

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

SEP 28 2015

Form C-141
Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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) 326-9786
Facility Name: AXI Apache N #13A	Facility Type: Gas Well
Surface Owner Jicarilla	Mineral Owner Jicarilla API No. 3003922288

LOCATION OF RELEASE

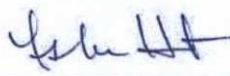

Unit Letter I	Section 02	Township 25N	Range 04W	Feet from the 1520	North/South Line South	Feet from the 1050	East/West Line East	County Rio Arriba
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Latitude **36.42506** Longitude **-107.21638**

NATURE OF RELEASE

Type of Release Hydrocarbon	Volume of Release Unknown	Volume Recovered 2 cubic yds soil
Source of Release BGT	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 05/21/15 @ 12:00 PM
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.* Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 6' x 4' x 1.5' in depth and 2 yds of soil was transported to IEI land farm and 2 yds of clean soil was transported from Jicarilla approved source and placed in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling 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.		

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Lisa Hunter	Approval Date: 11/9/15	Expiration Date:
Title: Field Environmental Specialist	Conditions of Approval:	
E-mail Address: Lisa.Hunter@cop.com	Attached <input type="checkbox"/>	
Date: September 23, 2015	Phone: (505) 326-9786	

* Attach Additional Sheets If Necessary

#NCS 15313 37 454

Rule Engineering, LLC

Solutions to Regulations for Industry

September 22, 2015

Ms. Lisa Hunter
ConocoPhillips
San Juan Business Unit
5525 Highway 64
Farmington, New Mexico 87401

**Re: Axi Apache N #13A
Below Grade Tank Closure Sampling and Release Report**

Dear Ms. Hunter:

This report summarizes below grade tank (BGT) closure sampling and remedial activities conducted at the ConocoPhillips Axi Apache N #13A, located in Unit Letter I, Section 2, Township 25N, Range 4W in Rio Arriba County, New Mexico on the Jicarilla Apache Nation. Site activities included collection and analysis of a five-point composite soil closure sample from beneath the BGT, excavation of hydrocarbon impacted soils, and collection and analysis of an excavation confirmation sample. A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

BGT/Release Summary

Site Name – Axi Apache N #13A

Location – Unit Letter I, Section 2, Township 25N, Range 4W

API Number – 30-039-22288

Wellhead Latitude/Longitude – N36.42523 and W107.21638

BGT Latitude/Longitude – N36.42506 and W107.21672

Land Jurisdiction – Jicarilla Apache Nation

Size of BGT – 45 barrels

Source of Release – historic (beneath the BGT east side)

Release Contents – unknown

Release Volume – unknown

Site Ranking – 20

Date of BGT Closure Soil Sampling – June 8, 2015

Date(s) of Rule Engineering, LLC (Rule) Field Work – June 8 and 12, 2015

Subcontractor(s) – CF&M

Amount of Contaminated Soil Excavated/Disposed – estimated 2 cubic yards

BGT Closure Standards

As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the Axi Apache N #13A are as follows: 0.2 milligram per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH).

Site Ranking

The Axi Apache N #13A is located on the Jicarilla Apache Nation and follows recommendations from Jicarilla Apache Nation Environmental Protection Office (EPO). In accordance with EPO and New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 20 (Table 1). Based on the ranking score of 20, action levels for remediated soils at the site are as follows: 10 mg/kg benzene, 50 mg/kg total BTEX, and 100 mg/kg TPH.

Depth to groundwater at the site was estimated to be 286 feet below ground surface (bgs) based on the elevation differential (286 feet) between the BGT location and the wash in Ojitos Canyon.

A review was completed of the New Mexico Office of the State Engineer online New Mexico Water Rights Reporting System and no water wells were identified within a 1,000 feet radius of the location.

The nearest surface water, an unnamed wash which drains to the Ojitos Canyon is located approximately 80 feet west of the BGT.

