

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office to
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company ConocoPhillips Company	Contact Lisa Hunter
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 258-1607
Facility Name: Edgar Federal #2	Facility Type: Gas Well
Surface Owner Federal	Mineral Owner Federal (SF-079116)
API No. 3004506893	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	01	27N	12W	1650	North	1650	East	San Juan

Latitude 36.60714 Longitude -108.05936

OIL CONS. DIV DIST. 3

NOV 18 2016

NATURE OF RELEASE

Type of Release Hydrocarbon (Historic)	Volume of Release Unknown	Volume Recovered None
Source of Release Below Grade Tank (BGT)	Date and Hour of Occurrence Unknown	Date and Hour of Discovery February 17, 2016
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*

Below-Grade Tank Closure activities with samples taken resulting in constituents exceeded standards outlined by 19.15.17.13 NMAC.

Describe Area Affected and Cleanup Action Taken.*

The below grade tank field sample results were above regulatory standard by USEPA method 418.1 for TPH and Organic Vapors, confirming a release. Test pits reveal contamination was >10 feet. Further delineation was completed and excavation terminated at approximately 26.5' x 21.5' x 14' deep. Analytical results were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release. No further work will be performed. The final report is attached for review.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Lisa Hunter	Approved by Environmental Specialist: 	
Title: Field Environmental Specialist	Approval Date: 12/17/2016	Expiration Date:
E-mail Address: Lisa.Hunter@cop.com	Conditions of Approval: NVF1636232176	Attached <input type="checkbox"/>
Date: November 16, 2016	Phone: (505) 258-1607	

* Attach Additional Sheets If Necessary

Edgar Federal #2 Release Report

Unit Letter G, Section 1, Township 27 North, Range 12 West
San Juan County, New Mexico

November 9, 2016

Prepared for:
ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:
Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

ConocoPhillips Edgar Federal #2 Release Report

Prepared for:

ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

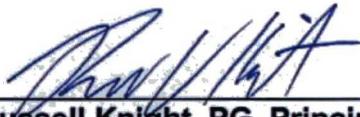
Prepared by:

Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401



Heather M. Woods, P.G., Area Manager

Reviewed by:



Russell Knight, PG, Principal Hydrogeologist

November 9, 2016

Table of Contents

1.0	Introduction.....	1
2.0	Release Summary	1
3.0	NNEPA/NMOCD Site Ranking	1
4.0	Below Grade Tank Closure Sampling	2
4.1	Field Activities	2
4.2	Soil Sampling	2
4.3	Field Screening and Laboratory Analytical Results	3
5.0	Site Assessment.....	3
5.1	Field Activities	3
5.2	Soil Sampling	4
5.3	Field Screening Results	4
6.0	Excavation Confirmation Sampling.....	4
6.1	Field Activities	4
6.2	Soil Sampling	4
6.3	Field Screening Results	5
6.4	Laboratory Analytical Results.....	5
7.0	Conclusions	5
8.0	Closure and Limitations	6

Tables

Table 1	NMOCD Site Ranking Determination
Table 2	BGT Soil Sampling Results
Table 3	Site Assessment Field Screening Results
Table 4	Excavation Confirmation Field Screening and Laboratory Analytical Results

Figures

Figure 1	Topographic Map
Figure 2	Aerial Site Map
Figure 3	Excavation Confirmation Sample Location Map

Appendices

Appendix A	BGT Field Work Summary Sheet
Appendix B	Analytical Laboratory Reports

1.0 Introduction

The ConocoPhillips Edgar Federal #2 release site is located in Unit Letter G, Section 1, Township 27 North, Range 12 West, in San Juan County, New Mexico. A historical release was discovered on February 17, 2016, during below grade tank (BGT) closure activities at the site.

A topographic map of the location reproduced from the United States Geological Society quadrangle map of the area is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Site Name	Edgar Federal #2		
Site Location Description	Unit Letter G, Section 1, Township 27 North, Range 12 West		
Wellhead GPS Location	N36.60686 and W108.05967	Release GPS Location	N36.60714 and W108.05936
Land Jurisdiction	Navajo Nation	Discovery Date	February 17, 2016
Release Description	Historical		
NNEPA/NMOCD Site Rank	10		
Distance to Nearest Surface Water	Unnamed, ephemeral wash located approximately 660 feet to the southwest of the release location		
Estimated Depth to Groundwater	Greater than 100 feet below grade surface (bgs)	Distance to Nearest Water Well or Spring	Greater than 1,000 feet

3.0 NNEPA/NMOCD Site Ranking

The release site is located on the Navajo Nation under the jurisdiction of the Navajo Nation Environmental Protection Agency (NNEPA). Based on NNEPA recommendations, remediation of soils associated with natural gas and condensate releases are assigned a rank in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993). This site was assigned a ranking score of 10 (Table 1).

Depth to groundwater at the site is estimated to be greater than 100 feet bgs based on the information published on the New Mexico Office of the State Engineer (NMOSE) online New Mexico Water Rights Reporting System (NMWRRS) and elevation differential between the location and large, local washes.

