

State of Colorado
Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY
Document 2142900
Received 4/24/2015
REM 9020

OGCC Employee:

Spill	Complaint
Inspection	NOAV

Tracking No:

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: _____	Contact Name and Telephone: _____
Name of Operator: _____	_____
Address: _____	No: _____
City: _____ State: _____ Zip: _____	Fax: _____

API Number: _____	County: _____
Facility Name: _____	Facility Number: _____
Well Name: _____	Well Number: _____
Location: (QtrQtr, Sec, Twp, Rng, Meridian): _____	Latitude: _____ Longitude: _____

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): _____

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): _____

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: _____

Potential receptors (water wells within 1/4 mi, surface waters, etc.): _____

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
Soils	_____	_____
Vegetation	_____	_____
Groundwater	_____	_____
Surface Water	_____	_____

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Describe how source is to be removed:

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

REMEDIATION WORKPLAN (Cont.)

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: _____ Date Site Investigation Completed: _____ Date Remediation Plan Submitted: _____
Remediation Start Date: _____ Anticipated Completion Date: _____ Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: _____ Signed: _____

Title: _____ Date: _____

OGCC Approved: _____ Title: **EPS** Date: **4/24/2015**

FREMONT ENVIRONMENTAL INC.

March 23, 2014

Mr. Jacob Evans
Noble Energy
1625 Broadway, Suite 2000
Denver, CO 80202

Subject: **Excavation Report**
 Brown 34-24
 API # 05-123-14829
 Weld County, Colorado
 Fremont Project No. C014-007
 Facility #247032

Dear Mr. Evans:

Enclosed please find a copy of the above referenced Excavation Report for the Brown 34-24 release site in Weld County, Colorado. The enclosed report describes excavation actions to remove impacted soil from the site. Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henehan, P.E.
Senior Consultant

Enclosure

EXCAVATION REPORT
NOBLE ENERGY INC.
BROWN 34-24
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C014-007
FACILITY #247032

Prepared by:

Fremont Environmental Inc.
12061 Pennsylvania Street, Suite B-101
Thornton, CO 80241
(303) 956-8714

March 23, 2014

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EXCAVATION REPORT
NOBLE ENERGY INC.
BROWN 34-24
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C014-007
FACILITY #247032

1.0 INTRODUCTION

The purpose of this document is to present information collected during the excavation of petroleum-impacted soil at the Brown 34-24 release location in Weld County, Colorado. This seven day excavation project was completed between February 11 and 20, 2014.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The Brown 34-24 site is located approximately three miles east of Gilcrest, Colorado in Weld County as shown on Figure 1. The site is located in a rural and agricultural area 0.5 miles northwest of the intersection of County Road 37 and County Road 42. The location is further described as the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 24, Township 4N, Range 66W.

2.2 Site History

The site consists of the separator and water vault for the Brown 34-24 natural gas well. The well was drilled in 1991 to a depth of approximately 7,355 feet. Soil impacts were recently identified at the facility after the failure of one of the dump lines between the separator and water vault. This failure initiated this excavation effort.

3.0 FIELD ACTIVITIES

Remediation efforts consisted of the excavation of petroleum-impacted soil at this site. Ground water was encountered in the excavation at a depth of approximately five feet; therefore, only three floor soil samples were collected during the course of this work. In addition, one ground water sample was collected. The soil consisted of roadbase or topsoil which was underlain by sandy clay to a depth of approximately 11 feet. The excavated area is shown on Figure 2.

Excavation was initiated near the former water vault in the center of the overall dig on February 11, 2014 and continued east. Excavation continued to the east and then south until clean sidewalls were encountered on both sides of the dig. The soil removal then continued westward and then north until the extent of impact was completely identified and removed on February 20, 2014.

A total of 2,170 cubic yards of petroleum impacted soil were removed by B&G Oilfield Services Inc. from the location over a seven day period. The impacted soil was disposed of at the Waste Management Inc. Buffalo Ridge landfill in Keenesburg, Colorado as non-hazardous waste.

A photoionization detector (PID) was used to field screen soil samples during the excavation. The instrument was calibrated with a 100 ppm isobutylene standard. Based on the field screening results, 15 soil samples were collected from the side walls and floor of the excavation to confirm that impacted soil had been removed. The laboratory analyses indicated that all of these samples had concentrations that were less than the Colorado Oil and Gas Conservation Commission (COGCC) limits.