Field Activities

On June 8, 2015, Rule personnel conducted a visual inspection for surface/subsurface indications of a release. Soil discoloration and hydrocarbon odor was observed below the BGT along the eastern edge. No corrosion holes were visible in the BGT and the impacted soils were located 4 inches bgs, indicating that a historic release had occurred. Rule personnel then collected five soil samples (S-1 through S-5) from 0.5 feet beneath the BGT. The field work summary sheet is attached.

On the June 12, 2015, CF&M excavated the petroleum impacted materials from below the BGT. On June 12, 2015, Rule personnel collected one confirmation sample made up of samples from the sidewalls and base of the excavation. Approximately 2 cubic yards of impacted soils were removed from an area of excavation measuring approximately 6 feet x 4 feet x 1.5 (to 2.0) feet in depth. Figure 3 provides the locations and results of the soil sample collected during the excavation clearance.

BGT Soil Sampling

The five soil samples (S-1 through S-5) collected from below the BGT liner were combined to create soil confirmation sample SC-1 BGT. A portion of SC-1 BGT was field screened for volatile organic compounds (VOCs) and chlorides, and field analyzed for TPH per U.S. Environmental Protection Agency (USEPA) Method 418.1.

The portion of SC-1 BGT 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 418.1, and chlorides per USEPA Method 300.0.

Field sampling results for closure sample SC-1 BGT reported VOCs at 293 parts per million (ppm) and TPH concentrations at 1,070 mg/kg. Field chloride concentrations were reported at 80 mg/kg. Laboratory analytical results for sample SC-1 BGT reported benzene and total BTEX concentrations as less than 0.050 mg/kg and 0.2 mg/kg, respectively. Laboratory analytical results for SC-1 BGT reported concentrations of 480 mg/kg TPH and 170 mg/kg chloride. Field and laboratory results for SC-1 BGT are summarized in Table 2, and the analytical laboratory report is attached.

Excavation Soil Sampling

From the excavation, Rule collected one five-point composite sample (Excavation Composite) from the sidewalls and base. A portion of the composite soil sample was field screened for VOCs and field analyzed for TPH per USEPA Method 418.1.

The Excavation Composite 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 and TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015D.

Field results for soil confirmation sample reported VOC and TPH concentrations below the NMOCD action levels of with 5.2 ppm and 99.9 mg/kg, respectively. Laboratory analytical results for soil confirmation Excavation Composite reported benzene, total BTEX, and TPH (GRO+DRO) concentrations below the applicable NMOCD action levels. Field sampling and laboratory analytical results are summarized in Table 3 and presented on Figure 3. The analytical laboratory report is attached.

Conclusions

On June 8, 2015, BGT closure sampling activities were conducted at the ConocoPhillips Axi Apache N 13A. Field and laboratory results for sample SC-1 BGT were reported below the BGT closure standards for benzene, total BTEX, and chlorides as outlined in 19.15.17.13.NMAC, but exceeded the BGT closure standard of 100 mg/kg for TPH. Based on field screening results a historic release was noted along the eastern portion of the BGT location.

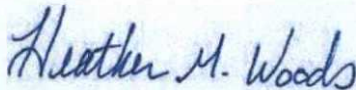
On June 12, 2015, approximately 2 cubic yards of hydrocarbon contaminated soils were removed from within the impacted area. The final excavation measured 6

feet x 4 feet x 1.5 (to 2.0) feet in depth. On June 12, 2015, one confirmation soil sample was collected from the sidewalls and base of the final excavation.

Laboratory analytical results for soil confirmation sample, Excavation Composite, reported benzene and total BTEX concentrations below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. The field and laboratory TPH concentrations were both reported below the NMOCD action level of 100 mg/kg. Based on the field screening results, Hobson Sandoval, EPO representative, approved backfilling of the excavation on June 12, 2015. Based on laboratory analytical results, no further work is recommended.

Rule Engineering appreciates the opportunity to provide services to ConocoPhillips. If you have any questions, please contact me at (505) 325-1055.

Sincerely,
Rule Engineering, LLC



Heather M. Woods, P.G.