A review was completed of the NMWRRS and no water wells were identified within a 1,000 foot radius of the location. No water wells were observed within a 1,000 foot radius of the location during a visual inspection.

An unnamed, ephemeral wash traverses the area approximately 660 feet southwest of the release location.

As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the Edgar Federal #2 are as follows: 0.2 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), 100 mg/kg total petroleum hydrocarbons (TPH), and 250 mg/kg chlorides.

Based on the ranking score of 10, NNEPA/NMOCOD action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

4.0 Below Grade Tank Closure Sampling

4.1 Field Activities

On February 17, 2016, following removal of the BGT tank and liner, Rule Engineering, LLC (Rule) personnel conducted a visual inspection for surface/subsurface indications of a release. Staining and odor was observed in the western portion of the BGT excavation. Rule personnel then collected five soil samples (S-1 through S-5) from 0.5 feet beneath the floor of the BGT excavation. Figure 2 provides the location of the soil samples collected from below the BGT and the field work summary sheet is included in Appendix A.

4.2 Soil Sampling

The five soil samples (S-1 through S-5) collected from below the floor of the BGT excavation were combined to create soil confirmation sample BGT-1. A portion of BGT-1 was field screened for volatile organic compounds (VOCs) and chlorides, and field analyzed for TPH.

Field screening for VOC vapors was conducted with a photo-ionization detector (PID). Prior to field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field analysis for TPH was conducted per U.S. Environmental Protection Agency (USEPA) Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure with includes calculation of a calibration curve using known concentration standards. Field screening for chloride was conducted using the Hach chloride low range test kit. Chloride concentrations were determined by drop count titration method using silver nitrate titrant.

The portion of BGT-1 collected for laboratory analysis was placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. The sample was analyzed for BTEX per USEPA Method 8021B, TPH per USEPA Method 8015D, and chlorides per USEPA Method 300.0.

4.3 Field Screening and Laboratory Analytical Results

Field sampling results for soil composite sample BGT-1 indicated a VOC concentration of 934 ppm and a TPH concentration of greater than 2,500 mg/kg. Field chloride concentration was reported at 80 mg/kg.

Laboratory analytical results for sample BGT-1 reported a benzene concentration below the laboratory reporting limit of 0.047 mg/kg and a total BTEX concentration of 0.14 mg/kg. Laboratory analytical results for sample BGT-1 reported the TPH concentrations of 19 mg/kg as GRO and 300 mg/kg DRO by USEPA Method 8015D. The laboratory analytical result for sample BGT-1 for chloride concentration was 59 mg/kg.

Field and laboratory results for BGT-1 are summarized in Table 2, and the analytical laboratory report is attached.

5.0 Site Assessment

Field screening of the BGT sample indicated the presence of petroleum hydrocarbons in excess of NNEPA/NMOCDC BGT closure standards. The same day of BGT closure sampling, Rule initiated an initial site assessment to delineate the horizontal and vertical extents of the historical release. Due to the limitations of the backhoe, the initial assessment was suspended and a continued site assessment was conducted utilizing a Geoprobe® on April 20, 2016.

5.1 Field Activities

On February 17, 2016, the initial site assessment included advancing three backhoe test pits (TP-1 through TP-3). Test pits were advanced to the limits of the equipment at depths ranging from 11 to 12 feet bgs. Backhoe test pit operations were suspended in favor of returning to the location at a later date to continue the assessment utilizing a Geoprobe®.

On April 20, 2016, Rule returned to the location to continue the site assessment utilizing a Geoprobe® to advance five soil borings (SB-1 through SB-5) at the location. Soil borings were advanced to depths ranging from 11 to 12 feet bgs where refusal on weathered sandstone was encountered. Test pit and soil boring locations are illustrated on Figure 2.

5.2 Soil Sampling

Rule collected soil samples from the test pits and soil borings at selected intervals. The lithology encountered at the site included clayey silty sand underlain by weathered sandstone. A portion of each sample was field screened for VOCs and selected samples were analyzed for TPH. Field screening for VOC vapors was conducted with a PID. Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards.

5.3 Field Screening Results

Field screening results for site assessment samples collected from test pits TP-1 through TP-3 and soil borings SB-1 through SB-5 indicated VOC concentrations ranging from 0.0 ppm to 2,050 ppm. Field TPH results for selected site assessment samples indicated TPH concentrations ranging from 690 mg/kg to greater than 2,500 mg/kg. Site assessment field screening results are summarized in Table 3.

6.0 Excavation Confirmation Sampling

6.1 Field Activities

On July 18, 2016, Rule personnel returned to the location to provide excavation guidance and collect confirmation samples from the resultant excavation. The maximum extent of the excavation measured approximately 26.5 feet by 21.5 feet by 14 feet deep. Approximately 330 cubic yards of excavated soils were transported to the Envirotech Landfarm near Bloomfield, New Mexico for disposal/remediation and the excavation was backfilled with clean, imported material. A depiction of the final excavation with sample locations is included on Figure 3.

