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 Oil &Gas Co.	Contact **Bobby Spearman**
Address 3401 East 30th St, Farmington, NM	Telephone No.(505)-320-3045
Facility Name: Pierce A 4M	Facility Type: Gas well

Surface Owner: FED	Mineral Owner: FED	API No. 3004533713

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	**13**	**30N**	**10W**	**1660**	**South**	**690**	**Westt**	**San Juan**

Latitude 36.809086 Longitude -107.842510

NATURE OF RELEASE

Type of Release Condensate / Produce water	Volume of Release 51/15	Volume Recovered 0/0
Source of Release Production tank	Date and Hour of Occurrence **1:30 PM**	Date and Hour of Discovery **1:30 PM**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Vanessa Fields NMOCD, Katherina Diemer BLM**	
By Whom? Bobby Spearman	Date and Hour 2-16-16 10:50A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

OIL CONS. DIV DIST. 3

OCT 13 2016

Describe Cause of Problem and Remedial Action Taken.*
Nipple on drain line between tank had a corrosion failure

Describe Area Affected and Cleanup Action Taken.*
8-18-16 Crew completed the following:
Excavation was 39' x 45' x 12' deep. 880 cu/yds of soil was transported to IEI Land Farm and clean soil was placed in the excavation site. Analytical results were below the regulatory standards – no further action required. 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: RSpearman	OIL CONSERVATION DIVISION	
Printed Name: **Robert Spearman**	Approved by Environmental Specialist:	
Title: **Field Environmental Specialist**	Approval Date: 10/26/2016	Expiration Date:
E-mail Address: **Robert.E.Spearman**@conocophillips.com	Conditions of Approval: NVF1605326467	Attached ☐
Date: 10-5-16 Phone: (505) 320-3045		

* Attach Additional Sheets If Necessary

41

Pierce A #4M Release Report

Unit Letter P, Section 13, Township 30 North, Range 10 West
San Juan County, New Mexico

October 3, 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

Rule Engineering, LLC
Solutions to Regulations for Industry

ConocoPhillips
Pierce A #4M 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

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

Reviewed by:

Russell Knight, PG, Principal Hydrogeologist

October 3, 2016

Table of Contents

Tables

Figures

Appendices

1.0 Introduction

The ConocoPhillips Pierce A #4M release site is located in Unit Letter P, Section 13, Township 30 North, Range 10 West, in San Juan County, New Mexico. The release of an estimated 66 barrels (bbls) of produced water and condensate from the above ground storage tank was discovered on February 16, 2016.

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	Pierce A #4M		
Site Location Description	Unit Letter P, Section 13, Township 30 North, Range 10 West		
Wellhead GPS Location	N36.80940 and W107.84257	***Release GPS Location***	N36.80914 and W107.84249
Land Jurisdiction	Bureau of Land Management (BLM)	***Discovery Date***	January 27, 2016
Release Source	Above Grade Tank – Corrosion induced nipple failure on drain line		
Estimated Volume(s) Released	51 bbls condensate and 15 bbls produced water	***Volume Recovered***	0 bbls
NMOCD Site Rank	10		
Distance to Nearest Surface Water	Unnamed, ephemeral wash is located approximately 690 feet to the east which ultimately drains to the wash in Slane Canyon		
Estimated Depth to Groundwater	Estimated to be greater than 100 feet below grade surface (bgs)	***Distance to Nearest Water Well or Spring***	Greater than 1,000 feet

3.0 NMOCD Site Ranking

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 reported depth to water of 70 feet bgs for a cathodic well drilled at the Pierce A #4E located approximately 1,040 feet to the southeast at an elevation approximately 63 feet

lower than the release location, resulting in an estimated depth to groundwater at the release location of 133 bgs.

A review was completed of the New Mexico Office of the State Engineer (NMOSE) online New Mexico Water Rights Reporting System (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 690 feet east of the release location which ultimately drains to the wash in Slane Canyon.

Based on the ranking score of 40, 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).

4.0 Initial and Continued Site Assessments

4.1 Field Activities

On February 29, 2016, Rule Engineering, LLC (Rule) personnel conducted an initial site assessment to delineate the extents of the release which included advancing seven soil borings (SB-1 through SB-7) utilizing a hand auger. The soil borings were advanced to approximately 3 to 7.5 feet bgs where auger refusal was encountered on sandstone or buried vegetation.

To further define the horizontal and vertical extents of the release, Rule returned to the location on March 19, 2016 to conduct a continued site assessment using a Geoprobe®, operated by Earth Worx Environmental Services LLC, to advance six additional borings (SB-8 through SB-13). The soil borings were advanced to depths ranging from approximately 11 to 16 feet below ground surface where refusal was encountered on sandstone or shale. A sample location map showing the boring locations is included as Figure 3.

4.2 Soil Sampling

Rule collected soil samples from the soil borings at selected intervals. The lithology encountered at the site included clayey sand underlain by sandstone and shale to the maximum depths of the soil borings.