The sidewall samples were collected as grab samples near the lower portion of the excavation wall at depths of five to eight feet. The water table was present at a depth of

approximately five feet; however, ground water only seeped into the excavation which allowed the soil to be removed to a greater depth. As noted above, only three floor samples were collected due to the presence of ground water in the bottom of the excavation. One ground water sample was collected during the excavation.

The soil samples were analyzed by eAnalytics Laboratory, Inc. of Loveland, Colorado for benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene, Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) by EPA method 8260C, and TPH – Diesel Range Organics (TPH-DRO) by EPA method 8015. The laboratory reports and chain-of-custody documentation are included in Appendix A.

A summary of the laboratory data is included in Table 1. This table shows the PID value and laboratory analyses for each soil sample. In addition, a column stating whether the laboratory analyses passed or failed the COGCC limits is provided. The laboratory analyses indicated that all of the 15 soil samples collected from the sidewalls and floor achieved the COGCC Table 910-1 limits. As noted above, one ground water sample was collected on the first day of excavation and submitted to the laboratory. As shown in Table 2, the BTEX concentrations in this sample exceeded the COGCC Table 910-1 limits for benzene, toluene and xylenes.

Gypsum was placed at the water table during backfilling to promote biodegradation of any residual petroleum in the soil and ground water. Gypsum, which is also known as hydrated calcium sulfate, releases sulfate into the ground water which can enhance anaerobic biodegradation of petroleum constituents. Above the gypsum layer, the excavation was backfilled with clean soil and compacted.

A daily summary of the excavation work is provided below:

February 11, 2014 (Day 1) - Excavation of the impacted area was initiated near the location of the former water vault and continued to the east. Petroleum impacted soil was present to a depth of approximately 11 feet; ground water was observed in the excavation. The soil consisted of sandy clay. Approximately 260 cubic yards of impacted soil were removed using a track excavator and transported to the landfill.

One wall sample (1-16') was collected and submitted to the laboratory. This wall sample defined the eastern extent of the overall excavation. A ground water sample was collected from the excavation and submitted to the laboratory for BTEX analyses. Benzene, toluene and xylenes all exceeded the COGCC Table 910-1 limits with concentrations of 1,033, 4,685 and 8,999 ug/L, respectively. The ground water data is presented in Table 2.

February 12, 2014 (Day 2) - Excavation continued to the south and then west as the entire southern extent of impacts was identified. In the afternoon, work continued on the north end of previous day's work.

Three wall samples (2-5', 3-6' and 4-7') were collected and submitted to the laboratory. These wall samples defined the southern, southeastern and eastern extent of the overall excavation. One floor sample (A-11') was also collected and defined the vertical extent of impacts. Approximately 350 cubic yards of impacted soil were removed and transported to the landfill. The locations of the soil samples are illustrated on Figure 2. The PID values and laboratory analyses are provided on Table 1.

February 13, 2014 (Day 3) - Excavation continued to the west from the previous day's work. Approximately 400 cubic yards of impacted soil were removed and transported to the landfill.

One wall sample (5-7') and one floor sample (B-11') were collected and submitted to the laboratory. This wall sample defined the southwestern extent of the overall excavation.

February 14, 2104 (Day 4) - Excavation continued towards the southwestern corner to the south while paralleling DCP's flow line. DCP personnel were present during excavation of their line to ensure no damage occurred. Much of this excavation work was conducted in the landowner's cornfield.

One wall sample (6-8') was collected and submitted to the laboratory. This wall sample helped define the western extent of the overall excavation. Approximately 190 cubic yards of impacted soil were removed and transported to the landfill. The location of the soil sample is illustrated on Figure 2. The PID values and laboratory analyses are provided on Table 1.

February 18, 2014 (Day 5) - Soil removal continued to the south while maintaining a clean sidewall along the western limits of excavation. One wall sample (7-7') was collected and submitted to the laboratory. This wall sample also helped define the southwestern extent of the overall excavation. Approximately 250 cubic yards of impacted soil were removed and transported to the landfill. The locations of the soil samples are illustrated on Figure 2. The PID values and laboratory analyses are provided on Table 1.

February 19, 2014 (Day 6) - Excavation continued to the north from the previous excavation and just south of the bermed separator area along the DCP pipeline. Soil

removal continued from east to west while maintaining a clean northern wall based on PID readings. Three wall samples (8-7, 9-8' and 10-7') were collected and submitted to the laboratory. Approximately 540 cubic yards of impacted soil were removed and transported to the landfill. The locations of the soil samples are illustrated on Figure 2. The PID values and laboratory analyses are provided on Table 1.

