2	110	180	<2.0	0.10J	<0.40	<0.60	220	210	7.45	12
			Average		110	180	ND	0.15	ND	ND	213	195	7.44	12
Aerobic Tilling Control	10-Jan-12	0	Tilling Control- 1	3	770	340	<2.0	0.20J	<0.40	<0.60	232	240	7.34	14
			Tilling Control- 2	4	820	370	<2.0	0.20J	<0.40	<0.60	191	280	7.36	14
			Average		795	355	ND	0.20	ND	ND	212	260	7.35	14
	7-Feb-12	28	Tilling Control- 1	3	400	310	<2.0	0.20J	<0.40	<0.60	292	180	7.70	12
			Tilling Control- 2	4	410	360	<2.0	0.20J	<0.40	<0.60	247	220	7.60	12
			Average		405	335	ND	0.20	ND	ND	270	200	7.65	12
	3-Apr-12	84	Tilling Control- 1	3	150	140	<2.0	--	--	--	--	--	7.54	14
			Tilling Control- 2	4	180	200	<2.0	--	--	--	--	--	7.81	9.2
			Average		165	170	ND	--	--	--	--	--	7.68	12
	28-May-12	139	Tilling Control- 1	3	69	120	<2.0	0.20J	<0.40	<0.60	184	200	7.49	12
			Tilling Control- 2	4	24	90	<2.0	0.10J	<0.40	<0.60	306	210	7.50	1.1
			Average		47	105	ND	0.15	ND	ND	245	205	7.50	6.6
Aerobic Tilling and Nutrient Amended Treatment	10-Jan-12	0	Tilling + Nutrient Treatment -1	5	770	340	<2.0	<0.1	<0.40	<0.60	344	880	6.95	14
			Tilling + Nutrient Treatment -2	6	820	370	<2.0	<0.1	<0.40	<0.60	599	750	6.95	14
			Average		795	355	ND	ND	ND	ND	472	815	6.95	14
	24-Jan-12	14	Tilling + Nutrient Treatment -1	5	560	280	<2.0	--	--	--	--	--	--	12
			Tilling + Nutrient Treatment -2	6	560	290	<2.0	--	--	--	--	--	--	11
			Average		560	285	ND	--	--	--	--	--	--	12
	7-Feb-12	28	Tilling + Nutrient Treatment -1	5	300	240	<2.0	<0.1	<0.40	<0.60	470	910	7.26	10
			Tilling + Nutrient Treatment -2	6	280	280	<2.0	<0.1	<0.40	<0.60	485	770	7.29	2.4
			Average		290	260	ND	ND	ND	ND	478	840	7.28	6.2
	7-Mar-12	57	Tilling + Nutrient Treatment -1	5	200	180	<2.0	<0.1	<0.40	<0.60	463	590	7.21	2.3
			Tilling + Nutrient Treatment -2	6	230	170	<2.0	<0.1	<0.40	<0.60	404	710	7.19	5.4
			Average		215	175	ND	ND	ND	ND	434	650	7.20	3.9
	3-Apr-12	84	Tilling + Nutrient Treatment -1	5	83	150	<2.0	<0.1	<0.40	<0.60	504	760	7.24	12
			Tilling + Nutrient Treatment -2	6	65	110	<2.0	<0.1	<0.40	<0.60	395	890	7.27	11
			Average		74	130	ND	ND	ND	ND	450	825	7.26	12
	1-May-12	112	Tilling + Nutrient Treatment -1	5	57	110	<2.0	<0.1	<0.40	<0.60	319	780	7.21	13
			Tilling + Nutrient Treatment -2	6	84	110	<2.0	<0.1	<0.40	<0.60	326	770	7.32	10
			Average		71	110	ND	ND	ND	ND	323	775	7.27	12
	28-May-12	139	Tilling + Nutrient Treatment -1	5	45	73	<2.0	<0.1	<0.40	<0.60	302	790	7.15	11
			Tilling + Nutrient Treatment -2	6	48	100	<2.0	<0.1	<0.40	<0.60	342	820	6.72	7.7
			Average		47	87	ND	ND	ND	ND	322	805	6.94	9.4
Aerobic Tilling and Waste Sludge Amended Treatment	10-Jan-12	0	Tilling + Waste Sludge -1	7	770	340	<2.0	<0.1	<0.40	<0.60	218	220	7.31	12
			Tilling + Waste Sludge- 2	8	820	370	<2.0	<0.1	<0.40	<0.60	213	230	7.26	13
			Average		795	355	ND	ND	ND	ND	216	225	7.29	13
	24-Jan-12	14	Tilling + Waste Sludge -1	7	570	320	<2.0	--	--	--	--	--	--	10
			Tilling + Waste Sludge- 2	8	480	380	<2.0	--	--	--	--	--	--	1.2
			Average		525	350	ND	--	--	--	--	--	--	5.6
	7-Feb-12	28	Tilling + Waste Sludge -1	7	460	370	<2.0	<0.1	<0.40	<0.60	256	150	7.57	4.8
			Tilling + Waste Sludge- 2	8	340	240	<2.0	<0.1	<0.40	<0.60	216	320	7.45	13
			Average		400	305	ND	ND	ND	ND	236	235	7.51	8.9
	7-Mar-12	57	Tilling + Waste Sludge -1	7	180	160	<2.0	0.60	<0.40	<0.60	341	720	7.20	15
			Tilling + Waste Sludge- 2	8	130	210	<2.0	0.60	<0.40	<0.60	451	570	7.24	15
			Average		155	185	ND	0.60	ND	0.80	396	645	7.22	15
	3-Apr-12	84	Tilling + Waste Sludge -1	7	120	180	<2.0	0.3J	13	13	313	490	7.36	7.4
			Tilling + Waste Sludge- 2	8	80	170	<2.0	0.3J	22	22	418	410	7.39	6.9
			Average		100	175	ND	0.30	18	18	366	450	7.38	7.2
	1-May-12	112	Tilling + Waste Sludge -1	7	100	240	15	<0.1	18	18	590	1600	7.39	16
			Tilling + Waste Sludge- 2	8	120	200	11	<0.1	35	35	494	1000	7.28	11
			Average		110	220	13	ND	27	27	542	1300	7.34	14
	28-May-12	139	Tilling + Waste Sludge -1	7	54	210	28	0.3J	25	25	699	1800	7.12	11
			Tilling + Waste Sludge- 2	8	36	170	26	0.3J	91	91	485	1600	7.06	5.7
			Average		45	190	27	0.30	58	58	592	1700	7.09	8.4

Notes:
AAC - aerobic active control
J - The reported value was obtained from a reading that was less than the quantitation limit but greater than or equal to the method detection limit
µg/g - micrograms per gram
µg/kg - micrograms per kilogram
ND - not detected
N - nitrogen
TKN - Total Kjeldahl Nitrogen

% - percent
-- - not available/not applicable
< - compound not detected, the associated value is the detected limit
S.U. - standard units

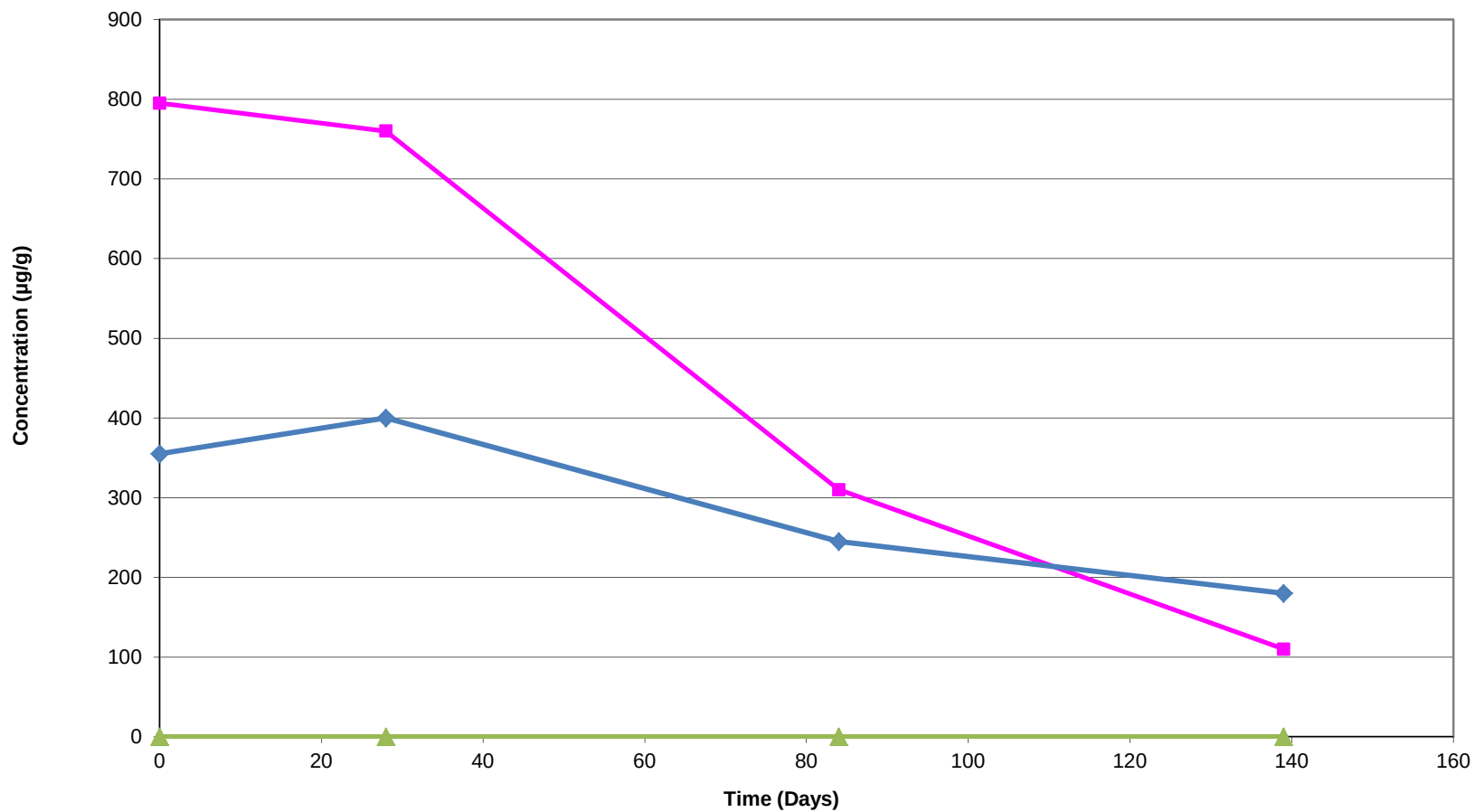
TABLE 5: PERCENT REMOVAL OF PETROLEUM HYDROCARBONS IN MICROCOSMS
Milne Inlet, Nunavut

SiREM

Treatment	F2 (C10-C16)			F3 (C16-C34)			F4 (C34-C50)		
	% Removal	Initial [] (µg/g)	Final [] (µg/g)	% Removal	Initial [] (µg/g)	Final [] (µg/g)	% Removal	Initial [] (µg/g)	Final [] (µg/g)
Aerobic Active Control	86	795	110	49	355	180	NA	0	0
Aerobic Tilling Control	94	795	47	70	355	105	NA	0	0
Aerobic Nutrient Amended Tilling Treatment	94	795	47	75	355	87	NA	0	0
Aerobic Waste Sludge Amended Tilling Treatment	94	795	45	46	355	190	NA	0	27

Notes: % removal = {(initial concentration - final concentration)/initial concentration} * 100
 % - percent
 [] - concentration
 µg/g - microgram per gram
 NA - not applicable

FIGURES



F2 (C10-C16) F3 (C16-C34) F4 (C34-C50)

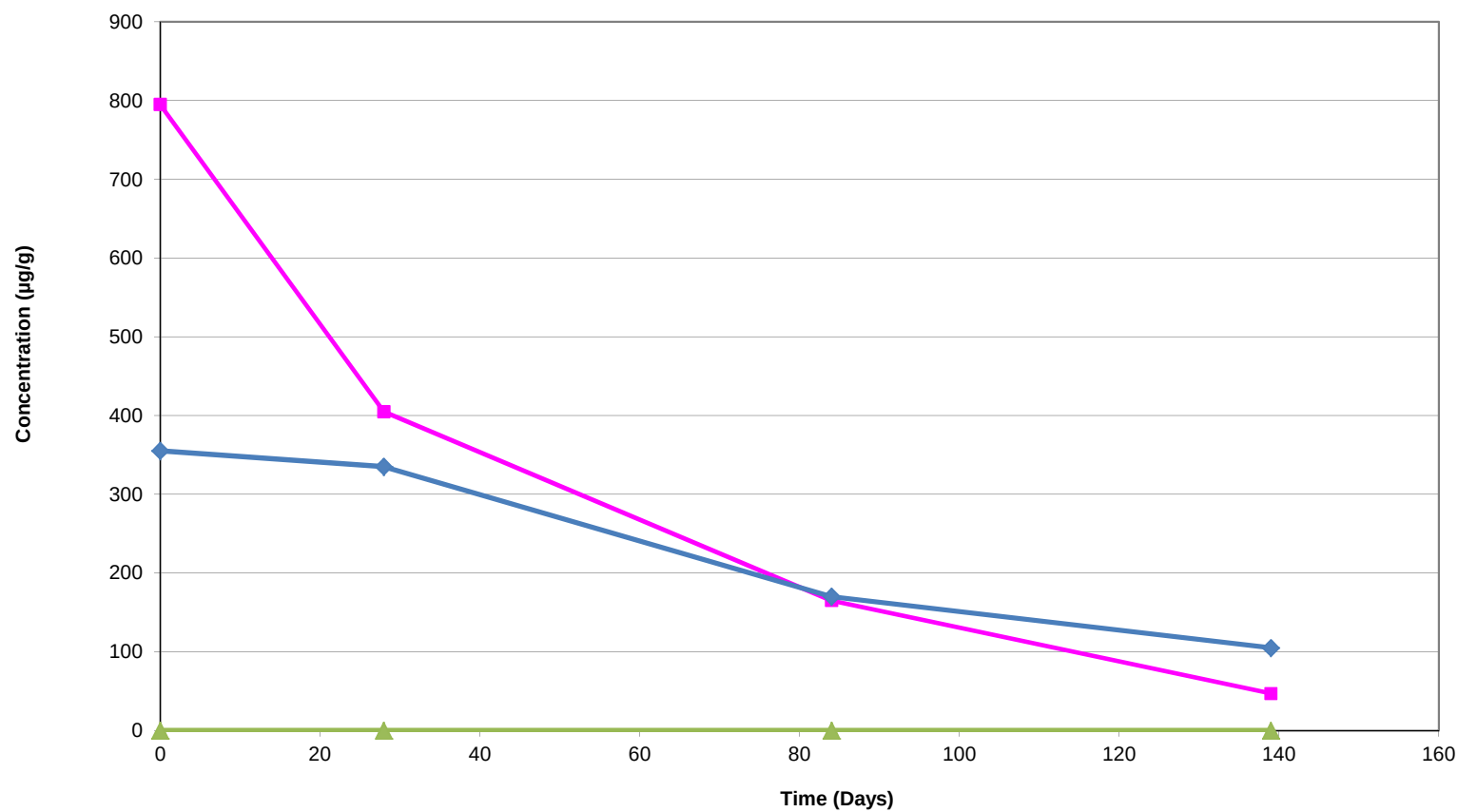
**Petroleum Hydrocarbon Compound Concentration Trends in
Aerobic Active Control Microcosms**

Milne Inlet, Nunavut



July 2012

Figure: 1

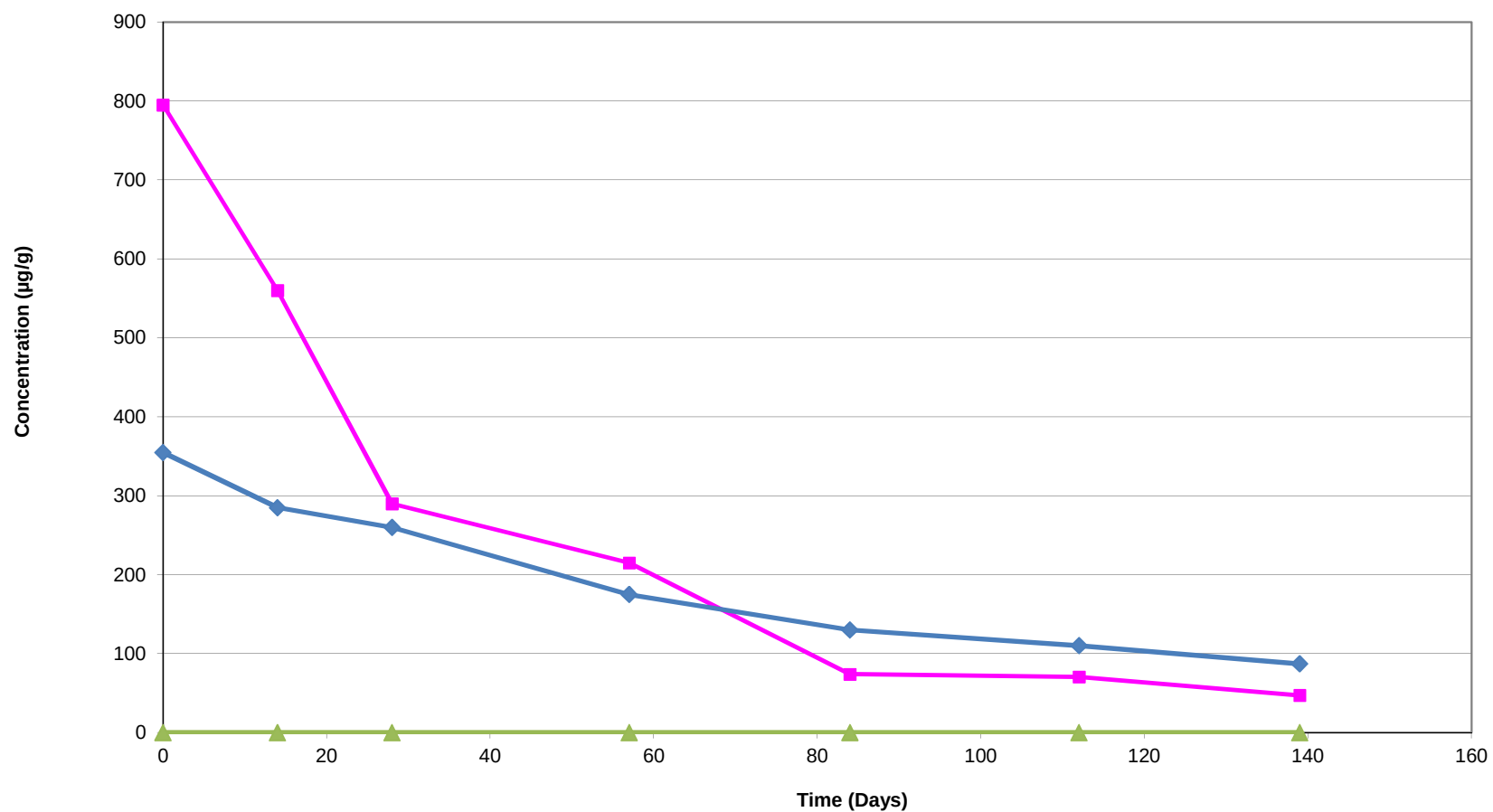


**Petroleum Hydrocarbon Compound Concentration Trends in
Aerobic Tilling Control Microcosms**
Milne Inlet, Nunavut



July 2012

Figure: 2



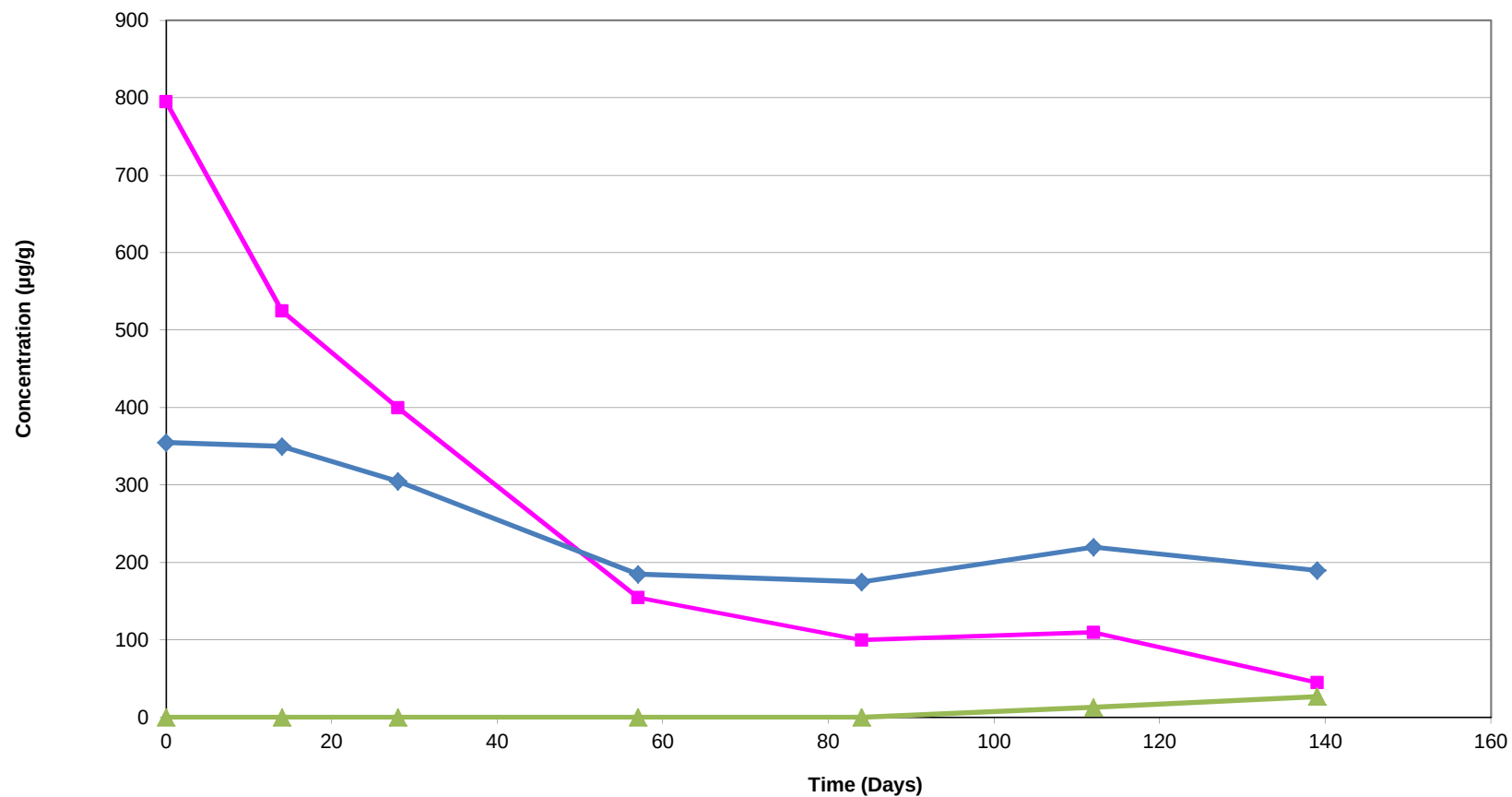
**Petroleum Hydrocarbon Compound Concentration Trends in
Aerobic Tilling and Nutrient Amended Treatment Microcosms**