A portion of each sample was field screened for volatile organic compounds (VOCs) and selected samples were analyzed for TPH. Field screening for VOC vapors was conducted with a photoionization detector (PID). Prior to field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field analysis for TPH was conducted for selected samples per United States 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 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 per USEPA 8015D.

Initial site assessment field screening and laboratory analytical results are summarized in Table 2. Analytical laboratory reports are included in Appendix A.

4.3 Field Screening and Results

Field screening results for samples collected from soil borings SB-1 and SB-13 indicated VOC concentrations ranging from 1.0 ppm to 4,020 ppm. Field TPH results for samples collected from soil borings SB-2 at 4 feet and SB-4 at 7.5 feet indicated TPH concentrations of 22.5 mg/kg and greater than 5,000 mg/kg, respectively. Field screening results are summarized in Table 2.

4.4 Laboratory Analytical Results

Laboratory analytical results for the site assessment sample SB-11 at 14 to 16 feet reported the benzene concentration below the laboratory reporting limit of 0.024 mg/kg, the total BTEX concentration of 0.99 mg/kg, and TPH as gasoline range organics (GRO) and diesel range organics (DRO) concentrations of 55 mg/kg. Laboratory analytical results for site assessment sample SB-13 at 14 to 16 feet reported benzene, total BTEX, and TPH (GRO/DRO) concentrations below the laboratory reporting limits.

Site assessment field screening and laboratory analytical results are summarized in Table 2. Analytical laboratory reports are included in Appendix A.

5.0 Excavation Confirmation Sampling

5.1 Field Activities

On August 22, 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 45 feet by 39 feet by 12 feet deep. Approximately 880 cubic yards of impacted soils were transported to a local NMOCD approved landfarm 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.

5.2 Soil Sampling

Rule collected six composite confirmation soil samples (SC-1 through 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 selected samples were also field 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.

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 per USEPA 8015D.

Excavation confirmation field screening and laboratory analytical results are summarized in Table 3. The analytical laboratory report is included in Appendix A.

5.3 Field Screening Results

Field screening results for excavation confirmation soil samples SC-1 through SC-6 indicated VOC concentrations ranging from 141 ppm to 2,738 ppm. The field TPH concentration results for samples SC-1 through SC-6 ranged from below the reporting limit of 20 mg/kg to 394 mg/kg. Field screening results are summarized in Table 3.

5.4 Laboratory Analytical Results

Laboratory analytical results for excavation confirmation samples SC-1 through SC-6 reported benzene concentrations ranging from below the laboratory reporting limits to 0.12 mg/kg, which are below the NMOCD action level of 10 mg/kg. Total BTEX concentrations for samples SC-1 though SC-6 ranged from below the laboratory reporting limits to 27 mg/kg, which are below the NMOCD action level of 50 mg/kg. Concentrations of TPH for samples SC-1 through SC-6 ranged from 23 mg/kg to 680 mg/kg, which are below the NMOCD action level of 1,000 mg/kg for a site rank of 10.

Excavation confirmation analytical laboratory results are summarized in Table 3. Analytical laboratory reports are included in Appendix A.

6.0 Conclusions

The ConocoPhillips Pierce A #4M release site is located in Unit Letter P, Section 13, Township 30 North, Range 10 West, in San Juan County, New Mexico. The release of an estimated 66 bbls of produced water and condensate from the above ground storage tank was discovered on February 16, 2016. Following the excavation of hydrocarbon impacted soils, confirmation samples SC-1 through SC-6 were collected from the resultant excavation which measured approximately 45 feet by 39 feet by 12 feet deep. Laboratory analytical results for confirmation samples SC-1 through SC-6 reported benzene, total BTEX, and total TPH concentrations below the applicable NMOCD action levels for a site rank of 10. Approximately 880 impacted soils were transported to a local NMOCD approved 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 at this time.