February 20, 2014 (Day 7, Final Day) – Excavation continued to the northwest from the previous day's work. This work was also conducted mostly in the cornfield. Two side wall samples (11-8' and 12-8') were collected and submitted to the laboratory. Approximately 180 cubic yards of impacted soil were removed and transported to the landfill. The locations of the soil samples are illustrated on Figure 2. The PID values and laboratory analyses are provided on Table 1.

4.0 DISCUSSION

As demonstrated by the soil sampling, the petroleum impacted soil was removed from the site by excavation. This was confirmed by the analyses of the soil samples collected from the excavation sidewalls and floor which were below the COGCC Table 910-1 concentrations. Approximately 2,170 cubic yards of impacted soil were removed and transported to the landfill.

Ground water was encountered during excavation and a sample was collected and analyzed for BTEX. Benzene, toluene and xylenes all exceeded the COGCC Table 910-1 limits with concentrations of 1,033, 4,685 and 8,999 ug/L, respectively.

Since this water sample had concentrations of BTEX that exceeded the COGCC limits, monitoring wells will need to be installed at this site to delineate the horizontal extent of ground water impacts. Installation and monitoring of the wells will be discussed in separate reporting.

5.0 REMARKS

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**

 For MVA

3/23/14

Date _____

Wayne Austin
Construction Consultant

Reviewed by:



3/23/14

Date _____

Paul V. Henehan, P.E.
Senior Consultant

TABLE

TABLE 1
SUMMARY OF SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BROWN 34-24, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C014-007

Sample	Depth (ft)	Date Sampled	Location	Pass or Fail	PID (ppm)	Benzene mg/kg	Toluene mg/kg	Ethyl-Benzene mg/kg	Xylenes mg/kg	Naphthalene mg/kg	TPH GRO mg/kg	TPH DRO mg/kg
A-11'	11	2/11/2014	Floor	Pass	34	<0.01	0.034	<0.01	0.097	<0.01	<50	<50
1-6'	6	2/11/2014	Sidewall	Pass	2	<0.01	<0.01	<0.01	0.037	<0.01	<50	<50
2-5'	5	2/12/2014	Sidewall	Pass	1	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
3-6'	6	2/12/2014	Sidewall	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
4-7'	7	2/12/2014	Sidewall	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
B-10'	10	2/12/2014	Floor	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
5-7'	7	2/13/2014	Sidewall	Pass	5	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
C-10'	10	2/13/2014	Floor	Pass	3	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
6-8'	8	2/14/2014	Sidewall	Pass	2	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
7-7'	7	2/18/2014	Sidewall	Pass	3	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
8-7'	7	2/19/2014	Sidewall	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
9-8'	8	2/19/2014	Sidewall	Pass	17	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
10-7'	7	2/19/2014	Sidewall	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
11-8'	8	2/20/2014	Sidewall	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
12-8'	8	2/20/2014	Sidewall	Pass	0	<0.01	<0.01	<0.01	<0.01	<0.01	<50	<50
COGCC Table 910 Limits						0.17	85	100	175	23	500	500