Milne Inlet, Nunavut



July 2012

Figure: 3



**Petroleum Hydrocarbon Compound Concentration Trends in
Aerobic Tilling and Waste Sludge Amended Treatment Microcosms**

Milne Inlet, Nunavut



July 2012

Figure: 4

APPENDIX A: Chain of Custody Documentation

Company:	Invoice To: EPA ENGINEERING		C/O Report Address	☐
Contact:	14940-123 AVE			
Address:	EDMONTON AB			
	Prov: 75V1B4	PC:		
Contact #s:	Ph: 780-451-7171		Cell:	

Report To:	Same as Invoice	☐
Prov:	PC:	
Ph:	Cell:	

Report Distribution (E-Mail):

dfelske@eba.ca
bhorne@eba.ca

REGULATORY GUIDELINES:

☐ AT1

☐ CCME

☐ Regulated Drinking Water

☐ Other:

All samples are held for 60 calendar days after sample receipt, unless specified otherwise.

PO #: E14101092
Project # / Name: _____
Site Location: _____
Quote #: _____
Sampled By: _____

SERVICE REQUESTED:

☐ RUSH (Contact lab to reserve)
Date Required: _____

☒ REGULAR (5 to 7 Days)

	Sample ID	Depth (unit)	Matrix GW / SW Soil	Date/Time Sampled YY/MM/DD 24:00	BTEX F	Sieve (%)	Regulation	Salinity	Assessment	Basic C			☐ BTEX	☐ BTEX	Rough	TOTAL	Total	Dissolved	Mercurium	NIT	CU	MA	SA	HOLD - # of Co
1	JET I																			X				
2	BAG8																			X	X	X	X	
3	BAG54																							
4																								
5																								
6	- see Figure 1 for																							
7	F2/F3 results																							
8	- spill is diesel fuel																							
9	and Jet A																							
10																								
11	-																							
12																								

SEE QUOTE
SI-1434-1004/1

Please indicate Filtered, Preserved or Both (F, P, F/P) →

Please indicate Filtered, Preserved or Both (F, P, F/P)

Relinquished By (Signature/Print): 	Date (YY/MM/DD): DEC 5 2011	Time (24:00): 1:00
Relinquished By (Signature/Print):	Date (YY/MM/DD):	Time (24:00):
Special Instructions:	# of Jars Used & Not Submitted	

LAB USE ONLY									
Received By:	Date:	Time:	Maxxam Job #:						
<i>SiREN</i>	<i>Dec 6 '11</i>	<i>10:30 am</i>	<table border="1"> <tr> <td>Custody Seal</td> <td>Temperature</td> <td>Ice</td> </tr> <tr> <td><i>NO</i></td> <td><i>3°C</i></td> <td><i>Y</i></td> </tr> </table>	Custody Seal	Temperature	Ice	<i>NO</i>	<i>3°C</i>	<i>Y</i>
Custody Seal	Temperature	Ice							
<i>NO</i>	<i>3°C</i>	<i>Y</i>							
Lab Comments:									

APPENDIX B:
Summary of Percent Moisture and Water Holding Capacity Results

APPENDIX B: SUMMARY OF BASELINE MOISTURE CONTENT AND SOIL WATER HOLDING CAPACITY

Minle Inlet, Nunavut

Moisture Content:

Sample	Dish Weight (g)	Dish + Wet Sample (g)	Dish + Sample Dried @ 100 °C 16hr (g)	% Dry Matter	% Moisture	average
1	0.95	14.30	12.95	90%	10%	10%
2	0.95	14.30	12.90	90%	10%	
3	1.00	14.55	13.20	90%	10%	

Water Holding Capacity:

Sample	Sample Weight (g)	Buret Reading Start (mL)	Buret Reading Finish (mL)	Total Water Used (mL)	Total Water Holding Capacity (mL/g)	Percent Water Holding Capacity per gram (%)	Average Water Holding Capacity (mL/g)
1	10.00	3.00	7.80	4.80	0.48	48%	0.45
2	10.00	8.00	12.30	4.30	0.43	43%	
3	10.00	12.30	16.70	4.40	0.44	44%	

Notes:

% - percent

° C - degrees Celsius

g - gram

hr - hour

mL - milliliter

mL/g - milliliter per gram

APPENDIX C:
Summary of Nutrient and Moisture Amendment Calculations for Treatment Microcosms

APPENDIX C: SUMMARY OF NUTRIENT AND MOISTURE AMENDMENT CALCULATIONS FOR TREATMENT MICROCOSMS

Minle Inlet, Nunavut

How much water needs to be added to the soil?

% Moisture = 10.19% (calculated)

water holding capacity (WHC) = 0.45 ml/g (calculated)

For 200 g of soil (each treatment microcosm contains 200 g of soil), based on the % percent moisture:

$(200 \text{ g}) * (10.19\%)$

= 20.4 g of water in 200 g of soil

WHC of 200 g of soil

$0.45 \text{ ml/g} * 200 \text{ g soil}$

= 90 ml of water, but we want to use 50% WHC (as per proposal)

$= 90 / 2 = 45 \text{ mL}$

$45 \text{ ml} - 20.4 \text{ ml} = 24.6 \text{ ml of water/treatment}$

Therefore need to add 24.6mL of water or sludge per bottle to reach 50% of the WHC. However, upon microcosms setup it was observed that only 12.5mL of sludge or DI water could be added per bottle without having free water accumulate in the soil.

How much TKN is present in 12.5 mL of Waste Sludge?

Baseline TKN = 400 mg/L (value from sludge baseline analysis)

$400 \text{ mg}/1000 \text{ mL} = x/12.5 \text{ mL}$

$x = 5.0 \text{ mg TKN}/12.5 \text{ mL of sludge or } 5.0 \text{ mg}/200 \text{ g of soil} = 25 \text{ mg/Kg}$

How much Carbon present in F2 and F3 Hydrocarbons?

Assumption that 85% C by mass

Soil Baseline F2 [] 1800 mg/Kg

Therefore $1800 \text{ mg/Kg} * 0.85 = 1530 \text{ mg/Kg as C}$

Soil Baseline F3 [] 800 mg/Kg

Therefore $800 \text{ mg/Kg} * 0.85 = 683 \text{ mg/Kg as C}$

Therefore total C present in soil is $1530 \text{ mg/Kg} + 683 \text{ mg/Kg} = 2213 \text{ mg/Kg}$

We want a C:N:P ratio of 100:10:1

Therefore 2210:221:22

APPENDIX C: SUMMARY OF NUTRIENT AND MOISTURE AMENDMENT CALCULATIONS FOR TREATMENT MICROCOSMS

Minle Inlet, Nunavut

N Calculation

want 221 mg/Kg N

$221\text{mg}/14\text{mg}/\text{mmol}$ (M.W of N)

= 15.8 N

Used Diammonium Phosphate $(\text{NH}_4)_2\text{HPO}_4$

2 N in each mole of DAP

therefore $15.8/2 = 7.89$ mmol of DAP needed

$7.89\text{ mmol} * 132\text{ mg}/\text{mmol}$ (M.W of DAP)

= 1042 mg DAP/Kg

= 209 mg DAP/200 g soil

Need to set up 14 bottles with 200 g soil in each

$200\text{ g} * 14 = 2800\text{ g}$ soil in total

therefore $209\text{ mg DAP} * 14 = 2926\text{ mg}$ or 2.9 g of DAP

50% WHC is 25 mL but beyond 12.5 mL of DI water it was observed to saturate the soil

$12.5\text{ mL DI} * 14 = 175\text{ mL}$ of DI water

Dissolve 2.9 g of DAP in 175 mL of DI and add to 2800 g homogenized soil

P Calculation

How much P was added in the 209 mg of DAP?

$7.89\text{ mmol of DAP} * 31\text{ mg}/\text{mmol}$ (MW of P)

= 246 mg of P added.

Therefore, in 209 mg of DAP added to each bottle there was 221 mg/kg of N and 246 mg/kg of P added

APPENDIX D: Maxxam Analytical Reports

Your Project #: EBA #2
Your C.O.C. #: 2111

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/06

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1K2045

Received: 2011/12/22, 10:30

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	2	2011/12/29	2011/12/29	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	2	2011/12/29	2011/12/30	CAM SOP-00408	EPA 6010
Acid Extr. Metals (aqua regia) by ICPMS	2	2011/12/29	2012/01/03	CAM SOP-00447	EPA 6020
Moisture	2	N/A	2011/12/28	CAM SOP-00445	McKeague 2nd ed 1978
Nitrate (NO3) and Nitrite (NO2) in Soil	2	N/A	2012/01/04	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	2	2011/12/29	2011/12/29	CAM SOP-00413	SM 4500 H
Salinity in Soil (SAL4) ☺	2	N/A	N/A		
Total Kjeldahl Nitrogen - Soil	2	2011/12/29	2011/12/30	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as

Your Project #: EBA #2
Your C.O.C. #: 2111

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/06

CERTIFICATE OF ANALYSIS

-2-

per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bedford to Calgary Subcontract

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

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Maxxam Job #: B1K2045
Report Date: 2012/01/06

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MB5541	MB5542		
Sampling Date		2011/12/21 14:40	2011/12/21 14:40		
COC Number		2111	2111		
	Units	S-2049-122111-1	S-2049-122111-2	RDL	QC Batch

Inorganics					
Moisture	%	12	12	1	2724662
Available (CaCl2) pH	pH	7.51	7.42		2725092
Total Kjeldahl Nitrogen	ug/g	228	283	10	2725809
Nitrite (N)	ug/g	0.1 U	0.1 U	0.5	2728246
Nitrate (N)	ug/g	0.4 U	0.4 U	2	2728246
Nitrate + Nitrite	ug/g	0.6 U	0.6 U	3	2728246
Subcontracted Analysis					
Subcontract Parameter	N/A	TBA	TBA	TBA	2729302

TBA = Result to follow
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1K2045
Report Date: 2012/01/06

SiREM - Site Recovery & Management
Client Project #: EBA #2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		MB5541	MB5542		
Sampling Date		2011/12/21 14:40	2011/12/21 14:40		
COC Number		2111	2111		
	Units	S-2049-122111-1	S-2049-122111-2	RDL	QC Batch

Metals					
Acid Extractable Sulphur (S)	ug/g	170	150	50	2725477
Acid Extractable Aluminum (Al)	ug/g	3200	3300	50	2725472
Acid Extractable Antimony (Sb)	ug/g	0.040 U	0.040 U	0.20	2725472
Acid Extractable Arsenic (As)	ug/g	0.93 J	0.92 J	1.0	2725472
Acid Extractable Barium (Ba)	ug/g	9.2	9.0	0.50	2725472
Acid Extractable Beryllium (Be)	ug/g	0.28	0.30	0.20	2725472
Acid Extractable Bismuth (Bi) (l)	ug/g	<1.0	<1.0	1.0	2725472
Acid Extractable Boron (B)	ug/g	6.3	6.4	5.0	2725472
Acid Extractable Cadmium (Cd)	ug/g	0.020 U	0.023 J	0.10	2725472
Acid Extractable Calcium (Ca)	ug/g	17000	18000	50	2725472
Acid Extractable Chromium (Cr)	ug/g	8.1	8.5	1.0	2725472
Acid Extractable Cobalt (Co)	ug/g	2.6	2.6	0.10	2725472
Acid Extractable Copper (Cu)	ug/g	5.3	5.5	0.50	2725472
Acid Extractable Iron (Fe)	ug/g	7400	7400	50	2725472
Acid Extractable Lead (Pb)	ug/g	4.4	4.4	1.0	2725472
Acid Extractable Magnesium (Mg)	ug/g	10000	11000	50	2725472
Acid Extractable Manganese (Mn)	ug/g	120	120	1.0	2725472
Acid Extractable Molybdenum (Mo)	ug/g	0.13 J	0.16 J	0.50	2725472
Acid Extractable Nickel (Ni)	ug/g	4.9	5.2	0.50	2725472
Acid Extractable Phosphorus (P)	ug/g	200	230	50	2725472
Acid Extractable Potassium (K)	ug/g	540	560	200	2725472
Acid Extractable Selenium (Se)	ug/g	0.23 J	0.29 J	0.50	2725472
Acid Extractable Silver (Ag)	ug/g	0.040 U	0.040 U	0.20	2725472
Acid Extractable Sodium (Na)	ug/g	160	150	100	2725472
Acid Extractable Strontium (Sr)	ug/g	9.3	9.7	1.0	2725472
Acid Extractable Thallium (Tl)	ug/g	0.083	0.079	0.050	2725472
Acid Extractable Tin (Sn) (l)	ug/g	<5.0	<5.0	5.0	2725472
Acid Extractable Uranium (U)	ug/g	0.68	0.73	0.050	2725472
Acid Extractable Vanadium (V)	ug/g	11	11	5.0	2725472
Acid Extractable Zinc (Zn)	ug/g	15	14	5.0	2725472
Acid Extractable Mercury (Hg) (l)	ug/g	<0.050	<0.050	0.050	2725472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) UJ Flags are not applicable

Maxxam Job #: B1K2045
Report Date: 2012/01/06

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MB5541	MB5541	MB5542		
Sampling Date		2011/12/21 14:40	2011/12/21 14:40	2011/12/21 14:40		
COC Number		2111	2111	2111		
	Units	S-2049-122111-1	S-2049-122111-1 Lab-Dup	S-2049-122111-2	RDL	QC Batch

F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	1700	1700	2000	10	2725051
F3 (C16-C34 Hydrocarbons)	ug/g	790	750	860	10	2725051
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	10	2725051
Reached Baseline at C50	ug/g	Yes	Yes	Yes		2725051
Surrogate Recovery (%)						
o-Terphenyl	%	129	129	126		2725051

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1K2045
Report Date: 2012/01/06

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MB5541
Sample ID S-2049-122111-1
Matrix Soil

Collected 2011/12/21
Shipped
Received 2011/12/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2725051	2011/12/29	2011/12/29	BARBARA WOWK
Total Metals Analysis by ICP	ICP	2725477	2011/12/29	2011/12/30	SUBAN KANAPATHIPPLLAI
Acid Extr. Metals (aqua regia) by ICPMS	ICP/MS	2725472	2011/12/29	2012/01/03	KEVIN COMERFORD
Moisture	BAL	2724662	N/A	2011/12/28	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2728246	N/A	2012/01/04	BAVANI KAILAYA
pH CaCl2 EXTRACT		2725092	2011/12/29	2011/12/29	XUANHONG QIU
Salinity in Soil (SAL4)		2729302	2012/01/05	2012/01/05	MARLENE BASDEO
Total Kjeldahl Nitrogen - Soil	AC	2725809	2011/12/29	2011/12/30	CHANDRA NANDLAL

Maxxam ID MB5541 Dup
Sample ID S-2049-122111-1
Matrix Soil

Collected 2011/12/21
Shipped
Received 2011/12/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2725051	2011/12/29	2011/12/29	BARBARA WOWK

Maxxam ID MB5542
Sample ID S-2049-122111-2
Matrix Soil

Collected 2011/12/21
Shipped
Received 2011/12/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2725051	2011/12/29	2011/12/29	BARBARA WOWK
Total Metals Analysis by ICP	ICP	2725477	2011/12/29	2011/12/30	SUBAN KANAPATHIPPLLAI
Acid Extr. Metals (aqua regia) by ICPMS	ICP/MS	2725472	2011/12/29	2012/01/03	KEVIN COMERFORD
Moisture	BAL	2724662	N/A	2011/12/28	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2728246	N/A	2012/01/04	BAVANI KAILAYA
pH CaCl2 EXTRACT		2725092	2011/12/29	2011/12/29	XUANHONG QIU
Salinity in Soil (SAL4)		2729302	2012/01/05	2012/01/05	MARLENE BASDEO
Total Kjeldahl Nitrogen - Soil	AC	2725809	2011/12/29	2011/12/30	CHANDRA NANDLAL

Maxxam Job #: B1K2045
Report Date: 2012/01/06

SiREM - Site Recovery & Management
Client Project #: EBA #2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report