7.0 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
Pierce A #4M
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	Estimated to be 133 feet below ground surface based on a recorded depth to groundwater of 70 feet below ground surface on the cathodic well report for the Pierce A #4E which is approximately 63 feet lower in elevation than the release location.	NMOCD Online database, Turley 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, Turley Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An unnamed, ephemeral wash located approximately 690 feet east of release location which ultimately drains to the wash in Slane Canyon.	Turley 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. Site Assessment Field Screening and Laboratory Analytical Results
ConocoPhillips
Pierce A #4M
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)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NMOCD Action Level*			100	1,000	10	NE	NE	NE	50	1,000	
SB-1	2/29/2016	0.5	1.0	--	--	--	--	--	--	--	--
		2	9.3	--	--	--	--	--	--	--	--
		4	47.2	--	--	--	--	--	--	--	--
SB-2	2/29/2016	0.5	59.1	--	--	--	--	--	--	--	--
		2	269	--	--	--	--	--	--	--	--
		4	531	22.5	--	--	--	--	--	--	--
SB-3	2/29/2016	0.5	11.5	--	--	--	--	--	--	--	--
		2.5	17.1	--	--	--	--	--	--	--	--
SB-4	2/29/2016	0.5	22.0	--	--	--	--	--	--	--	--
		2	67.6	--	--	--	--	--	--	--	--
		4	248	--	--	--	--	--	--	--	--
		6	240	--	--	--	--	--	--	--	--
		7.5	2,565	>5,000	--	--	--	--	--	--	--
SB-5	2/29/2016	0.5	4,020	--	--	--	--	--	--	--	--
		2	3,479	--	--	--	--	--	--	--	--
		4	3,752	--	--	--	--	--	--	--	--
SB-6	2/29/2016	0.5	30.0	--	--	--	--	--	--	--	--
		2	43.5	--	--	--	--	--	--	--	--
		4	133	--	--	--	--	--	--	--	--
		6	173	--	--	--	--	--	--	--	--
SB-7	2/29/2016	0.5	59.7	--	--	--	--	--	--	--	--
		2	172	--	--	--	--	--	--	--	--
		4	84.8	--	--	--	--	--	--	--	--
SB-8	4/19/2016	0-4	4.2	--	--	--	--	--	--	--	--
		4-6	3.3	--	--	--	--	--	--	--	--
		6-8	54.9	--	--	--	--	--	--	--	--
		8-10	18.9	--	--	--	--	--	--	--	--
		10-12	6.1	--	--	--	--	--	--	--	--
SB-9	4/19/2016	0-2	2.1	--	--	--	--	--	--	--	--
		2-4	2.7	--	--	--	--	--	--	--	--
		4-6	12.0	--	--	--	--	--	--	--	--
		6-8	64.0	--	--	--	--	--	--	--	--
		8-10	44.7	--	--	--	--	--	--	--	--
		10-12	25.5	--	--	--	--	--	--	--	--
SB-10	4/19/2016	0-2	8.0	--	--	--	--	--	--	--	--
		2-4	3.7	--	--	--	--	--	--	--	--
		4-6	27.0	--	--	--	--	--	--	--	--
		6-8	484	--	--	--	--	--	--	--	--
		8-10	2,400	--	--	--	--	--	--	--	--
		10-12	3,150	--	--	--	--	--	--	--	--

Table 2. Site Assessment Field Screening and Laboratory Analytical Results
ConocoPhillips
Pierce A #4M
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)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NMOCD Action Level*			100	1,000	10	NE	NE	NE	50	1,000	
SB-11	4/19/2016	0-2	370	--	--	--	--	--	--	--	--
		2-4	7.0	--	--	--	--	--	--	--	--
		4-6	11.5	--	--	--	--	--	--	--	--
		6-8	10.4	--	--	--	--	--	--	--	--
		8-10	350	--	--	--	--	--	--	--	--
		10-12	3,250	--	--	--	--	--	--	--	--
		14-16	3,300	--	<0.024	<0.048	0.080	0.91	0.99	36	19
SB-12	4/19/2016	0-2	11.0	--	--	--	--	--	--	--	--
		2-4	9.8	--	--	--	--	--	--	--	--
		4-6	1.6	--	--	--	--	--	--	--	--
		6-8	1.0	--	--	--	--	--	--	--	--
		8-10	3.0	--	--	--	--	--	--	--	--
		10-11	2.6	--	--	--	--	--	--	--	--
SB-13	4/19/2016	0-2	27.2	--	--	--	--	--	--	--	--
		2-4	18.7	--	--	--	--	--	--	--	--
		4-6	74.4	--	--	--	--	--	--	--	--
		6-8	1,460	--	--	--	--	--	--	--	--
		8-10	753	--	--	--	--	--	--	--	--
		10-12	61.7	--	--	--	--	--	--	--	--
		12-14	62.2	--	--	--	--	--	--	--	--
		14-16	323	--	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.9

