



7/5/18	
N Wall ~ 3'	
B	<0.002
T	<0.005
E	<0.005
X	<0.005
N	<0.010
G	<0.50
D	<50
EC	0.592
pH	8.4
SAR	0.142

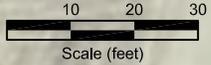
7/5/18	
Floor ~ 5'	
B	<0.002
T	<0.005
E	<0.005
X	<0.005
N	<0.010
G	<0.50
D	<50
EC	NA
pH	NA
SAR	NA

FORMER WATER VAULT

N Wall ~ 3'

Floor ~ 5'

AST



LEGEND

	SOIL SAMPLE LOCATION		
	ABOVE GROUND STORAGE TANK		
	FORMER FACILITY		
	FENCE LINE		
	CONTAINMENT BERM		
	CONTAINMENT WALL		
		NA	NOT ANALYZED
		7/5/18	DATE SAMPLED
		N Wall ~ 3'	LOCATION and DEPTH (ft)
B	<0.002		BENZENE (mg/kg)
T	<0.005		TOLUENE (mg/kg)
E	<0.005		ETHYLBENZENE (mg/kg)
X	<0.005		TOTAL XYLENES (mg/kg)
N	<0.010		NAPHTHALENE (mg/kg)
G	<0.50		TPH-GRO (mg/kg)
D	<50		TPH-DRO (mg/kg)
EC	0.601		EC mmhos/cm
pH	0.386		pH Units
SAR	0.130		SAR Units

Figure 1
SITE PLAN

Noble Stroh O 2-7,17
 Facility ID - 305741
 SWNE Sec 2, T4N, R67W - 40.34249°N -104.85534°W
 Weld County, Colorado

API No. 05-123-23417	Prepared by TDA	Drawn by TDA
Date 7/31/18	Reviewed by PH	Filename V210A



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 10, 2018

Paul Henehan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Stroh O 2-7, 17

Enclosed are the results of analyses for samples received by Summit Scientific on 07/05/18 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. WALL 3FT	1807058-01	Soil	07/05/18 00:00	07/05/18 17:00
FLOOR 5FT	1807058-02	Soil	07/05/18 00:00	07/05/18 17:00

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

**N. WALL 3FT
1807058-01 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807055	07/06/18	07/07/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807056	"	07/07/18	EPA 8015M	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.4 %	30-150		"	"	"	"	

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

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1310	11.4	mg/kg dry	1	1807061	07/06/18	07/07/18	EPA 6020B	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

**N. WALL 3FT
1807058-01 (Soil)**

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	414	5.71	mg/kg dry	1	1807061	07/06/18	07/07/18	EPA 6020B	
Sodium	23.0	5.71	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.142	0.100	units	1	1807072	07/08/18	07/09/18	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.5		%	1	1807068	07/06/18	07/09/18	Calculation	
pH	8.40		pH Units	"	1807069	07/06/18	07/06/18	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.592	0.0100	mmhos/cm	1	1807070	07/06/18	07/06/18	EPA 120.1	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

FLOOR 5FT
1807058-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807055	07/06/18	07/07/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807056	"	07/07/18	EPA 8015M	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.1 %	30-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1807055 - EPA 5030 Soil MS

Blank (1807055-BLK1)

Prepared & Analyzed: 07/06/18

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
Naphthalene	ND	0.010	"								
Gasoline Range Hydrocarbons	ND	50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0446		"	0.0396		112	23-173				
Surrogate: Toluene-d8	0.0420		"	0.0400		105	20-170				
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0400		104	21-167				

LCS (1807055-BS1)

Prepared & Analyzed: 07/06/18

Benzene	0.100	0.0020	mg/kg	0.100		100	70-130				
Toluene	0.104	0.0050	"	0.100		104	70-130				
Ethylbenzene	0.116	0.0050	"	0.100		116	70-130				
m,p-Xylene	0.202	0.010	"	0.200		101	70-130				
o-Xylene	0.102	0.0050	"	0.100		102	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0396		110	23-173				
Surrogate: Toluene-d8	0.0427		"	0.0400		107	20-170				
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400		108	21-167				

Matrix Spike (1807055-MS1)