Maxxam Job Number: MB1K2045

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2724662 PHM	RPD	Moisture	2011/12/28	NC		%	20
2725051 BWW	Matrix Spike [MB5541-01]	o-Terphenyl	2011/12/29		120	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2011/12/29		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2011/12/29		120	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2011/12/29		118	%	50 - 130
	Spiked Blank	o-Terphenyl	2011/12/29		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2011/12/29		95	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2011/12/29		113	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2011/12/29		104	%	70 - 130
	Method Blank	o-Terphenyl	2011/12/29		106	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2011/12/29	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2011/12/29	2.0 U, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2011/12/29	2.0 U, MDL=2.0		ug/g	
	RPD [MB5541-01]	F2 (C10-C16 Hydrocarbons)	2011/12/29	0.6		%	30
		F3 (C16-C34 Hydrocarbons)	2011/12/29	4.5		%	30
		F4 (C34-C50 Hydrocarbons)	2011/12/29	NC		%	30
2725472 KCO	Matrix Spike	Acid Extractable Aluminum (Al)	2011/12/29		NC	%	75 - 125
		Acid Extractable Antimony (Sb)	2011/12/29		108	%	75 - 125
		Acid Extractable Arsenic (As)	2011/12/29		99	%	75 - 125
		Acid Extractable Barium (Ba)	2011/12/29		NC (1)	%	75 - 125
		Acid Extractable Beryllium (Be)	2011/12/29		96	%	75 - 125
		Acid Extractable Bismuth (Bi)	2011/12/29		99	%	75 - 125
		Acid Extractable Boron (B)	2011/12/29		92	%	75 - 125
		Acid Extractable Cadmium (Cd)	2011/12/29		106	%	75 - 125
		Acid Extractable Calcium (Ca)	2011/12/29		NC	%	75 - 125
		Acid Extractable Chromium (Cr)	2011/12/29		97	%	75 - 125
		Acid Extractable Cobalt (Co)	2011/12/29		98	%	75 - 125
		Acid Extractable Copper (Cu)	2011/12/29		94	%	75 - 125
		Acid Extractable Iron (Fe)	2011/12/29		NC	%	75 - 125
		Acid Extractable Lead (Pb)	2011/12/29		100	%	75 - 125
		Acid Extractable Manganese (Mn)	2011/12/29		NC	%	75 - 125
		Acid Extractable Molybdenum (Mo)	2011/12/29		109	%	75 - 125
		Acid Extractable Nickel (Ni)	2011/12/29		95	%	75 - 125
		Acid Extractable Phosphorus (P)	2011/12/29		NC	%	75 - 125
		Acid Extractable Potassium (K)	2011/12/29		NC	%	75 - 125
		Acid Extractable Selenium (Se)	2011/12/29		101	%	75 - 125
		Acid Extractable Silver (Ag)	2011/12/29		102	%	75 - 125
		Acid Extractable Sodium (Na)	2011/12/29		97	%	75 - 125
		Acid Extractable Strontium (Sr)	2011/12/29		NC	%	75 - 125
		Acid Extractable Thallium (Tl)	2011/12/29		100	%	75 - 125
		Acid Extractable Tin (Sn)	2011/12/29		109	%	75 - 125
		Acid Extractable Uranium (U)	2011/12/29		102	%	75 - 125
		Acid Extractable Vanadium (V)	2011/12/29		100	%	75 - 125
		Acid Extractable Zinc (Zn)	2011/12/29		NC (1)	%	75 - 125
	Spiked Blank	Acid Extractable Mercury (Hg)	2011/12/29		98	%	75 - 125
		Acid Extractable Aluminum (Al)	2011/12/29		103	%	75 - 125
		Acid Extractable Antimony (Sb)	2011/12/29		110	%	75 - 125
		Acid Extractable Arsenic (As)	2011/12/29		103	%	75 - 125
		Acid Extractable Barium (Ba)	2011/12/29		103	%	75 - 125
		Acid Extractable Beryllium (Be)	2011/12/29		102	%	75 - 125
		Acid Extractable Bismuth (Bi)	2011/12/29		106	%	75 - 125
		Acid Extractable Boron (B)	2011/12/29		102	%	75 - 125
		Acid Extractable Cadmium (Cd)	2011/12/29		108	%	75 - 125
		Acid Extractable Calcium (Ca)	2011/12/29		106	%	75 - 125

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB1K2045

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2725472 KCO	Spiked Blank	Acid Extractable Chromium (Cr)	2011/12/29		104	%	75 - 125
		Acid Extractable Cobalt (Co)	2011/12/29		105	%	75 - 125
		Acid Extractable Copper (Cu)	2011/12/29		104	%	75 - 125
		Acid Extractable Iron (Fe)	2011/12/29		115	%	75 - 125
		Acid Extractable Lead (Pb)	2011/12/29		107	%	75 - 125
		Acid Extractable Magnesium (Mg)	2011/12/29		112	%	75 - 125
		Acid Extractable Manganese (Mn)	2011/12/29		105	%	75 - 125
		Acid Extractable Molybdenum (Mo)	2011/12/29		107	%	75 - 125
		Acid Extractable Nickel (Ni)	2011/12/29		105	%	75 - 125
		Acid Extractable Phosphorus (P)	2011/12/29		114	%	75 - 125
		Acid Extractable Potassium (K)	2011/12/29		100	%	75 - 125
		Acid Extractable Selenium (Se)	2011/12/29		103	%	75 - 125
		Acid Extractable Silver (Ag)	2011/12/29		106	%	75 - 125
		Acid Extractable Sodium (Na)	2011/12/29		106	%	75 - 125
		Acid Extractable Strontium (Sr)	2011/12/29		105	%	75 - 125
		Acid Extractable Thallium (Tl)	2011/12/29		109	%	75 - 125
		Acid Extractable Tin (Sn)	2011/12/29		106	%	75 - 125
		Acid Extractable Uranium (U)	2011/12/29		106	%	75 - 125
		Acid Extractable Vanadium (V)	2011/12/29		103	%	75 - 125
		Acid Extractable Zinc (Zn)	2011/12/29		107	%	75 - 125
		Acid Extractable Mercury (Hg)	2011/12/29		102	%	75 - 125
	Method Blank	Acid Extractable Aluminum (Al)	2011/12/29	10 U, MDL=10		ug/g	
		Acid Extractable Antimony (Sb)	2011/12/29	0.040 U, MDL=0.040		ug/g	
		Acid Extractable Arsenic (As)	2011/12/29	0.20 U, MDL=0.20		ug/g	
		Acid Extractable Barium (Ba)	2011/12/29	0.10 U, MDL=0.10		ug/g	
		Acid Extractable Beryllium (Be)	2011/12/29	0.040 U, MDL=0.040		ug/g	
		Acid Extractable Bismuth (Bi)	2011/12/29	<1.0		ug/g	
		Acid Extractable Boron (B)	2011/12/29	<5.0		ug/g	
		Acid Extractable Cadmium (Cd)	2011/12/29	0.020 U, MDL=0.020		ug/g	
		Acid Extractable Calcium (Ca)	2011/12/29	10 U, MDL=10		ug/g	
		Acid Extractable Chromium (Cr)	2011/12/29	0.20 U, MDL=0.20		ug/g	
		Acid Extractable Cobalt (Co)	2011/12/29	0.020 U, MDL=0.020		ug/g	
		Acid Extractable Copper (Cu)	2011/12/29	0.10 U, MDL=0.10		ug/g	
		Acid Extractable Iron (Fe)	2011/12/29	10 U, MDL=10		ug/g	
		Acid Extractable Lead (Pb)	2011/12/29	0.20 U, MDL=0.20		ug/g	
		Acid Extractable Magnesium (Mg)	2011/12/29	10 U, MDL=10		ug/g	
		Acid Extractable Manganese (Mn)	2011/12/29	0.20 U, MDL=0.20		ug/g	
		Acid Extractable Molybdenum (Mo)	2011/12/29	0.10 U, MDL=0.10		ug/g	
		Acid Extractable Nickel (Ni)	2011/12/29	0.39 J, MDL=0.10		ug/g	
		Acid Extractable Phosphorus (P)	2011/12/29	10 U, MDL=10		ug/g	
		Acid Extractable Potassium (K)	2011/12/29	40 U, MDL=40		ug/g	
		Acid Extractable Selenium (Se)	2011/12/29	0.10 U, MDL=0.10		ug/g	
		Acid Extractable Silver (Ag)	2011/12/29	0.040 U, MDL=0.040		ug/g	
		Acid Extractable Sodium (Na)	2011/12/29	20 U, MDL=20		ug/g	
		Acid Extractable Strontium (Sr)	2011/12/29	0.20 U, MDL=0.20		ug/g	
		Acid Extractable Thallium (Tl)	2011/12/29	0.010 U, MDL=0.010		ug/g	
		Acid Extractable Tin (Sn)	2011/12/29	<5.0		ug/g	
		Acid Extractable Uranium (U)	2011/12/29	<0.050		ug/g	
		Acid Extractable Vanadium (V)	2011/12/29	1.0 U, MDL=1.0		ug/g	
		Acid Extractable Zinc (Zn)	2011/12/29	1.0 U, MDL=1.0		ug/g	
		Acid Extractable Mercury (Hg)	2011/12/29	<0.050		ug/g	
RPD		Acid Extractable Antimony (Sb)	2011/12/29	NC		%	30
		Acid Extractable Arsenic (As)	2011/12/29	NC		%	30
		Acid Extractable Barium (Ba)	2011/12/29	5.3		%	30
		Acid Extractable Beryllium (Be)	2011/12/29	NC		%	30

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB1K2045

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2725472 KCO	RPD	Acid Extractable Boron (B)	2011/12/29	NC		%	30
		Acid Extractable Cadmium (Cd)	2011/12/29	NC		%	30
		Acid Extractable Chromium (Cr)	2011/12/29	8.6		%	30
		Acid Extractable Cobalt (Co)	2011/12/29	5.9		%	30
		Acid Extractable Copper (Cu)	2011/12/29	0.2		%	30
		Acid Extractable Lead (Pb)	2011/12/29	NC		%	30
		Acid Extractable Molybdenum (Mo)	2011/12/29	NC		%	30
		Acid Extractable Nickel (Ni)	2011/12/29	2.8		%	30
		Acid Extractable Selenium (Se)	2011/12/29	NC		%	30
		Acid Extractable Silver (Ag)	2011/12/29	NC		%	30
		Acid Extractable Thallium (Tl)	2011/12/29	NC		%	30
		Acid Extractable Uranium (U)	2011/12/29	1.9		%	30
		Acid Extractable Vanadium (V)	2011/12/29	NC		%	30
		Acid Extractable Zinc (Zn)	2011/12/29	2.0		%	30
2725477 SUK	Matrix Spike	Acid Extractable Sulphur (S)	2011/12/30		99	%	75 - 125
	QC Standard	Acid Extractable Sulphur (S)	2011/12/30		102	%	75 - 125
	Method Blank	Acid Extractable Sulphur (S)	2011/12/30	<50		ug/g	
2725809 C_N	Matrix Spike	Total Kjeldahl Nitrogen	2011/12/30		NC	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2011/12/30		123	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2011/12/30	3 U, MDL=3		ug/g	
	RPD	Total Kjeldahl Nitrogen	2011/12/30	1.4		%	40
2728246 BAV	Matrix Spike	Nitrite (N)	2012/01/04		85	%	75 - 125
		Nitrate (N)	2012/01/04		109	%	80 - 120
	Spiked Blank	Nitrite (N)	2012/01/04		96	%	75 - 125
		Nitrate (N)	2012/01/04		101	%	85 - 115
	Method Blank	Nitrite (N)	2012/01/04	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/01/04	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/01/04	0.6 U, MDL=0.6		ug/g	
	RPD	Nitrite (N)	2012/01/04	NC		%	25
		Nitrate (N)	2012/01/04	NC		%	25
		Nitrate + Nitrite	2012/01/04	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) The recovery in the matrix spike was not calculated (NC). Spiked concentration was less than 2x that native to the sample.

Validation Signature Page

Maxxam Job #: B1K2045

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



EWA PRANJIC, M.Sc., C.Chem, Scientific Specialist



MAMDOUH SALIB, Analyst, Hydrocarbons

=====

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Your Project #: MB1K2045
Site Location: EBA #2

Attention: SUB CONTRACTOR

MAXXAM ANALYTICS
CAMPOBELLO
6740 CAMPOBELLO ROAD
MISSISSAUGA, ON
CANADA L5N 2L8

Report Date: 2012/01/04

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B1C4573

Received: 2011/12/29, 8:20

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chloride (Soluble)	2	2011/12/30	2011/12/30	AB SOP-00026	SM 4110-B
Conductivity @25C (Soluble)	2	2011/12/30	2011/12/30	AB SOP-00004	SSMA 15.3
Ion Balance	2	N/A	2011/12/30	AB WI-00065	SM 1030E
Sum of Cations, Anions	2	N/A	2011/12/30	AB WI-00065	SM 1030E
pH @25C (1:2 Calcium Chloride Extract)	2	2012/01/04	2012/01/04	AB SOP-00006	SSMA 16.3
Sodium Adsorption Ratio	2	N/A	2011/12/30	AB WI-00065	SSMA 15.4.4
Ca,Mg,Na,K,SO4 (Soluble)	2	2011/12/30	2011/12/30	AB SOP-00042	EPA 200.7
Soluble Paste	2	2011/12/30	2011/12/30	AB SOP-00033	SSMA 15.2
Theoretical Gypsum Requirement	2	N/A	2011/12/30	CAL WI-00087	CJSS 79:449-455

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Units for TGR have changed from tons/acre to tonnes/ha

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Candace Fahey, Project Manager
Email: CFahey@maxxam.ca
Phone# (403) 291-3077

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Total cover pages: 1

Maxxam Job #: B1C4573
Report Date: 2012/01/04

MAXXAM ANALYTICS
Client Project #: MB1K2045
Site Location: EBA #2

SOIL SALINITY 4 (SOIL)

Maxxam ID		CL1758	CL1759		
Sampling Date		2011/12/21	2011/12/21		
	Units	S-2049-122111-1 (MB5541-01R)	S-2049-122111-2 (MB5542-01R)	RDL	QC Batch
Calculated Parameters					
Anion Sum	meq/L	11	9.9	N/A	5483465
Cation Sum	meq/L	15	16	N/A	5483465
Ion Balance	N/A	1.4	1.6	0.010	5483464
Soluble Parameters					
Soluble Chloride (Cl)	mg/L	360	330	5.0	5486871
Soluble Conductivity	dS/m	1.5	1.4	0.020	5486694
Soluble (CaCl ₂) pH	N/A	7.26	7.18	N/A	5491817
Sodium Adsorption Ratio	N/A	2.9	2.8	0.10	5483466
Soluble Calcium (Ca)	mg/L	100	110	1.5	5487225
Soluble Magnesium (Mg)	mg/L	42	46	1.0	5487225
Soluble Sodium (Na)	mg/L	140	140	2.5	5487225
Soluble Potassium (K)	mg/L	7.8	14	1.3	5487225
Saturation %	%	27	26	N/A	5486144
Soluble Sulphate (SO ₄)	mg/L	24	30	5.0	5487225
Theoretical Gypsum Requirement	tonnes/ha	<0.10	<0.10	0.10	5483467
RDL = Reportable Detection Limit					

Maxxam Job #: B1C4573
Report Date: 2012/01/04

MAXXAM ANALYTICS
Client Project #: MB1K2045
Site Location: EBA #2

Package 1	3.7°C
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Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.

MAXXAM ANALYTICS
Attention: SUB CONTRACTOR
Client Project #: MB1K2045
P.O. #:
Site Location: EBA #2

Quality Assurance Report

Maxxam Job Number: CB1C4573

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
5486144 FZ	QC Standard	Saturation %	2011/12/30		101	%	93 - 107
	RPD	Saturation %	2011/12/30	0.7		%	12
5486694 FM0	QC Standard	Soluble Conductivity	2011/12/30		96	%	87 - 113
	Spiked Blank	Soluble Conductivity	2011/12/30		100	%	94 - 105
	Method Blank	Soluble Conductivity	2011/12/30	<0.020		dS/m	
	RPD	Soluble Conductivity	2011/12/30	5.6		%	35
5486871 RR6	Matrix Spike	Soluble Chloride (Cl)	2011/12/30		NC	%	75 - 125
	QC Standard	Soluble Chloride (Cl)	2011/12/30		99	%	75 - 125
	Spiked Blank	Soluble Chloride (Cl)	2011/12/30		95	%	80 - 120
	Method Blank	Soluble Chloride (Cl)	2011/12/30	<5.0		mg/L	
	RPD	Soluble Chloride (Cl)	2011/12/30	2.6		%	35
5487225 PK0	Matrix Spike	Soluble Calcium (Ca)	2011/12/30		112	%	75 - 125
		Soluble Magnesium (Mg)	2011/12/30		108	%	75 - 125
		Soluble Sodium (Na)	2011/12/30		99	%	75 - 125
		Soluble Potassium (K)	2011/12/30		108	%	75 - 125
	QC Standard	Soluble Calcium (Ca)	2011/12/30		94	%	76 - 120
		Soluble Magnesium (Mg)	2011/12/30		90	%	80 - 120
		Soluble Sodium (Na)	2011/12/30		92	%	77 - 123
		Soluble Potassium (K)	2011/12/30		116	%	75 - 125
		Soluble Sulphate (SO4)	2011/12/30		93	%	81 - 119
	Spiked Blank	Soluble Calcium (Ca)	2011/12/30		102	%	80 - 120
		Soluble Magnesium (Mg)	2011/12/30		105	%	80 - 120
		Soluble Sodium (Na)	2011/12/30		96	%	80 - 120
		Soluble Potassium (K)	2011/12/30		103	%	80 - 120
	Method Blank	Soluble Calcium (Ca)	2011/12/30	<1.5		mg/L	
		Soluble Magnesium (Mg)	2011/12/30	<1.0		mg/L	
		Soluble Sodium (Na)	2011/12/30	<2.5		mg/L	
		Soluble Potassium (K)	2011/12/30	<1.3		mg/L	
		Soluble Sulphate (SO4)	2011/12/30	<5.0		mg/L	
	RPD	Soluble Calcium (Ca)	2011/12/30	1.6		%	35
		Soluble Magnesium (Mg)	2011/12/30	1.8		%	35
		Soluble Sodium (Na)	2011/12/30	0.1		%	35
		Soluble Potassium (K)	2011/12/30	2.6		%	35
		Soluble Sulphate (SO4)	2011/12/30	8.9		%	35
5491817 SLO	QC Standard	Soluble (CaCl2) pH	2012/01/04		97	%	95 - 105
	Spiked Blank	Soluble (CaCl2) pH	2012/01/04		100	%	99 - 102
	RPD	Soluble (CaCl2) pH	2012/01/04	1.1		%	5

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

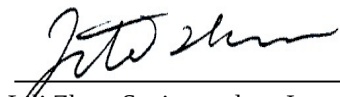
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

Validation Signature Page

Maxxam Job #: B1C4573

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Lili Zhou, Senior analyst, Inorganic department.

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Your Project #: EBA #2
Your C.O.C. #: 2115

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/18

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B204400

Received: 2012/01/11, 10:44

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	2	2012/01/16	2012/01/16	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	6	2012/01/16	2012/01/16	CAM SOP-00408	EPA 6010
Moisture	8	N/A	2012/01/14	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	6	N/A	2012/01/17	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	6	2012/01/16	2012/01/16	CAM SOP-00413	SM 4500 H
Total Kjeldahl Nitrogen - Soil	6	2012/01/16	2012/01/16	CAM SOP-00454	EPA 351.2 Rev 2

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Conductivity	1	N/A	2012/01/13	CAM SOP-00448	SM 2510
Total Metals Analysis by ICPMS	1	N/A	2012/01/16	CAM SOP-00447	EPA 6020
Nitrate (NO3) and Nitrite (NO2) in Water @	1	N/A	2012/01/13	CAM SOP-00440	SM 4500 NO3/NO2B
pH	1	N/A	2012/01/13	CAM SOP-00448	SM 4500H
Total Kjeldahl Nitrogen in Water	1	2012/01/16	2012/01/16	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is

Your Project #: EBA #2
Your C.O.C. #: 2115

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/18

CERTIFICATE OF ANALYSIS

-2-

available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====

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Total cover pages: 2

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

RESULTS OF ANALYSES OF SOIL

Maxxam ID		ME9935	ME9936		ME9937	ME9938	ME9938		
Sampling Date		2012/01/10	2012/01/10		2012/01/10	2012/01/10	2012/01/10		
COC Number		2115	2115		2115	2115	2115		
	Units	EBA2-100112-1	EBA2-100112-2	QC Batch	EBA2-100112-3	EBA2-100112-4	EBA2-100112-4 Lab-Dup	RDL	QC Batch

Inorganics									
Moisture	%	15	12	2737017	14	14		1	2736989
Available (CaCl2) pH	pH				7.34	7.36			2737320
Total Kjeldahl Nitrogen	ug/g				232	191		10	2737267
Nitrite (N)	ug/g				0.2 J	0.2 J	0.3 J	0.5	2737377
Nitrate (N)	ug/g				0.4 U	0.4 U	0.4 U	2	2737377
Nitrate + Nitrite	ug/g				0.6 U	0.6 U	0.6 U	3	2737377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		ME9939		ME9940		ME9941	ME9941	ME9942		
Sampling Date		2012/01/10		2012/01/10		2012/01/10	2012/01/10	2012/01/10		
COC Number		2115		2115		2115	2115	2115		
	Units	EBA2-100112-5	RDL	EBA2-100112-6	RDL	EBA2-100112-7	EBA2-100112-7 Lab-Dup	EBA2-100112-8	RDL	QC Batch

Inorganics										
Moisture	%	14	1	14	1	12		13	1	2736989
Available (CaCl2) pH	pH	6.95		6.95		7.31	7.26	7.19		2737320
Total Kjeldahl Nitrogen	ug/g	344	10	599	50	218		213	10	2737267
Nitrite (N)	ug/g	0.1 U	0.5	0.1 U	0.5	0.2 J		0.2 J	0.5	2737377
Nitrate (N)	ug/g	0.4 U	2	0.4 U	2	0.4 U		0.4 U	2	2737377
Nitrate + Nitrite	ug/g	0.6 U	3	0.6 U	3	0.6 U		0.6 U	3	2737377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		ME9937	ME9938	ME9939	ME9940	ME9941		
Sampling Date		2012/01/10	2012/01/10	2012/01/10	2012/01/10	2012/01/10		
COC Number		2115	2115	2115	2115	2115		
	Units	EBA2-100112-3	EBA2-100112-4	EBA2-100112-5	EBA2-100112-6	EBA2-100112-7	RDL	QC Batch

Metals								
Acid Extractable Phosphorus (P)	ug/g	240	280	880	750	220	20	2737751