Attachments:

Table 1. NMOCD Site Ranking Determination
Table 2. BGT Soil Sampling Results
Table 3. Excavation Soil Sampling Results
Figure 1. Topographic Map
Figure 2. Aerial Site Map
Figure 3. Excavation Clearance Soil Analytical Map
BGT Field Work Summary Sheet
Analytical Laboratory Reports (#1506962 and #1506818)

Table 1. NMOCD Site Ranking Determination
Axi Apache N #13A
Rio Arriba County, New Mexico
ConocoPhillips

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential between location and wash in Ojitos Canyon south of the location is 286 feet.	NMOCD Online database, Schmitz Ranch 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 feet radius of location.	NMOSE NMWRRS, Schmitz Ranch Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	20	An unnamed wash which drains to wash in Ojitos Canyon is located approximately 80 feet west of the BGT.	Schmitz Ranch Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		20		

Table 2. BGT Soil Sampling Results
Axi Apache N #13A
Rio Arriba County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Type	Sample Depth (ft below BGT)	Field Sampling Results			Laboratory Analytical Results			
				VOCs (PID) (ppm)	TPH (mg/kg)	Chloride (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BGT Closure Standards*				-----	100	250	0.2	50	100	250
SC-1 BGT	Jun 08, 15	composite	0.5	293	1,070	80	<0.050	0.17	480	170

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

Table 3. Excavation Soil Sampling Results
Axi Apache N #13A
Rio Arriba County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Depth (ft below BGT)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO	TPH-DRO
							(mg/kg)	
EPO/NMOCD Action Levels**			100	100	10	50	100	
Excavation Composite	Jun 12, 15	1.5 to 2	5.2	99.9	<0.049	<0.245	<4.9	50

Notes:

* field results

VOCs - volatile organic compounds

PID - photo-ionization detector

ppm - parts per million

mg/kg - milligrams/kilograms

TPH-total petroleum hydrocarbons

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

**Based on NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993), site rank of 20.



Axi Apache N #13A
N36.42523, W107.21638



ConocoPhillips

0 0.125 0.25 0.5 0.75 1
Miles

Rule Engineering, LLC
Solutions to Regulations for Industry

9/22/2015

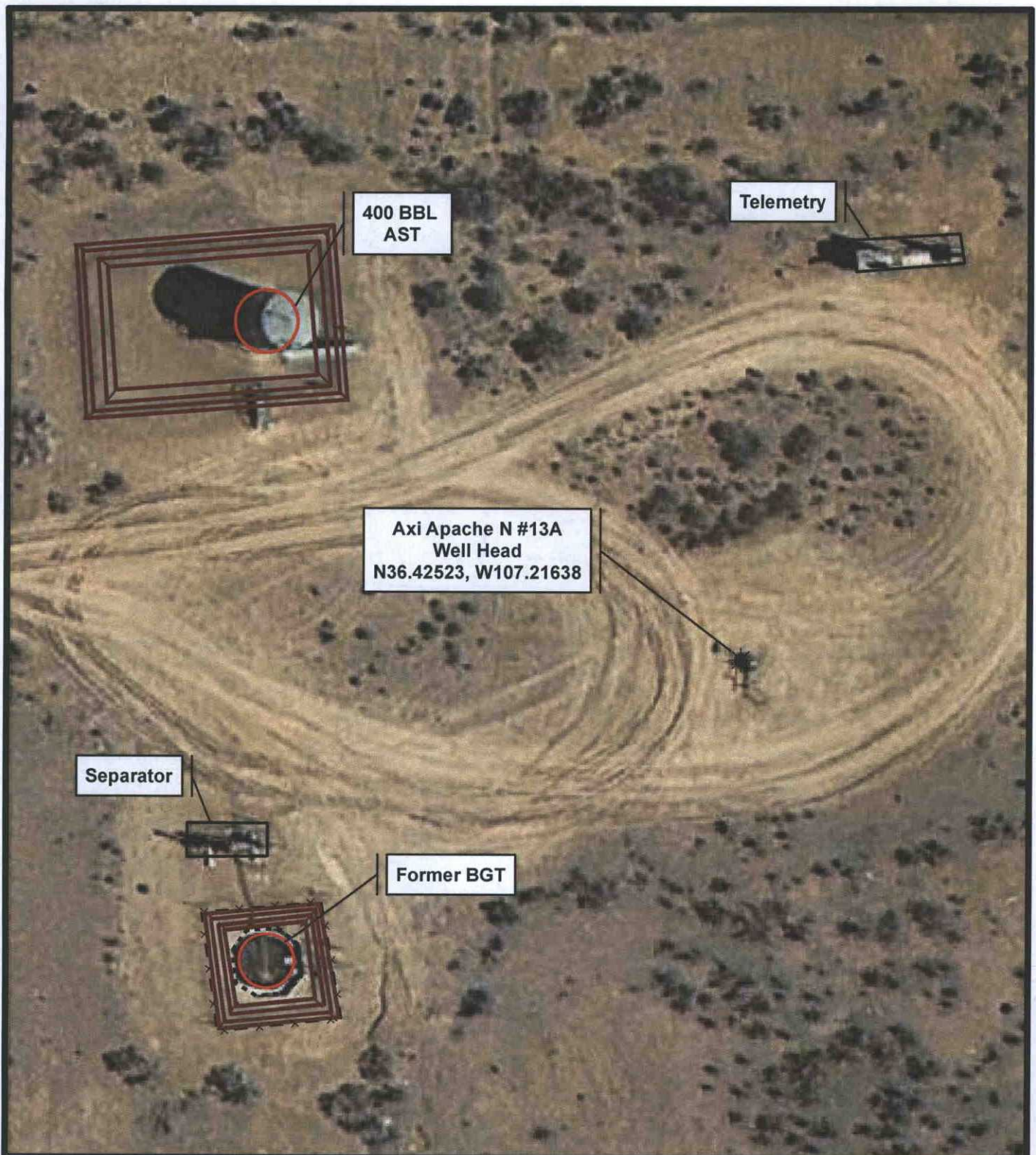


Topographic Site Map






ConocoPhillips
Axi Apache N #13A
API: 30-039-22288

Figure 1

I-2-T25N-R04W
N36.42523, W107.21638
Schmitz Ranch Quadrangle
Rio Arriba County, New Mexico



Legend

- | | | | |
|---|-----------|---|---------------|
|  | Well Head |  | Berm |
|  | Fence |  | Storage Tanks |
|  | Cribbing | | |