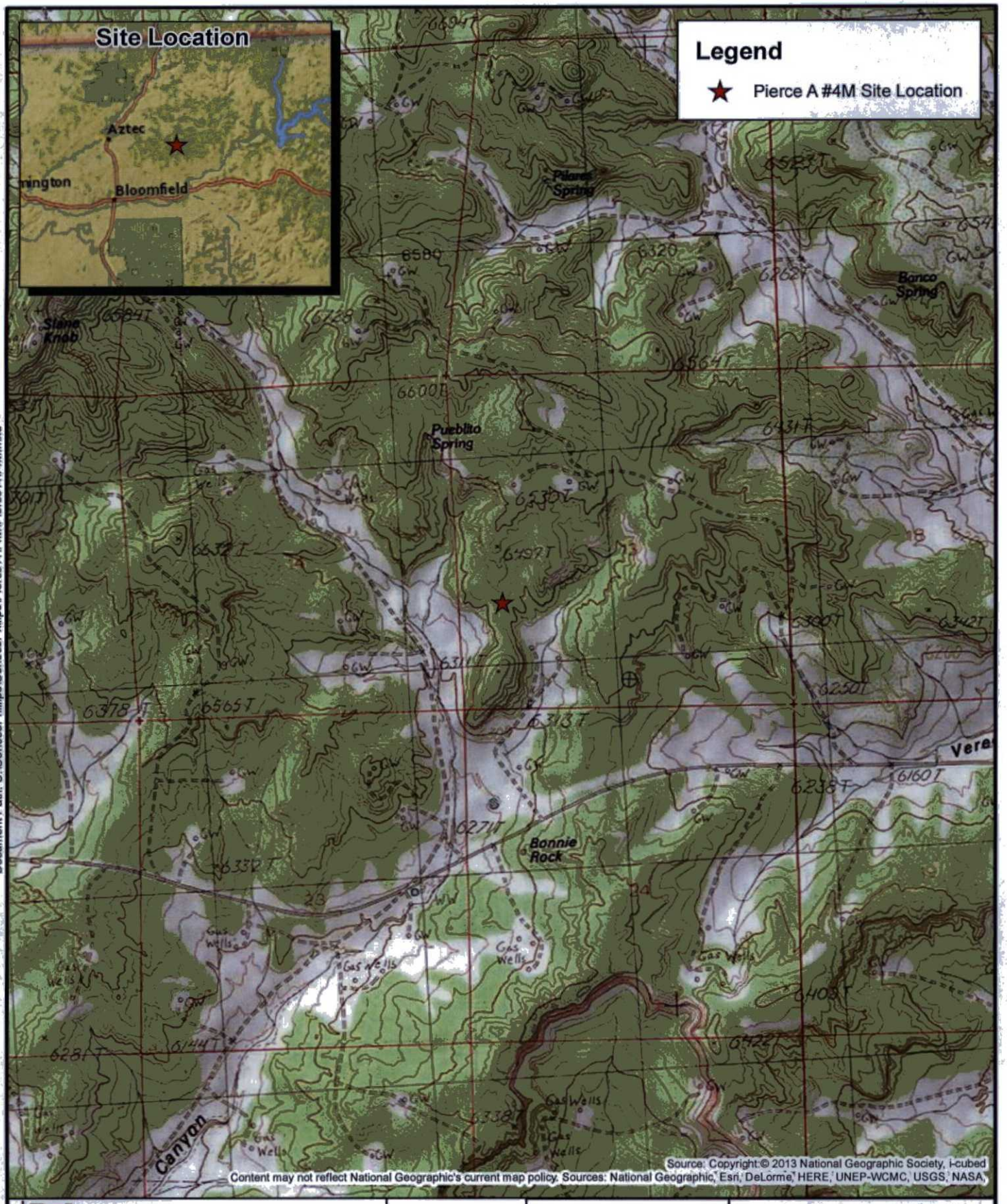
Notes:
All borings were terminated at auger refusal on sandstone.
VOCs - volatile organic compounds
PID - photoionization detector
ft bgs - feet below grade surface
ppm - parts per million
mg/kg - milligrams per kilogram
TPH - total petroleum hydrocarbons
NMOCD - New Mexico Oil Conservation Division
*Based on the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases (August 1993)*
**Based on a site ranking of 10.

Table 3. Excavation Confirmation Field Screening and Laboratory Analytical Results
ConocoPhillips
Pierce A #4M
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)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)	TPH as MRO (mg/kg)
NMOCD Action Level*			100	1,000**	10	NE	NE	NE	50	1,000**		
SC-1	7/22/2016	0.5 to 12	2,738	82.2	<0.040	0.46	0.16	1.5	2.1	54	25	<46
SC-2	7/22/2016	0.5 to 12	2,269	394	<0.041	<0.081	<0.081	1.6	1.6	120	110	<49
SC-3	7/22/2016	0.5 to 12	1,456	340	0.12	3.4	2.0	21	27	520	160	<48
SC-4	7/22/2016	0.5 to 12	2,450	31.1	<0.019	0.14	0.12	1.5	1.8	44	25	<49
SC-5	7/22/2016	12	711	<20.0	<0.018	0.16	0.077	0.91	1.15	23	15	<51
SC-6	7/22/2016	12	141	<20.0	<0.021	<0.041	<0.041	<0.082	<0.185	<4.1	19	<49

Notes:
VOCs - volatile organic compounds
PID - photoionization detector
ft bgs - feet below grade surface
ppm - parts per million
mg/kg - milligrams per kilogram
TPH - total petroleum hydrocarbons
GRO - gasoline range organics
DRO - diesel range organics
MRO - mineral oil range organics
NMOCD - New Mexico Oil Conservation Division
*Based on the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases (August 1993)*
**Based on a site ranking of 10.