6.2 Soil Sampling

Rule collected six composite confirmation soil samples (SC-1 and SC-6) from the final excavation for field screening and laboratory analysis. Each confirmation soil sample is a representative composite comprised of five equivalent portions of soil collected from the sampled area.

A portion of each sample was field screened for VOCs and TPH. Field screening for VOC vapors was conducted with a PID. Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per USEPA Method 8021B and TPH (GRO/DRO) per USEPA 8015D.

Field screening and laboratory analytical results are summarized in Table 4. The analytical laboratory report is included in Appendix B.

6.3 Field Screening Results

Field screening results for soil confirmation samples SC-1 through SC-6 indicated VOC concentrations ranging from 15 ppm to 339 ppm. The field TPH concentration results for samples SC-1 through SC-6 ranged from 80.8 mg/kg to 1,079 mg/kg. Excavation confirmation field screening results are summarized in Table 4.

6.4 Laboratory Analytical Results

Laboratory analytical results for excavation confirmation samples SC-1 through SC-6 reported benzene concentrations below the laboratory reporting limits, which are below the NNEPA/NMOCD action level of 10 mg/kg. Total BTEX concentrations for samples SC-1 through SC-6 ranged from below the laboratory reporting limits to 1.1 mg/kg, which are below the NNEPA/NMOCD action level of 50 mg/kg. Concentrations of TPH (GRO/DRO) for samples SC-1 through SC-6 ranged from below the laboratory reporting limits to 713 mg/kg, which are below the NNEPA/NMOCD action level of 1,000 mg/kg for a site rank of 10.

Excavation confirmation laboratory analytical results are summarized in Table 4. The analytical laboratory report is included in Appendix B.

7.0 Conclusions

The ConocoPhillips Edgar Federal #2 release site is located in Unit Letter G, Section 1, Township 27 North, Range 12 West, in San Juan County, New Mexico. A historical release was discovered on February 17, 2016, during BGT closure activities at the site. A site assessment was conducted utilizing both test pits and soil borings to delineate as best as possible the vertical and horizontal extents of the historical release. Following the excavation of hydrocarbon impacted soils, confirmation samples SC-1 through SC-6 were collected from the resultant excavation which measured approximately 26.5 feet by 21.5 feet by 14 feet deep. Laboratory analytical results for confirmation samples SC-1 through SC-6 reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below the applicable NNEPA/NMOCD action levels for a site rank of 10. Approximately 330 cubic yards of impacted soil was transported to the Envirotech Landfarm for disposal/remediation and the excavation was backfilled with clean, imported material.

Based on laboratory analytical results of the confirmation soil samples, no further work is recommended.

8.0 Closure and Limitations

This report has been prepared for the exclusive use of ConocoPhillips and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with ConocoPhillips. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Tables

Table 1. NMOCD Site Ranking Determination
ConocoPhillips
Edgar Federal #2
San Juan County, New Mexico

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential information derived from the topographic map of the area between the site and large, local washes.	NMOCD Online database, Gallegos Trading Post Quadrangle, Google Earth, and Visual Inspection
50-99 feet	10			
>100 feet	0			
Wellhead Protection Area				
<1,000 feet from a water source, or <200 feet from private domestic water source	20 (Yes)	0	No water source or recorded water wells within 1,000 foot radius of location.	NMOSE NMWRRS, Gallegos Trading Post Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An unnamed, ephemeral wash located approximately 660 feet southwest of release location.	Gallegos Trading Post Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		10		

Table 2. BGT Soil Sampling Results
ConocoPhillips
Edgar Federal #2
San Juan County, New Mexico

Sample ID	Date	Sample Type	Sample Depth (ft below BGT liner)	Field Sampling Results			Laboratory Analytical Results				
				VOCs (PID) (ppm)	TPH - 418.1 (mg/kg)	Chloride** (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chloride*** (mg/kg)
BGT Closure Standards*				--	100	250	0.2	50	100		250
BGT-1	2/17/16	Composite	0.5	934	>2,500	80	<0.047	0.14	19	300	59

Notes: PID - photo-ionization detector
 ppm - parts per million
 mg/kg - milligrams/kilograms
 VOCs - volatile organic compounds
 TPH - total petroleum hydrocarbons per USEPA Method 418.1
 BTEX - benzene, toluene, ethylbenzene, and total xylenes
 *19.15.17.13 NMAC
 **Per Hach chloride low-range test kit
 ***Per USEPA Method 300.0 chlorides

**Table 3. Site Assessment Field Soil Sampling Results - VOCs and TPH
Edgar Federal #2
San Juan County, New Mexico
ConocoPhillips**