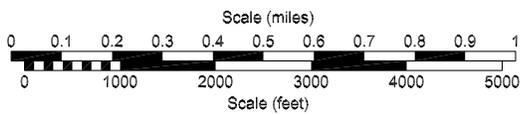
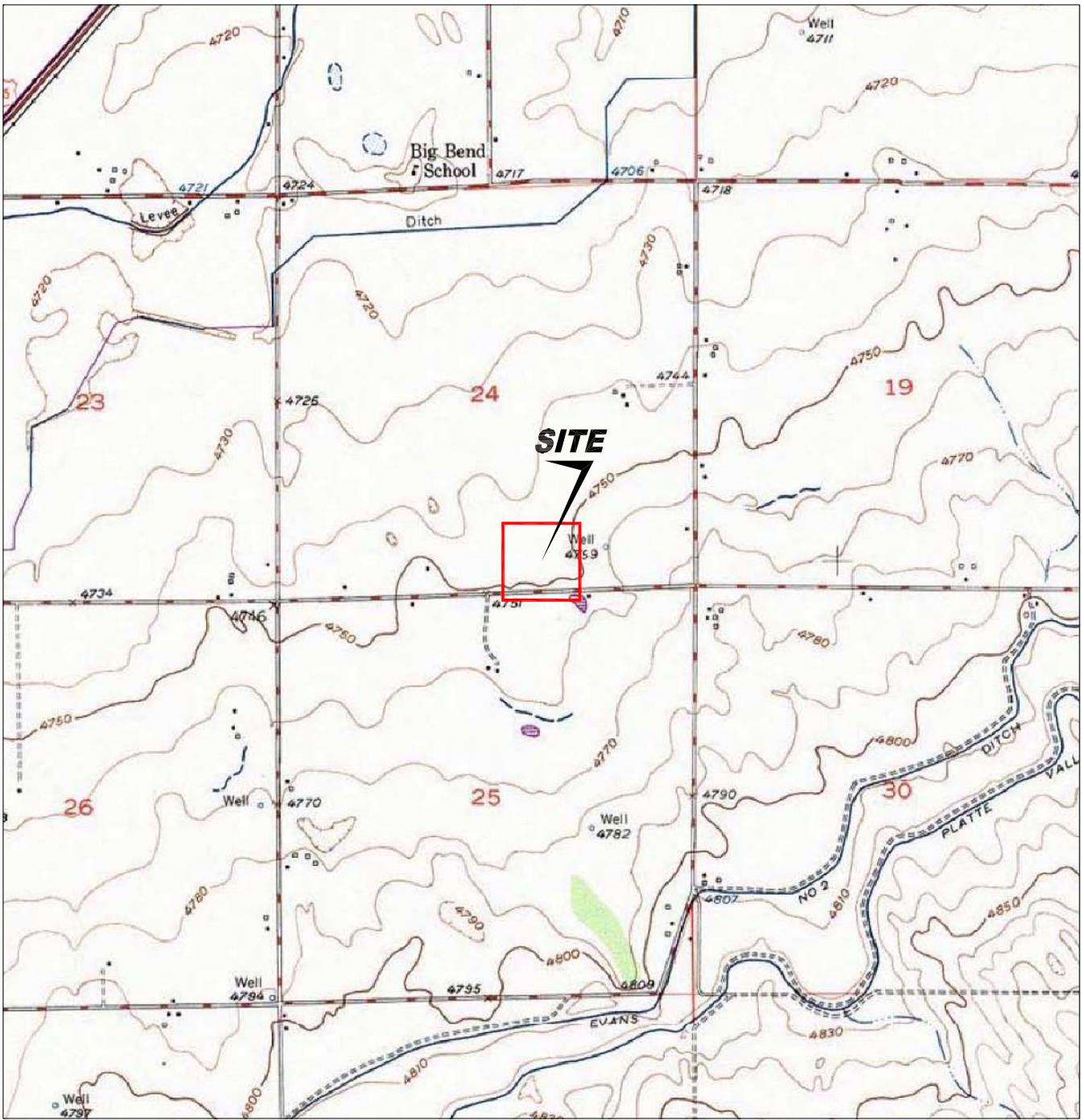
Bold faced values exceed the COGCC Table 910-1 concentrations

TABLE 2
SUMMARY OF GROUND WATER CHEMISTRY DATA
NOBLE ENERGY INC.
BROWN 34-24, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C014-007

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)
GW-1 at 11'	02/11/14	1033	4685	587	8999
Table 910-1 Limits		5	560	700	1,400

Bold face values exceed the COGCC limits

FIGURES



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Brown 34-24
SW SE Section 24, T4N, R66W
Weld County, Colorado

Project No. C014-007	Prepared by	Drawn by JMA
Date 2/26/14	Reviewed by	Filename 14007T





LEGEND

- WELL LOCATION
- FENCE LINE
- PIPELINE
- BERM
- ABOVE GROUND STORAGE TANK
- SOIL SAMPLE LOCATION

**Figure 2
SITE MAP**

Noble Brown 34-24
SW SE Section 24, T4N, R66W
Weld County, Colorado

Project No. C014-007	Prepared by	Drawn by JMA
Date 3/3/14	Reviewed by	Filename 14007Q



APPENDIX A

LABORATORY DOCUMENTATION

Test Report

eANALYTICS LABORATORY

February 12, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 722
Date Samples Received: 2/11/2014
Number of Samples: 4
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



Proudly certified by A2LA & The
United States Department of Defense
(DoD ELAP)