Figures



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Rule Engineering, LLC
Solutions to Regulations for Industry

0 1,050 2,100 4,200 Feet

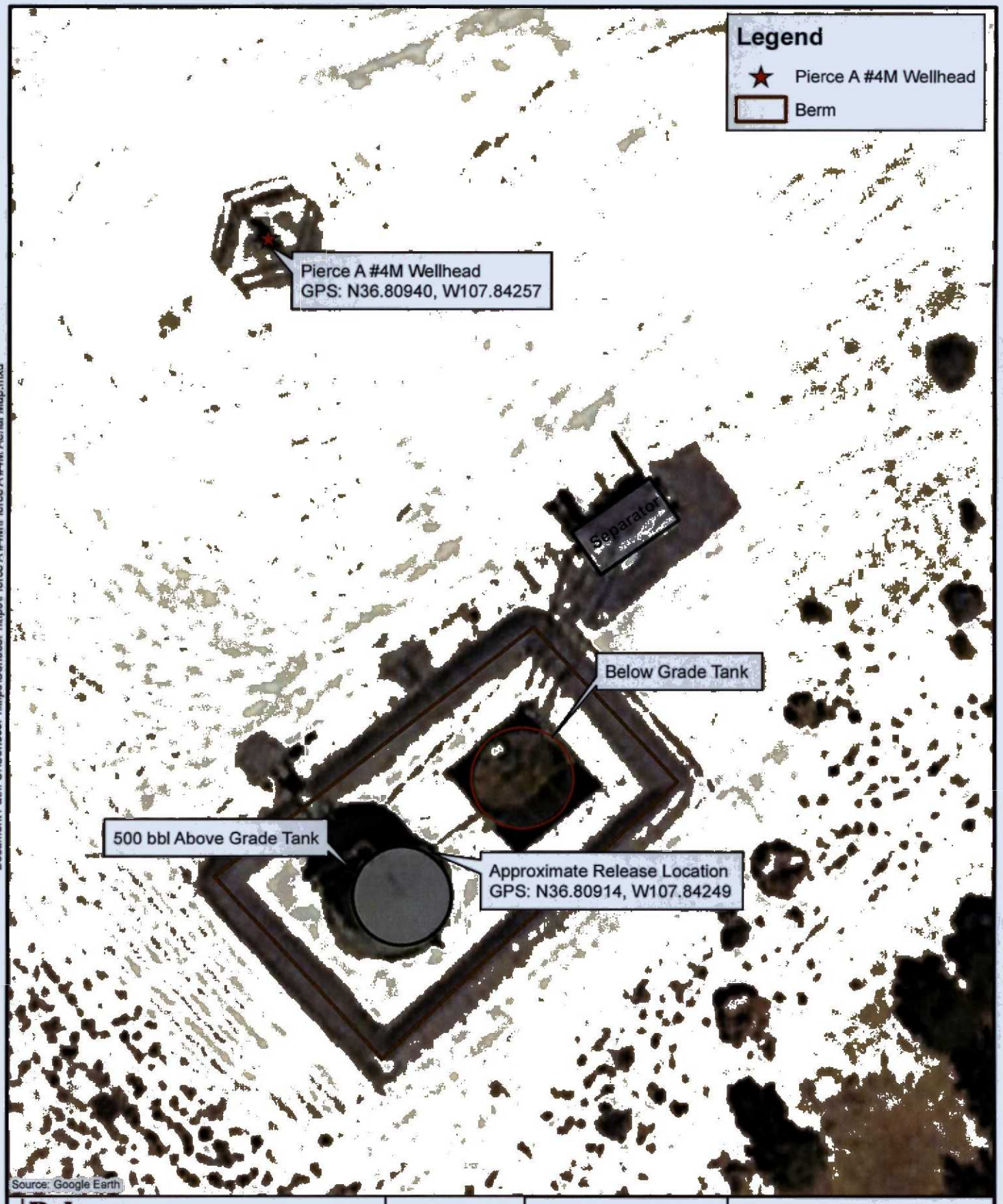
Turley Quadrangle
1:24,000

N

ConocoPhillips

P-S13-T30N-R10W
N36.80940, W107.84257
San Juan County, NM
API: 30-045-33713

Figure 1
Topographic Site Map
Pierce A #4M



Document Path: U:\ConocoPhillips\ConocoPhillips\Pierce A #4M\Pierce A #4M Aerial Map.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

