



LEGEND

	FENCE LINE
	CONTAINMENT WALL
	ABOVE GROUND STORAGE TANK
	FORMER FACILITY

Figure 1
SITE MAP

Noble Allen 41-12
Facility ID - 330027
NE NE Section 12, T4N, R65W
Weld County, Colorado

API No. 05-123-18226	Prepared by	Drawn by JMA	
Date 3/31/16	Reviewed by	Filename V001A	

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 08, 2015

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020
RE: Noble - Allen 41-12

Enclosed are the results of analyses for samples received by Summit Scientific on 12/07/15 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Floor - 5ft	1512043-01	Soil	12/07/15 00:00	12/07/15 17:41
North - 3ft	1512043-02	Soil	12/07/15 00:00	12/07/15 17:41

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Summit Scientific 1512043

S₂

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Client: FREMONT/NOBLE Project Manager: Paul Henehan Page 1 of 1
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: 303-956-8714 Fax: _____ Project Name: Noble - Allen 41-12
Sampler Name: Henehan Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRV/DO	WATER	SAR	EC	pH	
1	FLOOR - SPT	12/7/15		1			✓						✓	✓	✓	✓			
2	NORTH - 3 FT	"		1			✓			✓			✓	✓	✓	✓			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <u>MAHRE</u>	Date/Time: <u>12/7/15 16:15</u>	Received by: <u>MAHRE</u>	Date/Time: <u>12-7-15 16:15</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours _____ 24 hours _____ Standard _____ 48 hours _____ Sample Integrity: <u>TUES AM PLZ</u> Temperature Upon Receipt: <u>13.1°</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: <u>MAHRE</u>	Date/Time: <u>12-7-15 13:41</u>	Received by: <u>MAHRE</u>	Date/Time: <u>12-7-15 13:41</u>		
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Floor - 5ft
1512043-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512060	12/07/15	12/07/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		80.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.6 %	21-167		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

**North - 3ft
1512043-02 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1512061	12/07/15	12/07/15	8015M	

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.4 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1512060	12/07/15	12/07/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		82.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.0 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

North - 3ft
1512043-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Calcium	939	10.2 mg/kg dry	1	1512062	12/07/15	12/07/15	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	424	5.12	"	"	"	"	"
Sodium	410	5.12	"	"	"	"	"

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.79		units	"	1512065	12/08/15	12/08/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.467	0.0100	mmhos/cm	1	1512064	12/07/15	12/07/15	SM 2510B	

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97	0.100	pH Units	"	1512063	12/07/15	12/07/15	EPA 9045	

Date Sampled: 12/07/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	"	1512057	12/07/15	12/08/15	% calculation	

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1512061 - EPA 3550A

Blank (1512061-BLK1)

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 14.0 " 12.5 112 30-150

LCS (1512061-BS1)

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) 478 50 mg/kg 499 95.8 73-134

Surrogate: o-Terphenyl 12.5 " 12.5 100 30-150

Matrix Spike (1512061-MS1)

Source: 1512043-01

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) 457 50 mg/kg 465 25.3 93.0 50-148

Surrogate: o-Terphenyl 11.3 " 11.6 96.7 30-150

Matrix Spike Dup (1512061-MSD1)

Source: 1512043-01

Prepared & Analyzed: 12/07/15

C10-C28 (DRO) 474 50 mg/kg 490 25.3 91.4 50-148 3.50 13

Surrogate: o-Terphenyl 11.8 " 12.3 96.1 30-150

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1512060 - EPA 5030 Soil MS

Blank (1512060-BLK1)

Prepared & Analyzed: 12/07/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0319		"	0.0400		79.7	23-173			
Surrogate: Toluene-d8	0.0370		"	0.0400		92.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0354		"	0.0400		88.6	21-167			

LCS (1512060-BS1)

Prepared & Analyzed: 12/07/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0858	0.0020	"	0.100		85.8	58-130			
Toluene	0.0868	0.0050	"	0.100		86.8	61-134			
Ethylbenzene	0.0981	0.0050	"	0.0992		98.9	74-139			
m,p-Xylene	0.187	0.010	"	0.200		93.5	73-137			
o-Xylene	0.0910	0.0050	"	0.0984		92.4	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0311		"	0.0400		77.8	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0364		"	0.0400		91.0	21-167			