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS

LABORATORY

Chain of Custody Form

		1767 Rocky Mountain Avenue Loveland CO 80538 Phone: (970) 667-6975 Fax: (970) 669-0941 www.eAnalyticsLab.com			
CLIENT INFORMATION (*New Clients please fill out completely)			ANALYSIS INFORMATION (Select analysis by checking box on corresponding sample line)		
Company: Fremont Environmental Project: <u>BROWN 34-24 CO14-007</u> Project Manager: Paul Henehan Sampler: <u>Wayne Austin</u> Phone/Email: 303-956-8714 Address: P.O. Box 1289 Wellington CO 80549			Number of Containers Matrix: (S) Soil (W) Water (V) Vapor (O) Other	<input type="checkbox"/> BTEX (EPA 8260) <input type="checkbox"/> BTEX Naphthalene (EPA 8260) <input type="checkbox"/> TPH - GRO/DRO (EPA 8260/8015) <input type="checkbox"/> SAR (US Dept of Ag Method 20B) <input type="checkbox"/> EC (US Dept of Ag Method 3) <input type="checkbox"/> pH (EPA 9045D)	Other Analysis
Lab ID	Sample Name	Sampling Date/Time			
1	Gw-1 @ 11'	2/11 AM/PM			
2	1739 PPM	" AM/PM			
3	A-11'	" AM/PM			
4	1-6'	" AM/PM			
Comments:					
Turnaround Time (Business Days) TAT begins when sample is received by eANALYTICS <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (1.25x) <input type="radio"/> 2 Day (1.5x) <input type="radio"/> 1 Day (2x) <input type="radio"/> Next Bus Morning (Noble Pricing)			Record of Custody Relinquished by: <u>Wayne A</u> Date <u>2/11</u> Company: FREMONT ENVIRONMENTAL Time <u>15:45</u> AM/PM Received by: _____ Date _____ AM/PM Company: _____ Time _____ AM/PM Relinquished by: _____ Date _____ AM/PM Company: _____ Time _____ AM/PM Received by: <u>[Signature]</u> Date <u>2/11/14</u> Company: eANALYTICS Time <u>15:45</u> AM/PM		
For eANALYTICS Use Samples Received Intact <input checked="" type="radio"/> Yes / No Received Within Temperature Range (2-6°C) <input checked="" type="radio"/> Yes / No Sample Preservative Ice / Acid / None / Other					

WO# 722

eANALYTICS: Environmental testing made Easy

Page 1 of 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Naph- thalene	TPH GRO C6-C10	TPH DRO C10-C28	Date Sampled	Date Analyzed	Lab ID
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
A-11'	< 0.01	0.034	< 0.01	0.097	< 0.01	< 50	< 50	02/11/14	02/12/14	722 3
1-6'	< 0.01	< 0.01	< 0.01	0.037	< 0.01	< 50	< 50	02/11/14	02/12/14	722 4

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy

Lab ID: 722

Project: Brown 34-24

Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
A-11'	104	109	100	94	02/11/14	02/12/14	722 3
1-6'	102	100	106	91	02/11/14	02/12/14	722 4

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	92	100	90	101	89	100	91	02/12/14	LCS	722 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/12/14	MB	722 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report

eANALYTICS LABORATORY

February 12, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 722
Date Samples Received: 2/11/2014
Number of Samples: 4
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



Proudly certified by A2LA & The
United States Department of Defense
(DoD ELAP)

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS

LABORATORY

Chain of Custody Form

eANALYTICS LABORATORY			1767 Rocky Mountain Avenue Loveland CO 80538		Phone: (970) 667-6975		Fax: (970) 669-0941		www.eAnalyticsLab.com						
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>					ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>										
Company: Fremont Environmental					Number of Containers Matrix: (S) Soil (W) Water (V) Vapor (O) Other	BTEX (EPA 8260)	BTEX Naphthalene (EPA 8260)	TPH - GRO/DRO (EPA 8260/8015)	SAR (US Dept of Ag Method 20B)	EC (US Dept of Ag Method 3)	pH (EPA 9045D)	Other Analysis			
Project: BROWN 34-24 C014-007															
Project Manager: Paul Henehan															
Sampler: Wayne Austin															
Phone/Email: 303-956-8714															
Address: P.O. Box 1289 Wellington CO 80549															
Lab ID	Sample Name	Sampling Date/Time													
1	Gw-1 @ 11'	2/11	AM/PM	2W											
	Rush {														
2	1739 PPM	"	AM/PM	1S											
3	A-11'	"	AM/PM	1S											
4	1-6'	"	AM/PM	1S											
Comments:															
Turnaround Time (Business Days) TAT begins when sample is received by eANALYTICS <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (1.25x) <input type="radio"/> 2 Day (1.5x) <input type="radio"/> 1 Day (2x) <input type="radio"/> Next Bus Morning (Noble Pricing)					Record of Custody Relinquished by: Wayne A Date 2/11 Company: FREMONT ENVIRONMENTAL Time 15:45 AM/PM Received by: _____ Date _____ AM/PM Company: _____ Time _____ AM/PM Relinquished by: _____ Date _____ AM/PM Company: _____ Time _____ AM/PM Received by: [Signature] Date 2/11/14 Company: eANALYTICS Time 15:45 AM/PM										
For eANALYTICS Use Samples Received Intact <input checked="" type="radio"/> Yes / No Received Within Temperature Range (2-6°C) <input checked="" type="radio"/> Yes / No Sample Preservative Ice None Acid Other															