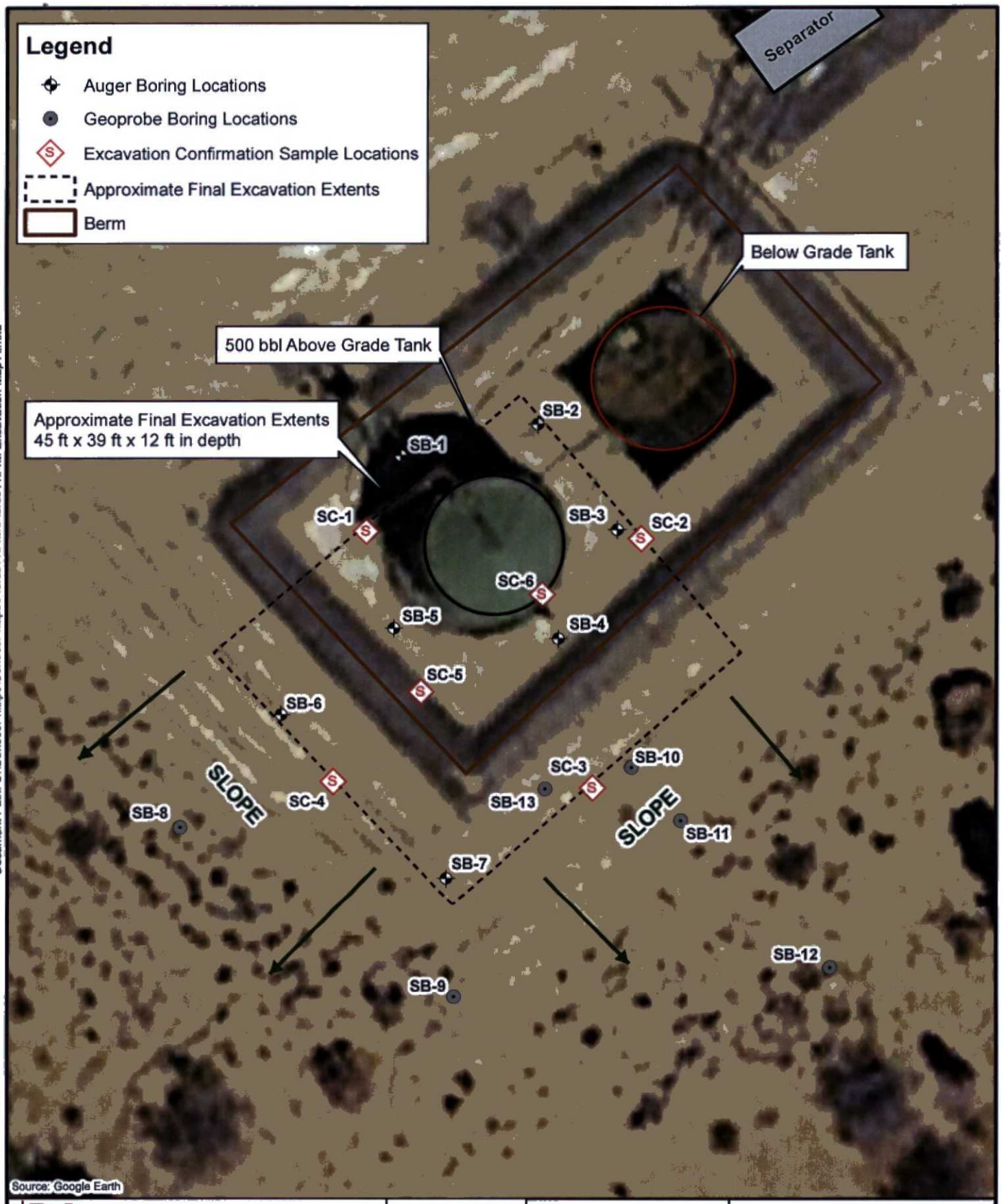
0 5 10 20 30 Feet

1 inch = 20 feet

ConocoPhillips

P-S13-T30N-R10W
N36.80940, W107.84257
San Juan County, NM
API: 30-045-33713

Figure 2
Aerial Map
Pierce A #4M



Rule Engineering, LLC
Solutions to Regulations for Industry

0 5 10 20 30 Feet

1 inch = 15 feet

ConocoPhillips

P-S13-T30N-R10W
N36.80940, W107.84257
San Juan County, NM
API: 30-045-33713

Figure 3
Sample Location Map
Pierce A #4M

Appendix A

Analytical Laboratory Reports

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

May 02, 2016

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

RE: CoP Pierce A 4M OrderNo.: 1604A97

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/23/2016 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1604A97**
Date Reported: **5/2/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: CoP Pierce A 4M
Lab ID: 1604A97-001 **Matrix:** SOIL

Client Sample ID: SB-11@14-16
Collection Date: 4/19/2016 9:40:00 AM
Received Date: 4/23/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	19	9.4		mg/Kg	1	4/28/2016 10:46:27 PM	25002
Surr: DNOP	88.1	70-130		%Rec	1	4/28/2016 10:46:27 PM	25002
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	36	4.8		mg/Kg	1	4/28/2016 4:39:55 PM	25014
Surr: BFB	278	80-120	S	%Rec	1	4/28/2016 4:39:55 PM	25014
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/28/2016 4:39:55 PM	25014
Toluene	ND	0.048		mg/Kg	1	4/28/2016 4:39:55 PM	25014
Ethylbenzene	0.080	0.048		mg/Kg	1	4/28/2016 4:39:55 PM	25014
Xylenes, Total	0.91	0.095		mg/Kg	1	4/28/2016 4:39:55 PM	25014
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	1	4/28/2016 4:39:55 PM	25014