9/22/2015

1:412

ConocoPhillips

0 10 20 40 60 80
Feet

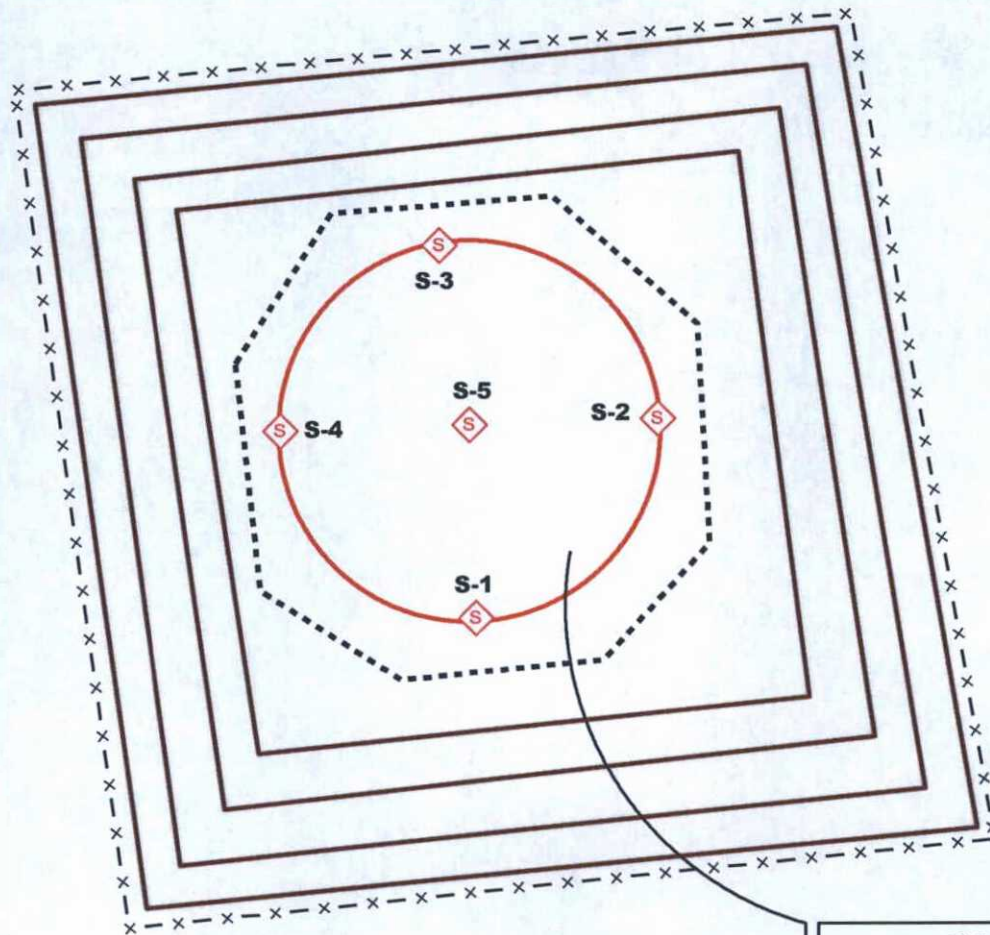
Rule Engineering, LLC
Solutions to Regulations for Industry

Aerial Site Map

ConocoPhillips
Axi Apache N #13A
API: 30-039-22288









Figure 2

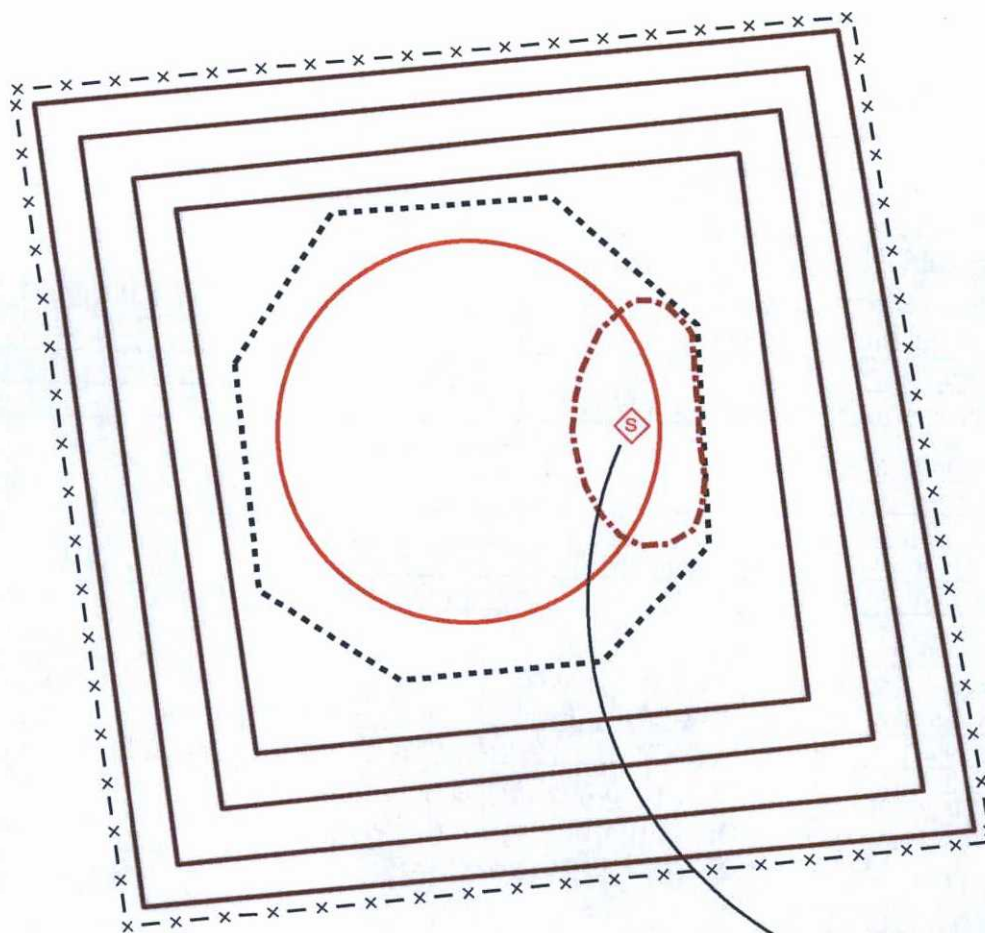
I-2-T25N-R04W
N36.42523, W107.21638
Rio Arriba County, New Mexico