WO# 722

eANALYTICS: Environmental testing made Easy

Page 1 of 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

The results contained within this report relate only to the items analyzed



Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Naph- thalene	TPH GRO C6-C10	TPH DRO C10-C28	Date Sampled	Date Analyzed	Lab ID
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
1739 PPM	0.116	0.040	3.09	12.5	0.367	156	57.9	02/11/14	02/11/14	722 2

eANALYTICS
LABORATORY

Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260

Sample Name	Benzene ug/L	Toluene ug/L	Ethyl- benzene ug/L	Total Xylenes ug/L	Date Sampled	Date Analyzed	Lab ID
GW-1 @ 11'	1033	4685	587	8999	02/11/14	02/11/14	722 1



Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
1739 PPM	100	95	96	107	02/11/14	02/11/14	722 2



Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
GW-1 @ 11'	99	105	95	98	02/11/14	02/11/14	722 1



Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	104	103	92	97	90	100	103	02/11/14	LCS	722 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/11/14	MB	722 1

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Client: Fremont Environmental / Noble Energy Lab ID: 722
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Date Analyzed	Lab ID
Laboratory Control Sample (70-130%)	102	103	95	90	02/11/14	LCS 722 1
Method Blank	< 1.0	< 1.0	< 1.0	< 1.0	02/11/14	MB 722 1
	ug/L	ug/L	ug/L	ug/L		

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report

eANALYTICS LABORATORY

February 17, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 726
Date Samples Received: 2/12/2014
Number of Samples: 4
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



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Chain of Custody

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LABORATORY

Chain of Custody Form

eANALYTICS LABORATORY			eANALYTICS LABORATORY									
1767 Rocky Mountain Avenue Loveland CO 80538			Phone: (970) 667-6975			Fax: (970) 669-0941			www.eAnalyticsLab.com			
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>			ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>									
Company: Fremont Environmental			Number of Containers	Matrix: (S) Soil (W) Water (V) Vapor (O) Other	BTEX (EPA 8260)	BTEX Naphthalene (EPA 8260)	TPH - GRO/DRO (EPA 8260/8015)	SAR (US Dept of Ag Method 20B)	EC (US Dept of Ag Method 3)	pH (EPA 9045D)	Other Analysis	
Project: Brown 34.24 C014-007												
Project Manager: Paul Henehan												
Sampler: Wayne Austin												
Phone/Email: 303-956-8714												
Address: P.O. Box 1289 Wellington CO 80549												
Lab ID	Sample Name	Sampling Date/Time										
1	2-5'	2/12' AM/PM	1	S		88						
2	3-6'	" AM/PM	1	S		88						
3	4-7'	" AM/PM	1	S		88						
4	B-10'	" AM/PM	1	S		88						
		AM/PM										
		AM/PM										
		AM/PM										
		AM/PM										
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		AM/PM										
		AM/PM										
Comments:												
Turnaround Time (Business Days) <small>TAT begins when sample is received by eANALYTICS</small> <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (1.25x) <input type="radio"/> 2 Day (1.5x) <input type="radio"/> 1 Day (2x) <input type="radio"/> Next Bus Morning (Noble Pricing)						Record of Custody Relinquished by: Wayne Austin Date 2/12 Company: FREMONT ENVIRONMENTAL Time 2:40 AM Received by: _____ Date _____ Company: _____ Time _____ Relinquished by: _____ Date _____ Company: _____ Time _____ Received by: Todd _____ Date 2-17-14 Company: eANALYTICS Time 2:40 AM						
For eANALYTICS Use Samples Received Intact Yes/No Received Within Temperature Range (2-6°C) Yes/No Sample Preservative Ice/Acid/Other None												