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		ME9942		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	EBA2-100112-8	RDL	QC Batch

Metals				
Acid Extractable Phosphorus (P)	ug/g	230	20	2737751

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		ME9935	ME9936		
Sampling Date		2012/01/10	2012/01/10		
COC Number		2115	2115		
	Units	EBA2-100112-1	EBA2-100112-2	RDL	QC Batch

F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	770	820	10	2737303
F3 (C16-C34 Hydrocarbons)	ug/g	340	370	10	2737303
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	10	2737303
Reached Baseline at C50	ug/g	Yes	Yes		2737303
Surrogate Recovery (%)					
o-Terphenyl	%	91	95		2737303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

RESULTS OF ANALYSES OF WATER

Maxxam ID		ME9943		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	S-2436	RDL	QC Batch

Inorganics				
Conductivity	umho/cm	2100	1	2735481
Total Kjeldahl Nitrogen (TKN)	mg/L	400	10	2737318
pH	pH	7.14		2735482
Nitrite (N)	mg/L	0.003 J	0.01	2735897
Nitrate (N)	mg/L	0.02 U	0.1	2735897
Nitrate + Nitrite	mg/L	0.02 U	0.1	2735897

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		ME9943		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	S-2436	RDL	QC Batch

Metals				
Total Aluminum (Al)	ug/L	850000	50	2737322
Total Antimony (Sb)	ug/L	54	5.0	2737322
Total Arsenic (As)	ug/L	17	10	2737322
Total Barium (Ba)	ug/L	560	20	2737322
Total Beryllium (Be)	ug/L	5.0 U	5.0	2737322
Total Bismuth (Bi)	ug/L	81	10	2737322
Total Boron (B)	ug/L	100 U	100	2737322
Total Cadmium (Cd)	ug/L	22	1.0	2737322
Total Calcium (Ca)	ug/L	140000	2000	2737322
Total Chromium (Cr)	ug/L	180	50	2737322
Total Cobalt (Co)	ug/L	15	5.0	2737322
Total Copper (Cu)	ug/L	1400	10	2737322
Total Iron (Fe)	ug/L	61000	1000	2737322
Total Lead (Pb)	ug/L	120	5.0	2737322
Total Lithium (Li)	ug/L	50 U	50	2737322
Total Magnesium (Mg)	ug/L	42000	500	2737322
Total Manganese (Mn)	ug/L	1000	20	2737322
Total Molybdenum (Mo)	ug/L	51	5.0	2737322
Total Nickel (Ni)	ug/L	200	10	2737322
Total Phosphorus (P)	ug/L	290000	10000	2737322
Total Potassium (K)	ug/L	34000	2000	2737322
Total Silicon (Si)	ug/L	15000	500	2737322
Total Selenium (Se)	ug/L	49	20	2737322
Total Silver (Ag)	ug/L	7.2	1.0	2737322
Total Sodium (Na)	ug/L	420000	1000	2737322
Total Strontium (Sr)	ug/L	370	10	2737322
Total Tellurium (Te)	ug/L	10 U	10	2737322
Total Thallium (Tl)	ug/L	0.50 U	0.50	2737322
Total Tin (Sn)	ug/L	70	10	2737322
Total Titanium (Ti)	ug/L	290	100	2737322
Total Tungsten (W)	ug/L	12	10	2737322
Total Uranium (U)	ug/L	18	1.0	2737322

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		ME9943		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	S-2436	RDL	QC Batch

Total Vanadium (V)	ug/L	33	5.0	2737322
Total Zinc (Zn)	ug/L	23000	50	2737322
Total Zirconium (Zr)	ug/L	50	10	2737322
Total Cesium (Cs)	ug/L	1.3 J	2.0	2737322
Total Rubidium (Rb)	ug/L	49	2.0	2737322

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

Test Summary

Maxxam ID ME9935
Sample ID EBA2-100112-1
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2737303	2012/01/16	2012/01/16	ZHIYUE (FRANK) ZHU
Moisture	BAL	2737017	N/A	2012/01/14	LAKHVIR KALER

Maxxam ID ME9936
Sample ID EBA2-100112-2
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2737303	2012/01/16	2012/01/16	ZHIYUE (FRANK) ZHU
Moisture	BAL	2737017	N/A	2012/01/14	LAKHVIR KALER

Maxxam ID ME9937
Sample ID EBA2-100112-3
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9938
Sample ID EBA2-100112-4
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9938 Dup
Sample ID EBA2-100112-4
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

Test Summary

Maxxam ID ME9939
Sample ID EBA2-100112-5
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9940
Sample ID EBA2-100112-6
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9941
Sample ID EBA2-100112-7
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9941 Dup
Sample ID EBA2-100112-7
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL

Maxxam ID ME9942
Sample ID EBA2-100112-8
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

Test Summary

Maxxam ID ME9943
Sample ID S-2436
Matrix Water

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Conductivity	COND	2735481	N/A	2012/01/13	YOGESH PATEL
Total Metals Analysis by ICPMS	ICP/MS	2737322	N/A	2012/01/16	JOHN BOWMAN
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	2735897	N/A	2012/01/13	BAVANI KAILAYA
pH	PH	2735482	N/A	2012/01/13	YOGESH PATEL
Total Kjeldahl Nitrogen in Water	AC	2737318	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report
Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2735481 YPA	QC Standard	Conductivity	2012/01/13		101	%	85 - 115
	Method Blank	Conductivity	2012/01/13	0.4 J, MDL=0.2		umho/cm	
	RPD	Conductivity	2012/01/13	0.06		%	25
2735897 BAV	Matrix Spike	Nitrite (N)	2012/01/13		104	%	80 - 120
		Nitrate (N)	2012/01/13		103	%	80 - 120
	Spiked Blank	Nitrite (N)	2012/01/13		106	%	85 - 115
		Nitrate (N)	2012/01/13		98	%	85 - 115
	Method Blank	Nitrite (N)	2012/01/13	0.002 U, MDL=0.002		mg/L	
		Nitrate (N)	2012/01/13	0.02 U, MDL=0.02		mg/L	
	RPD	Nitrite (N)	2012/01/13	NC		%	25
		Nitrate (N)	2012/01/13	NC		%	25
2736989 LKA	RPD	Moisture	2012/01/14	3.0		%	20
2737017 LKA	RPD	Moisture	2012/01/14	2.2		%	20
2737267 C_N	Matrix Spike	Total Kjeldahl Nitrogen	2012/01/16		105	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2012/01/16		90	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/01/16	3 U, MDL=3		ug/g	
	RPD	Total Kjeldahl Nitrogen	2012/01/16	10.1		%	40
2737303 ZZ	Matrix Spike	o-Terphenyl	2012/01/16		86	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/16		94	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/01/16		99	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/01/16		94	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/01/16		88	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/16		96	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/01/16		100	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/01/16		96	%	70 - 130
	Method Blank	o-Terphenyl	2012/01/16		92	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/16	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/01/16	2.0 U, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/01/16	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/01/16	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/01/16	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/01/16	NC		%	30
2737318 C_N	Matrix Spike	Total Kjeldahl Nitrogen (TKN)	2012/01/16		NC	%	80 - 120
	QC Standard	Total Kjeldahl Nitrogen (TKN)	2012/01/16		88	%	85 - 115
	Spiked Blank	Total Kjeldahl Nitrogen (TKN)	2012/01/16		94	%	85 - 115
	Method Blank	Total Kjeldahl Nitrogen (TKN)	2012/01/16	0.05 J, MDL=0.02		mg/L	
	RPD	Total Kjeldahl Nitrogen (TKN)	2012/01/16	4.7		%	20
2737322 JBW	Matrix Spike	Total Aluminum (Al)	2012/01/16		109	%	80 - 120
		Total Antimony (Sb)	2012/01/16		111	%	80 - 120
		Total Arsenic (As)	2012/01/16		103	%	80 - 120
		Total Barium (Ba)	2012/01/16		102	%	80 - 120
		Total Beryllium (Be)	2012/01/16		105	%	80 - 120
		Total Bismuth (Bi)	2012/01/16		103	%	80 - 120
		Total Boron (B)	2012/01/16		111	%	80 - 120
		Total Cadmium (Cd)	2012/01/16		106	%	80 - 120
		Total Calcium (Ca)	2012/01/16		NC	%	80 - 120
		Total Chromium (Cr)	2012/01/16		103	%	80 - 120
		Total Cobalt (Co)	2012/01/16		104	%	80 - 120
		Total Copper (Cu)	2012/01/16		100	%	80 - 120
		Total Iron (Fe)	2012/01/16		105	%	80 - 120
		Total Lead (Pb)	2012/01/16		101	%	80 - 120
		Total Lithium (Li)	2012/01/16		107	%	80 - 120
		Total Magnesium (Mg)	2012/01/16		109	%	80 - 120
		Total Manganese (Mn)	2012/01/16		105	%	80 - 120
		Total Molybdenum (Mo)	2012/01/16		108	%	80 - 120

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2737322 JBW	Matrix Spike	Total Nickel (Ni)	2012/01/16		100	%	80 - 120
		Total Phosphorus (P)	2012/01/16		112	%	80 - 120
		Total Potassium (K)	2012/01/16		106	%	80 - 120
		Total Silicon (Si)	2012/01/16		105	%	80 - 120
		Total Selenium (Se)	2012/01/16		105	%	80 - 120
		Total Silver (Ag)	2012/01/16		101	%	80 - 120
		Total Sodium (Na)	2012/01/16		112	%	80 - 120
		Total Strontium (Sr)	2012/01/16		107	%	80 - 120
		Total Tellurium (Te)	2012/01/16		104	%	80 - 120
		Total Thallium (Tl)	2012/01/16		101	%	80 - 120
		Total Tin (Sn)	2012/01/16		110	%	80 - 120
		Total Titanium (Ti)	2012/01/16		104	%	80 - 120
		Total Tungsten (W)	2012/01/16		104	%	80 - 120
		Total Uranium (U)	2012/01/16		101	%	80 - 120
		Total Vanadium (V)	2012/01/16		104	%	80 - 120
		Total Zinc (Zn)	2012/01/16		104	%	80 - 120
		Total Zirconium (Zr)	2012/01/16		112	%	80 - 120
		Total Cesium (Cs)	2012/01/16		98	%	80 - 120
		Total Rubidium (Rb)	2012/01/16		103	%	80 - 120
	Spiked Blank	Total Aluminum (Al)	2012/01/16		114	%	80 - 120
		Total Antimony (Sb)	2012/01/16		113	%	80 - 120
		Total Arsenic (As)	2012/01/16		106	%	80 - 120
		Total Barium (Ba)	2012/01/16		105	%	80 - 120
		Total Beryllium (Be)	2012/01/16		107	%	80 - 120
		Total Bismuth (Bi)	2012/01/16		105	%	80 - 120
		Total Boron (B)	2012/01/16		112	%	80 - 120
		Total Cadmium (Cd)	2012/01/16		109	%	80 - 120
		Total Calcium (Ca)	2012/01/16		110	%	80 - 120
		Total Chromium (Cr)	2012/01/16		108	%	80 - 120
		Total Cobalt (Co)	2012/01/16		108	%	80 - 120
		Total Copper (Cu)	2012/01/16		104	%	80 - 120
		Total Iron (Fe)	2012/01/16		110	%	80 - 120
		Total Lead (Pb)	2012/01/16		105	%	80 - 120
		Total Lithium (Li)	2012/01/16		108	%	80 - 120
		Total Magnesium (Mg)	2012/01/16		114	%	80 - 120
		Total Manganese (Mn)	2012/01/16		109	%	80 - 120
		Total Molybdenum (Mo)	2012/01/16		110	%	80 - 120
		Total Nickel (Ni)	2012/01/16		104	%	80 - 120
		Total Phosphorus (P)	2012/01/16		113	%	80 - 120
		Total Potassium (K)	2012/01/16		111	%	80 - 120
		Total Silicon (Si)	2012/01/16		110	%	80 - 120
		Total Selenium (Se)	2012/01/16		112	%	80 - 120
		Total Silver (Ag)	2012/01/16		105	%	80 - 120
		Total Sodium (Na)	2012/01/16		117	%	80 - 120
		Total Strontium (Sr)	2012/01/16		111	%	80 - 120
		Total Tellurium (Te)	2012/01/16		106	%	80 - 120
		Total Thallium (Tl)	2012/01/16		104	%	80 - 120
		Total Tin (Sn)	2012/01/16		111	%	80 - 120
		Total Titanium (Ti)	2012/01/16		111	%	80 - 120
		Total Tungsten (W)	2012/01/16		107	%	80 - 120
		Total Uranium (U)	2012/01/16		105	%	80 - 120
		Total Vanadium (V)	2012/01/16		108	%	80 - 120
		Total Zinc (Zn)	2012/01/16		108	%	80 - 120
		Total Zirconium (Zr)	2012/01/16		114	%	80 - 120
		Total Cesium (Cs)	2012/01/16		100	%	80 - 120

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2737322 JBW	Spiked Blank	Total Rubidium (Rb)	2012/01/16		106	%	80 - 120
	Method Blank	Total Aluminum (Al)	2012/01/16	9.3, MDL=5.0		ug/L	
		Total Antimony (Sb)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Arsenic (As)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Barium (Ba)	2012/01/16	2.0 U, MDL=2.0		ug/L	
		Total Beryllium (Be)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Bismuth (Bi)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Boron (B)	2012/01/16	10 U, MDL=10		ug/L	
		Total Cadmium (Cd)	2012/01/16	0.10 U, MDL=0.10		ug/L	
		Total Calcium (Ca)	2012/01/16	200 U, MDL=200		ug/L	
		Total Chromium (Cr)	2012/01/16	5.0 U, MDL=5.0		ug/L	
		Total Cobalt (Co)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Copper (Cu)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Iron (Fe)	2012/01/16	50 U, MDL=50		ug/L	
		Total Lead (Pb)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Lithium (Li)	2012/01/16	5.0 U, MDL=5.0		ug/L	
		Total Magnesium (Mg)	2012/01/16	50 U, MDL=50		ug/L	
		Total Manganese (Mn)	2012/01/16	2.0 U, MDL=2.0		ug/L	
		Total Molybdenum (Mo)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Nickel (Ni)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Phosphorus (P)	2012/01/16	50 U, MDL=50		ug/L	
		Total Potassium (K)	2012/01/16	200 U, MDL=200		ug/L	
		Total Silicon (Si)	2012/01/16	50 U, MDL=50		ug/L	
		Total Selenium (Se)	2012/01/16	2.0 U, MDL=2.0		ug/L	
		Total Silver (Ag)	2012/01/16	0.10 U, MDL=0.10		ug/L	
		Total Sodium (Na)	2012/01/16	100 U, MDL=100		ug/L	
		Total Strontium (Sr)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Tellurium (Te)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Thallium (Tl)	2012/01/16	0.050 U, MDL=0.050		ug/L	
		Total Tin (Sn)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Titanium (Ti)	2012/01/16	5.0 U, MDL=5.0		ug/L	
		Total Tungsten (W)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Uranium (U)	2012/01/16	0.10 U, MDL=0.10		ug/L	
		Total Vanadium (V)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Zinc (Zn)	2012/01/16	5.2, MDL=5.0		ug/L	
		Total Zirconium (Zr)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Cesium (Cs)	2012/01/16	0.040 U, MDL=0.040		ug/L	
		Total Rubidium (Rb)	2012/01/16	0.040 U, MDL=0.040		ug/L	
	RPD	Total Aluminum (Al)	2012/01/16	2.7		%	20
		Total Antimony (Sb)	2012/01/16	NC		%	20
		Total Arsenic (As)	2012/01/16	NC		%	20
		Total Barium (Ba)	2012/01/16	NC		%	20
		Total Beryllium (Be)	2012/01/16	NC		%	20
		Total Bismuth (Bi)	2012/01/16	NC		%	20
		Total Boron (B)	2012/01/16	NC		%	20
		Total Cadmium (Cd)	2012/01/16	NC		%	20
		Total Calcium (Ca)	2012/01/16	3.5		%	20
		Total Chromium (Cr)	2012/01/16	NC		%	20
		Total Cobalt (Co)	2012/01/16	NC		%	20
		Total Copper (Cu)	2012/01/16	NC		%	20
		Total Iron (Fe)	2012/01/16	NC		%	20
		Total Lead (Pb)	2012/01/16	NC		%	20
		Total Lithium (Li)	2012/01/16	NC		%	20
		Total Magnesium (Mg)	2012/01/16	2.5		%	20
		Total Manganese (Mn)	2012/01/16	1.6		%	20

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2737322 JBW	RPD	Total Molybdenum (Mo)	2012/01/16	NC		%	20
		Total Nickel (Ni)	2012/01/16	NC		%	20
		Total Potassium (K)	2012/01/16	5.5		%	20
		Total Silicon (Si)	2012/01/16	3.9		%	20
		Total Selenium (Se)	2012/01/16	NC		%	20
		Total Silver (Ag)	2012/01/16	NC		%	20
		Total Sodium (Na)	2012/01/16	3.2		%	20
		Total Strontium (Sr)	2012/01/16	4.4		%	20
		Total Tellurium (Te)	2012/01/16	NC		%	20
		Total Thallium (Tl)	2012/01/16	NC		%	20
		Total Tin (Sn)	2012/01/16	NC		%	20
		Total Titanium (Ti)	2012/01/16	NC		%	20
		Total Tungsten (W)	2012/01/16	NC		%	20
		Total Uranium (U)	2012/01/16	NC		%	20
		Total Vanadium (V)	2012/01/16	NC		%	20
		Total Zinc (Zn)	2012/01/16	4.1		%	20
		Total Zirconium (Zr)	2012/01/16	NC		%	20
2737377 BAV	Matrix Spike [ME9938-01]	Nitrite (N)	2012/01/17		102	%	75 - 125
		Nitrate (N)	2012/01/17		107	%	80 - 120
	Spiked Blank	Nitrite (N)	2012/01/17		98	%	75 - 125
		Nitrate (N)	2012/01/17		104	%	85 - 115
	Method Blank	Nitrite (N)	2012/01/17	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/01/17	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/01/17	0.6 U, MDL=0.6		ug/g	
	RPD [ME9938-01]	Nitrite (N)	2012/01/17	NC		%	25
		Nitrate (N)	2012/01/17	NC		%	25
		Nitrate + Nitrite	2012/01/17	NC		%	25
2737751 SUK	Matrix Spike	Acid Extractable Phosphorus (P)	2012/01/16		NC	%	75 - 125
	QC Standard	Acid Extractable Phosphorus (P)	2012/01/16		101	%	75 - 125
	Method Blank	Acid Extractable Phosphorus (P)	2012/01/16	<20		ug/g	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: B204400

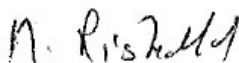
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



EWA PRANJIC, M.Sc., C.Chem, Scientific Specialist



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA #2
Your C.O.C. #: 2115

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/18

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B204400

Received: 2012/01/11, 10:44

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	2	2012/01/16	2012/01/16	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	6	2012/01/16	2012/01/16	CAM SOP-00408	EPA 6010
Moisture	8	N/A	2012/01/14	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	6	N/A	2012/01/17	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	6	2012/01/16	2012/01/16	CAM SOP-00413	SM 4500 H
Total Kjeldahl Nitrogen - Soil	6	2012/01/16	2012/01/16	CAM SOP-00454	EPA 351.2 Rev 2

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Conductivity	1	N/A	2012/01/13	CAM SOP-00448	SM 2510
Total Metals Analysis by ICPMS	1	N/A	2012/01/16	CAM SOP-00447	EPA 6020
Nitrate (NO3) and Nitrite (NO2) in Water @	1	N/A	2012/01/13	CAM SOP-00440	SM 4500 NO3/NO2B
pH	1	N/A	2012/01/13	CAM SOP-00448	SM 4500H
Total Kjeldahl Nitrogen in Water	1	2012/01/16	2012/01/16	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is

Your Project #: EBA #2
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CANADA N1G 5G3

Report Date: 2012/01/18

CERTIFICATE OF ANALYSIS

-2-

available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====

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Total cover pages: 2

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

RESULTS OF ANALYSES OF SOIL

Maxxam ID		ME9935	ME9936		ME9937	ME9938	ME9938		
Sampling Date		2012/01/10	2012/01/10		2012/01/10	2012/01/10	2012/01/10		
COC Number		2115	2115		2115	2115	2115		
	Units	EBA2-100112-1	EBA2-100112-2	QC Batch	EBA2-100112-3	EBA2-100112-4	EBA2-100112-4 Lab-Dup	RDL	QC Batch