Sample ID	Date	Sample Depth (ft bgs)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)
NNEPA/NMOCD Action Levels**			100	1,000
TP-1	2/17/16	3.5	934	>2,500
		7	353	1,540
		11	1,330	--
TP-2	2/17/16	7	3.0	--
		9	0.4	--
		11	1.2	--
TP-3	2/17/16	2	0.6	--
		10	667	--
		12	2,050	--
SB-1	4/20/16	3.5 to 4	0.6	--
		4 to 6	0.8	--
		6 to 8	0.8	--
		8 to 10	0.5	--
		10 to 12	0.4	--
SB-2	4/20/16	3 to 4	0.7	--
		4 to 6	0.2	--
		6 to 8	0.3	--
		8 to 10	0.2	--
		10 to 12	0.3	--
SB-3	4/20/16	3 to 4	0.5	--
		4 to 5	3.4	--
		5 to 6	103	--
		6 to 7	215	690
		7 to 8	2.2	--
		8 to 9	1.5	--
		9 to 10	2.7	--
		10 to 11	0.5	--
SB-4	4/20/16	2 to 4	1.0	--
		4 to 6	0.8	--
		6 to 8	0.3	--
		8 to 9	0.7	--
		9 to 10	0.1	--
		10 to 11	0.5	--

**Table 3. Site Assessment Field Soil Sampling Results - VOCs and TPH
Edgar Federal #2
San Juan County, New Mexico
ConocoPhillips**

Sample ID	Date	Sample Depth (ft bgs)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)
NNEPA/NMOCD Action Levels**			100	1,000
SB-5	4/20/16	2 to 3	0.5	--
		4 to 6	0.8	--
		6 to 8	0.7	--
		8 to 9	0.7	--
		9 to 11	0.6	--

Notes: VOCs - volatile organic compounds

PID - photo-ionization detector

ft bgs - feet below ground surface

ppm - parts per million

mg/kg - milligrams/kilograms

TPH-total petroleum hydrocarbons per USEPA Method 418.1

NNEPA - Navajo Nation Environmental Protection Agency

NMOCD - New Mexico Oil Conservation Division

* field results

**NMOCD Guidelines for Remediation of Leaks, Spills, and Releases
(1993)

**Table 4. Excavation Confirmation Field Screening and Laboratory Analytical Results
ConocoPhillips
Edgar Federal #2
San Juan County, New Mexico**

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Field TPH by 418.1 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NNEPA/NMOCD Action Level*			100	1,000**	10	NE	NE	NE	50	1,000**	
SC-1	7/18/2016	14	339	1,079	<0.025	<0.050	0.055	0.12	0.18	29	240
SC-2	7/18/2016	14	300	169	<0.024	<0.049	<0.049	<0.093	ND	<4.9	99
SC-3	7/18/2016	0 to 14	300	824	<0.025	<0.049	0.15	0.93	1.1	63	650
SC-4	7/18/2016	0 to 14	235	203	<0.025	<0.050	<0.050	<0.099	ND	<5.0	20
SC-5	7/18/2016	0 to 14	50	185	<0.023	<0.046	<0.046	<0.092	ND	<4.6	22
SC-6	7/18/2016	0 to 14	15	80.8	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<9.9

Notes: VOCs - volatile organic compounds
 PID - photoionization detector
 ft bgs - feet below grade surface
 ppm - parts per million
 mg/kg - milligrams per kilogram
 NNEPA - Navajo Nation Environmental Protection Agency
 NMOCD - New Mexico Oil Conservation Division