WO # 726

eANALYTICS: Environmental testing made Easy

Page 1 of 1



Client: Fremont Environmental / Noble Energy Lab ID: 726

Project: Brown 34-24

Analysis: Volatile Organics Method: EPA8260
TPH EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	Naph- thalene mg/kg	TPH	TPH	Date Sampled	Date Analyzed	Lab ID
						GRO C6-C10 mg/kg	DRO C10-C28 mg/kg			
2-5'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/12/14	02/12/14	726 3
3-6'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/12/14	02/12/14	726 4
4-7'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/12/14	02/12/14	726 5
B-10'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/12/14	02/12/14	726 6



Client: Fremont Environmental / Noble Energy Lab ID: 726
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
2-5'	91	98	97	104	02/12/14	02/12/14	726 3
3-6'	86	109	107	93	02/12/14	02/12/14	726 4
4-7'	100	89	95	93	02/12/14	02/12/14	726 5
B-10'	109	106	86	96	02/12/14	02/12/14	726 6

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy Lab ID: 726
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	92	100	90	101	89	100	91	02/12/14	LCS	726 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/12/14	MB	726 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report

eANALYTICS LABORATORY

February 17, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 731
Date Samples Received: 2/13/2014
Number of Samples: 2
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



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Client: Fremont Environmental / Noble Energy Lab ID: 731
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	Naph- thalene mg/kg	TPH	TPH	Date Sampled	Date Analyzed	Lab ID
						GRO C6-C10 mg/kg	DRO C10-C28 mg/kg			
C-10'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/13/14	02/13/14	731 1
5-7'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/13/14	02/13/14	731 2



Client: Fremont Environmental / Noble Energy Lab ID: 731
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
C-10'	91	110	102	111	02/13/14	02/13/14	731 1
5-7'	99	90	107	99	02/13/14	02/13/14	731 2



Client: Fremont Environmental / Noble Energy Lab ID: 731
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	94	100	95	102	102	103	93	02/13/14	LCS	731 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/13/14	MB	731 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report

eANALYTICS LABORATORY

February 18, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 743
Date Samples Received: 2/14/2014
Number of Samples: 1
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



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Client: Fremont Environmental / Noble Energy Lab ID: 743
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	Naph- thalene mg/kg	TPH	TPH	Date Sampled	Date Analyzed	Lab ID
						GRO C6-C10 mg/kg	DRO C10-C28 mg/kg			
6-8'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/14/14	02/17/14	743 1



Client: Fremont Environmental / Noble Energy Lab ID: 743
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
6-8'	90	96	104	100	02/14/14	02/17/14	743 1

eANALYTICS
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Client: Fremont Environmental / Noble Energy Lab ID: 743
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	101	99	94	103	95	96	95	02/17/14	LCS	743 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/17/14	MB	743 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report

eANALYTICS LABORATORY

February 20, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 759
Date Samples Received: 2/18/2014
Number of Samples: 1
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



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Client: Fremont Environmental / Noble Energy Lab ID: 759
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	Naph- thalene mg/kg	TPH	TPH	Date Sampled	Date Analyzed	Lab ID
						GRO C6-C10 mg/kg	DRO C10-C28 mg/kg			
7-7'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/18/14	02/19/14	759 1



Client: Fremont Environmental / Noble Energy Lab ID: 759
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
7-7'	110	98	104	96	02/18/14	02/19/14	759 1



Client: Fremont Environmental / Noble Energy Lab ID: 759
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	97	91	100	91	89	90	96	02/19/14	LCS	759 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/19/14	MB	759 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report

eANALYTICS LABORATORY

February 25, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 787
Date Samples Received: 2/20/2014
Number of Samples: 5
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager



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eAnalytics Laboratory

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Chain of Custody

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Chain of Custody Form

eANALYTICS		LABORATORY										
1767 Rocky Mountain Avenue Loveland CO 80538		Phone: (970) 667-6975										
Fax: (970) 669-0941		www.eAnalyticsLab.com										
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>			ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>									
Company: Fremont Environmental			Number of Containers	Matrix (S) Soil (W) Water (V) Vapor (O) Other	BTEX (EPA 8260)	BTEX Naphthalene (EPA 8260)	TPH - GRO/DRO (EPA 8260/8015)	SAR (US Dept of Ag Method 20B)	EC (US Dept of Ag Method 3)	pH (EPA 9045D)	Other Analysis:	
Project: <u>Brown 34-24 C013-007</u>												
Project Manager: Paul Henehan												
Sampler: <u>Wayne Assin</u>												
Phone/Email: 303-956-8714												
Address: P.O. Box 1289 Wellington CO 80549												
Lab ID	Sample Name	Sampling Date/Time										
1	<u>8-7'</u>	<u>2/19</u> AM/PM	1	S								
2	<u>9-8'</u>	<u>2/19</u> AM/PM	1	S								
3	<u>10-7'</u>	<u>2/19</u> AM/PM	1	S								
4	<u>11-8'</u>	<u>2/20</u> AM/PM	1	S								
5	<u>12-8'</u>	<u>2/20</u> AM/PM	1	S								
Comments:												
Turnaround Time (Business Days) <small>TAT begins when sample is received by eANALYTICS</small> <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (1.25x) <input type="radio"/> 2 Day (1.5x) <input type="radio"/> 1 Day (2x) <input type="radio"/> Next Bus Morning (Noble Pricing)						Record of Custody Relinquished by: <u>Wayne Assin</u> Date: <u>2/20</u> Company: FREMONT ENVIRONMENTAL Time: <u>12:00 PM</u> Received by: _____ Date: _____ Company: _____ Time: _____ Relinquished by: _____ Date: _____ Company: _____ Time: _____ Received by: <u>[Signature]</u> Date: <u>2-20-14</u> Company: eANALYTICS Time: <u>12:00 PM</u>						
For eANALYTICS Use Samples Received Intact <input checked="" type="radio"/> Yes <input type="radio"/> No Received Within Temperature Range (2-6°C) <input checked="" type="radio"/> Yes <input type="radio"/> No Sample Preservative <input checked="" type="radio"/> None <input type="radio"/> Acid <input type="radio"/> Other												

WO # 787

eANALYTICS: Environmental testing made Easy

Page 1 of 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy Lab ID: 787
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	Naph- thalene mg/kg	TPH	TPH	Date Sampled	Date Analyzed	Lab ID
						GRO C6-C10 mg/kg	DRO C10-C28 mg/kg			
8-7'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/19/14	02/24/14	787 1
10-7'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/19/14	02/24/14	787 3
11-8'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/20/14	02/24/14	787 4
12-8'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/20/14	02/24/14	787 5

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy Lab ID: 787
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
8-7'	100	98	95	103	02/19/14	02/24/14	787 1
10-7'	110	99	88	99	02/19/14	02/24/14	787 3
11-8'	108	91	90	87	02/20/14	02/24/14	787 4
12-8'	100	97	96	105	02/20/14	02/24/14	787 5

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

eANALYTICS
L A B O R A T O R Y

Client: Fremont Environmental / Noble Energy Lab ID: 787
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	97	93	93	103	93	93	96	02/24/14	LCS	787 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/24/14	MB	787 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report



February 21, 2014

Client: Fremont Environmental / Noble Energy
Project: Brown 34-24
Lab ID: 787
Date Samples Received: 2/20/2014
Number of Samples: 5
Sample Condition: Samples arrived intact and in appropriate sample containers
Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

A handwritten signature in black ink that reads "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink that reads "Todd Rhea".

Todd Rhea
Laboratory Manager



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1767 Rocky Mountain Avenue Loveland CO 80538



Client: Fremont Environmental / Noble Energy Lab ID: 787
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	Naph- thalene mg/kg	TPH	TPH	Date Sampled	Date Analyzed	Lab ID
						GRO C6-C10 mg/kg	DRO C10-C28 mg/kg			
9-8'	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	02/19/14	02/20/14	787 2



Client: Fremont Environmental / Noble Energy Lab ID: 787
 Project: Brown 34-24 Method: EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
9-8'	110	90	108	106	02/19/14	02/20/14	787 2



Client: Fremont Environmental / Noble Energy Lab ID: 787
 Project: Brown 34-24
 Analysis: Volatile Organics Method: EPA8260
 TPH EPA8260/8015

Sample Name	Benzene % Rec	Toluene % Rec	Ethyl- benzene % Rec	Total Xylenes % Rec	Naph- thalene % Rec	TPH GRO C6-C10 % Rec	TPH DRO C10-C28 % Rec	Date Analyzed	Lab ID	
Laboratory Control Sample (70-130%)	96	94	100	92	95	95	98	02/20/14	LCS	787 1
Method Blank	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 50 mg/kg	< 50 mg/kg	02/20/14	MB	787 1