Matrix Spike (1512060-MS1)

Source: 1512043-01

Prepared & Analyzed: 12/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0886	0.0020	"	0.0969	ND	91.4	30-131			
Toluene	0.0879	0.0050	"	0.0969	ND	90.7	30-134			
Ethylbenzene	0.102	0.0050	"	0.0961	ND	106	22-153			
m,p-Xylene	0.196	0.010	"	0.193	ND	101	10-159			
o-Xylene	0.0951	0.0050	"	0.0953	ND	99.8	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0311		"	0.0388		80.2	23-173			
Surrogate: Toluene-d8	0.0365		"	0.0388		94.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0355		"	0.0388		91.5	21-167			

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1512060 - EPA 5030 Soil MS

Matrix Spike Dup (1512060-MSD1)			Source: 1512043-01		Prepared & Analyzed: 12/07/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0923	0.0020	"	0.0969	ND	95.2	30-131	4.11	34	
Toluene	0.0926	0.0050	"	0.0969	ND	95.6	30-134	5.28	30	
Ethylbenzene	0.104	0.0050	"	0.0961	ND	109	22-153	2.28	24	
m,p-Xylene	0.198	0.010	"	0.193	ND	103	10-159	1.48	68	
o-Xylene	0.0965	0.0050	"	0.0953	ND	101	31-151	1.43	38	
Surrogate: 1,2-Dichloroethane-d4	0.0322		"	0.0388		82.9	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0388		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0349		"	0.0388		90.1	21-167			

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1512062 - General Preparation

Blank (1512062-BLK1)

Prepared & Analyzed: 12/07/15

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1512062-BS1)

Prepared & Analyzed: 12/07/15

Calcium	489	10.0	mg/kg wet	500	97.7	82.9-118
Magnesium	429	5.00	"	500	85.9	77.1-123
Sodium	387	5.00	"	500	77.5	71-129

Duplicate (1512062-DUP1)

Source: 1512043-02

Prepared & Analyzed: 12/07/15

Calcium	903	10.2	mg/kg dry	939	3.85	200
Magnesium	427	5.12	"	424	0.696	200
Sodium	409	5.12	"	410	0.154	200

Matrix Spike (1512062-MS1)

Source: 1512043-02

Prepared & Analyzed: 12/07/15

Calcium	1380	10.2	mg/kg dry	512	939	86.0	75-125
Magnesium	809	5.12	"	512	424	75.3	75-125
Sodium	797	5.12	"	512	410	75.6	75-125

Matrix Spike Dup (1512062-MSD1)

Source: 1512043-02

Prepared & Analyzed: 12/07/15

Calcium	1370	10.2	mg/kg dry	512	939	85.1	75-125	0.338	25
Magnesium	835	5.12	"	512	424	80.3	75-125	3.09	25
Sodium	821	5.12	"	512	410	80.3	75-125	2.99	25

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1512063 - General Preparation

LCS (1512063-BS1)

Prepared & Analyzed: 12/07/15

pH	8.02	0.100	pH Units	8.00	100	95-105
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Duplicate (1512063-DUP1)

Source: 1512043-02

Prepared & Analyzed: 12/07/15

pH	7.96	0.100	pH Units	7.97	0.126	20
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Batch 1512064 - General Preparation

Blank (1512064-BLK1)

Prepared & Analyzed: 12/07/15

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1512064-BS1)

Prepared & Analyzed: 12/07/15

Specific Conductance (EC)	0.502	0.0100	mmhos/cm	0.500	100	90-110
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Duplicate (1512064-DUP1)

Source: 1512043-02

Prepared & Analyzed: 12/07/15

Specific Conductance (EC)	0.427	0.0100	mmhos/cm	0.467	8.91	20
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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Allen 41-12

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/08/15 06:27

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

A handwritten signature in black ink, appearing to be 'MSM'.