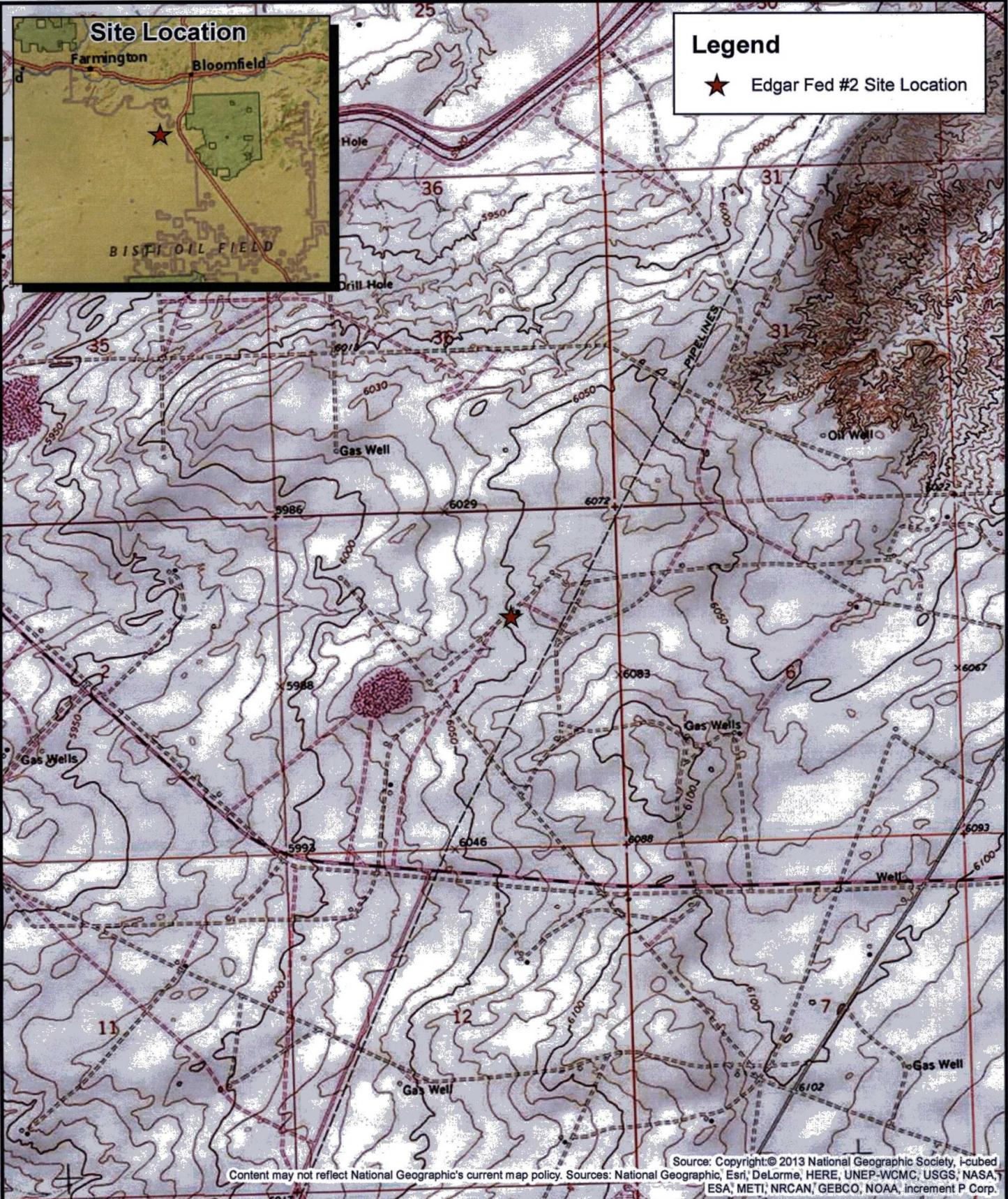
NE - not-established
 ND - not detected above laboratory reporting limits
 BTEX - benzene, toluene, ethylbenzene, and xylenes
 TPH - total petroleum hydrocarbons
 GRO - gasoline range organics
 DRO - diesel range organics

*Based on the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases (August 1993)*

**Based on a site ranking of 10.

Figures

Document Path: U:\ConocoPhillips\ConocoPhillips\Edgar Fed #2\Edgar Fed #2 Topo Map.mxd



Rule Engineering, LLC
Solutions to Regulations for Industry

0 0.2 0.4 0.8 Miles

Gallegos Trading Post Quadrangle
1:24,000

ConocoPhillips

G-S1-T27N-R12W
N36.60686, W108.05967
San Juan County, NM
API: 30-045-06893

Figure 1
Topographic Map
Edgar Federal #2

Document Path: U:\ConocoPhillips\ConocoPhillips\Edgar Fed #2\161109 Figure 2 Edgar Fed #2.mxd

Legend

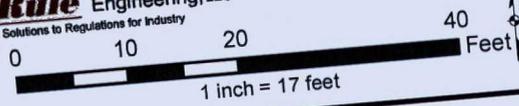
- ★ Wellhead Monument
- ◇ Below Grade Tank Sample Locations
- Geoprobe Boring Locations
- ▭ Berm



Edgar Federal #2 Wellhead Monument
 GPS: N36.60686, W108.05967

Source: Google Earth

Rule Engineering, LLC
 Solutions to Regulations for Industry



ConocoPhillips

G-S1-T27N-R12W
 N36.60686, W108.05967
 San Juan County, NM
 API: 30-045-06893

Figure 2
Aerial Site Map
 Edgar Federal #2

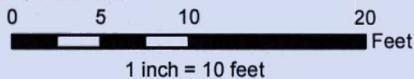


Legend

- Soil Sample Locations
- Final Excavation Extent
- Berm

Approximate Final Excavation Extents:
26.5 feet x 21.5 feet x 14 feet in depth

Rule Engineering, LLC
Solutions to Regulations for Industry



G-S1-T27N-R12W
N36.60686, W108.05967
San Juan County, NM
API: 30-045-06893

Figure 3
Excavation Confirmation
Sample Location Map
Edgar Federal #2

Source: Google Earth

Appendix A

BGT Field Work Summary Sheet

Rule Engineering Field Work Summary Sheet

Company: ConocoPhillips
 Location: Edgar Federal #2
 API: 30-045-06893
 Legals: G-S1-T27N-R12W
 County: San Juan
 Land Jurisdiction: Navajo Nation

Date:	2/17/16
Staff:	Heather Woods

Wellhead GPS: 36.60686, -108.05967
 BGT GPS: 36.60714 -108.05936

Siting Information based on BGT Location:

Site Rank 10

Groundwater: Estimated to be greater than 100 feet below grade surface, based on elevation differential between the location and nearby major washes.