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: CoP Pierce A 4M
Lab ID: 1604A97-002 **Matrix:** SOIL

Client Sample ID: SB-13@14-16
Collection Date: 4/19/2016 10:45:00 AM
Received Date: 4/23/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/28/2016 11:08:21 PM	25002
Surr: DNOP	101	70-130		%Rec	1	4/28/2016 11:08:21 PM	25002
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/28/2016 5:03:21 PM	25014
Surr: BFB	116	80-120		%Rec	1	4/28/2016 5:03:21 PM	25014
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/28/2016 5:03:21 PM	25014
Toluene	ND	0.046		mg/Kg	1	4/28/2016 5:03:21 PM	25014
Ethylbenzene	ND	0.046		mg/Kg	1	4/28/2016 5:03:21 PM	25014
Xylenes, Total	ND	0.092		mg/Kg	1	4/28/2016 5:03:21 PM	25014
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/28/2016 5:03:21 PM	25014

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#: **1604A97**

02-May-16

Client: Rule Engineering LLC

Project: CoP Pierce A 4M

Sample ID	LCS-25002	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	25002		RunNo:	33843				
Prep Date:	4/26/2016	Analysis Date:	4/28/2016		SeqNo:	1042563	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.2	65.8	136			
Surr: DNOP	4.7		5.000		94.5	70	130			

Sample ID	MB-25002	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	25002		RunNo:	33843				
Prep Date:	4/26/2016	Analysis Date:	4/28/2016		SeqNo:	1042566	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	12		10.00		124	70	130			

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#: **1604A97**

02-May-16

Client: Rule Engineering LLC
Project: CoP Pierce A 4M

Sample ID	MB-25015	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	25015		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042318	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.3	80	120			

Sample ID	LCS-25015	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	25015		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042319	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	80	120			

Sample ID	MB-25013	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	25013		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042396	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		96.7	80	120			

Sample ID	LCS-25013	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	25013		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042397	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	80	120			

Sample ID	MB-25014	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	25014		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042398	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	960		1000		96.3	80	120			

Sample ID	LCS-25014	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	25014		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042399	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.4	80	120			
Surr: BFB	1000		1000		104	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#: **1604A97**

02-May-16

Client: Rule Engineering LLC

Project: CoP Pierce A 4M

Sample ID	MB-25034	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	25034		RunNo:	33850				
Prep Date:	4/27/2016	Analysis Date:	4/28/2016		SeqNo:	1043122	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.2	80	120			

Sample ID	LCS-25034	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	25034		RunNo:	33850				
Prep Date:	4/27/2016	Analysis Date:	4/28/2016		SeqNo:	1043125	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	80	120			

Sample ID	1604A97-002AMS	SampType:	MS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	SB-13@14-16	Batch ID:	25014		RunNo:	33850				
Prep Date:	4/26/2016	Analysis Date:	4/28/2016		SeqNo:	1043157	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.30	2.555	95.8	59.3	143			
Surr: BFB	1100		932.0		118	80	120			

Sample ID	1604A97-002AMSD	SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	SB-13@14-16	Batch ID:	25014		RunNo:	33850				
Prep Date:	4/26/2016	Analysis Date:	4/28/2016		SeqNo:	1043158	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.97	2.555	85.7	59.3	143	7.45	20	
Surr: BFB	1100		958.8		113	80	120	0	0	

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#: **1604A97**

02-May-16

Client: Rule Engineering LLC

Project: CoP Pierce A 4M

Sample ID	MB-25015	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	25015	RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016	SeqNo:	1042402	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	80	120			

Sample ID	LCS-25015	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	25015	RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016	SeqNo:	1042403	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	MB-25013	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	25013	RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016	SeqNo:	1042404	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	LCS-25013	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	25013	RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016	SeqNo:	1042405	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	MB-25014	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	25014	RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016	SeqNo:	1042408	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		99.7	80	120			

Sample ID	LCS-25014	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	25014	RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016	SeqNo:	1042409	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.0	75.3	123			

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#: **1604A97**

02-May-16

Client: Rule Engineering LLC

Project: CoP Pierce A 4M

Sample ID	LCS-25014	SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	25014		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042409	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	0.89	0.050	1.000	0	88.9	80	124			
Ethylbenzene	0.88	0.050	1.000	0	88.2	82.8	121			
Xylenes, Total	2.6	0.10	3.000	0	87.6	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	1604A97-001AMS	SampType:	MS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	SB-11@14-16	Batch ID:	25014		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042410	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.024	0.9434	0	105	71.5	122			
Toluene	1.0	0.047	0.9434	0.02620	104	71.2	123			
Ethylbenzene	1.0	0.047	0.9434	0.07995	98.1	75.2	130			
Xylenes, Total	3.6	0.094	2.830	0.9120	94.0	72.4	131			
Surr: 4-Bromofluorobenzene	1.1		0.9434		113	80	120			

