



LEGEND

-  FENCE LINE
-  CONTAINMENT BERM
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY

**Figure 1
SITE MAP**

Noble Cushman Grace Unit #1
 Facility ID - 317578
 SW SW Section 20, T4N, R66W
 Weld County, Colorado

API No. 05-123-07283	Prepared by	Drawn by JMA
Date 4/11/16	Reviewed by	Filename V015A



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 06, 2016

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020

RE: Noble - Cushman Grace Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/04/16 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Floor 5Ft	1603036-01	Soil	03/04/16 00:00	03/04/16 16:45
N. Wall 3Ft	1603036-02	Soil	03/04/16 00:00	03/04/16 16:45

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

Summit Scientific 1603034

S₂

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

Page 1 of 1

Client: FREMONT / NOBLE Project Manager: HENEHAN
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: 3039568714 Fax: _____ Project Name: NOBLE - CUSHMAN GRACE UNIT #1
Sampler Name: HENEHAN Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRE/DRO	NAPL/PAH	SAR	EC		PH
1	FLOOR 5 FT	3/4/16		1			✓							✓	✓	✓	✓	✓	
2	N. WALL 3 FT			1			✓							✓	✓	✓	✓	✓	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <u>OUTFE</u> Date/Time: <u>3/4/16 15:35</u>	Received by: <u>LA</u> Date/Time: <u>3-4-16 16:45</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> <u>MON AM PCT</u> Sample Integrity: Temperature Upon Receipt: <u>18.0</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: <u>AS</u> Date/Time: <u>3-4-16 17:35</u>	Received by: <u>AS</u> Date/Time: <u>3-4-16 17:35</u>		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

Floor 5Ft
1603036-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603051	03/04/16	03/04/16	8015M	

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603047	03/04/16	03/04/16	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: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

**N. Wall 3Ft
1603036-02 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/04/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603051	03/04/16	03/04/16	8015M	

Date Sampled: **03/04/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/04/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603047	03/04/16	03/04/16	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: **03/04/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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

Date Sampled: **03/04/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

**N. Wall 3Ft
1603036-02 (Soil)**

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1250	11.0	mg/kg dry	1	1603040	03/04/16	03/04/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	609	5.49	"	"	"	"	"	"	
Sodium	557	5.49	"	"	"	"	"	"	

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.23		units	"	1603048	03/04/16	03/06/16	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.131	0.0100	mmhos/cm	1	1603050	03/04/16	03/04/16	SM 2510B	

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.93	0.100	pH Units	"	1603049	03/04/16	"	EPA 9045	

Date Sampled: 03/04/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	"	1603042	03/04/16	03/05/16	% calculation	

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Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1603051 - EPA 3550A

Blank (1603051-BLK1)

Prepared & Analyzed: 03/04/16

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	13.1		"	12.5		105	30-150				

LCS (1603051-BS1)

Prepared & Analyzed: 03/04/16

C10-C28 (DRO)	470	50	mg/kg	499		94.2	73-134				
<i>Surrogate: o-Terphenyl</i>	13.7		"	12.5		109	30-150				

Matrix Spike (1603051-MS1)

Source: 1603035-01

Prepared & Analyzed: 03/04/16

C10-C28 (DRO)	452	50	mg/kg	499	16.9	87.2	50-148				
<i>Surrogate: o-Terphenyl</i>	13.4		"	12.5		107	30-150				

Matrix Spike Dup (1603051-MSD1)

Source: 1603035-01

Prepared & Analyzed: 03/04/16

C10-C28 (DRO)	449	50	mg/kg	499	16.9	86.5	50-148	0.768	13		
<i>Surrogate: o-Terphenyl</i>	13.4		"	12.5		107	30-150				

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

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

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

Batch 1603047 - EPA 5030 Soil MS

Blank (1603047-BLK1)

Prepared & Analyzed: 03/04/16

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0410</i>		<i>"</i>	<i>0.0396</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.5</i>	<i>21-167</i>			

LCS (1603047-BS1)

Prepared & Analyzed: 03/04/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0811	0.0020	"	0.100		81.1	58-130			
Toluene	0.0897	0.0050	"	0.100		89.7	61-134			
Ethylbenzene	0.102	0.0050	"	0.0992		102	74-139			
m,p-Xylene	0.199	0.010	"	0.200		99.6	73-137			
o-Xylene	0.0976	0.0050	"	0.0984		99.2	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0416</i>		<i>"</i>	<i>0.0396</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>21-167</i>			