Surface Water: An unnamed ephemeral wash is located approximately 660 feet southwest of the BGT.

Wellhead Protection: No water wells identified within 1,000 ft of location.

Objective: Closure sampling for BGT

Tank Size: 120 barrels, removed during closure activities

Liner: Liner present, removed during closure activities

Observations: No staining or excess moisture was observed below the tank.

Notes: Ms. Vanessa Fields, OCD representative, was present during sample collection activities.
Staining and odor was observed in the western portion of the BGT excavation.

Field Sampling Information

Name	Type of Sample	Collection Time	Collection Location	VOCs ¹ (ppm)	VOCs time	TPH ² mg/kg	TPH Time	Chloride ³ mg/kg	Chloride Time
BGT-1	Composite	9:45	See below	934	9:52	>2,500	10:15	80	10:20

BGT-1 is a 5-point composite of S-1 through S-5, collected 0.5 ft below BGT.
 Sample BGT-1 was laboratory analyzed for TPH (8015), BTEX (8021) and chlorides (300.0).



Field Sampling Notes:

¹ Field screening for volatile organic compounds (VOC) vapors was conducted with a photo-ionization detector (PID). Before beginning field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas.

² Field analysis for TPH was conducted using a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards.

³ Field screening for chlorides was conducted using the Hach chloride low range test kit. Chloride concentrations are determined by drop count titration method using silver nitrate titrant.

Appendix B
Analytical Laboratory Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 29, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: CoP Edgar Federal #2

OrderNo.: 1602807

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/18/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: BGT-1

Project: CoP Edgar Federal #2

Collection Date: 2/17/2016 9:45:00 AM

Lab ID: 1602807-001

Matrix: SOIL

Received Date: 2/18/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	59	1.5		mg/Kg	1	2/24/2016 10:02:46 PM	23934
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	300	95		mg/Kg	10	2/23/2016 8:28:27 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 8:28:27 PM	23859
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	19	4.7		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Surr: BFB	275	66.2-112	S	%Rec	1	2/24/2016 3:13:49 AM	23867
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Toluene	ND	0.047		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Ethylbenzene	ND	0.047		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Xylenes, Total	0.14	0.095		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	1	2/24/2016 3:13:49 AM	23867

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602807

29-Feb-16

Client: Rule Engineering LLC

Project: CoP Edgar Federal #2

Sample ID: MB-23934	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 23934	RunNo: 32385								
Prep Date: 2/24/2016	Analysis Date: 2/24/2016	SeqNo: 990234	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-23934	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 23934	RunNo: 32385								
Prep Date: 2/24/2016	Analysis Date: 2/24/2016	SeqNo: 990235	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602807
29-Feb-16

Client: Rule Engineering LLC
Project: CoP Edgar Federal #2

Sample ID	LCS-23859	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	23859	RunNo:	32327					
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	988166	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.5	65.8	136			
Surr: DNOP	4.8		5.000		95.8	70	130			

Sample ID	LCS-23860	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	23860	RunNo:	32327					
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	988167	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.1	70	130			

Sample ID	MB-23859	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	23859	RunNo:	32327					
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	988168	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.7		10.00		87.0	70	130			

Sample ID	MB-23860	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	23860	RunNo:	32327					
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	988169	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.6	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602807

29-Feb-16

Client: Rule Engineering LLC
Project: CoP Edgar Federal #2

Sample ID MB-23867	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 23867		RunNo: 32332							
Prep Date: 2/22/2016	Analysis Date: 2/23/2016		SeqNo: 988918				Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.8	66.2	112			

Sample ID LCS-23867	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 23867		RunNo: 32332							
Prep Date: 2/22/2016	Analysis Date: 2/23/2016		SeqNo: 988919				Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	79.6	122			
Surr: BFB	990		1000		99.2	66.2	112			

Sample ID 1602807-001AMS	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BGT-1	Batch ID: 23867		RunNo: 32332							
Prep Date: 2/22/2016	Analysis Date: 2/23/2016		SeqNo: 988922				Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	55	4.7	23.72	19.25	150	59.3	143			S
Surr: BFB	3100		948.8		331	66.2	112			S

Sample ID 1602807-001AMSD	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BGT-1	Batch ID: 23867		RunNo: 32332							
Prep Date: 2/22/2016	Analysis Date: 2/23/2016		SeqNo: 988923				Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	48	4.7	23.74	19.25	123	59.3	143	12.6	20	
Surr: BFB	2700		949.7		287	66.2	112	0	0	S

Sample ID MB-23866	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 23866		RunNo: 32332							
Prep Date: 2/22/2016	Analysis Date: 2/23/2016		SeqNo: 988952				Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.4	66.2	112			

Sample ID LCS-23866	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 23866		RunNo: 32332							
Prep Date: 2/22/2016	Analysis Date: 2/23/2016		SeqNo: 988963				Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		113	66.2	112			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602807