Inorganics									
Moisture	%	15	12	2737017	14	14		1	2736989
Available (CaCl2) pH	pH				7.34	7.36			2737320
Total Kjeldahl Nitrogen	ug/g				232	191		10	2737267
Nitrite (N)	ug/g				0.2 J	0.2 J	0.3 J	0.5	2737377
Nitrate (N)	ug/g				0.4 U	0.4 U	0.4 U	2	2737377
Nitrate + Nitrite	ug/g				0.6 U	0.6 U	0.6 U	3	2737377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		ME9939		ME9940		ME9941	ME9941	ME9942		
Sampling Date		2012/01/10		2012/01/10		2012/01/10	2012/01/10	2012/01/10		
COC Number		2115		2115		2115	2115	2115		
	Units	EBA2-100112-5	RDL	EBA2-100112-6	RDL	EBA2-100112-7	EBA2-100112-7 Lab-Dup	EBA2-100112-8	RDL	QC Batch

Inorganics										
Moisture	%	14	1	14	1	12		13	1	2736989
Available (CaCl2) pH	pH	6.95		6.95		7.31	7.26	7.19		2737320
Total Kjeldahl Nitrogen	ug/g	344	10	599	50	218		213	10	2737267
Nitrite (N)	ug/g	0.1 U	0.5	0.1 U	0.5	0.2 J		0.2 J	0.5	2737377
Nitrate (N)	ug/g	0.4 U	2	0.4 U	2	0.4 U		0.4 U	2	2737377
Nitrate + Nitrite	ug/g	0.6 U	3	0.6 U	3	0.6 U		0.6 U	3	2737377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		ME9937	ME9938	ME9939	ME9940	ME9941		
Sampling Date		2012/01/10	2012/01/10	2012/01/10	2012/01/10	2012/01/10		
COC Number		2115	2115	2115	2115	2115		
	Units	EBA2-100112-3	EBA2-100112-4	EBA2-100112-5	EBA2-100112-6	EBA2-100112-7	RDL	QC Batch

Metals								
Acid Extractable Phosphorus (P)	ug/g	240	280	880	750	220	20	2737751

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		ME9942		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	EBA2-100112-8	RDL	QC Batch

Metals				
Acid Extractable Phosphorus (P)	ug/g	230	20	2737751

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		ME9935	ME9936		
Sampling Date		2012/01/10	2012/01/10		
COC Number		2115	2115		
	Units	EBA2-100112-1	EBA2-100112-2	RDL	QC Batch

F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	770	820	10	2737303
F3 (C16-C34 Hydrocarbons)	ug/g	340	370	10	2737303
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	10	2737303
Reached Baseline at C50	ug/g	Yes	Yes		2737303
Surrogate Recovery (%)					
o-Terphenyl	%	91	95		2737303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

RESULTS OF ANALYSES OF WATER

Maxxam ID		ME9943		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	S-2436	RDL	QC Batch

Inorganics				
Conductivity	umho/cm	2100	1	2735481
Total Kjeldahl Nitrogen (TKN)	mg/L	400	10	2737318
pH	pH	7.14		2735482
Nitrite (N)	mg/L	0.003 J	0.01	2735897
Nitrate (N)	mg/L	0.02 U	0.1	2735897
Nitrate + Nitrite	mg/L	0.02 U	0.1	2735897

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		ME9943		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	S-2436	RDL	QC Batch

Metals				
Total Aluminum (Al)	ug/L	850000	50	2737322
Total Antimony (Sb)	ug/L	54	5.0	2737322
Total Arsenic (As)	ug/L	17	10	2737322
Total Barium (Ba)	ug/L	560	20	2737322
Total Beryllium (Be)	ug/L	5.0 U	5.0	2737322
Total Bismuth (Bi)	ug/L	81	10	2737322
Total Boron (B)	ug/L	100 U	100	2737322
Total Cadmium (Cd)	ug/L	22	1.0	2737322
Total Calcium (Ca)	ug/L	140000	2000	2737322
Total Chromium (Cr)	ug/L	180	50	2737322
Total Cobalt (Co)	ug/L	15	5.0	2737322
Total Copper (Cu)	ug/L	1400	10	2737322
Total Iron (Fe)	ug/L	61000	1000	2737322
Total Lead (Pb)	ug/L	120	5.0	2737322
Total Lithium (Li)	ug/L	50 U	50	2737322
Total Magnesium (Mg)	ug/L	42000	500	2737322
Total Manganese (Mn)	ug/L	1000	20	2737322
Total Molybdenum (Mo)	ug/L	51	5.0	2737322
Total Nickel (Ni)	ug/L	200	10	2737322
Total Phosphorus (P)	ug/L	290000	10000	2737322
Total Potassium (K)	ug/L	34000	2000	2737322
Total Silicon (Si)	ug/L	15000	500	2737322
Total Selenium (Se)	ug/L	49	20	2737322
Total Silver (Ag)	ug/L	7.2	1.0	2737322
Total Sodium (Na)	ug/L	420000	1000	2737322
Total Strontium (Sr)	ug/L	370	10	2737322
Total Tellurium (Te)	ug/L	10 U	10	2737322
Total Thallium (Tl)	ug/L	0.50 U	0.50	2737322
Total Tin (Sn)	ug/L	70	10	2737322
Total Titanium (Ti)	ug/L	290	100	2737322
Total Tungsten (W)	ug/L	12	10	2737322
Total Uranium (U)	ug/L	18	1.0	2737322

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		ME9943		
Sampling Date		2012/01/10		
COC Number		2115		
	Units	S-2436	RDL	QC Batch

Total Vanadium (V)	ug/L	33	5.0	2737322
Total Zinc (Zn)	ug/L	23000	50	2737322
Total Zirconium (Zr)	ug/L	50	10	2737322
Total Cesium (Cs)	ug/L	1.3 J	2.0	2737322
Total Rubidium (Rb)	ug/L	49	2.0	2737322

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

Test Summary

Maxxam ID ME9935
Sample ID EBA2-100112-1
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2737303	2012/01/16	2012/01/16	ZHIYUE (FRANK) ZHU
Moisture	BAL	2737017	N/A	2012/01/14	LAKHVIR KALER

Maxxam ID ME9936
Sample ID EBA2-100112-2
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2737303	2012/01/16	2012/01/16	ZHIYUE (FRANK) ZHU
Moisture	BAL	2737017	N/A	2012/01/14	LAKHVIR KALER

Maxxam ID ME9937
Sample ID EBA2-100112-3
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9938
Sample ID EBA2-100112-4
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9938 Dup
Sample ID EBA2-100112-4
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

Test Summary

Maxxam ID ME9939
Sample ID EBA2-100112-5
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9940
Sample ID EBA2-100112-6
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9941
Sample ID EBA2-100112-7
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam ID ME9941 Dup
Sample ID EBA2-100112-7
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL

Maxxam ID ME9942
Sample ID EBA2-100112-8
Matrix Soil

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2737751	2012/01/16	2012/01/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2736989	N/A	2012/01/14	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2737377	N/A	2012/01/17	BAVANI KAILAYA
pH CaCl2 EXTRACT		2737320	2012/01/16	2012/01/16	YOGESH PATEL
Total Kjeldahl Nitrogen - Soil	AC	2737267	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

Test Summary

Maxxam ID ME9943
Sample ID S-2436
Matrix Water

Collected 2012/01/10
Shipped
Received 2012/01/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Conductivity	COND	2735481	N/A	2012/01/13	YOGESH PATEL
Total Metals Analysis by ICPMS	ICP/MS	2737322	N/A	2012/01/16	JOHN BOWMAN
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	2735897	N/A	2012/01/13	BAVANI KAILAYA
pH	PH	2735482	N/A	2012/01/13	YOGESH PATEL
Total Kjeldahl Nitrogen in Water	AC	2737318	2012/01/16	2012/01/16	CHANDRA NANDLAL

Maxxam Job #: B204400
Report Date: 2012/01/18

SiREM - Site Recovery & Management
Client Project #: EBA #2

Sampler Initials: RS

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report
Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2735481 YPA	QC Standard	Conductivity	2012/01/13		101	%	85 - 115
	Method Blank	Conductivity	2012/01/13	0.4 J, MDL=0.2		umho/cm	
	RPD	Conductivity	2012/01/13	0.06		%	25
2735897 BAV	Matrix Spike	Nitrite (N)	2012/01/13		104	%	80 - 120
		Nitrate (N)	2012/01/13		103	%	80 - 120
	Spiked Blank	Nitrite (N)	2012/01/13		106	%	85 - 115
		Nitrate (N)	2012/01/13		98	%	85 - 115
	Method Blank	Nitrite (N)	2012/01/13	0.002 U, MDL=0.002		mg/L	
		Nitrate (N)	2012/01/13	0.02 U, MDL=0.02		mg/L	
	RPD	Nitrite (N)	2012/01/13	NC		%	25
		Nitrate (N)	2012/01/13	NC		%	25
2736989 LKA	RPD	Moisture	2012/01/14	3.0		%	20
2737017 LKA	RPD	Moisture	2012/01/14	2.2		%	20
2737267 C_N	Matrix Spike	Total Kjeldahl Nitrogen	2012/01/16		105	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2012/01/16		90	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/01/16	3 U, MDL=3		ug/g	
	RPD	Total Kjeldahl Nitrogen	2012/01/16	10.1		%	40
2737303 ZZ	Matrix Spike	o-Terphenyl	2012/01/16		86	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/16		94	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/01/16		99	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/01/16		94	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/01/16		88	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/16		96	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/01/16		100	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/01/16		96	%	70 - 130
	Method Blank	o-Terphenyl	2012/01/16		92	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/16	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/01/16	2.0 U, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/01/16	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/01/16	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/01/16	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/01/16	NC		%	30
2737318 C_N	Matrix Spike	Total Kjeldahl Nitrogen (TKN)	2012/01/16		NC	%	80 - 120
	QC Standard	Total Kjeldahl Nitrogen (TKN)	2012/01/16		88	%	85 - 115
	Spiked Blank	Total Kjeldahl Nitrogen (TKN)	2012/01/16		94	%	85 - 115
	Method Blank	Total Kjeldahl Nitrogen (TKN)	2012/01/16	0.05 J, MDL=0.02		mg/L	
	RPD	Total Kjeldahl Nitrogen (TKN)	2012/01/16	4.7		%	20
2737322 JBW	Matrix Spike	Total Aluminum (Al)	2012/01/16		109	%	80 - 120
		Total Antimony (Sb)	2012/01/16		111	%	80 - 120
		Total Arsenic (As)	2012/01/16		103	%	80 - 120
		Total Barium (Ba)	2012/01/16		102	%	80 - 120
		Total Beryllium (Be)	2012/01/16		105	%	80 - 120
		Total Bismuth (Bi)	2012/01/16		103	%	80 - 120
		Total Boron (B)	2012/01/16		111	%	80 - 120
		Total Cadmium (Cd)	2012/01/16		106	%	80 - 120
		Total Calcium (Ca)	2012/01/16		NC	%	80 - 120
		Total Chromium (Cr)	2012/01/16		103	%	80 - 120
		Total Cobalt (Co)	2012/01/16		104	%	80 - 120
		Total Copper (Cu)	2012/01/16		100	%	80 - 120
		Total Iron (Fe)	2012/01/16		105	%	80 - 120
		Total Lead (Pb)	2012/01/16		101	%	80 - 120
		Total Lithium (Li)	2012/01/16		107	%	80 - 120
		Total Magnesium (Mg)	2012/01/16		109	%	80 - 120
		Total Manganese (Mn)	2012/01/16		105	%	80 - 120
		Total Molybdenum (Mo)	2012/01/16		108	%	80 - 120

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2737322 JBW	Matrix Spike	Total Nickel (Ni)	2012/01/16		100	%	80 - 120
		Total Phosphorus (P)	2012/01/16		112	%	80 - 120
		Total Potassium (K)	2012/01/16		106	%	80 - 120
		Total Silicon (Si)	2012/01/16		105	%	80 - 120
		Total Selenium (Se)	2012/01/16		105	%	80 - 120
		Total Silver (Ag)	2012/01/16		101	%	80 - 120
		Total Sodium (Na)	2012/01/16		112	%	80 - 120
		Total Strontium (Sr)	2012/01/16		107	%	80 - 120
		Total Tellurium (Te)	2012/01/16		104	%	80 - 120
		Total Thallium (Tl)	2012/01/16		101	%	80 - 120
		Total Tin (Sn)	2012/01/16		110	%	80 - 120
		Total Titanium (Ti)	2012/01/16		104	%	80 - 120
		Total Tungsten (W)	2012/01/16		104	%	80 - 120
		Total Uranium (U)	2012/01/16		101	%	80 - 120
		Total Vanadium (V)	2012/01/16		104	%	80 - 120
		Total Zinc (Zn)	2012/01/16		104	%	80 - 120
		Total Zirconium (Zr)	2012/01/16		112	%	80 - 120
		Total Cesium (Cs)	2012/01/16		98	%	80 - 120
	Spiked Blank	Total Rubidium (Rb)	2012/01/16		103	%	80 - 120
		Total Aluminum (Al)	2012/01/16		114	%	80 - 120
		Total Antimony (Sb)	2012/01/16		113	%	80 - 120
		Total Arsenic (As)	2012/01/16		106	%	80 - 120
		Total Barium (Ba)	2012/01/16		105	%	80 - 120
		Total Beryllium (Be)	2012/01/16		107	%	80 - 120
		Total Bismuth (Bi)	2012/01/16		105	%	80 - 120
		Total Boron (B)	2012/01/16		112	%	80 - 120
		Total Cadmium (Cd)	2012/01/16		109	%	80 - 120
		Total Calcium (Ca)	2012/01/16		110	%	80 - 120
		Total Chromium (Cr)	2012/01/16		108	%	80 - 120
		Total Cobalt (Co)	2012/01/16		108	%	80 - 120
		Total Copper (Cu)	2012/01/16		104	%	80 - 120
		Total Iron (Fe)	2012/01/16		110	%	80 - 120
		Total Lead (Pb)	2012/01/16		105	%	80 - 120
		Total Lithium (Li)	2012/01/16		108	%	80 - 120
		Total Magnesium (Mg)	2012/01/16		114	%	80 - 120
		Total Manganese (Mn)	2012/01/16		109	%	80 - 120
		Total Molybdenum (Mo)	2012/01/16		110	%	80 - 120
		Total Nickel (Ni)	2012/01/16		104	%	80 - 120
		Total Phosphorus (P)	2012/01/16		113	%	80 - 120
		Total Potassium (K)	2012/01/16		111	%	80 - 120
		Total Silicon (Si)	2012/01/16		110	%	80 - 120
		Total Selenium (Se)	2012/01/16		112	%	80 - 120
		Total Silver (Ag)	2012/01/16		105	%	80 - 120
		Total Sodium (Na)	2012/01/16		117	%	80 - 120
		Total Strontium (Sr)	2012/01/16		111	%	80 - 120
		Total Tellurium (Te)	2012/01/16		106	%	80 - 120
		Total Thallium (Tl)	2012/01/16		104	%	80 - 120
		Total Tin (Sn)	2012/01/16		111	%	80 - 120
		Total Titanium (Ti)	2012/01/16		111	%	80 - 120
		Total Tungsten (W)	2012/01/16		107	%	80 - 120
		Total Uranium (U)	2012/01/16		105	%	80 - 120
		Total Vanadium (V)	2012/01/16		108	%	80 - 120
		Total Zinc (Zn)	2012/01/16		108	%	80 - 120
		Total Zirconium (Zr)	2012/01/16		114	%	80 - 120
		Total Cesium (Cs)	2012/01/16		100	%	80 - 120

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2737322 JBW	Spiked Blank	Total Rubidium (Rb)	2012/01/16		106	%	80 - 120
	Method Blank	Total Aluminum (Al)	2012/01/16	9.3, MDL=5.0		ug/L	
		Total Antimony (Sb)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Arsenic (As)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Barium (Ba)	2012/01/16	2.0 U, MDL=2.0		ug/L	
		Total Beryllium (Be)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Bismuth (Bi)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Boron (B)	2012/01/16	10 U, MDL=10		ug/L	
		Total Cadmium (Cd)	2012/01/16	0.10 U, MDL=0.10		ug/L	
		Total Calcium (Ca)	2012/01/16	200 U, MDL=200		ug/L	
		Total Chromium (Cr)	2012/01/16	5.0 U, MDL=5.0		ug/L	
		Total Cobalt (Co)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Copper (Cu)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Iron (Fe)	2012/01/16	50 U, MDL=50		ug/L	
		Total Lead (Pb)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Lithium (Li)	2012/01/16	5.0 U, MDL=5.0		ug/L	
		Total Magnesium (Mg)	2012/01/16	50 U, MDL=50		ug/L	
		Total Manganese (Mn)	2012/01/16	2.0 U, MDL=2.0		ug/L	
		Total Molybdenum (Mo)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Nickel (Ni)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Phosphorus (P)	2012/01/16	50 U, MDL=50		ug/L	
		Total Potassium (K)	2012/01/16	200 U, MDL=200		ug/L	
		Total Silicon (Si)	2012/01/16	50 U, MDL=50		ug/L	
		Total Selenium (Se)	2012/01/16	2.0 U, MDL=2.0		ug/L	
		Total Silver (Ag)	2012/01/16	0.10 U, MDL=0.10		ug/L	
		Total Sodium (Na)	2012/01/16	100 U, MDL=100		ug/L	
		Total Strontium (Sr)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Tellurium (Te)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Thallium (Tl)	2012/01/16	0.050 U, MDL=0.050		ug/L	
		Total Tin (Sn)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Titanium (Ti)	2012/01/16	5.0 U, MDL=5.0		ug/L	
		Total Tungsten (W)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Uranium (U)	2012/01/16	0.10 U, MDL=0.10		ug/L	
		Total Vanadium (V)	2012/01/16	0.50 U, MDL=0.50		ug/L	
		Total Zinc (Zn)	2012/01/16	5.2, MDL=5.0		ug/L	
		Total Zirconium (Zr)	2012/01/16	1.0 U, MDL=1.0		ug/L	
		Total Cesium (Cs)	2012/01/16	0.040 U, MDL=0.040		ug/L	
		Total Rubidium (Rb)	2012/01/16	0.040 U, MDL=0.040		ug/L	
	RPD	Total Aluminum (Al)	2012/01/16	2.7		%	20
		Total Antimony (Sb)	2012/01/16	NC		%	20
		Total Arsenic (As)	2012/01/16	NC		%	20
		Total Barium (Ba)	2012/01/16	NC		%	20
		Total Beryllium (Be)	2012/01/16	NC		%	20
		Total Bismuth (Bi)	2012/01/16	NC		%	20
		Total Boron (B)	2012/01/16	NC		%	20
		Total Cadmium (Cd)	2012/01/16	NC		%	20
		Total Calcium (Ca)	2012/01/16	3.5		%	20
		Total Chromium (Cr)	2012/01/16	NC		%	20
		Total Cobalt (Co)	2012/01/16	NC		%	20
		Total Copper (Cu)	2012/01/16	NC		%	20
		Total Iron (Fe)	2012/01/16	NC		%	20
		Total Lead (Pb)	2012/01/16	NC		%	20
		Total Lithium (Li)	2012/01/16	NC		%	20
		Total Magnesium (Mg)	2012/01/16	2.5		%	20
		Total Manganese (Mn)	2012/01/16	1.6		%	20

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB204400

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2737322 JBW	RPD	Total Molybdenum (Mo)	2012/01/16	NC		%	20
		Total Nickel (Ni)	2012/01/16	NC		%	20
		Total Potassium (K)	2012/01/16	5.5		%	20
		Total Silicon (Si)	2012/01/16	3.9		%	20
		Total Selenium (Se)	2012/01/16	NC		%	20
		Total Silver (Ag)	2012/01/16	NC		%	20
		Total Sodium (Na)	2012/01/16	3.2		%	20
		Total Strontium (Sr)	2012/01/16	4.4		%	20
		Total Tellurium (Te)	2012/01/16	NC		%	20
		Total Thallium (Tl)	2012/01/16	NC		%	20
		Total Tin (Sn)	2012/01/16	NC		%	20
		Total Titanium (Ti)	2012/01/16	NC		%	20
		Total Tungsten (W)	2012/01/16	NC		%	20
		Total Uranium (U)	2012/01/16	NC		%	20
		Total Vanadium (V)	2012/01/16	NC		%	20
		Total Zinc (Zn)	2012/01/16	4.1		%	20
		Total Zirconium (Zr)	2012/01/16	NC		%	20
2737377 BAV	Matrix Spike [ME9938-01]	Nitrite (N)	2012/01/17		102	%	75 - 125
		Nitrate (N)	2012/01/17		107	%	80 - 120
	Spiked Blank	Nitrite (N)	2012/01/17		98	%	75 - 125
		Nitrate (N)	2012/01/17		104	%	85 - 115
	Method Blank	Nitrite (N)	2012/01/17	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/01/17	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/01/17	0.6 U, MDL=0.6		ug/g	
	RPD [ME9938-01]	Nitrite (N)	2012/01/17	NC		%	25
		Nitrate (N)	2012/01/17	NC		%	25
		Nitrate + Nitrite	2012/01/17	NC		%	25
2737751 SUK	Matrix Spike	Acid Extractable Phosphorus (P)	2012/01/16		NC	%	75 - 125
	QC Standard	Acid Extractable Phosphorus (P)	2012/01/16		101	%	75 - 125
	Method Blank	Acid Extractable Phosphorus (P)	2012/01/16	<20		ug/g	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: B204400

