



LEGEND

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

Figure 1
SITE MAP

Noble Gunther Alles BB31-9
 Facility ID - 328093
 NE SE Section 31, T5N, R63W - 40.35284°N 104.46986°W
 Weld County, Colorado

API No. 05-123-15536	Prepared by	Drawn by JMA
Date 9/5/17	Reviewed by	Filename V147A



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 17, 2017

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020

RE: Noble - Gunther Alles BB 31-09

Enclosed are the results of analyses for samples received by Summit Scientific on 08/11/17 14:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury
Laboratory Manager



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Northwall 5'	1708105-01	Soil	08/11/17 00:00	08/11/17 14:40
Floor 6'	1708105-02	Soil	08/11/17 00:00	08/11/17 14:40

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

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1708105

S₂

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

Page 1 of 1

Client: Fremont Environmental (Noble) Project Manager: Paul Henehan
Address: P.O. Box 1289 E-Mail: paulh@fremontenv.com
City/State/Zip: PO Box 1829 Wellington, CO 80549
Phone: 303-956-8714 Fax: Project Name: Noble - Gunther Alles BB 31-09
Sampler Name: Mark T 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	GRO/DRO	Napthalene	SAR	EC	
1	north wall 5'	8/1/17																
2	floor 6			1														
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
Relinquished by: [Signature]		Date/Time: 8/1/17 14:40		Received by: [Signature]		Date/Time: 8-1-17 14:40		Turn Around Time (Check)						Notes:				
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> 72 hours <input checked="" type="checkbox"/> Standard						0110				
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity: 0.8										
								Temperature Upon Receipt: <input checked="" type="checkbox"/> Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										

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Broomfield CO, 80020

Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

Sample Receipt Checklist

S2 Work Order: 1708105

Client: Fremont Client Project ID: Noble - Gunther Alles BB 31-09

Shipped Via: P/U (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

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

Cooler ID					
Temp (°C)	<u>10.8</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
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 short holding time analytes or samples with HTs 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.

Paul Shew Shug
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

8-11-17 1800
Date/Time



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

Northwall 5'
1708105-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1708130	08/14/17	08/14/17	8015M	

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		94.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1708129	08/14/17	08/14/17	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: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2220	11.7	mg/kg dry	1	1708126	08/14/17	08/14/17	EPA 6020/Mod. USDA60 6(2, 3A)	

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Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

Northwall 5'
1708105-01 (Soil)

Summit Scientific

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

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	533	5.84	mg/kg dry	1	1708126	08/14/17	08/14/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	86.3	5.84	"	"	"	"	"	"	"
Sodium Adsorption Ratio	0.427		units	"	1708140	08/15/17	08/15/17	"	"

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26	0.100	pH Units	1	1708146	08/16/17	08/16/17	EPA 9045	
Specific Conductance (EC)	0.731	0.0100	mmhos/cm	"	1708147	08/16/17	08/17/17	SM 2510B	
% Solids	85.6		%	"	1708125	08/14/17	08/15/17	% calculation	

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Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

Floor 6'
1708105-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1708130	08/14/17	08/14/17	8015M	

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		94.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1708129	08/14/17	08/14/17	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: **08/11/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

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 1708130 - EPA 3550A

Blank (1708130-BLK1)				Prepared & Analyzed: 08/14/17							
C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.7		"	12.5		101	30-150				
LCS (1708130-BS1)				Prepared & Analyzed: 08/14/17							
C10-C28 (DRO)	602	50	mg/kg	499		121	73-134				
<i>Surrogate: o-Terphenyl</i>	13.2		"	12.5		106	30-150				
Matrix Spike (1708130-MS1)				Source: 1708105-01		Prepared & Analyzed: 08/14/17					
C10-C28 (DRO)	482	50	mg/kg	499	42.8	88.1	50-148				
<i>Surrogate: o-Terphenyl</i>	11.9		"	12.5		95.5	30-150				
Matrix Spike Dup (1708130-MSD1)				Source: 1708105-01		Prepared & Analyzed: 08/14/17					
C10-C28 (DRO)	481	50	mg/kg	499	42.8	87.7	50-148	0.336		20	
<i>Surrogate: o-Terphenyl</i>	11.9		"	12.5		95.1	30-150				

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Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

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

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

Batch 1708129 - EPA 5030 Soil MS

Blank (1708129-BLK1)

Prepared & Analyzed: 08/14/17

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>0.0457</i>		<i>"</i>	<i>0.0400</i>		<i>114</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>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

LCS (1708129-BS1)