29-Feb-16

Client: Rule Engineering LLC

Project: CoP Edgar Federal #2

Sample ID	MB-23867	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	23867	RunNo:	32332				
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	989011	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	LCS-23867	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	23867	RunNo:	32332				
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	989012	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.1	0.050	1.000	0	112	80	120			
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.4	0.10	3.000	0	112	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	80	120			S

Sample ID	MB-23866	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	23866	RunNo:	32332				
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	989021	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-23866	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	23866	RunNo:	32332				
Prep Date:	2/22/2016	Analysis Date:	2/23/2016	SeqNo:	989022	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		115	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87106
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **RULE ENGINEERING LL**

Work Order Number: **1602807**

RcptNo: **1**

Received by/date: *[Signature]* **02/18/16**
 Logged By: **Lindsay Mangin** **2/18/2016 7:00:00 AM**
 Completed By: **Lindsay Mangin** **2/19/2016 9:34:21 AM**
 Reviewed By: *[Signature]* **02/22/16**

[Signature]
[Signature]

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? Courier

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH:
 (<2 or >12 unless noted)
 Adjusted?
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Dr, Suite 205
Farmington, NM 87401
 Phone #: (505) 716-2787

Email or Fax#: hwoods@ruleengineering.com

VQC Package:
 Standard Level 4 (Full Validation)

Creditation:
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name:
CoP Edgar Federal #2

Project #:

Project Manager:
Heather Woods

Sampler: Heather Woods / Justin Valdez
 On Ice Yes No

Sample Temperature: 1.3



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + TOLUENE + XYLENES (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / NRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
7/16	0945	Soil	BGT-1	(1) 4oz Glass	Cold	1602807 -201	X		X					X					
RESERVED																			

Site:	Time:	Relinquished by:	Received by:	Date:	Time:
7/16	1650	Heather M. Woods	Justin Valdez	7/16	1650
7/16	1850	Justin Valdez	[Signature]	02/18/16	0900

Remarks: Direct bill to CenocoPhillips
 Inv: 10381633 ordered by: Lisa Hunter
 Activity: T110
 User ID: KGARCIA
 Lead: Shawn Fincher

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 25, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Edgar Fed 2

OrderNo.: 1607860

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/19/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: Edgar Fed 2
Lab ID: 1607860-001

Client Sample ID: SC-1
Collection Date: 7/18/2016 2:30:00 PM
Received Date: 7/19/2016 8:45:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	240	96		mg/Kg	10	7/20/2016 9:42:05 AM	26499
Surr: DNOP	0	70-130	S	%Rec	10	7/20/2016 9:42:05 AM	26499
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	29	5.0		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Surr: BFB	347	80-120	S	%Rec	1	7/20/2016 1:30:49 PM	26468
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Toluene	ND	0.050		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Ethylbenzene	0.055	0.050		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Xylenes, Total	0.12	0.10		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	7/20/2016 1:30:49 PM	26468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-3

Project: Edgar Fed 2

Collection Date: 7/18/2016 2:40:00 PM

Lab ID: 1607860-002

Matrix: SOIL

Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	650	100		mg/Kg	10	7/21/2016 4:32:12 PM	26500
Surr: DNOP	0	70-130	S	%Rec	10	7/21/2016 4:32:12 PM	26500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	63	4.9		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Surr: BFB	631	80-120	S	%Rec	1	7/20/2016 8:58:20 PM	26468
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Toluene	ND	0.049		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Ethylbenzene	0.15	0.049		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Xylenes, Total	0.93	0.098		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	1	7/20/2016 8:58:20 PM	26468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: Edgar Fed 2
Lab ID: 1607860-003

Client Sample ID: SC-4
Collection Date: 7/18/2016 2:45:00 PM
Received Date: 7/19/2016 8:45:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	20	9.8		mg/Kg	1	7/21/2016 4:53:57 PM	26500
Surr: DNOP	108	70-130		%Rec	1	7/21/2016 4:53:57 PM	26500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Surr: BFB	102	80-120		%Rec	1	7/20/2016 9:45:14 PM	26468
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Toluene	ND	0.050		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	7/20/2016 9:45:14 PM	26468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-5

Project: Edgar Fed 2

Collection Date: 7/18/2016 2:50:00 PM

Lab ID: 1607860-004

Matrix: SOIL

Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	22	9.2		mg/Kg	1	7/21/2016 5:16:10 PM	26500
Surr: DNOP	110	70-130		%Rec	1	7/21/2016 5:16:10 PM	26500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Surr: BFB	108	80-120		%Rec	1	7/20/2016 10:08:43 PM	26468
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Toluene	ND	0.046		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Ethylbenzene	ND	0.046		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Xylenes, Total	ND	0.092		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	7/20/2016 10:08:43 PM	26468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: Edgar Fed 2
Lab ID: 1607860-005