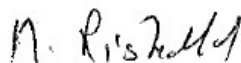
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



EWA PRANJIC, M.Sc., C.Chem, Scientific Specialist



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA
Your C.O.C. #: na

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/31

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B211501

Received: 2012/01/25, 09:30

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	4	2012/01/30	2012/01/30	CAM SOP-00316	CCME CWS
Moisture	4	N/A	2012/01/28	CAM SOP-00445	R.Carter,1993

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

../2

Your Project #: EBA
Your C.O.C. #: na

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/01/31

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B211501
Report Date: 2012/01/31

SiREM - Site Recovery & Management
Client Project #: EBA

Sampler Initials: RS

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MI5238	MI5238	MI5239	MI5240	MI5241		
Sampling Date		2012/01/24 11:30	2012/01/24 11:30	2012/01/24 11:30	2012/01/24 11:30	2012/01/24 11:30		
COC Number		na	na	na	na	na		
	Units	EBA-240112-5A	EBA-240112-5A Lab-Dup	EBA-240112-6A	EBA-240112-7A	EBA-240112-8A	RDL	QC Batch

Inorganics								
Moisture	%	12	12	11	10	1.2	1.0	2749469

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B211501
Report Date: 2012/01/31

SiREM - Site Recovery & Management
Client Project #: EBA

Sampler Initials: RS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MI5238	MI5239	MI5240	MI5241		
Sampling Date		2012/01/24 11:30	2012/01/24 11:30	2012/01/24 11:30	2012/01/24 11:30		
COC Number		na	na	na	na		
	Units	EBA-240112-5A	EBA-240112-6A	EBA-240112-7A	EBA-240112-8A	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	560	560	570	480	10	2749849
F3 (C16-C34 Hydrocarbons)	ug/g	290	280	320	380	10	2749849
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2.0 U	10	2749849
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2749849
Surrogate Recovery (%)							
o-Terphenyl	%	88	94	89	95		2749849

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B211501
Report Date: 2012/01/31

SiREM - Site Recovery & Management
Client Project #: EBA

Sampler Initials: RS

Test Summary

Maxxam ID MI5238
Sample ID EBA-240112-5A
Matrix Soil

Collected 2012/01/24
Shipped
Received 2012/01/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2749849	2012/01/30	2012/01/30	ZHIYUE (FRANK) ZHU
Moisture	BAL	2749469	N/A	2012/01/28	MIN YANG

Maxxam ID MI5238 Dup
Sample ID EBA-240112-5A
Matrix Soil

Collected 2012/01/24
Shipped
Received 2012/01/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	2749469	N/A	2012/01/28	MIN YANG

Maxxam ID MI5239
Sample ID EBA-240112-6A
Matrix Soil

Collected 2012/01/24
Shipped
Received 2012/01/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2749849	2012/01/30	2012/01/30	ZHIYUE (FRANK) ZHU
Moisture	BAL	2749469	N/A	2012/01/28	MIN YANG

Maxxam ID MI5240
Sample ID EBA-240112-7A
Matrix Soil

Collected 2012/01/24
Shipped
Received 2012/01/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2749849	2012/01/30	2012/01/30	ZHIYUE (FRANK) ZHU
Moisture	BAL	2749469	N/A	2012/01/28	MIN YANG

Maxxam ID MI5241
Sample ID EBA-240112-8A
Matrix Soil

Collected 2012/01/24
Shipped
Received 2012/01/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2749849	2012/01/30	2012/01/30	ZHIYUE (FRANK) ZHU
Moisture	BAL	2749469	N/A	2012/01/28	MIN YANG

Maxxam Job #: B211501
Report Date: 2012/01/31

SiREM - Site Recovery & Management
Client Project #: EBA

Sampler Initials: RS

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA
P.O. #:
Site Location:

Quality Assurance Report
Maxxam Job Number: MB211501

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2749469 LKA	RPD [MI5238-01]	Moisture	2012/01/28	0.8		%	20
2749849 ZZ	Matrix Spike	o-Terphenyl	2012/01/30		88	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/30		97	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/01/30		101	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/01/30		96	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/01/30		85	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/30		96	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/01/30		102	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/01/30		96	%	70 - 130
	Method Blank	o-Terphenyl	2012/01/30		91	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/01/30	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/01/30	2.6 J, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/01/30	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/01/30	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/01/30	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/01/30	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

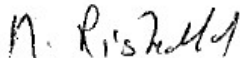
Validation Signature Page

Maxxam Job #: B211501

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA #2
Your C.O.C. #: 2157

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/02/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B220254

Received: 2012/02/10, 10:45

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	7	2012/02/15	2012/02/16	CAM SOP-00316	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	1	2012/02/15	2012/02/17	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	8	2012/02/16	2012/02/16	CAM SOP-00408	SW-846 6010C
Moisture	8	N/A	2012/02/16	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	8	N/A	2012/02/16	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	8	2012/02/17	2012/02/17	CAM SOP-00413	SM 4500H+ B

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

../2

Your Project #: EBA #2
Your C.O.C. #: 2157

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/02/22

CERTIFICATE OF ANALYSIS

-2-

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MM7924		MM7925	MM7926	MM7926		
Sampling Date		2012/02/07 02:45		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157		2157	2157	2157		
	Units	EBA2-070212-1B	QC Batch	EBA2-070212-2B	EBA2-070212-3B	EBA2-070212-3B Lab-Dup	RDL	QC Batch

Inorganics								
Moisture	%	6.5	2766107	5.8	12		1.0	2766060
Available (CaCl2) pH	pH	7.68	2767255	7.63	7.70	7.75		2767255
Nitrite (N)	ug/g	0.1 U	2766049	0.2 J	0.2 J	0.2 J	0.5	2766049
Nitrate (N)	ug/g	0.4 U	2766049	0.4 U	0.4 U	0.4 U	2	2766049
Nitrate + Nitrite	ug/g	0.6 U	2766049	0.6 U	0.6 U	0.6 U	3	2766049
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam ID		MM7927		MM7928	MM7929	MM7930		
Sampling Date		2012/02/07 02:45		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157		2157	2157	2157		
	Units	EBA2-070212-4B	QC Batch	EBA2-070212-5B	EBA2-070212-6B	EBA2-070212-7B	RDL	QC Batch

Inorganics								
Moisture	%	12	2766060	10	2.4	4.8	1.0	2766107
Available (CaCl2) pH	pH	7.60	2767255	7.26	7.29	7.57		2767255
Nitrite (N)	ug/g	0.1 U	2766049	0.1 U	0.1 U	0.1 U	0.5	2766049
Nitrate (N)	ug/g	0.4 U	2766049	0.4 U	0.4 U	0.4 U	2	2766049
Nitrate + Nitrite	ug/g	0.6 U	2766049	0.6 U	0.6 U	0.6 U	3	2766049
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MM7931		
Sampling Date		2012/02/07 02:45		
COC Number		2157		
	Units	EBA2-070212-8B	RDL	QC Batch

Inorganics				
Moisture	%	13	1.0	2766107
Available (CaCl2) pH	pH	7.45		2767255
Nitrite (N)	ug/g	0.1 U	0.5	2766049
Nitrate (N)	ug/g	0.4 U	2	2766049
Nitrate + Nitrite	ug/g	0.6 U	3	2766049
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		MM7924	MM7925	MM7926	MM7927		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-1B	EBA2-070212-2B	EBA2-070212-3B	EBA2-070212-4B	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	260	320	180	220	20	2766162
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam ID		MM7928	MM7929	MM7930	MM7931		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-5B	EBA2-070212-6B	EBA2-070212-7B	EBA2-070212-8B	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	910	770	150	320	20	2766162
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MM7924	MM7925	MM7926	MM7927		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-1B	EBA2-070212-2B	EBA2-070212-3B	EBA2-070212-4B	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	680	840	400	410	10	2765120
F3 (C16-C34 Hydrocarbons)	ug/g	370	430	310	360	10	2765120
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	10	10	2765120
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2765120
Surrogate Recovery (%)							
o-Terphenyl	%	117	113	111	113		2765120

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		MM7928	MM7929	MM7930	MM7931		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-5B	EBA2-070212-6B	EBA2-070212-7B	EBA2-070212-8B	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	300	280	460	340	10	2765120
F3 (C16-C34 Hydrocarbons)	ug/g	240	280	370	240	10	2765120
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2.0 U	10	2765120
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2765120
Surrogate Recovery (%)							
o-Terphenyl	%	110	117	112	89		2765120

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MM7924
Sample ID EBA2-070212-1B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7925
Sample ID EBA2-070212-2B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2766060	N/A	2012/02/16	ANITA CHEEMA
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7926
Sample ID EBA2-070212-3B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2766060	N/A	2012/02/16	ANITA CHEEMA
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7926 Dup
Sample ID EBA2-070212-3B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7927
Sample ID EBA2-070212-4B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPLLAI
Moisture	BAL	2766060	N/A	2012/02/16	ANITA CHEEMA
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MM7928
Sample ID EBA2-070212-5B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7929
Sample ID EBA2-070212-6B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7930
Sample ID EBA2-070212-7B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam ID MM7931
Sample ID EBA2-070212-8B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/17	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam Job #: B220254
Report Date: 2012/02/22

SiREM - Site Recovery & Management
Client Project #: EBA #2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report

Maxxam Job Number: MB220254

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2765120 JKA	Matrix Spike	o-Terphenyl	2012/02/16		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/02/16		101	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/02/16		104	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/02/16		99	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/02/16		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/02/16		100	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/02/16		106	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/02/16		105	%	70 - 130
	Method Blank	o-Terphenyl	2012/02/16		111	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/02/16	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/02/16	2.0 U, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/02/16	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/02/16	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/02/16	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/02/16	NC		%	30
2766049 BAV	Matrix Spike [MM7926-01]	Nitrite (N)	2012/02/16		102	%	75 - 125
		Nitrate (N)	2012/02/16		106	%	75 - 125
	Spiked Blank	Nitrite (N)	2012/02/16		99	%	75 - 125
		Nitrate (N)	2012/02/16		102	%	75 - 125
		Nitrate + Nitrite	2012/02/16		101	%	75 - 125
	Method Blank	Nitrite (N)	2012/02/16	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/02/16	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/02/16	0.6 U, MDL=0.6		ug/g	
	RPD [MM7926-01]	Nitrite (N)	2012/02/16	NC		%	25
		Nitrate (N)	2012/02/16	NC		%	25
		Nitrate + Nitrite	2012/02/16	NC		%	25
2766060 PHM	RPD	Moisture	2012/02/16	5.5		%	20
2766107 PHM	RPD	Moisture	2012/02/16	8.2		%	20
2766162 SUK	Matrix Spike	Acid Extractable Phosphorus (P)	2012/02/16		99	%	75 - 125
	Spiked Blank	Acid Extractable Phosphorus (P)	2012/02/16		96	%	80 - 120
	Method Blank	Acid Extractable Phosphorus (P)	2012/02/16	<20		ug/g	
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.							

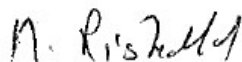
Validation Signature Page

Maxxam Job #: B220254

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA #2
Your C.O.C. #: 2157

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/02/24

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B220254

Received: 2012/02/10, 10:45

Sample Matrix: Soil
Samples Received: 8

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Petroleum Hydrocarbons F2-F4 in Soil	7	2012/02/15	2012/02/16	CAM SOP-00316	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	1	2012/02/15	2012/02/17	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	8	2012/02/16	2012/02/16	CAM SOP-00408	SW-846 6010C
Moisture	8	N/A	2012/02/16	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	8	N/A	2012/02/16	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	8	2012/02/17	2012/02/17	CAM SOP-00413	SM 4500H+ B
Total Kjeldahl Nitrogen - Soil	8	2012/02/24	2012/02/24	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

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../2

Your Project #: EBA #2
Your C.O.C. #: 2157

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/02/24

CERTIFICATE OF ANALYSIS

-2-

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MM7924	MM7924		MM7925	MM7926		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45		2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157		2157	2157		
	Units	EBA2-070212-1B	EBA2-070212-1B Lab-Dup	QC Batch	EBA2-070212-2B	EBA2-070212-3B	RDL	QC Batch

Inorganics								
Moisture	%	6.5		2766107	5.8	12	1.0	2766060
Available (CaCl2) pH	pH	7.68		2767255	7.63	7.70		2767255
Total Kjeldahl Nitrogen	ug/g	242	242	2772583	281	292	10	2772583
Nitrite (N)	ug/g	0.1 U		2766049	0.2 J	0.2 J	0.5	2766049
Nitrate (N)	ug/g	0.4 U		2766049	0.4 U	0.4 U	2	2766049
Nitrate + Nitrite	ug/g	0.6 U		2766049	0.6 U	0.6 U	3	2766049

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		MM7926	MM7927		MM7928	MM7929		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45		2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157		2157	2157		
	Units	EBA2-070212-3B Lab-Dup	EBA2-070212-4B	QC Batch	EBA2-070212-5B	EBA2-070212-6B	RDL	QC Batch

Inorganics								
Moisture	%		12	2766060	10	2.4	1.0	2766107
Available (CaCl2) pH	pH	7.75	7.60	2767255	7.26	7.29		2767255
Total Kjeldahl Nitrogen	ug/g		247	2772583	470	485	10	2772583
Nitrite (N)	ug/g	0.2 J	0.1 U	2766049	0.1 U	0.1 U	0.5	2766049
Nitrate (N)	ug/g	0.4 U	0.4 U	2766049	0.4 U	0.4 U	2	2766049
Nitrate + Nitrite	ug/g	0.6 U	0.6 U	2766049	0.6 U	0.6 U	3	2766049

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MM7930	MM7931		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157		
	Units	EBA2-070212-7B	EBA2-070212-8B	RDL	QC Batch

Inorganics					
Moisture	%	4.8	13	1.0	2766107
Available (CaCl2) pH	pH	7.57	7.45		2767255
Total Kjeldahl Nitrogen	ug/g	256	216	10	2772583
Nitrite (N)	ug/g	0.1 U	0.1 U	0.5	2766049
Nitrate (N)	ug/g	0.4 U	0.4 U	2	2766049
Nitrate + Nitrite	ug/g	0.6 U	0.6 U	3	2766049

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		MM7924	MM7925	MM7926	MM7927		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-1B	EBA2-070212-2B	EBA2-070212-3B	EBA2-070212-4B	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	260	320	180	220	20	2766162
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam ID		MM7928	MM7929	MM7930	MM7931		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-5B	EBA2-070212-6B	EBA2-070212-7B	EBA2-070212-8B	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	910	770	150	320	20	2766162
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MM7924	MM7925	MM7926	MM7927		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-1B	EBA2-070212-2B	EBA2-070212-3B	EBA2-070212-4B	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	680	840	400	410	10	2765120
F3 (C16-C34 Hydrocarbons)	ug/g	370	430	310	360	10	2765120
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	10	10	2765120
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2765120
Surrogate Recovery (%)							
o-Terphenyl	%	117	113	111	113		2765120

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		MM7928	MM7929	MM7930	MM7931		
Sampling Date		2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45	2012/02/07 02:45		
COC Number		2157	2157	2157	2157		
	Units	EBA2-070212-5B	EBA2-070212-6B	EBA2-070212-7B	EBA2-070212-8B	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	300	280	460	340	10	2765120
F3 (C16-C34 Hydrocarbons)	ug/g	240	280	370	240	10	2765120
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2.0 U	10	2765120
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2765120
Surrogate Recovery (%)							
o-Terphenyl	%	110	117	112	89		2765120

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MM7924
Sample ID EBA2-070212-1B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7924 Dup
Sample ID EBA2-070212-1B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7925
Sample ID EBA2-070212-2B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLAI
Moisture	BAL	2766060	N/A	2012/02/16	ANITA CHEEMA
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7926
Sample ID EBA2-070212-3B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLAI
Moisture	BAL	2766060	N/A	2012/02/16	ANITA CHEEMA
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7926 Dup
Sample ID EBA2-070212-3B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MM7927
Sample ID EBA2-070212-4B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766060	N/A	2012/02/16	ANITA CHEEMA
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7928
Sample ID EBA2-070212-5B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7929
Sample ID EBA2-070212-6B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam ID MM7930
Sample ID EBA2-070212-7B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/16	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MM7931
Sample ID EBA2-070212-8B
Matrix Soil

Collected 2012/02/07
Shipped
Received 2012/02/10

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2765120	2012/02/15	2012/02/17	JOLANTA KAWZOWICZ
Total Metals Analysis by ICP	ICP	2766162	2012/02/16	2012/02/16	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2766107	N/A	2012/02/16	LAKHVIR KALER
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2766049	N/A	2012/02/16	BAVANI KAILAYA
pH CaCl2 EXTRACT		2767255	2012/02/17	2012/02/17	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2772583	2012/02/24	2012/02/24	CHANDRA NANDLAL

Maxxam Job #: B220254
Report Date: 2012/02/24

SiREM - Site Recovery & Management
Client Project #: EBA #2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report

Maxxam Job Number: MB220254

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2765120 JKA	Matrix Spike	o-Terphenyl	2012/02/16		105	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/02/16		101	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/02/16		104	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/02/16		99	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/02/16		104	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/02/16		100	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/02/16		106	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/02/16		105	%	70 - 130
	Method Blank	o-Terphenyl	2012/02/16		111	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/02/16	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/02/16	2.0 U, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/02/16	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/02/16	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/02/16	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/02/16	NC		%	30
2766049 BAV	Matrix Spike						
	[MM7926-01]	Nitrite (N)	2012/02/16		102	%	75 - 125
		Nitrate (N)	2012/02/16		106	%	75 - 125
	Spiked Blank	Nitrite (N)	2012/02/16		99	%	75 - 125
		Nitrate (N)	2012/02/16		102	%	75 - 125
		Nitrate + Nitrite	2012/02/16		101	%	75 - 125
	Method Blank	Nitrite (N)	2012/02/16	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/02/16	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/02/16	0.6 U, MDL=0.6		ug/g	
	RPD [MM7926-01]	Nitrite (N)	2012/02/16	NC		%	25
		Nitrate (N)	2012/02/16	NC		%	25
		Nitrate + Nitrite	2012/02/16	NC		%	25
2766060 PHM	RPD	Moisture	2012/02/16	5.5		%	20
2766107 PHM	RPD	Moisture	2012/02/16	8.2		%	20
2766162 SUK	Matrix Spike	Acid Extractable Phosphorus (P)	2012/02/16		99	%	75 - 125
	Spiked Blank	Acid Extractable Phosphorus (P)	2012/02/16		96	%	80 - 120
	Method Blank	Acid Extractable Phosphorus (P)	2012/02/16	<20		ug/g	
2772583 C_N	Matrix Spike						
	[MM7924-01]	Total Kjeldahl Nitrogen	2012/02/24		93	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2012/02/24		94	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/02/24	3 U, MDL=3		ug/g	
	RPD [MM7924-01]	Total Kjeldahl Nitrogen	2012/02/24	0.2		%	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

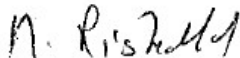
Validation Signature Page

Maxxam Job #: B220254

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA#2

Your C.O.C. #: na

Attention: Ximena Druar

SiREM - Site Recovery & Management

130 Research Lane

Suite 2

Guelph, ON

CANADA N1G 5G3

Report Date: 2012/03/15
CERTIFICATE OF ANALYSIS
MAXXAM JOB #: B233267
Received: 2012/03/08, 10:39

Sample Matrix: Soil

Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	4	2012/03/13	2012/03/14	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	4	2012/03/14	2012/03/14	CAM SOP-00408	SW-846 6010C
Moisture	4	N/A	2012/03/13	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	4	N/A	2012/03/14	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	4	2012/03/14	2012/03/14	CAM SOP-00413	SM 4500H+ B
Total Kjeldahl Nitrogen - Soil	4	2012/03/13	2012/03/14	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

../2

Your Project #: EBA#2
Your C.O.C. #: na

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/03/15

CERTIFICATE OF ANALYSIS

-2-

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B233267
Report Date: 2012/03/15

