OIL CONS. DIV DIST. 3

MAY 26 2015

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 **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Lisa Hunter**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 326-9786**
Facility Name: **Canyon Largo Unit 95E**	Facility Type: **Gas Well**

Surface Owner **State**	Mineral Owner **State (E-291-5)**	API No.**3003923802**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	**36**	**25N**	**06W**	**1170'**	**South**	**1840'**	**East**	**Rio Arriba**

Latitude 36.35295 Longitude 107.41620

NATURE OF RELEASE

Type of Release **Hydrocarbon**	Volume of Release **Unknown**	Volume Recovered **0**
Source of Release **BGT (Historic)**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **April 14, 2015**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom? **N/A**	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

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

Describe Cause of Problem and Remedial Action Taken.*
Per field sampling results, evidence of historic release during BGT closure discovered.

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. The sample was then transported to the lab and analytical results were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required.

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 Approved by Environmental Specialist:	
Printed Name: **Lisa Hunter**		
Title: **Field Environmental Specialist**	Approval Date: 8/11/15	Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval:	Attached ☐
Date: **May 26, 2015** Phone: (505) **258-1607**		

* Attach Additional Sheets If Necessary

#NCS 1522352087

Rule Engineering, LLC
Solutions to Regulations for Industry

May 20, 2015

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

Re: Canyon Largo Unit 95E
Below Grade Tank Closure Sampling Report

Dear Ms. Hunter:

This report summarizes the below grade tank (BGT) closure sampling activities conducted by Rule Engineering, LLC (Rule) at the ConocoPhillips Canyon Largo Unit 95E, located in Unit Letter O, Section 36, Township 25N, Range 6W in Rio Arriba County, New Mexico. Activities included collection and analysis of a 5-point composite soil confirmation sample from beneath the BGT on April 14, 2015. A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

BGT Summary
Site Name – Canyon Largo Unit 95E
Location – Unit Letter O, Section 36, Township 25N, Range 6W
API Number – 30-039-23802
Monument Latitude/Longitude – N36.35283 and W107.41610
BGT Latitude/Longitude – N36.35295 and W107.41620
Land Jurisdiction – State of New Mexico
Size of BGT – 120 barrels
Site Ranking – 10 New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993) see Table 1
Date of BGT Closure Soil Sampling – April 14, 2015

BGT Closure Standards
As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the Canyon Largo Unit 95E are as follows: 0.2 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH).

Field Activities
On April 14, 2015, following removal of the BGT tank and liner, Rule personnel conducted a visual inspection for surface/subsurface indications of a release. Minor staining was observed beneath the liner in an area located along the southern edge of the BGT. Rule personnel then collected five soil samples (S-1

through S-5) from 0.25 feet beneath the BGT liner. Stained soils were included as sample S-1. Figure 2 provides the location of the soil samples collected from below the BGT. The field work summary sheet is attached.

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. A portion of SC-1 was field screened for volatile organic compounds (VOCs) and chlorides, and field analyzed for total petroleum hydrocarbons (TPH) per U.S. Environmental Protection Agency (USEPA) Method 418.1.

The portion of SC-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 418.1, chlorides per USEPA Method 300.0, and TPH for GRO and DRO per USEPA Method 8015D.

Field sampling results for soil confirmation sample SC-1 reported VOCs at 1.0 ppm and TPH concentrations at 194 mg/kg. Field chloride concentrations were also reported at 80 mg/kg. Laboratory analytical results for sample SC-1 reported benzene and total BTEX concentrations of less than 0.050 mg/kg and 0.250 mg/kg, respectively. Laboratory analytical results for SC-1 reported concentrations of 360 mg/kg TPH and 5.0 mg/kg chloride. TPH (GRO/DRO) was reported at less than 5.0 mg/kg GRO and 53 mg/kg DRO. Field and laboratory results for SC-1 are summarized in Table 2, and the analytical laboratory report is attached.

Conclusions

On April 14, 2015, BGT closure sampling activities were conducted at the ConocoPhillips Canyon Largo Unit 95E. Field and laboratory results for sample SC-1 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 sampling and laboratory analytical results, a release occurred from the BGT.

