



LEGEND

	SOIL SAMPLE LOCATION
	ABOVE GROUND STORAGE TANK
	FORMER FACILITY
	FENCE LINE
	CONTAINMENT BERM
	CONTAINMENT WALL

12/10/18	
Floor@5'	
B	<0.002
T	<0.005
E	<0.005
X	<0.005
N	<0.010
G	<50
D	<50
EC	NA
pH	NA
SAR	NA

DATE SAMPLED
LOCATION and DEPTH (ft)
BENZENE (mg/kg)
TOLUENE (mg/kg)
ETHYLBENZENE (mg/kg)
TOTAL XYLENES (mg/kg)
NAPHTHALENE (mg/kg)
TPH-GRO (mg/kg)
TPH-DRO (mg/kg)
EC mmhos/cm
pH Units
SAR Units

NA NOT ANALYZED

Figure 1
SITE PLAN

NOBLE ARY USX AB31-14

Facility ID - 306416

SWSW Sec 31, T7N, R64W ~ 40.52301°, -104.59789°

Weld County, Colorado

API No.
05-123-24611

Prepared by

Drawn by

TDA

Date

2/11/19

Reviewed by

EB

Filename

V369A



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 16, 2018

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Ary USX AB31-14

Enclosed are the results of analyses for samples received by Summit Scientific on 12/12/18 16:35. 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 For Ben Shrewsbury

Laboratory Manager



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. WALL 3ft	1812151-01	Soil	12/10/18 00:00	12/12/18 16:35
FLOOR 5ft	1812151-02	Soil	12/10/18 00:00	12/12/18 16:35

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1812151

Summit Scientific

S₂

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401

303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address: P.O. Box 1289

E-Mail: paulh@fremontenv.com

Bill to Howard

City/State/Zip: PO Box 1829 Wellington, CO 80549

Phone: 303-956-8714

Fax:

Project Name: NOBLE - ARY USX AB31-14

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	Napthalene	SAR	EC	Ph		
1	N WALL 3 FT	12/10/18		1			✓			✓				✓	✓	✓	✓	✓	✓	
2	FLOOR 5 FT			1			✓			✓				✓	✓	✓				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard _____ 48 hours _____ Sample Integrity: Temperature Upon Receipt: 13.2 Intact: Yes No	Notes:
P4J/FE	12/12/18 1635		12.12.18 1635		
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order: 1812151

Client: Escomet Client Project ID: Noble - Any USX AB31-14

Shipped Via: H.O. Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air ☒ Soil/Solid Water Other: _____
(Describe)

Temp (°C)	<u>13.2</u>
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

UP
Custodian Printed Name or Initials

[Signature]
Signature or Initials of Custodian

12.12.18 1650
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

N. WALL 3ft
1812151-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1812188	12/13/18	12/15/18	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: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1812189	12/13/18	12/14/18	EPA 8015M	

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.2 %	30-150		"	"	"	"	

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

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	3790	11.2	mg/kg dry	1	1812187	12/13/18	12/13/18	EPA 6020B	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

N. WALL 3ft
1812151-01 (Soil)

Summit Scientific

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

Magnesium	315	5.59	mg/kg dry	1	1812187	12/13/18	12/13/18	EPA 6020B
Sodium	89.5	5.59	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.375	0.100	units	1	1812206	12/14/18	12/14/18	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.4		%	1	1812180	12/13/18	12/13/18	Calculation	
pH	8.70		pH Units	"	1812181	12/13/18	12/13/18	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.442	0.0100	mmhos/cm	1	1812182	12/13/18	12/13/18	EPA 120.1	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

FLOOR 5ft
1812151-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1812188	12/13/18	12/15/18	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: **12/10/18 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1812189	12/13/18	12/14/18	EPA 8015M	

Date Sampled: **12/10/18 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		99.5 %	30-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1812188 - EPA 5030 Soil MS

Blank (1812188-BLK1)

Prepared: 12/13/18 Analyzed: 12/15/18

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	0.0408		"	0.0396	103	23-173				
Surrogate: Toluene-d8	0.0385		"	0.0400	96.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400	98.2	21-167				

LCS (1812188-BS1)

Prepared: 12/13/18 Analyzed: 12/15/18

Benzene	0.154	0.0020	mg/kg	0.100	154	70-130				QM-07
Toluene	0.123	0.0050	"	0.100	123	70-130				
Ethylbenzene	0.103	0.0050	"	0.100	103	70-130				
m,p-Xylene	0.158	0.010	"	0.200	79.0	70-130				
o-Xylene	0.125	0.0050	"	0.100	125	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0396	107	23-173				
Surrogate: Toluene-d8	0.0391		"	0.0400	97.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0435		"	0.0400	109	21-167				