SiREM - Site Recovery & Management
Client Project #: EBA#2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MT2416	MT2416	MT2417	MT2418	MT2418		
Sampling Date		2012/03/07	2012/03/07	2012/03/07	2012/03/07	2012/03/07		
COC Number		na	na	na	na	na		
	Units	EBA2-070312-5C	EBA2-070312-5C Lab-Dup	EBA2-070312-6C	EBA2-070312-7C	EBA2-070312-7C Lab-Dup	RDL	QC Batch

Inorganics								
Moisture	%	2.3	2.1	5.4	15		1.0	2788613
Available (CaCl2) pH	pH	7.21		7.19	7.20			2789040
Total Kjeldahl Nitrogen	ug/g	463		404	341	363	10	2788627
Nitrite (N)	ug/g	0.1 U		0.1 U	0.6		0.5	2789128
Nitrate (N)	ug/g	0.4 U		0.4 U	0.4 U		2	2789128
Nitrate + Nitrite	ug/g	0.6 U		0.6 U	0.8 J		3	2789128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		MT2419		
Sampling Date		2012/03/07		
COC Number		na		
	Units	EBA2-070312-8C	RDL	QC Batch

Inorganics				
Moisture	%	15	1.0	2788613
Available (CaCl2) pH	pH	7.24		2789040
Total Kjeldahl Nitrogen	ug/g	451	10	2788627
Nitrite (N)	ug/g	0.6	0.5	2789128
Nitrate (N)	ug/g	0.4 U	2	2789128
Nitrate + Nitrite	ug/g	0.8 J	3	2789128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B233267
Report Date: 2012/03/15

SiREM - Site Recovery & Management
Client Project #: EBA#2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		MT2416	MT2417	MT2418	MT2419		
Sampling Date		2012/03/07	2012/03/07	2012/03/07	2012/03/07		
COC Number		na	na	na	na		
	Units	EBA2-070312-5C	EBA2-070312-6C	EBA2-070312-7C	EBA2-070312-8C	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	590	710	720	570	20	2789053

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B233267
Report Date: 2012/03/15

SiREM - Site Recovery & Management
Client Project #: EBA#2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MT2416	MT2417	MT2418	MT2419		
Sampling Date		2012/03/07	2012/03/07	2012/03/07	2012/03/07		
COC Number		na	na	na	na		
	Units	EBA2-070312-5C	EBA2-070312-6C	EBA2-070312-7C	EBA2-070312-8C	RDL	QC Batch
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	200	230	180	130	10	2787907
F3 (C16-C34 Hydrocarbons)	ug/g	180	170	160	210	10	2787907
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2.0 U	10	2787907
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2787907
Surrogate Recovery (%)							
o-Terphenyl	%	114	117	110	112		2787907
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B233267
Report Date: 2012/03/15

SiREM - Site Recovery & Management
Client Project #: EBA#2

Test Summary

Maxxam ID MT2416
Sample ID EBA2-070312-5C
Matrix Soil

Collected 2012/03/07
Shipped
Received 2012/03/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2787907	2012/03/13	2012/03/14	BARBARA WOWK
Total Metals Analysis by ICP	ICP	2789053	2012/03/14	2012/03/14	SUBAN KANAPATHIPPLAI
Moisture	BAL	2788613	N/A	2012/03/13	PHILIP MAST
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2789128	N/A	2012/03/14	BAVANI KAILAYA
pH CaCl2 EXTRACT		2789040	2012/03/14	2012/03/14	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2788627	2012/03/13	2012/03/14	CHANDRA NANDLAL

Maxxam ID MT2416 Dup
Sample ID EBA2-070312-5C
Matrix Soil

Collected 2012/03/07
Shipped
Received 2012/03/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	2788613	N/A	2012/03/13	PHILIP MAST

Maxxam ID MT2417
Sample ID EBA2-070312-6C
Matrix Soil

Collected 2012/03/07
Shipped
Received 2012/03/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2787907	2012/03/13	2012/03/14	BARBARA WOWK
Total Metals Analysis by ICP	ICP	2789053	2012/03/14	2012/03/14	SUBAN KANAPATHIPPLAI
Moisture	BAL	2788613	N/A	2012/03/13	PHILIP MAST
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2789128	N/A	2012/03/14	BAVANI KAILAYA
pH CaCl2 EXTRACT		2789040	2012/03/14	2012/03/14	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2788627	2012/03/13	2012/03/14	CHANDRA NANDLAL

Maxxam ID MT2418
Sample ID EBA2-070312-7C
Matrix Soil

Collected 2012/03/07
Shipped
Received 2012/03/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2787907	2012/03/13	2012/03/14	BARBARA WOWK
Total Metals Analysis by ICP	ICP	2789053	2012/03/14	2012/03/14	SUBAN KANAPATHIPPLAI
Moisture	BAL	2788613	N/A	2012/03/13	PHILIP MAST
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2789128	N/A	2012/03/14	BAVANI KAILAYA
pH CaCl2 EXTRACT		2789040	2012/03/14	2012/03/14	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2788627	2012/03/13	2012/03/14	CHANDRA NANDLAL

Maxxam ID MT2418 Dup
Sample ID EBA2-070312-7C
Matrix Soil

Collected 2012/03/07
Shipped
Received 2012/03/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Kjeldahl Nitrogen - Soil	AC	2788627	2012/03/13	2012/03/14	CHANDRA NANDLAL

Maxxam Job #: B233267
Report Date: 2012/03/15

SiREM - Site Recovery & Management
Client Project #: EBA#2

Test Summary

Maxxam ID MT2419
Sample ID EBA2-070312-8C
Matrix Soil

Collected 2012/03/07
Shipped
Received 2012/03/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2787907	2012/03/13	2012/03/14	BARBARA WOWK
Total Metals Analysis by ICP	ICP	2789053	2012/03/14	2012/03/14	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2788613	N/A	2012/03/13	PHILIP MAST
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2789128	N/A	2012/03/14	BAVANI KAILAYA
pH CaCl2 EXTRACT		2789040	2012/03/14	2012/03/14	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2788627	2012/03/13	2012/03/14	CHANDRA NANDLAL

Maxxam Job #: B233267
Report Date: 2012/03/15

SiREM - Site Recovery & Management
Client Project #: EBA#2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA#2
P.O. #:
Site Location:

Quality Assurance Report
Maxxam Job Number: MB233267

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2787907 BWW	Matrix Spike	o-Terphenyl	2012/03/14		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/03/14		85	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/03/14		91	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/03/14		93	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/03/13		108	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/03/13		95	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/03/13		105	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/03/13		104	%	70 - 130
	Method Blank	o-Terphenyl	2012/03/13		124	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/03/13	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/03/13	2.0 U, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/03/13	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/03/14	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/03/14	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/03/14	NC		%	30
2788613 DEE	RPD [MT2416-01]	Moisture	2012/03/13	NC		%	20
2788627 C_N	Matrix Spike						
	[MT2418-01]	Total Kjeldahl Nitrogen	2012/03/14		NC	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2012/03/14		89	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/03/14	3 U, MDL=3		ug/g	
	RPD [MT2418-01]	Total Kjeldahl Nitrogen	2012/03/14	6.3		%	40
2789053 SUK	Spiked Blank	Acid Extractable Phosphorus (P)	2012/03/14		119	%	80 - 120
	Method Blank	Acid Extractable Phosphorus (P)	2012/03/14	<20		ug/g	
2789128 BAV	Matrix Spike	Nitrite (N)	2012/03/14		128 (1)	%	75 - 125
		Nitrate (N)	2012/03/14		96	%	75 - 125
	Spiked Blank	Nitrite (N)	2012/03/14		99	%	75 - 125
		Nitrate (N)	2012/03/14		102	%	75 - 125
		Nitrate + Nitrite	2012/03/14		102	%	75 - 125
	Method Blank	Nitrite (N)	2012/03/14	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/03/14	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/03/14	0.6 U, MDL=0.6		ug/g	
	RPD	Nitrite (N)	2012/03/14	NC		%	25
		Nitrate (N)	2012/03/14	NC		%	25
		Nitrate + Nitrite	2012/03/14	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

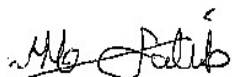
Validation Signature Page

Maxxam Job #: B233267

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



MAMDOUH SALIB, Analyst, Hydrocarbons

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA #2
Your C.O.C. #: 2203

Attention: TWYLA GILBERT

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/04/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B247079

Received: 2012/04/04, 10:05

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	4	2012/04/07	2012/04/07	CAM SOP-00316	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	2	2012/04/07	2012/04/08	CAM SOP-00316	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	2	2012/04/10	2012/04/11	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	4	2012/04/11	2012/04/11	CAM SOP-00408	SW-846 6010C
Moisture	1	N/A	2012/04/09	CAM SOP-00445	R.Carter,1993
Moisture	7	N/A	2012/04/10	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	4	N/A	2012/04/11	CAM SOP-00440	SM 4500 NO3I/NO2B
pH CaCl2 EXTRACT	8	2012/04/10	2012/04/10	CAM SOP-00413	SM 4500H+ B
Total Kjeldahl Nitrogen - Soil	2	2012/04/09	2012/04/10	CAM SOP-00454	EPA 351.2 Rev 2
Total Kjeldahl Nitrogen - Soil	2	2012/04/12	2012/04/12	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other

Your Project #: EBA #2
Your C.O.C. #: 2203

Attention: TWYLA GILBERT

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/04/12

CERTIFICATE OF ANALYSIS

-2-

warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Page 2 of 13

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MZ9451		MZ9452	MZ9452	MZ9453		
Sampling Date		2012/04/03		2012/04/03	2012/04/03	2012/04/03		
		13:30		13:30	13:30	13:30		
COC Number		2203		2203	2203	2203		
	Units	EBA2-030412-1D	QC Batch	EBA2-030412-2D	EBA2-030412-2D Lab-Dup	EBA2-030412-3D	RDL	QC Batch

Inorganics								
Moisture	%	6.9	2814474	5.0		14	1.0	2814474
Available (CaCl ₂) pH	pH	7.54	2814286	7.60	7.57	7.54		2814548
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam ID		MZ9454	MZ9454		MZ9455	MZ9455		
Sampling Date		2012/04/03	2012/04/03		2012/04/03	2012/04/03		
		13:30	13:30		13:30	13:30		
COC Number		2203	2203		2203	2203		
	Units	EBA2-030412-4D	EBA2-030412-4D Lab-Dup	QC Batch	EBA2-030412-5D	EBA2-030412-5D Lab-Dup	RDL	QC Batch

Inorganics								
Moisture	%	9.2	8.6	2813180	12		1.0	2814474
Available (CaCl ₂) pH	pH	7.81		2814548	7.24			2814548
Total Kjeldahl Nitrogen	ug/g				504		10	2813829
Nitrite (N)	ug/g				0.1 U	0.1 U	0.5	2815586
Nitrate (N)	ug/g				0.4 U	0.4 U	2	2815586
Nitrate + Nitrite	ug/g				0.6 U	0.6 U	3	2815586
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		MZ9456		MZ9457	MZ9458		
Sampling Date		2012/04/03 13:30		2012/04/03 13:30	2012/04/03 13:30		
COC Number		2203		2203	2203		
	Units	EBA2-030412-6D	QC Batch	EBA2-030412-7D	EBA2-030412-8D	RDL	QC Batch

Inorganics							
Moisture	%	11	2814474	7.4	6.9	1.0	2815181
Available (CaCl ₂) pH	pH	7.27	2814548	7.36	7.39		2814286
Total Kjeldahl Nitrogen	ug/g	395	2813829	313	418	10	2816677
Nitrite (N)	ug/g	0.1 U	2815586	0.3 J	0.3 J	0.5	2815586
Nitrate (N)	ug/g	0.4 U	2815586	13	22	2	2815586
Nitrate + Nitrite	ug/g	0.6 U	2815586	13	22	3	2815586

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		MZ9455	MZ9456	MZ9457	MZ9458		
Sampling Date		2012/04/03	2012/04/03	2012/04/03	2012/04/03		
		13:30	13:30	13:30	13:30		
COC Number		2203	2203	2203	2203		
	Units	EBA2-030412-5D	EBA2-030412-6D	EBA2-030412-7D	EBA2-030412-8D	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	760	890	490	410	20	2815444

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MZ9451	MZ9452	MZ9453	MZ9454		
Sampling Date		2012/04/03 13:30	2012/04/03 13:30	2012/04/03 13:30	2012/04/03 13:30		
COC Number		2203	2203	2203	2203		
	Units	EBA2-030412-1D	EBA2-030412-2D	EBA2-030412-3D	EBA2-030412-4D	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	310	310	150	180	10	2812697
F3 (C16-C34 Hydrocarbons)	ug/g	250	240	140	200	10	2812697
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2.0 U	10	2812697
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2812697
Surrogate Recovery (%)							
o-Terphenyl	%	94	92	95	94		2812697

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		MZ9454	MZ9455	MZ9456		MZ9457		
Sampling Date		2012/04/03 13:30	2012/04/03 13:30	2012/04/03 13:30		2012/04/03 13:30		
COC Number		2203	2203	2203		2203		
	Units	EBA2-030412-4D	EBA2-030412-5D	EBA2-030412-6D	QC Batch	EBA2-030412-7D	RDL	QC Batch

F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	170	83	65	2812697	120	10	2815236
F3 (C16-C34 Hydrocarbons)	ug/g	200	150	110	2812697	180	10	2815236
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2812697	2.0 U	10	2815236
Reached Baseline at C50	ug/g	Yes	Yes	Yes	2812697	Yes		2815236
Surrogate Recovery (%)								
o-Terphenyl	%	97	93	93	2812697	94		2815236

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		MZ9458		
Sampling Date		2012/04/03 13:30		
COC Number		2203		
	Units	EBA2-030412-8D	RDL	QC Batch

F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	80	10	2815236
F3 (C16-C34 Hydrocarbons)	ug/g	170	10	2815236
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	10	2815236
Reached Baseline at C50	ug/g	Yes		2815236
Surrogate Recovery (%)				
o-Terphenyl	%	93		2815236

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MZ9451
Sample ID EBA2-030412-1D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/07	NICOLETA CIUBLEA
Moisture	BAL	2814474	N/A	2012/04/10	MIN YANG
pH CaCl2 EXTRACT		2814286	2012/04/10	2012/04/10	XUANHONG QIU

Maxxam ID MZ9452
Sample ID EBA2-030412-2D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/07	NICOLETA CIUBLEA
Moisture	BAL	2814474	N/A	2012/04/10	MIN YANG
pH CaCl2 EXTRACT		2814548	2012/04/10	2012/04/10	XUANHONG QIU

Maxxam ID MZ9452 Dup
Sample ID EBA2-030412-2D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
pH CaCl2 EXTRACT		2814548	2012/04/10	2012/04/10	XUANHONG QIU

Maxxam ID MZ9453
Sample ID EBA2-030412-3D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/07	NICOLETA CIUBLEA
Moisture	BAL	2814474	N/A	2012/04/10	MIN YANG
pH CaCl2 EXTRACT		2814548	2012/04/10	2012/04/10	XUANHONG QIU

Maxxam ID MZ9454
Sample ID EBA2-030412-4D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/07	NICOLETA CIUBLEA
Moisture	BAL	2813180	N/A	2012/04/09	MIN YANG
pH CaCl2 EXTRACT		2814548	2012/04/10	2012/04/10	XUANHONG QIU

Maxxam ID MZ9454 Dup
Sample ID EBA2-030412-4D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/07	NICOLETA CIUBLEA
Moisture	BAL	2813180	N/A	2012/04/09	MIN YANG

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID MZ9455
Sample ID EBA2-030412-5D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/08	NICOLETA CIUBLEA
Total Metals Analysis by ICP	ICP	2815444	2012/04/11	2012/04/11	SUBAN KANAPATHIPPLAI
Moisture	BAL	2814474	N/A	2012/04/10	MIN YANG
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2815586	N/A	2012/04/11	CHANDRA NANDLAL
pH CaCl2 EXTRACT		2814548	2012/04/10	2012/04/10	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2813829	2012/04/09	2012/04/10	CHANDRA NANDLAL

Maxxam ID MZ9455 Dup
Sample ID EBA2-030412-5D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2815586	N/A	2012/04/11	CHANDRA NANDLAL

Maxxam ID MZ9456
Sample ID EBA2-030412-6D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2812697	2012/04/07	2012/04/08	NICOLETA CIUBLEA
Total Metals Analysis by ICP	ICP	2815444	2012/04/11	2012/04/11	SUBAN KANAPATHIPPLAI
Moisture	BAL	2814474	N/A	2012/04/10	MIN YANG
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2815586	N/A	2012/04/11	CHANDRA NANDLAL
pH CaCl2 EXTRACT		2814548	2012/04/10	2012/04/10	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2813829	2012/04/09	2012/04/10	CHANDRA NANDLAL

Maxxam ID MZ9457
Sample ID EBA2-030412-7D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2815236	2012/04/10	2012/04/11	RAVINDER GAIDHU
Total Metals Analysis by ICP	ICP	2815444	2012/04/11	2012/04/11	SUBAN KANAPATHIPPLAI
Moisture	BAL	2815181	N/A	2012/04/10	PHILIP MAST
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2815586	N/A	2012/04/11	CHANDRA NANDLAL
pH CaCl2 EXTRACT		2814286	2012/04/10	2012/04/10	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2816677	2012/04/12	2012/04/12	CHANDRA NANDLAL

Maxxam ID MZ9458
Sample ID EBA2-030412-8D
Matrix Soil

Collected 2012/04/03
Shipped
Received 2012/04/04

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2815236	2012/04/10	2012/04/11	RAVINDER GAIDHU
Total Metals Analysis by ICP	ICP	2815444	2012/04/11	2012/04/11	SUBAN KANAPATHIPPLAI
Moisture	BAL	2815181	N/A	2012/04/10	PHILIP MAST
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2815586	N/A	2012/04/11	CHANDRA NANDLAL
pH CaCl2 EXTRACT		2814286	2012/04/10	2012/04/10	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2816677	2012/04/12	2012/04/12	CHANDRA NANDLAL

Maxxam Job #: B247079
Report Date: 2012/04/12

SiREM - Site Recovery & Management
Client Project #: EBA #2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: TWYLA GILBERT
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report
Maxxam Job Number: MB247079

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2812697 NCI	Matrix Spike [MZ9454-01]	o-Terphenyl	2012/04/07		90	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/04/07		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/04/07		89	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/04/07		91	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/04/07		90	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/04/07		89	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/04/07		89	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/04/07		91	%	70 - 130
	Method Blank	o-Terphenyl	2012/04/07		87	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/04/07	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/04/07	2.4 J, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/04/07	2.0 U, MDL=2.0		ug/g	
	RPD [MZ9454-01]	F2 (C10-C16 Hydrocarbons)	2012/04/07	4.3		%	30
		F3 (C16-C34 Hydrocarbons)	2012/04/07	3.9		%	30
		F4 (C34-C50 Hydrocarbons)	2012/04/07	NC		%	30
2813180 MYG	RPD [MZ9454-01]	Moisture	2012/04/09	6.7		%	20
2813829 C_N	Matrix Spike	Total Kjeldahl Nitrogen	2012/04/10		89	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2012/04/10		112	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/04/10	3 U, MDL=3		ug/g	
	RPD	Total Kjeldahl Nitrogen	2012/04/10	0.4		%	40
2814474 PHM	RPD	Moisture	2012/04/10	12.4		%	20
2815181 PHM	RPD	Moisture	2012/04/10	6.4		%	20
2815236 RGA	Matrix Spike	o-Terphenyl	2012/04/11		88	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/04/11		94	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/04/11		101	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/04/11		98	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/04/11		87	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/04/11		93	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/04/11		98	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/04/11		95	%	70 - 130
	Method Blank	o-Terphenyl	2012/04/11		92	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/04/11	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/04/11	3.2 J, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/04/11	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/04/11	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/04/11	11.7		%	30
		F4 (C34-C50 Hydrocarbons)	2012/04/11	NC		%	30
2815444 SUK	Matrix Spike	Acid Extractable Phosphorus (P)	2012/04/11		89	%	75 - 125
	Spiked Blank	Acid Extractable Phosphorus (P)	2012/04/11		100	%	80 - 120
	Method Blank	Acid Extractable Phosphorus (P)	2012/04/11	<20		ug/g	
2815586 C_N	Matrix Spike [MZ9455-01]	Nitrite (N)	2012/04/11		100	%	75 - 125
		Nitrate (N)	2012/04/11		101	%	75 - 125
		Nitrate + Nitrite	2012/04/11		101	%	75 - 125
	Spiked Blank	Nitrite (N)	2012/04/11		98	%	75 - 125
		Nitrate (N)	2012/04/11		100	%	75 - 125
		Nitrate + Nitrite	2012/04/11		99	%	75 - 125
	Method Blank	Nitrite (N)	2012/04/11	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/04/11	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/04/11	0.6 U, MDL=0.6		ug/g	
	RPD [MZ9455-01]	Nitrite (N)	2012/04/11	NC		%	25
		Nitrate (N)	2012/04/11	NC		%	25
		Nitrate + Nitrite	2012/04/11	NC		%	25
2816677 C_N	Matrix Spike	Total Kjeldahl Nitrogen	2012/04/05		110	%	75 - 125

