



LEGEND

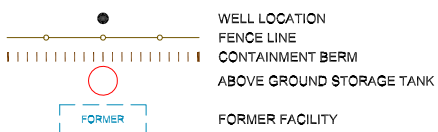


Figure 1
SITE MAP

Noble Dow 1-29
 Facility ID - 332761
 SW NW Section 28, T5N, R63W
 Weld County, Colorado

API No.
05-123-22549

Prepared by

Drawn by
JMA

Date
3/31/16

Reviewed by

Filename
V005A



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

January 21, 2016

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020
RE: Noble - DOW 1-29

Enclosed are the results of analyses for samples received by Summit Scientific on 01/20/16 16:47. 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 - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. Wall 2 Ft	1601155-01	Soil	01/20/16 00:00	01/20/16 16:47
Floor 3 Ft.	1601155-02	Soil	01/20/16 00:00	01/20/16 16:47

Summit Scientific

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

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

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S₂

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

1601154

Page 1 of 1

Client: FREMONT/NOBLE

Project Manager: HENEHAN

Address:

E-Mail:

City/State/Zip:

Phone: 3039568714

Fax:

Project Name: NOBLE - BURKE RG 24-8

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	GRO/DRO	NAPHTH	SAR	EC	pH	
1	N. WALL 3 FT	1/20/16		1			✓		✓				✓	✓	✓	✓			
2	FLOOR 6 FT			1			✓		✓				✓	✓	✓	✓			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <u>PAH/FE</u>	Date/Time: <u>1/20/16 16:11</u>	Received by: <u>PAH</u>	Date/Time: <u>1-20-16 16:11</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/>	Notes:
Relinquished by: <u>PAH</u>	Date/Time: <u>1-20-16 16:15</u>	Received by: <u>PAH</u>	Date/Time: <u>1/20/16 18:15</u>	Sample Integrity: <u>THURS. AM PLZ.</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: <u>16.2°C</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

**N. Wall 2 Ft
1601155-01 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601203	01/20/16	01/21/16	8015M	

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1601202	01/20/16	01/20/16	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: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	21-167		"	"	"	"	

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

Date Sampled: 01/20/16 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 - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

**N. Wall 2 Ft
1601155-01 (Soil)**

Summit Scientific

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

Calcium	1710	11.5 mg/kg dry	1	1601201	01/20/16	01/20/16	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	578	5.73	"	"	"	"	"
Sodium	675	5.73	"	"	"	"	"

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.60		units	"	1601204	01/21/16	01/21/16	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.510	0.0100	mmhos/cm	1	1601194	01/20/16	01/20/16	SM 2510B	

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.18	0.100	pH Units	"	1601193	01/20/16	01/20/16	EPA 9045	

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	"	1601195	01/20/16	01/21/16	% calculation	

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

Floor 3 Ft.
1601155-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601203	01/20/16	01/21/16	8015M	

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1601202	01/20/16	01/20/16	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: 01/20/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

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 1601203 - EPA 3550A

Blank (1601203-BLK1)

Prepared: 01/20/16 Analyzed: 01/21/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.5 " 12.5 92.3 30-150

LCS (1601203-BS1)

Prepared: 01/20/16 Analyzed: 01/21/16

C10-C28 (DRO) 534 50 mg/kg 499 107 73-134

Surrogate: o-Terphenyl 11.7 " 12.5 93.3 30-150

Matrix Spike (1601203-MS1)

Source: 1601154-01

Prepared: 01/20/16 Analyzed: 01/21/16

C10-C28 (DRO) 569 50 mg/kg 485 15.7 114 50-148

Surrogate: o-Terphenyl 11.4 " 12.2 93.7 30-150

Matrix Spike Dup (1601203-MSD1)

Source: 1601154-01

Prepared: 01/20/16 Analyzed: 01/21/16

C10-C28 (DRO) 621 50 mg/kg 485 15.7 125 50-148 8.68 13

Surrogate: o-Terphenyl 12.3 " 12.2 101 30-150

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

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 1601202 - EPA 5030 Soil MS

Blank (1601202-BLK1)

Prepared: 01/20/16 Analyzed: 01/21/16

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	0.0411		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

LCS (1601202-BS1)