SC-1
 6/8/2015
 Benzene <0.005 mg/kg
 Total BTEX 0.17 mg/kg
 Chloride 170 mg/kg
TPH 480 mg/kg

NOTES: SC-1 is a five part composite comprised of aliquots taken from S-1 through S-5
 BTEX= benzene, toluene, ethylbenzene, and xylenes
 TPH= total petroleum hydrocarbons

<p>Legend</p> <p> Soil Sample  Berm</p> <p> Fence  UST</p> <p> Cribbing</p> <p>9/22/2015 1:81</p>	<p style="text-align: center;"> ConocoPhillips</p> <p style="text-align: center;">0 2 4 8 12 16  Feet</p> <p style="text-align: center;"> Rule Engineering, LLC Solutions to Regulations for Industry</p>	<p style="text-align: center;">BGT Soil Analytical Map</p> <p style="text-align: center;">ConocoPhillips Axi Apache N #13A API: 30-039-22288</p> <p style="text-align: center;">Figure 3</p> <p style="text-align: center;">I-2-T25N-R04W N36.42523, W107.21638 Rio Arriba County, New Mexico</p>
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Excavation Composite

7/12/2015

Benzene <0.049 mg/kg

Total BTEX <0.245 mg/kg

TPH-GRO <4.9 mg/kg

TPH-DRO 50 mg/kg

NOTES: Excavation composite is a five point composite







BTEX= benzene, toluene, ethylbenzene, and xylenes

TPH= total petroleum hydrocarbons

GRO= gasoline range organics

DRO= diesel range organics

Legend

- | | |
|---|--|
|  Soil Sample |  Berm |
|  BGT |  Excavation Extents |
|  Fence |  Cribbing |

9/22/2015

1:81

ConocoPhillips

0 2 4 8 12 16
Feet

Rule Engineering, LLC
Solutions to Regulations for Industry



Excavation Soil Analytical Map

ConocoPhillips
Axi Apache N #13A
API: 30-039-22288

Figure 4

I-2-T25N-R04W
N36.42523, W107.21638
Rio Arriba County, New Mexico

Rule Engineering Field Work Summary Sheet

Company: ConocoPhillips

Location: Axi Apache N #13A

API: 30-039-22288

Legals: I-S02-T25N-R4W

County: Rio Arriba

Land Jurisdiction: Jicarilla Apache Nation

Date: 8-Jun-15

Staff: Debbie Watson

Wellhead GPS: 36.42523, -107.21638

BGT GPS: 36.42506, -107.21672

Siting Information based on BGT Location:

Groundwater: Elevation differential (>100 ft)

Surface Water: Unnamed wash located 80 ft W of BGT

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

Site Rank **20**

Objective: Closure sampling for BGT

Tank Size: Tank removed

Liner: No liner

Observations: Staining observed along east portion of BGT. Stained soil included in sample.

Notes: Following BGT sampling, excavation of impacted soils along east side.

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
SC-1	Composite	9:50	See below	293	10:00	1,070	10:23	80	10:18

SC-1 is a 5-point composite of S-1 through S-5, collected 0.5 ft below BGT.