SiREM - Site Recovery & Management
Attention: TWYLA GILBERT
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: MB247079

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2816677 C_N	QC Standard	Total Kjeldahl Nitrogen	2012/04/12		107	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/04/12	3 U, MDL=3		ug/g	
	RPD	Total Kjeldahl Nitrogen	2012/04/12	16.5		%	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

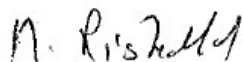
Validation Signature Page

Maxxam Job #: B247079

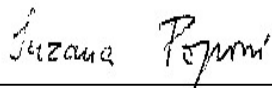
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



MEDHAT RISKALLAH, Manager, Hydrocarbon Department



SUZANA POPOVIC, Supervisor, Hydrocarbons

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA #2
Your C.O.C. #: 2240

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/05/11

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B262266

Received: 2012/05/02, 10:30

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	4	2012/05/07	2012/05/08	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	4	2012/05/08	2012/05/08	CAM SOP-00408	SW-846 6010C
Moisture	4	N/A	2012/05/07	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	4	N/A	2012/05/08	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	4	2012/05/08	2012/05/08	CAM SOP-00413	SM 4500H+ B
Total Kjeldahl Nitrogen - Soil	4	2012/05/08	2012/05/11	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

../2

Your Project #: EBA #2
Your C.O.C. #: 2240

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/05/11

CERTIFICATE OF ANALYSIS

-2-

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B262266
Report Date: 2012/05/11

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		NH6913	NH6913	NH6914		NH6915		
Sampling Date		2012/05/01 15:00	2012/05/01 15:00	2012/05/01 15:00		2012/05/01 15:00		
COC Number		2240	2240	2240		2240		
	Units	EBA2-010512-5E	EBA2-010512-5E Lab-Dup	EBA2-010512-6E	RDL	EBA2-010512-7E	RDL	QC Batch

Inorganics								
Moisture	%	13		10	1.0	16	1.0	2841308
Available (CaCl ₂) pH	pH	7.21	7.22	7.32		7.39		2841946
Total Kjeldahl Nitrogen	ug/g	319		326	10	590	20	2842361
Nitrite (N)	ug/g	0.1 U		0.1 U	0.5	0.1 U	0.5	2842088
Nitrate (N)	ug/g	0.4 U		0.4 U	2	18	2	2842088
Nitrate + Nitrite	ug/g	0.6 U		0.6 U	3	18	3	2842088

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		NH6916	NH6916		
Sampling Date		2012/05/01 15:00	2012/05/01 15:00		
COC Number		2240	2240		
	Units	EBA2-010512-8E	EBA2-010512-8E Lab-Dup	RDL	QC Batch

Inorganics					
Moisture	%	11		1.0	2841308
Available (CaCl ₂) pH	pH	7.28			2841946
Total Kjeldahl Nitrogen	ug/g	494		10	2842361
Nitrite (N)	ug/g	0.1 U	0.1 U	0.5	2842088
Nitrate (N)	ug/g	35	36	2	2842088
Nitrate + Nitrite	ug/g	35	36	3	2842088

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B262266
Report Date: 2012/05/11

SiREM - Site Recovery & Management
Client Project #: EBA #2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		NH6913	NH6914	NH6915	NH6916		
Sampling Date		2012/05/01	2012/05/01	2012/05/01	2012/05/01		
		15:00	15:00	15:00	15:00		
COC Number		2240	2240	2240	2240		
	Units	EBA2-010512-5E	EBA2-010512-6E	EBA2-010512-7E	EBA2-010512-8E	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	780	770	1600	1000	20	2842003

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B262266
Report Date: 2012/05/11

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		NH6913	NH6914	NH6915	NH6916		
Sampling Date		2012/05/01 15:00	2012/05/01 15:00	2012/05/01 15:00	2012/05/01 15:00		
COC Number		2240	2240	2240	2240		
	Units	EBA2-010512-5E	EBA2-010512-6E	EBA2-010512-7E	EBA2-010512-8E	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	57	84	100	120	10	2840945
F3 (C16-C34 Hydrocarbons)	ug/g	110	110	240	200	10	2840945
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	15	11	10	2840945
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2840945
Surrogate Recovery (%)							
o-Terphenyl	%	109	108	109	112		2840945

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B262266
Report Date: 2012/05/11

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID NH6913
Sample ID EBA2-010512-5E
Matrix Soil

Collected 2012/05/01
Shipped
Received 2012/05/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2840945	2012/05/07	2012/05/08	BILJANA LAZOVIC
Total Metals Analysis by ICP	ICP	2842003	2012/05/08	2012/05/08	SUBAN KANAPATHIPLLAI
Moisture	BAL	2841308	N/A	2012/05/07	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2842088	N/A	2012/05/08	CHRIS LI
pH CaCl2 EXTRACT		2841946	2012/05/08	2012/05/08	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2842361	2012/05/08	2012/05/11	CHANDRA NANDLAL

Maxxam ID NH6913 Dup
Sample ID EBA2-010512-5E
Matrix Soil

Collected 2012/05/01
Shipped
Received 2012/05/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
pH CaCl2 EXTRACT		2841946	2012/05/08	2012/05/08	XUANHONG QIU

Maxxam ID NH6914
Sample ID EBA2-010512-6E
Matrix Soil

Collected 2012/05/01
Shipped
Received 2012/05/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2840945	2012/05/07	2012/05/08	BILJANA LAZOVIC
Total Metals Analysis by ICP	ICP	2842003	2012/05/08	2012/05/08	SUBAN KANAPATHIPLLAI
Moisture	BAL	2841308	N/A	2012/05/07	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2842088	N/A	2012/05/08	CHRIS LI
pH CaCl2 EXTRACT		2841946	2012/05/08	2012/05/08	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2842361	2012/05/08	2012/05/11	CHANDRA NANDLAL

Maxxam ID NH6915
Sample ID EBA2-010512-7E
Matrix Soil

Collected 2012/05/01
Shipped
Received 2012/05/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2840945	2012/05/07	2012/05/08	BILJANA LAZOVIC
Total Metals Analysis by ICP	ICP	2842003	2012/05/08	2012/05/08	SUBAN KANAPATHIPLLAI
Moisture	BAL	2841308	N/A	2012/05/07	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2842088	N/A	2012/05/08	CHRIS LI
pH CaCl2 EXTRACT		2841946	2012/05/08	2012/05/08	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2842361	2012/05/08	2012/05/11	CHANDRA NANDLAL

Maxxam ID NH6916
Sample ID EBA2-010512-8E
Matrix Soil

Collected 2012/05/01
Shipped
Received 2012/05/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2840945	2012/05/07	2012/05/08	BILJANA LAZOVIC
Total Metals Analysis by ICP	ICP	2842003	2012/05/08	2012/05/08	SUBAN KANAPATHIPLLAI
Moisture	BAL	2841308	N/A	2012/05/07	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2842088	N/A	2012/05/08	CHRIS LI
pH CaCl2 EXTRACT		2841946	2012/05/08	2012/05/08	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2842361	2012/05/08	2012/05/11	CHANDRA NANDLAL

Maxxam Job #: B262266
Report Date: 2012/05/11

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID NH6916 Dup
Sample ID EBA2-010512-8E
Matrix Soil

Collected 2012/05/01
Shipped
Received 2012/05/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2842088	N/A	2012/05/08	CHRIS LI

Maxxam Job #: B262266
Report Date: 2012/05/11

SiREM - Site Recovery & Management
Client Project #: EBA #2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report

Maxxam Job Number: MB262266

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2840945 BLZ	Matrix Spike	o-Terphenyl	2012/05/08		100	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/05/08		89	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/05/08		111	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/05/08		100	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/05/08		102	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/05/08		88	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/05/08		113	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/05/08		99	%	70 - 130
	Method Blank	o-Terphenyl	2012/05/08		100	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/05/08	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/05/08	2.2 J, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/05/08	2.0 U, MDL=2.0		ug/g	
	RPD	F2 (C10-C16 Hydrocarbons)	2012/05/08	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/05/08	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/05/08	NC		%	30
2841308 LKA	RPD	Moisture	2012/05/07	0.8		%	20
2842003 SUK	Matrix Spike	Acid Extractable Phosphorus (P)	2012/05/08		NC	%	75 - 125
	Spiked Blank	Acid Extractable Phosphorus (P)	2012/05/08		109	%	80 - 120
	Method Blank	Acid Extractable Phosphorus (P)	2012/05/08	<20		ug/g	
2842088 C_H	Matrix Spike [NH6916-01]	Nitrite (N)	2012/05/08		99	%	75 - 125
		Nitrate (N)	2012/05/08		99	%	75 - 125
		Nitrate + Nitrite	2012/05/08		99	%	75 - 125
	Spiked Blank	Nitrite (N)	2012/05/08		98	%	75 - 125
		Nitrate (N)	2012/05/08		103	%	75 - 125
		Nitrate + Nitrite	2012/05/08		102	%	75 - 125
	Method Blank	Nitrite (N)	2012/05/08	0.1 U, MDL=0.1		ug/g	
		Nitrate (N)	2012/05/08	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/05/08	0.6 U, MDL=0.6		ug/g	
	RPD [NH6916-01]	Nitrite (N)	2012/05/08	NC		%	25
		Nitrate (N)	2012/05/08	2.6		%	25
		Nitrate + Nitrite	2012/05/08	2.5		%	25
2842361 C_N	Matrix Spike	Total Kjeldahl Nitrogen	2012/05/11		NC	%	75 - 125
	QC Standard	Total Kjeldahl Nitrogen	2012/05/11		96	%	75 - 125
	Method Blank	Total Kjeldahl Nitrogen	2012/05/11	3 U, MDL=3		ug/g	
	RPD	Total Kjeldahl Nitrogen	2012/05/11	15.4		%	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

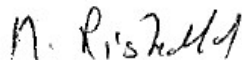
Validation Signature Page

Maxxam Job #: B262266

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: EBA #2

Your C.O.C. #: 2223

Attention: Ximena Druar

SiREM - Site Recovery & Management

130 Research Lane

Suite 2

Guelph, ON

CANADA N1G 5G3

Report Date: 2012/06/07
CERTIFICATE OF ANALYSIS
MAXXAM JOB #: B278662
Received: 2012/05/30, 10:50

Sample Matrix: Soil

Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydrocarbons F2-F4 in Soil	8	2012/06/02	2012/06/05	CAM SOP-00316	CCME CWS
Total Metals Analysis by ICP	8	2012/06/04	2012/06/05	CAM SOP-00408	SW-846 6010C
Moisture	8	N/A	2012/06/02	CAM SOP-00445	R.Carter,1993
Nitrate (NO3) and Nitrite (NO2) in Soil	8	N/A	2012/06/06	CAM SOP-00440	SM 4500 NO3/NO2B
pH CaCl2 EXTRACT	8	2012/06/04	2012/06/04	CAM SOP-00413	SM 4500H+ B
Total Kjeldahl Nitrogen - Soil	8	2012/06/04	2012/06/06	CAM SOP-00454	EPA 351.2 Rev 2

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

../2

Your Project #: EBA #2
Your C.O.C. #: 2223

Attention: Ximena Druar

SiREM - Site Recovery & Management
130 Research Lane
Suite 2
Guelph, ON
CANADA N1G 5G3

Report Date: 2012/06/07

CERTIFICATE OF ANALYSIS

-2-

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JOLANTA GORALCZYK, Project Manager
Email: JGoralczyk@maxxam.ca
Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Page 2 of 12

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

RESULTS OF ANALYSES OF SOIL

Maxxam ID		NP8761	NP8762	NP8763	NP8764	NP8765		
Sampling Date		2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50		
COC Number		2223	2223	2223	2223	2223		
	Units	EBA2-280512-1F	EBA2-280512-2F	EBA2-280512-3F	EBA2-280512-4F	EBA2-280512-5F	RDL	QC Batch

Inorganics								
Moisture	%	12	11	12	1.1	11	1.0	2868600
Available (CaCl ₂) pH	pH	7.42	7.45	7.49	7.50	7.15		2869067
Total Kjeldahl Nitrogen	ug/g	205	220	184	306	302	10	2870196
Nitrite (N)	ug/g	0.2 J	0.1 J	0.2 J	0.1 J	0.1 U	0.5	2870364
Nitrate (N)	ug/g	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2	2870364
Nitrate + Nitrite	ug/g	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	3	2870364

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		NP8766		NP8767	NP8768		
Sampling Date		2012/05/28 13:50		2012/05/28 13:50	2012/05/28 13:50		
COC Number		2223		2223	2223		
	Units	EBA2-280512-6F	RDL	EBA2-280512-7F	EBA2-280512-8F	RDL	QC Batch

Inorganics							
Moisture	%	7.7	1.0	11	5.7	1.0	2868600
Available (CaCl ₂) pH	pH	6.72		7.12	7.06		2869067
Total Kjeldahl Nitrogen	ug/g	342	10	699	485	100	2870196
Nitrite (N)	ug/g	0.1 U	0.5	0.3 J	0.3 J	0.5	2870364
Nitrate (N)	ug/g	0.4 U	2	25	91	2	2870364
Nitrate + Nitrite	ug/g	0.6 U	3	25	91	3	2870364

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		NP8761	NP8762	NP8763	NP8763		
Sampling Date		2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50		
COC Number		2223	2223	2223	2223		
	Units	EBA2-280512-1F	EBA2-280512-2F	EBA2-280512-3F	EBA2-280512-3F Lab-Dup	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	180	210	200	210	20	2869687
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam ID		NP8764	NP8765	NP8766	NP8767		
Sampling Date		2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50		
COC Number		2223	2223	2223	2223		
	Units	EBA2-280512-4F	EBA2-280512-5F	EBA2-280512-6F	EBA2-280512-7F	RDL	QC Batch

Metals							
Acid Extractable Phosphorus (P)	ug/g	210	790	820	1800	20	2869687
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam ID		NP8768		
Sampling Date		2012/05/28 13:50		
COC Number		2223		
	Units	EBA2-280512-8F	RDL	QC Batch

Metals				
Acid Extractable Phosphorus (P)	ug/g	1600	20	2869687
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		NP8761	NP8761	NP8762	NP8763		
Sampling Date		2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50		
COC Number		2223	2223	2223	2223		
	Units	EBA2-280512-1F	EBA2-280512-1F Lab-Dup	EBA2-280512-2F	EBA2-280512-3F	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	110	96	110	69	10	2868425
F3 (C16-C34 Hydrocarbons)	ug/g	180	150	180	120	10	2868425
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	2.0 U	10	2868425
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2868425
Surrogate Recovery (%)							
o-Terphenyl	%	92	93	94	92		2868425

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		NP8764	NP8765	NP8766	NP8767		
Sampling Date		2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50	2012/05/28 13:50		
COC Number		2223	2223	2223	2223		
	Units	EBA2-280512-4F	EBA2-280512-5F	EBA2-280512-6F	EBA2-280512-7F	RDL	QC Batch

F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	24	45	48	54	10	2868425
F3 (C16-C34 Hydrocarbons)	ug/g	90	73	100	210	10	2868425
F4 (C34-C50 Hydrocarbons)	ug/g	2.0 U	2.0 U	2.0 U	28	10	2868425
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		2868425
Surrogate Recovery (%)							
o-Terphenyl	%	90	91	90	89		2868425

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		NP8768		
Sampling Date		2012/05/28 13:50		
COC Number		2223		
	Units	EBA2-280512-8F	RDL	QC Batch

F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	36	10	2868425
F3 (C16-C34 Hydrocarbons)	ug/g	170	10	2868425
F4 (C34-C50 Hydrocarbons)	ug/g	26	10	2868425
Reached Baseline at C50	ug/g	Yes		2868425
Surrogate Recovery (%)				
o-Terphenyl	%	89		2868425

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID NP8761
Sample ID EBA2-280512-1F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam ID NP8761 Dup
Sample ID EBA2-280512-1F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI

Maxxam ID NP8762
Sample ID EBA2-280512-2F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam ID NP8763
Sample ID EBA2-280512-3F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam ID NP8763 Dup
Sample ID EBA2-280512-3F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPLLAI

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID NP8764
Sample ID EBA2-280512-4F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam ID NP8765
Sample ID EBA2-280512-5F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam ID NP8766
Sample ID EBA2-280512-6F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam ID NP8767
Sample ID EBA2-280512-7F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPPLLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

Test Summary

Maxxam ID NP8768
Sample ID EBA2-280512-8F
Matrix Soil

Collected 2012/05/28
Shipped
Received 2012/05/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	2868425	2012/06/02	2012/06/05	(KENT) MAOLIN LI
Total Metals Analysis by ICP	ICP	2869687	2012/06/04	2012/06/05	SUBAN KANAPATHIPILLAI
Moisture	BAL	2868600	N/A	2012/06/02	VALENTINA KAFTANI
Nitrate (NO3) and Nitrite (NO2) in Soil	LACH	2870364	N/A	2012/06/06	CHRIS LI
pH CaCl2 EXTRACT		2869067	2012/06/04	2012/06/04	XUANHONG QIU
Total Kjeldahl Nitrogen - Soil	AC	2870196	2012/06/04	2012/06/06	CHANDRA NANDLAL

Maxxam Job #: B278662
Report Date: 2012/06/07

SiREM - Site Recovery & Management
Client Project #: EBA #2

GENERAL COMMENTS

Results relate only to the items tested.

SiREM - Site Recovery & Management
Attention: Ximena Druar
Client Project #: EBA #2
P.O. #:
Site Location:

Quality Assurance Report

Maxxam Job Number: MB278662

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2868425 KLI	Matrix Spike [NP8761-01]	o-Terphenyl	2012/06/05		87	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/06/05		NC	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/06/05		104	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/06/05		100	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/06/05		84	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/06/05		102	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/06/05		106	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/06/05		100	%	70 - 130
	Method Blank	o-Terphenyl	2012/06/05		94	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/06/05	2.0 U, MDL=2.0		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/06/05	3.1 J, MDL=2.0		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/06/05	2.0 U, MDL=2.0		ug/g	
	RPD [NP8761-01]	F2 (C10-C16 Hydrocarbons)	2012/06/05	17.5		%	30
		F3 (C16-C34 Hydrocarbons)	2012/06/05	16.5		%	30
		F4 (C34-C50 Hydrocarbons)	2012/06/05	NC		%	30
		Moisture	2012/06/02	2.3		%	20
2868600 PHM	RPD						
2869687 SUK	Matrix Spike [NP8763-01]	Acid Extractable Phosphorus (P)	2012/06/05		NC	%	75 - 125
		Spiked Blank	2012/06/05		96	%	80 - 120
		Method Blank	2012/06/05	<20		ug/g	
		RPD [NP8763-01]	2012/06/05	8.1		%	30
	Matrix Spike	Total Kjeldahl Nitrogen	2012/06/06		NC	%	75 - 125
2870196 C_N	QC Standard	Total Kjeldahl Nitrogen	2012/06/06		82	%	75 - 125
		Method Blank	2012/06/06	3 U, MDL=3		ug/g	
		RPD	2012/06/06	3.8		%	40
	RPD	Total Kjeldahl Nitrogen	2012/06/06				
2870364 C_H	Matrix Spike	Nitrite (N)	2012/06/06		99	%	75 - 125
		Nitrate (N)	2012/06/06		101	%	75 - 125
		Nitrate + Nitrite	2012/06/06		100	%	75 - 125
		Spiked Blank	2012/06/06		100	%	75 - 125
	Spiked Blank	Nitrite (N)	2012/06/06		100	%	75 - 125
		Nitrate (N)	2012/06/06		100	%	75 - 125
		Nitrate + Nitrite	2012/06/06		100	%	75 - 125
		Method Blank	2012/06/06	0.1 U, MDL=0.1		ug/g	
	Method Blank	Nitrate (N)	2012/06/06	0.4 U, MDL=0.4		ug/g	
		Nitrate + Nitrite	2012/06/06	0.6 U, MDL=0.6		ug/g	
		RPD	2012/06/06	NC		%	25
		Nitrate (N)	2012/06/06	NC		%	25
	RPD	Nitrate + Nitrite	2012/06/06	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Validation Signature Page

Maxxam Job #: B278662

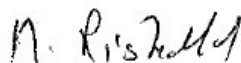
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



BRAD NEWMAN, Scientific Specialist



CRISTINA CARRIERE, Scientific Services



MEDHAT RISKALLAH, Manager, Hydrocarbon Department

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

APPENDIX C

CONSTRUCTION DRAWINGS