Matrix Spike (1603047-MS1)

Source: 1603003-01

Prepared & Analyzed: 03/04/16

Naphthalene	0.00348	0.010	mg/kg		ND		10-158			
Benzene	0.0786	0.0020	"	0.0943	ND	83.3	30-131			
Toluene	0.0874	0.0050	"	0.0943	ND	92.6	30-134			
Ethylbenzene	0.0946	0.0050	"	0.0936	ND	101	22-153			
m,p-Xylene	0.185	0.010	"	0.188	ND	98.1	10-159			
o-Xylene	0.0942	0.0050	"	0.0928	ND	101	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0449</i>		<i>"</i>	<i>0.0374</i>		<i>120</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0375</i>		<i>"</i>	<i>0.0377</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0365</i>		<i>"</i>	<i>0.0377</i>		<i>96.7</i>	<i>21-167</i>			

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

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

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

Batch 1603047 - EPA 5030 Soil MS

Matrix Spike Dup (1603047-MSD1)	Source: 1603003-01			Prepared & Analyzed: 03/04/16					
Naphthalene	0.00449	0.010	mg/kg	ND	ND	85.2	10-158	25.3	42
Benzene	0.0850	0.0020	"	0.0998	ND	94.8	30-131	7.83	34
Toluene	0.0946	0.0050	"	0.0998	ND	103	30-134	7.96	30
Ethylbenzene	0.102	0.0050	"	0.0990	ND	100	22-153	7.17	24
m,p-Xylene	0.200	0.010	"	0.199	ND	100	10-159	7.98	68
o-Xylene	0.101	0.0050	"	0.0982	ND	103	31-151	7.17	38
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0474</i>		<i>"</i>	<i>0.0395</i>		<i>120</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0399</i>		<i>101</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0399</i>		<i>99.2</i>	<i>21-167</i>		

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

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

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

Batch 1603040 - General Preparation

Blank (1603040-BLK1)

Prepared & Analyzed: 03/04/16

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

LCS (1603040-BS1)

Prepared & Analyzed: 03/04/16

Calcium	581	10.0	mg/kg wet	500	116	82.9-118		
Magnesium	573	5.00	"	500	115	77.1-123		
Sodium	587	5.00	"	500	117	71-129		

Duplicate (1603040-DUP1)

Source: 1603022-01

Prepared & Analyzed: 03/04/16

Calcium	159	8.96	mg/kg dry	161			0.849	200
Magnesium	27.3	4.48	"	31.3			13.8	200
Sodium	22.3	4.48	"	22.3			0.235	200

Matrix Spike (1603040-MS1)

Source: 1603022-01

Prepared & Analyzed: 03/04/16

Calcium	657	8.96	mg/kg dry	448	161	111	75-125	
Magnesium	542	4.48	"	448	31.3	114	75-125	
Sodium	541	4.48	"	448	22.3	116	75-125	

Matrix Spike Dup (1603040-MSD1)

Source: 1603022-01

Prepared & Analyzed: 03/04/16

Calcium	685	8.96	mg/kg dry	448	161	117	75-125	4.27	25
Magnesium	558	4.48	"	448	31.3	117	75-125	2.84	25
Sodium	550	4.48	"	448	22.3	118	75-125	1.50	25

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1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

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

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

Batch 1603042 - General Preparation

Duplicate (1603042-DUP1)	Source: 1603022-01			Prepared & Analyzed: 03/04/16						
% Solids	96.1		%		96.5			0.415	20	

Batch 1603049 - General Preparation

LCS (1603049-BS1)				Prepared & Analyzed: 03/04/16						
pH	6.01	0.100	pH Units	6.00		100	95-105			
Duplicate (1603049-DUP1)	Source: 1603035-01			Prepared & Analyzed: 03/04/16						
pH	8.30	0.100	pH Units	8.30				0.00	20	

Batch 1603050 - General Preparation

Blank (1603050-BLK1)				Prepared & Analyzed: 03/04/16						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (1603050-BS1)				Prepared & Analyzed: 03/04/16						
Specific Conductance (EC)	0.0994	0.00200	mmhos/cm	0.100		99.4	90-110			
Duplicate (1603050-DUP1)	Source: 1603035-01			Prepared & Analyzed: 03/04/16						
Specific Conductance (EC)	1.02	0.0100	mmhos/cm	0.983				3.99	20	

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Cushman Grace Unit #1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/06/16 11:26

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

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