In accordance with NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 10. Based on the ranking score of 10, action levels for remediated soils at the Canyon Largo Unit 95E are as follows: 10 mg/kg benzene, 50 mg/kg BTEX, and 1,000 mg/kg TPH (GRO/DRO). Laboratory analytical results for soil confirmation sample (SC-1) reported benzene, total BTEX, and TPH (GRO/DRO) concentrations below the applicable NMOCD release action levels. 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

Deborah Watson, PG

Attachments:
Table 1. NMOCD Site Ranking Determination
Table 2. BGT Soil Sampling Results
Figure 1. Topographic Map
Figure 2. Aerial Site Map
Field Work Summary Sheet
Analytical Laboratory Report

Table 1. NMOCD Site Ranking Determination
Canyon Largo Unit 95E
Rio Arriba County, New Mexico
ConocoPhillips

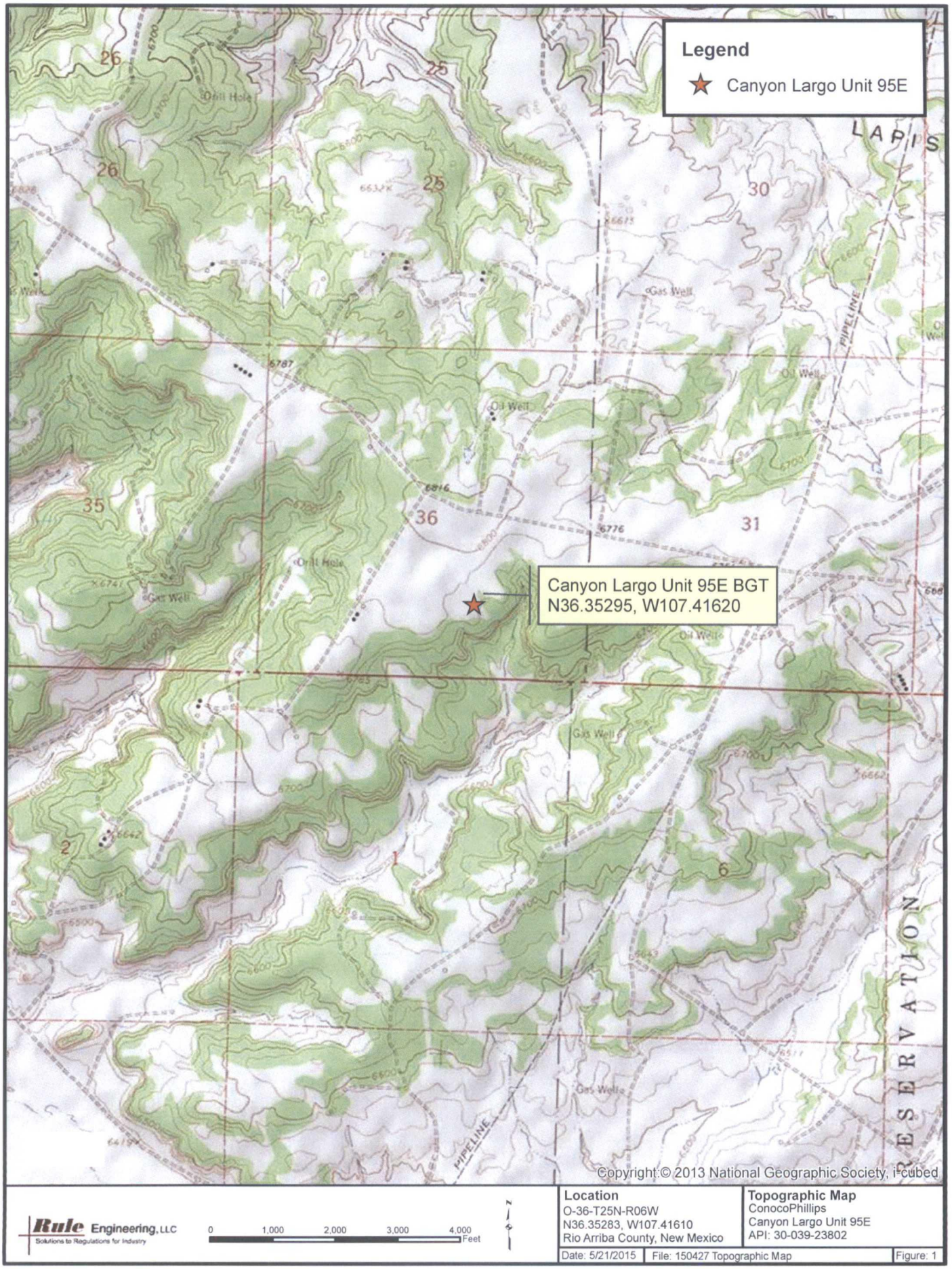
Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential between location and significant wash in Canyon Largo west of the location is 380 feet.	NMOCD Online database, Tafoya Canyon Quadrangle, Google Earth, 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, Tafoya Canyon Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An unnamed wash which drains to wash in Canyon Largo is located approximately 765 feet southeast of the BGT. An additional surface water is located 1,800 feet southwest of the BGT. A stock pond is located approximately 2,200 feet north of the BGT.	Tafoya Canyon Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		**10**		