Source: 1807054-01

Prepared & Analyzed: 07/06/18

Benzene	0.0993	0.0020	mg/kg	0.100	ND	99.3	70-130				
Toluene	0.102	0.0050	"	0.100	ND	102	70-130				
Ethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130				
m,p-Xylene	0.202	0.010	"	0.200	ND	101	70-130				
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0396		108	23-173				
Surrogate: Toluene-d8	0.0421		"	0.0400		105	20-170				
Surrogate: 4-Bromofluorobenzene	0.0435		"	0.0400		109	21-167				

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 07/10/18 08:30

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 1807055 - EPA 5030 Soil MS

Matrix Spike Dup (1807055-MSD1)	Source: 1807054-01			Prepared & Analyzed: 07/06/18					
Benzene	0.100	0.0020	mg/kg	0.100	ND	100	70-130	1.05	30
Toluene	0.103	0.0050	"	0.100	ND	103	70-130	1.38	30
Ethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130	2.62	30
m,p-Xylene	0.207	0.010	"	0.200	ND	104	70-130	2.23	30
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130	2.38	30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0426</i>		<i>"</i>	<i>0.0396</i>		<i>108</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0446</i>		<i>"</i>	<i>0.0400</i>		<i>112</i>	<i>21-167</i>		

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 07/10/18 08:30

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1807056 - EPA 3550A

Blank (1807056-BLK1)				Prepared & Analyzed: 07/06/18						
C10-C28 (DRO)	ND	50	mg/kg							
LCS (1807056-BS1)				Prepared & Analyzed: 07/06/18						
C10-C28 (DRO)	446	50	mg/kg			70-130				
Matrix Spike (1807056-MS1)				Source: 1807054-01		Prepared & Analyzed: 07/06/18				
C10-C28 (DRO)	439	50	mg/kg		25.1	70-130				
Matrix Spike Dup (1807056-MSD1)				Source: 1807054-01		Prepared & Analyzed: 07/06/18				
C10-C28 (DRO)	443	50	mg/kg		25.1	70-130	0.943		20	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

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

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

Batch 1807061 - General Preparation

Blank (1807061-BLK1)

Prepared: 07/06/18 Analyzed: 07/07/18

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

LCS (1807061-BS1)

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	487	10.0	mg/kg wet	500		97.4	70-130		
Magnesium	500	5.00	"	500		100	70-130		
Sodium	503	5.00	"	500		101	70-130		

Duplicate (1807061-DUP1)

Source: 1807032-01

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	801	11.1	mg/kg dry		695			14.2	20
Magnesium	189	5.55	"		171			10.5	20
Sodium	88.6	5.55	"		90.1			1.68	20

Matrix Spike (1807061-MS1)

Source: 1807032-01

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	1270	11.1	mg/kg dry	555	695	103	70-130		
Magnesium	733	5.55	"	555	171	101	70-130		
Sodium	608	5.55	"	555	90.1	93.3	70-130		

Matrix Spike Dup (1807061-MSD1)

Source: 1807032-01

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	1380	11.1	mg/kg dry	555	695	124	70-130	8.46	25
Magnesium	782	5.55	"	555	171	110	70-130	6.48	25
Sodium	623	5.55	"	555	90.1	96.1	70-130	2.51	25

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 07/10/18 08:30

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

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

Batch 1807068 - General Preparation

Duplicate (1807068-DUP1)	Source: 1807051-04		Prepared: 07/06/18		Analyzed: 07/09/18						
% Solids	80.0		%		79.0			1.18		20	

Batch 1807069 - General Preparation

LCS (1807069-BS1)					Prepared & Analyzed: 07/06/18						
pH	9.2		pH Units		9.18		99.8	95-105			
Duplicate (1807069-DUP1)	Source: 1807062-01		Prepared & Analyzed: 07/06/18								
pH	7.8		pH Units		8.0			2.65		20	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 07/10/18 08:30

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1807070 - General Preparation

LCS (1807070-BS1)

Prepared & Analyzed: 07/06/18

Specific Conductance (EC)	0.744	0.0100	mmhos/cm	0.750	99.3	90-110
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Duplicate (1807070-DUP1)

Source: 1807062-01

Prepared & Analyzed: 07/06/18

Specific Conductance (EC)	0.575	0.0100	mmhos/cm	0.586	1.89	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/10/18 08:30

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