Sample SC-1 was laboratory analyzed for TPH (418.1), 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.



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

June 24, 2015

Deborah Watson
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 860-2712
FAX

RE: Axi Apache N 13A

OrderNo.: 1506962

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/16/2015 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1506962

Date Reported: 6/24/2015

CLIENT: Rule Engineering LLC

Client Sample ID: SC-1

Project: Axi Apache N 13A

Collection Date: 6/8/2015 9:50:00 AM

Lab ID: 1506962-001

Matrix: SOIL

Received Date: 6/16/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	480	20		mg/Kg	1	6/19/2015	19823
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	170	7.5		mg/Kg	5	6/22/2015 11:30:10 AM	19854
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Toluene	ND	0.050		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Xylenes, Total	0.17	0.099		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	6/22/2015 11:49:21 AM	19822

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506962

24-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19854	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806753	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-19854	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806754	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			

Sample ID	1506962-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	SC-1	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806756	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	190	7.5	15.00	173.7	99.8	64.2	131			

Sample ID	1506962-001AMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	SC-1			Batch ID:	19854		RunNo:	27009				
Prep Date:	6/22/2015			Analysis Date:	6/22/2015		SeqNo:	806757			Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Chloride	190	7.5	15.00	173.7	115	64.2	131	1.21	20			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506962

24-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19823		SampType:	MBLK		TestCode:	EPA Method 418.1: TPH				
Client ID:	PBS		Batch ID:	19823		RunNo:	26959				
Prep Date:	6/19/2015		Analysis Date:	6/19/2015		SeqNo:	805089		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Petroleum Hydrocarbons, TR	ND	20									

Sample ID	LCS-19823		SampType: LCS		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS		Batch ID: 19823		RunNo: 26959					
Prep Date:	6/19/2015		Analysis Date: 6/19/2015		SeqNo: 805090		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	99.8	86.7	126			

Sample ID	LCSD-19823		SampType: LCSD		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS02		Batch ID: 19823		RunNo: 26959					
Prep Date:	6/19/2015		Analysis Date: 6/19/2015		SeqNo: 805091		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	99.8	86.7	126	0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506962

24-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19822		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806550		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	0.91		1.000		90.7	80	120			

Sample ID	LCS-19822		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806551		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	76.6	128			
Toluene	0.99	0.050	1.000	0	99.0	75	124			
Ethylbenzene	1.0	0.050	1.000	0	103	79.5	126			
Xylenes, Total	3.1	0.10	3.000	0	102	78.8	124			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	80	120			

Sample ID	1506962-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-1		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806553		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.050	0.9901	0	96.0	69.2	126			
Toluene	0.94	0.050	0.9901	0.04471	90.5	65.6	128			
Ethylbenzene	1.1	0.050	0.9901	0.1842	89.8	65.5	138			
Xylenes, Total	3.1	0.099	2.970	0.2219	98.4	63	139			
Surr: 4-Bromofluorobenzene	1.2		0.9901		117	80	120			

Sample ID	1506962-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-1		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806554		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.049	0.9891	0	96.3	69.2	126	0.248	18.5	
Toluene	0.94	0.049	0.9891	0.04471	90.5	65.6	128	0.0548	20.6	
Ethylbenzene	1.1	0.049	0.9891	0.1842	91.6	65.5	138	1.50	20.1	
Xylenes, Total	3.2	0.099	2.967	0.2219	99.6	63	139	1.02	21.1	
Surr: 4-Bromofluorobenzene	1.2		0.9891		118	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1506962