Prepared: 01/20/16 Analyzed: 01/21/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.113	0.0020	"	0.100		113	58-130			
Toluene	0.120	0.0050	"	0.100		120	61-134			
Ethylbenzene	0.130	0.0050	"	0.0992		131	74-139			
m,p-Xylene	0.244	0.010	"	0.200		122	73-137			
o-Xylene	0.118	0.0050	"	0.0984		120	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0401		"	0.0400		100	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		99.9	21-167			

Matrix Spike (1601202-MS1)

Source: 1601154-01

Prepared: 01/20/16 Analyzed: 01/21/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.115	0.0020	"	0.0984	ND	117	30-131			
Toluene	0.122	0.0050	"	0.0984	ND	124	30-134			
Ethylbenzene	0.135	0.0050	"	0.0976	ND	138	22-153			
m,p-Xylene	0.254	0.010	"	0.196	ND	129	10-159			
o-Xylene	0.123	0.0050	"	0.0969	ND	127	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0394		103	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0394		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0394		101	21-167			

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

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 1601202 - EPA 5030 Soil MS

Matrix Spike Dup (1601202-MSD1)		Source: 1601154-01			Prepared: 01/20/16		Analyzed: 01/21/16			
Naphthalene	ND	0.010	mg/kg		ND		10-158			42
Benzene	0.115	0.0020	"	0.0958	ND	120	30-131	0.490		34
Toluene	0.123	0.0050	"	0.0958	ND	128	30-134	0.446		30
Ethylbenzene	0.134	0.0050	"	0.0950	ND	141	22-153	1.18		24
m,p-Xylene	0.249	0.010	"	0.191	ND	130	10-159	2.29		68
o-Xylene	0.123	0.0050	"	0.0943	ND	130	31-151	0.372		38
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0383		105	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0383		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0383		101	21-167			

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

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 1601201 - General Preparation

Blank (1601201-BLK1)

Prepared & Analyzed: 01/20/16

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

LCS (1601201-BS1)

Prepared & Analyzed: 01/20/16

Calcium	455	10.0	mg/kg wet	500	91.0	82.9-118
Magnesium	475	5.00	"	500	94.9	77.1-123
Sodium	528	5.00	"	500	106	71-129

Duplicate (1601201-DUP1)

Source: 1601154-01

Prepared & Analyzed: 01/20/16

Calcium	1140	11.4	mg/kg dry	1190	3.88	200
Magnesium	459	5.69	"	439	4.31	200
Sodium	726	5.69	"	723	0.478	200

Matrix Spike (1601201-MS1)

Source: 1601154-01

Prepared & Analyzed: 01/20/16

Calcium	1650	11.4	mg/kg dry	527	1190	87.5	75-125
Magnesium	925	5.69	"	527	439	92.1	75-125
Sodium	1210	5.69	"	527	723	91.5	75-125

Matrix Spike Dup (1601201-MSD1)

Source: 1601154-01

Prepared & Analyzed: 01/20/16

Calcium	1670	11.4	mg/kg dry	527	1190	91.6	75-125	1.32	25
Magnesium	971	5.69	"	527	439	101	75-125	4.84	25
Sodium	1300	5.69	"	527	723	110	75-125	7.87	25

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

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 1601193 - General Preparation

LCS (1601193-BS1)

Prepared & Analyzed: 01/20/16

pH	7.96	0.100	pH Units	8.00	99.5	95-105
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Duplicate (1601193-DUP1)

Source: 1601051-04

Prepared & Analyzed: 01/20/16

pH	8.92	0.100	pH Units	9.11	2.11	20
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Batch 1601194 - General Preparation

Blank (1601194-BLK1)

Prepared & Analyzed: 01/20/16

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1601194-BS1)

Prepared & Analyzed: 01/20/16

Specific Conductance (EC)	0.504	0.0100	mmhos/cm	0.500	101	90-110
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Duplicate (1601194-DUP1)

Source: 1601051-04

Prepared & Analyzed: 01/20/16

Specific Conductance (EC)	2.80	0.0100	mmhos/cm	2.24	22.1	20	QR-03
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Batch 1601195 - General Preparation

Duplicate (1601195-DUP1)

Source: 1601144-01

Prepared: 01/20/16 Analyzed: 01/21/16

% Solids	71.8	%	73.5	2.34	20
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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - DOW 1-29

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/21/16 15:11

Notes and Definitions

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

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

Summit Scientific

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