Client Sample ID: SC-6
Collection Date: 7/18/2016 2:55:00 PM
Received Date: 7/19/2016 8:45:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/21/2016 5:37:45 PM	26500
Surr: DNOP	115	70-130		%Rec	1	7/21/2016 5:37:45 PM	26500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Surr: BFB	99.2	80-120		%Rec	1	7/20/2016 10:32:17 PM	26468
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Toluene	ND	0.047		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Ethylbenzene	ND	0.047		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Xylenes, Total	ND	0.094		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Surr: 4-Bromofluorobenzene	94.3	80-120		%Rec	1	7/20/2016 10:32:17 PM	26468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-2

Project: Edgar Fed 2

Collection Date: 7/18/2016 4:30:00 PM

Lab ID: 1607860-006

Matrix: SOIL

Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	99	9.7		mg/Kg	1	7/21/2016 5:59:36 PM	26500
Surr: DNOP	117	70-130		%Rec	1	7/21/2016 5:59:36 PM	26500
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Surr: BFB	135	80-120	S	%Rec	1	7/20/2016 10:55:42 PM	26468
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Toluene	ND	0.049		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/20/2016 10:55:42 PM	26468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1607860

25-Jul-16

Client: Rule Engineering LLC

Project: Edgar Fed 2

Sample ID	LCS-26499	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	26499	RunNo:	35794					
Prep Date:	7/20/2016	Analysis Date:	7/20/2016	SeqNo:	1108852	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.0	62.6	124			
Surr: DNOP	4.9		5.000		97.7	70	130			

Sample ID	MB-26499	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26499	RunNo:	35794					
Prep Date:	7/20/2016	Analysis Date:	7/20/2016	SeqNo:	1108854	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		102	70	130			

Sample ID	MB-26465	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26465	RunNo:	35794					
Prep Date:	7/19/2016	Analysis Date:	7/20/2016	SeqNo:	1110143	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	70	130			

Sample ID	LCS-26500	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	26500	RunNo:	35868					
Prep Date:	7/20/2016	Analysis Date:	7/21/2016	SeqNo:	1111810	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.1	62.6	124			
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID	MB-26500	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26500	RunNo:	35868					
Prep Date:	7/20/2016	Analysis Date:	7/21/2016	SeqNo:	1111811	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.5		10.00		94.8	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1607860

25-Jul-16

Client: Rule Engineering LLC

Project: Edgar Fed 2

Sample ID MB-26468	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 26468	RunNo: 35833								
Prep Date: 7/19/2016	Analysis Date: 7/20/2016	SeqNo: 1109484	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	80	120			

Sample ID LCS-26468	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 26468	RunNo: 35833								
Prep Date: 7/19/2016	Analysis Date: 7/20/2016	SeqNo: 1109485	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	80	120			
Surr: BFB	1100		1000		115	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1607860
25-Jul-16

Client: Rule Engineering LLC
Project: Edgar Fed 2

Sample ID	MB-26468	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	26468	RunNo:	35833					
Prep Date:	7/19/2016	Analysis Date:	7/20/2016	SeqNo:	1109545	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID	LCS-26468	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	26468	RunNo:	35833					
Prep Date:	7/19/2016	Analysis Date:	7/20/2016	SeqNo:	1109546	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	98.7	75.3	123			
Toluene	0.97	0.050	1.000	0	96.6	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.1	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	96.9	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Chain-of-Custody Record

Client: Airtek Engineering LLC

Billing Address: 501 Airport Dr. Suite 101 Farmington, NM 87401

Phone #: 505 793 9486

Email or Fax#: justin@airtekeengineering.com

Standard: Level 4 (Full Validation)

NE LAP: Other: _____

EDD (Type): _____

Turn-Around Time:

Standard Rush

Project Name: Edgar Fed #2

Project #: _____

Project Manager: Heather Woods

Sampler: Justin Walker

On Ice: Yes No

Sample Temperature: 4/1

Container Type and #: 4oz glass

Preservative Type: Cold

HEAL No. NOT SLO

Refinishing by: Justin Walker

Requested by: Justin Walker

Received by: Airtek

Date	Time	Refinishing by	Requested by	Received by	Date	Time
8/16	5:38	Justin Walker	Justin Walker	Justin Walker	7/15/16	1730
8/16	1821	Justin Walker	Justin Walker	Airtek	07/16/16	0845

Sample Request ID	Matrix	Time	Date	Time	Remarks
SC-1	Soil	14:30	8/16	14:40	BTEX + MTBE + APEL'S (8021)
SC-3	Soil	14:40	8/16	14:45	BTEX + MTBE + TPH (Gas only)
SC-4	Soil	14:45	8/16	14:50	TPH 8015B (GRO / DRO)
SC-5	Soil	14:50	8/16	14:55	TPH (Method 418.1)
SC-6	Soil	14:55	8/16	1630	EDB (Method 504.1)
SC-2	Soil	1630	8/16	1630	PAH's (8310 or 8270 SIMS)
					RCRA 8 Metals
					Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
					8081 Pesticides / 8082 PCB's
					8260B (VOA)
					8270 (Semi-VOA)
					Air Bubbles (Y or N)



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107
 Analysis Request

If necessary, samples submitted to Hall Environmental may be sub-contracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.