RcptNo: 1

Received by/date: AT/LM 06/16/15

Logged By: Anne Thorne

6/16/2015 7:30:00 AM

Anne Thorne

Completed By: Anne Thorne

6/19/2015

Anne Thorne

Reviewed By: *[Signature]*

06/19/15

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: ☐ eMail ☐ Phone ☐ Fax ☐ 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	1.8	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:	
Client: Rule Engineering LLC		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	
Mailing Address: 501 Airport Drive, Suite 205		Project Name:	
Farmington, NM 87401		Axi Apache N 134	
Phone #: 505-860-2712		Project #:	
email or Fax#: dwatson@ruleengineering.com		Project Manager:	
QA/QC Package:		D. Watson	
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)			
Accreditation:		Sampler: D. Watson	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> EDD (Type) _____		Sample Temperature: 73	

Sample Temperature / 7

[illegible]

Date: 6/15/15	Time: 1659	Relinquished by: Dorrah Watson	Received by: Christine Waack	Date 6/15/15	Time 1659	Remarks: Ball to Conco Phillips A
Date: 6/15/15	Time: 1804	Relinquished by: Christine Waack	Received by: [Signature]	Date 6/16/15	Time 0721	Per DW analyze & invoice/At 06/17/15

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

June 23, 2015

Deborah Watson
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 860-2712
FAX

RE: Axi Apache N 13A

OrderNo.: 1506818

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/16/2015 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 horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1506818

Date Reported: 6/23/2015

CLIENT: Rule Engineering LLC

Client Sample ID: Excavation Comp

Project: Axi Apache N 13A

Collection Date: 6/12/2015 11:15:00 AM

Lab ID: 1506818-001

Matrix: SOIL

Received Date: 6/16/2015 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	50	9.8		mg/Kg	1	6/19/2015 2:28:11 PM	19771
Surr: DNOP	103	57.9-140		%REC	1	6/19/2015 2:28:11 PM	19771
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Surr: BFB	85.5	75.4-113		%REC	1	6/19/2015 5:32:28 PM	19798
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Toluene	ND	0.049		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Ethylbenzene	ND	0.049		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Xylenes, Total	ND	0.098		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Surr: 4-Bromofluorobenzene	87.2	80-120		%REC	1	6/19/2015 5:32:28 PM	19798

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506818

23-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19771	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	19771	RunNo:	26936					
Prep Date:	6/17/2015	Analysis Date:	6/19/2015	SeqNo:	804485	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	9.1		10.00		90.8	57.9	140			

Sample ID	LCS-19771	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	19771	RunNo:	26936					
Prep Date:	6/17/2015	Analysis Date:	6/19/2015	SeqNo:	804486	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	67.8	130			
Surr: DNOP	4.8		5.000		95.3	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506818

23-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	1506818-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Excavation Comp	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805452	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.51	0	119	47.9	144			
Surr: BFB	930		980.4		95.2	75.4	113			

Sample ID	1506818-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Excavation Comp	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805453	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.9	24.56	0	123	47.9	144	4.13	29.9	
Surr: BFB	950		982.3		96.6	75.4	113	0	0	

Sample ID	LCS-19798	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805455	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	64	130			
Surr: BFB	940		1000		94.4	75.4	113			

Sample ID	MB-19798	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805456	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	890		1000		88.8	75.4	113			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506818

23-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	LCS-19798		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 19798		RunNo: 26956					
Prep Date:	6/18/2015		Analysis Date: 6/19/2015		SeqNo: 805465		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	102	76.6	128			
Toluene	0.99	0.050	1.000	0	99.0	75	124			
Ethylbenzene	1.0	0.050	1.000	0	102	79.5	126			
Xylenes, Total	3.0	0.10	3.000	0	100	78.8	124			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	MB-19798		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 19798		RunNo: 26956					
Prep Date:	6/18/2015		Analysis Date: 6/19/2015		SeqNo: 805466		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	0.89		1.000		89.5	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
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: **1506818**

RcptNo: **1**

Received by/date:

Am 06/16/15

Logged By: **Ashley Gallegos**

6/16/2015 7:20:00 AM

Ag

Completed By: **Ashley Gallegos**

6/17/2015 12:48:49 PM

Ag

Reviewed By:

Ja 06/18/15

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 ☐ # of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted?
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 ☐ 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: ☐ eMail ☐ Phone ☐ Fax ☐ 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	1.8	Good	Yes			