Rule Engineering, LLC
Solutions to Regulations for Industry

Table 2. BGT Soil Sampling Results
Canyon Largo Unit 95E
Rio Arriba County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Type	Sample Depth (ft below BGT liner)	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)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
BGT Closure Standards*				**----**	**100**	**250**	**0.2**	**50**	**100**	**250**	**----**	
NMOCD Release Action Levels**				**100**	**----**	**----**	**10**	**50**	**----**	**----**	**1,000**	
SC-1	Apr 14, 15	composite	0.5	1.0	**194**	80	<0.050	<0.250	**360**	5.0	<5.0	53

Notes: VOCs - volatile organic compounds
PID - photo-ionization detector
ppm - parts per million
mg/kg - milligrams/kilograms
TPH-total petroleum hydrocarbons per USEPA Method 418.1
BTEX - benzene, toluene, ethylbenzene, and xylenes
TPH-GRO - total petroleum hydrocarbons-gasoline range organics
TPH-DRO - total petroleum hydrocarbons-diesel range organics
*NMAC 19.15.17.13.E
**NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993)



Rule Engineering, LLC
Solutions to Regulations for Industry

0 1,000 2,000 3,000 4,000 Feet

Location
O-36-T25N-R06W
N36.35283, W107.41610
Rio Arriba County, New Mexico

Topographic Map
ConocoPhillips
Canyon Largo Unit 95E
API: 30-039-23802

Date: 5/21/2015 | File: 150427 Topographic Map | Figure: 1

Rule Engineering, LLC
Solutions to Regulations for Industry

0 25 50 75 100 Feet

Location
O-36-T25N-R06W
N36.35283, W107.41610
Rio Arriba County, New Mexico

Aerial Site Map
ConocoPhillips
Canyon Largo Unit 95E
API: 30-039-23802

Date: 5/19/2015 | File: 150513 Aerial Map | Figure: 2

Rule Engineering Field Work Summary Sheet

Date:	14-Apr-15
Staff:	Debbie Watson

Company:	ConocoPhillips
Location:	Canyon Largo Unit 95E
API:	30-039-23802
Legals:	O-S36-T25N-R6W
County:	Rio Arriba
Land Ownership:	State of NM

Wellhead Monument GPS: 36.35283, -107.41610

BGT GPS: 36.35295, -107.41620

Siting Information based on BGT Location: Site Rank 10

Groundwater: Elevation differential between location and significant wash in Canyon Largo W of the BGT is 380 ft.

Surface Water: An unnamed wash (blue line) is located approximately 765 ft SE of the BGT.

Wellhead Protection: No wells

Objective:	Closure sampling for BGT
Tank Size:	120 bbls (removed prior to arrival)
Liner:	Yes, removed while onsite
Observations:	Staining observed near S-1. Included in SC-1-per Cory Smith (NMOCD) onsite during sampling.
Notes:	Heavy liner and cribbing in place. Sandstone bedrock at 3-4" below BGT.

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	1315	see below	1.0	13:35	**194**	13:40	80	13:45

SC-1 is a 5-point composite of S-1 through S-5, collected 3-4" below tank liner.