Matrix Spike (1812188-MS1)

Source: 1812063-08

Prepared: 12/13/18 Analyzed: 12/15/18

Benzene	0.201	0.0020	mg/kg	0.100	201	70-130				
Toluene	0.199	0.0050	"	0.100	199	70-130				
Ethylbenzene	0.183	0.0050	"	0.100	183	70-130				
m,p-Xylene	0.349	0.010	"	0.200	174	70-130				
o-Xylene	0.190	0.0050	"	0.100	190	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0396	101	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400	98.2	21-167				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

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 1812188 - EPA 5030 Soil MS

Matrix Spike Dup (1812188-MSD1)

Source: 1812063-08

Prepared: 12/13/18 Analyzed: 12/15/18

Benzene	0.157	0.0020	mg/kg	0.100	157	70-130	24.5	30	
Toluene	0.126	0.0050	"	0.100	126	70-130	45.2	30	
Ethylbenzene	0.113	0.0050	"	0.100	113	70-130	47.5	30	
m,p-Xylene	0.152	0.010	"	0.200	76.0	70-130	78.6	30	
o-Xylene	0.129	0.0050	"	0.100	129	70-130	38.3	30	
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0396	108	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400	98.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400	107	21-167			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1812189 - EPA 3550A

Blank (1812189-BLK1)

Prepared: 12/13/18 Analyzed: 12/14/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1812189-BS1)

Prepared: 12/13/18 Analyzed: 12/14/18

C10-C28 (DRO) 618 50 mg/kg 500 124 70-130

Matrix Spike (1812189-MS1)

Source: 1812063-08

Prepared: 12/13/18 Analyzed: 12/14/18

C10-C28 (DRO) 652 50 mg/kg 500 52.3 120 70-130

Matrix Spike Dup (1812189-MSD1)

Source: 1812063-08

Prepared: 12/13/18 Analyzed: 12/14/18

C10-C28 (DRO) 653 50 mg/kg 500 52.3 120 70-130 0.219 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

Soluble Nutrients by EPA 6020/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 1812187 - General Preparation

Blank (1812187-BLK1)

Prepared & Analyzed: 12/13/18

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

LCS (1812187-BS1)

Prepared & Analyzed: 12/13/18

Calcium	554	10.0	mg/kg wet	500	111	70-130
Magnesium	549	5.00	"	500	110	70-130
Sodium	526	5.00	"	500	105	70-130

Duplicate (1812187-DUP1)

Source: 1812063-08

Prepared & Analyzed: 12/13/18

Calcium	1970	13.6	mg/kg dry	1750	11.9	20
Magnesium	436	6.81	"	505	14.5	20
Sodium	6520	6.81	"	6780	3.88	20

Matrix Spike (1812187-MS1)

Source: 1812063-08

Prepared & Analyzed: 12/13/18

Calcium	2450	13.6	mg/kg dry	681	1750	103	70-130
Magnesium	1150	6.81	"	681	505	95.2	70-130
Sodium	7390	6.81	"	681	6780	89.4	70-130

Matrix Spike Dup (1812187-MSD1)

Source: 1812063-08

Prepared & Analyzed: 12/13/18

Calcium	2520	13.6	mg/kg dry	681	1750	112	70-130	2.63	25
Magnesium	1100	6.81	"	681	505	86.8	70-130	5.10	25
Sodium	7400	6.81	"	681	6780	90.9	70-130	0.133	25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

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 1812180 - General Preparation

Duplicate (1812180-DUP1)		Source: 1812149-03			Prepared & Analyzed: 12/13/18						
% Solids	94.5		%		94.7			0.209		20	

Batch 1812181 - General Preparation

LCS (1812181-BS1)		Prepared & Analyzed: 12/13/18									
pH	9.3		pH Units				95-105				
Duplicate (1812181-DUP1)		Source: 1812149-03			Prepared & Analyzed: 12/13/18						
pH	8.3		pH Units		8.2			1.06		20	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1812182 - General Preparation

Blank (1812182-BLK1)

Prepared & Analyzed: 12/13/18

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1812182-BS1)

Prepared & Analyzed: 12/13/18

Specific Conductance (EC) 0.747 0.0100 mmhos/cm 0.750 99.5 90-110

Duplicate (1812182-DUP1)

Source: 1812149-03

Prepared & Analyzed: 12/13/18

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.180 15.5 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ary USX AB31-14

Project Number: [none]
Project Manager: Paul Henehan

Reported:
12/16/18 11:02

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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