Prepared & Analyzed: 08/14/17

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0794	0.0020	"	0.100		79.4	58-130			
Toluene	0.0902	0.0050	"	0.100		90.2	61-134			
Ethylbenzene	0.0902	0.0050	"	0.0992		91.0	74-139			
m,p-Xylene	0.166	0.010	"	0.200		83.1	73-137			
o-Xylene	0.0842	0.0050	"	0.0980		85.9	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0471</i>		<i>"</i>	<i>0.0400</i>		<i>118</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</i>	<i>21-167</i>			

Matrix Spike (1708129-MS1)

Source: 1708105-01

Prepared & Analyzed: 08/14/17

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0890	0.0020	"	0.100	ND	89.0	30-131			
Toluene	0.103	0.0050	"	0.100	ND	103	30-134			
Ethylbenzene	0.110	0.0050	"	0.0992	ND	110	22-153			
m,p-Xylene	0.204	0.010	"	0.200	ND	102	10-159			
o-Xylene	0.102	0.0050	"	0.0980	ND	104	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0459</i>		<i>"</i>	<i>0.0400</i>		<i>115</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0444</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

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Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

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 1708129 - EPA 5030 Soil MS

Matrix Spike Dup (1708129-MSD1)	Source: 1708105-01			Prepared & Analyzed: 08/14/17						
Naphthalene	ND	0.010	mg/kg	ND	ND	10-158			42	
Benzene	0.0962	0.0020	"	0.100	ND	96.2	30-131	7.71	34	
Toluene	0.111	0.0050	"	0.100	ND	111	30-134	7.04	30	
Ethylbenzene	0.127	0.0050	"	0.0992	ND	128	22-153	14.8	24	
m,p-Xylene	0.234	0.010	"	0.200	ND	117	10-159	13.6	68	
o-Xylene	0.118	0.0050	"	0.0980	ND	120	31-151	14.5	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0465</i>		<i>"</i>	<i>0.0400</i>		<i>116</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0415</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

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1759 Redwing Lane
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Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

Soluble Nutrients by EPA 6020/Mod. 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		

Batch 1708126 - General Preparation

Blank (1708126-BLK1)

Prepared & Analyzed: 08/14/17

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

LCS (1708126-BS1)

Prepared & Analyzed: 08/14/17

Calcium	480	10.0	mg/kg wet	500		96.0	82.9-118		
Magnesium	513	5.00	"	500		103	77.1-123		
Sodium	468	5.00	"	500		93.6	71-129		

Duplicate (1708126-DUP1)

Source: 1708102-09

Prepared & Analyzed: 08/14/17

Calcium	257	11.1	mg/kg dry		249			3.22	200
Magnesium	92.5	5.54	"		95.9			3.67	200
Sodium	5.07	5.54	"		4.94			2.69	200

Matrix Spike (1708126-MS1)

Source: 1708102-09

Prepared & Analyzed: 08/14/17

Calcium	744	11.1	mg/kg dry	554	249	89.5	75-125		
Magnesium	681	5.54	"	554	95.9	106	75-125		
Sodium	520	5.54	"	554	4.94	93.1	75-125		

Matrix Spike Dup (1708126-MSD1)

Source: 1708102-09

Prepared & Analyzed: 08/14/17

Calcium	739	11.1	mg/kg dry	554	249	88.5	75-125	0.718	25
Magnesium	677	5.54	"	554	95.9	105	75-125	0.658	25
Sodium	518	5.54	"	554	4.94	92.7	75-125	0.408	25

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Project Number: [none]
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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 1708125 - General Preparation

Duplicate (1708125-DUP1)	Source: 1708102-09			Prepared: 08/14/17 Analyzed: 08/15/17						
% Solids	91.3		%		90.3			1.02	20	

Batch 1708146 - General Preparation

LCS (1708146-BS1)				Prepared & Analyzed: 08/16/17						
pH	9.20	0.100	pH Units	9.16		100	95-105			
Duplicate (1708146-DUP1)	Source: 1708104-05			Prepared & Analyzed: 08/16/17						
pH	8.84	0.100	pH Units		8.87			0.339	20	

Batch 1708147 - General Preparation

Blank (1708147-BLK1)				Prepared: 08/16/17 Analyzed: 08/17/17						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (1708147-BS1)				Prepared: 08/16/17 Analyzed: 08/17/17						
Specific Conductance (EC)	0.751	0.0100	mmhos/cm	0.750		100	90-110			
Duplicate (1708147-DUP1)	Source: 1708104-05			Prepared: 08/16/17 Analyzed: 08/17/17						
Specific Conductance (EC)	1.24	0.0100	mmhos/cm		1.25			0.361	20	

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Project: Noble - Gunther Alles BB 31-09

Project Number: [none]
Project Manager: Paul Henehan

Reported:
08/17/17 17:31

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