Sample SC-1 was laboratory analyzed for TPH (418.1), BTEX (8021),chlorides (300.0), and TPH-GRO /TPH-DRO (8015)

Field Sampling Notes:

[1] Field screening for volatile organic compounds (VOC) 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 concentration is determined by drop count titration method using silver nitrate titrant.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 21, 2015

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

RE: Conoco Phillips Canyon Largo Unit 95 E OrderNo.: 1504659

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/15/2015 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-1
Project: Conoco Phillips Canyon Largo Unit 95 E
Collection Date: 4/14/2015 1:15:00 PM
Lab ID: 1504659-001 **Matrix:** SOIL
Received Date: 4/15/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	53	10		mg/Kg	1	4/16/2015 11:42:25 AM	18708
Surr: DNOP	88.0	57.9-140		%REC	1	4/16/2015 11:42:25 AM	18708
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/16/2015 9:51:00 PM	18710
Surr: BFB	87.3	80-120		%REC	1	4/16/2015 9:51:00 PM	18710
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.050		mg/Kg	1	4/16/2015 9:51:00 PM	18710
Toluene	ND	0.050		mg/Kg	1	4/16/2015 9:51:00 PM	18710
Ethylbenzene	ND	0.050		mg/Kg	1	4/16/2015 9:51:00 PM	18710
Xylenes, Total	ND	0.10		mg/Kg	1	4/16/2015 9:51:00 PM	18710
Surr: 4-Bromofluorobenzene	93.5	80-120		%REC	1	4/16/2015 9:51:00 PM	18710
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	5.0	1.5		mg/Kg	1	4/17/2015 3:36:11 PM	18745
EPA METHOD 418.1: TPH						Analyst: **KJH**	
Petroleum Hydrocarbons, TR	360	20		mg/Kg	1	4/21/2015 12:00:00 PM	18751

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#: **1504659**

21-Apr-15

Client: Rule Engineering LLC

Project: Conoco Phillips Canyon Largo Unit 95 E

Sample ID	**MB-18745**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**18745**	RunNo:	**25615**					
Prep Date:	**4/17/2015**	Analysis Date:	**4/17/2015**	SeqNo:	**758950**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-18745**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**18745**	RunNo:	**25615**					
Prep Date:	**4/17/2015**	Analysis Date:	**4/17/2015**	SeqNo:	**758951**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

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#: **1504659**

21-Apr-15

Client: Rule Engineering LLC

Project: Conoco Phillips Canyon Largo Unit 95 E

Sample ID **MB-18751**	SampType: **MBLK**	TestCode: **EPA Method 418.1: TPH**
Client ID: **PBS**	Batch ID: **18751**	RunNo: **25642**
Prep Date: **4/17/2015**	Analysis Date: **4/21/2015**	SeqNo: **759956** 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-18751**	SampType: **LCS**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS**	Batch ID: **18751**	RunNo: **25642**
Prep Date: **4/17/2015**	Analysis Date: **4/21/2015**	SeqNo: **759957** 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	101	86.7	126			

Sample ID **LCSD-18751**	SampType: **LCSD**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS02**	Batch ID: **18751**	RunNo: **25642**
Prep Date: **4/17/2015**	Analysis Date: **4/21/2015**	SeqNo: **759958** 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	102	86.7	126	1.30	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#: **1504659**

21-Apr-15

Client: Rule Engineering LLC

Project: Conoco Phillips Canyon Largo Unit 95 E

Sample ID **MB-18708**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18708**	RunNo: **25548**
Prep Date: **4/15/2015**	Analysis Date: **4/16/2015**	SeqNo: **756791** 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	8.9		10.00		88.9	63.5	128			

Sample ID **LCS-18708**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18708**	RunNo: **25548**
Prep Date: **4/15/2015**	Analysis Date: **4/16/2015**	SeqNo: **756805** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.0	67.8	130			
Surr: DNOP	4.7		5.000		93.5	57.9	140			

Sample ID **1504659-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **18708**	RunNo: **25548**
Prep Date: **4/15/2015**	Analysis Date: **4/16/2015**	SeqNo: **756980** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	80	10	50.25	53.40	52.3	29.2	176			
Surr: DNOP	4.5		5.025		89.6	57.9	140			

Sample ID **1504659-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **18708**	RunNo: **25548**
Prep Date: **4/15/2015**	Analysis Date: **4/16/2015**	SeqNo: **756981** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	9.9	49.26	53.40	255	29.2	176	76.9	23	RS
Surr: DNOP	4.9		4.926		99.2	57.9	140	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504659**

21-Apr-15

Client: Rule Engineering LLC

Project: Conoco Phillips Canyon Largo Unit 95 E

Sample ID **MB-18710**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **18710**	RunNo: **25555**
Prep Date: **4/15/2015**	Analysis Date: **4/16/2015**	SeqNo: **757273** 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	930		1000		93.2	80	120			

Sample ID **LCS-18710**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **18710**	RunNo: **25555**
Prep Date: **4/15/2015**	Analysis Date: **4/16/2015**	SeqNo: **757274** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	64	130			
Surr: BFB	960		1000		95.8	80	120			

Sample ID **1504659-001AMS2**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SC-1**	Batch ID: **18710**	RunNo: **25601**
Prep Date: **4/15/2015**	Analysis Date: **4/17/2015**	SeqNo: **758550** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.73	0	97.5	47.9	144			
Surr: BFB	970		989.1		98.5	80	120			

Sample ID **1504659-001AMSD2**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SC-1**	Batch ID: **18710**	RunNo: **25601**
Prep Date: **4/15/2015**	Analysis Date: **4/17/2015**	SeqNo: **758551** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.73	0	114	47.9	144	15.3	29.9	
Surr: BFB	970		989.1		98.5	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504659**

21-Apr-15

Client: Rule Engineering LLC

Project: Conoco Phillips Canyon Largo Unit 95 E

Sample ID **MB-18710** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **18710** RunNo: **25555**

Prep Date: **4/15/2015** Analysis Date: **4/16/2015** SeqNo: **757283** 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	0.92		1.000		92.4	80	120			

Sample ID **LCS-18710** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **18710** RunNo: **25555**

Prep Date: **4/15/2015** Analysis Date: **4/16/2015** SeqNo: **757284** 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	109	76.6	128			
Toluene	1.0	0.050	1.000	0	102	75	124			
Ethylbenzene	1.1	0.050	1.000	0	107	79.5	126			
Xylenes, Total	3.2	0.10	3.000	0	106	78.8	124			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID **1504659-001AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **SC-1** Batch ID: **18710** RunNo: **25601**

Prep Date: **4/15/2015** Analysis Date: **4/17/2015** SeqNo: **758554** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	0.9901	0	119	69.2	126			
Toluene	1.1	0.050	0.9901	0	114	65.6	128			
Ethylbenzene	1.2	0.050	0.9901	0	122	65.5	138			
Xylenes, Total	3.6	0.099	2.970	0	120	63	139			
Surr: 4-Bromofluorobenzene	1.1		0.9901		106	80	120			

Sample ID **1504659-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **SC-1** Batch ID: **18710** RunNo: **25601**

Prep Date: **4/15/2015** Analysis Date: **4/17/2015** SeqNo: **758555** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.049	0.9891	0	110	69.2	126	7.72	18.5	
Toluene	1.0	0.049	0.9891	0	106	65.6	128	7.55	20.6	
Ethylbenzene	1.1	0.049	0.9891	0	115	65.5	138	5.70	20.1	
Xylenes, Total	3.4	0.099	2.967	0	114	63	139	5.34	21.1	
Surr: 4-Bromofluorobenzene	1.1		0.9891		108	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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1504659 RcptNo: 1

Received by/date: 04/15/15

Logged By: Lindsay Mangin 4/15/2015 7:00:00 AM

Completed By: Lindsay Mangin 4/15/2015 12:15:15 PM

Reviewed By: 04/15/15

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	4.3	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering LLC

Mailing Address: 501 Airport Drive
Suite 205 Farmington NM 87401

Phone #:

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
ConocoPhillips
Canyon Largo Unit 95E

Project #:

Project Manager:
D Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.3

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 + [redacted] + [redacted] (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	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)	C				Air Bubbles (Y or N)
4-14-15	1315	Soil	SC-1	2-4oz glass	Cold	1504659-001	X		X	X				X								

Date: 4-14-15 Time: 1730 Relinquished by: Deborah Watson

Received by: [signature] Date: 04/15/15 Time: 0700

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks: Bill to ConocoPhillips
Network # 10376058 Issued
act code: C200 Ordered by: Lisa Hunter
PO: KGARCIA

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.