Sample ID	1604A97-001AMSD	SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	SB-11@14-16	Batch ID:	25014		RunNo:	33826				
Prep Date:	4/26/2016	Analysis Date:	4/27/2016		SeqNo:	1042411	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.023	0.9302	0	111	71.5	122	4.36	20	
Toluene	1.0	0.047	0.9302	0.02620	105	71.2	123	0.321	20	
Ethylbenzene	0.98	0.047	0.9302	0.07995	97.1	75.2	130	2.31	20	
Xylenes, Total	3.2	0.093	2.791	0.9120	82.3	72.4	131	10.7	20	
Surr: 4-Bromofluorobenzene	1.0		0.9302		110	80	120	0	0	

Sample ID	MB-25034	SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	25034		RunNo:	33850				
Prep Date:	4/27/2016	Analysis Date:	4/28/2016		SeqNo:	1043171	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	80	120			

Sample ID	LCS-25034	SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	25034		RunNo:	33850				
Prep Date:	4/27/2016	Analysis Date:	4/28/2016		SeqNo:	1043173	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	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

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: **1604A97** RcptNo: **1**

Received by/date: AG 04/23/16

Logged By: **Lindsay Mangin** **4/23/2016 8:45:00 AM**

Completed By: **Lindsay Mangin** **4/26/2016 8:32:46 AM**

Reviewed By: 04/26/16

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	1.0	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

ent: Rule Engineering LLC

iling Address: 501 Airport Dr., Suite 205

Farmington, NM 87401

one #: (505) 716-2707

ail or Fax#: hwoods@ruleengineering.com

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

creditation NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: CoP Pierce A #4M

Project #:

Project Manager: H. Woods

Sampler: H. Woods / J. Valdez

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

Analysis Request

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1604A97	BTEX + MTBE + TMB's (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)					Air Bubbles (Y or N)
2/16	0940	Soil	SB-11 @ 14-16	(1) 4oz Glass	Cold	-001	X		X													
2/16	1045	Soil	SB-13 @ 14-16	(1) 4oz Glass	Cold	-002	X		X													

e:	Time:	Relinquished by:	Received by:	Date	Time	Remarks: Direct Bill to ConocoPhillips
/14	1408	Heather M. Woods	Christen Walker	4/22/14	1408	WO. 21325153
e:	Time:	Relinquished by:	Received by:	Date	Time	Supervisor: Chris Neuenschwander
2/16	1840	Christen Walker		04/23/14	0845	Ordered by: Bobby Spearman
						Area: 3

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

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

October 03, 2016

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

RE: CoP Pierce A #4M

OrderNo.: 1607C03

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/23/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 27, 2016.

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. 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. All samples are reported as received unless otherwise indicated.

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

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: CoP Pierce A #4M
Collection Date: 7/22/2016 9:34:00 AM
Lab ID: 1607C03-001
Matrix: MEOH (SOIL)
Received Date: 7/23/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	25	9.3		mg/Kg	1	7/25/2016 5:33:03 PM	26575
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/25/2016 5:33:03 PM	26575
Surr: DNOP	86.5	70-130		%Rec	1	7/25/2016 5:33:03 PM	26575
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	54	8.0		mg/Kg	2	7/25/2016 7:11:31 PM	R35949
Surr: BFB	265	80-120	S	%Rec	2	7/25/2016 7:11:31 PM	R35949
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.040		mg/Kg	2	7/25/2016 7:11:31 PM	B35949
Toluene	0.46	0.080		mg/Kg	2	7/25/2016 7:11:31 PM	B35949
Ethylbenzene	0.16	0.080		mg/Kg	2	7/25/2016 7:11:31 PM	B35949
Xylenes, Total	1.5	0.16		mg/Kg	2	7/25/2016 7:11:31 PM	B35949
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	2	7/25/2016 7:11:31 PM	B35949

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: CoP Pierce A #4M
Collection Date: 7/22/2016 9:28:00 AM
Lab ID: 1607C03-002
Matrix: MEOH (SOIL)
Received Date: 7/23/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	110	9.9		mg/Kg	1	7/25/2016 5:55:20 PM	26575
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2016 5:55:20 PM	26575
Surr: DNOP	86.8	70-130		%Rec	1	7/25/2016 5:55:20 PM	26575
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	120	8.1		mg/Kg	2	7/25/2016 7:35:04 PM	R35949
Surr: BFB	564	80-120	S	%Rec	2	7/25/2016 7:35:04 PM	R35949
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.041		mg/Kg	2	7/25/2016 7:35:04 PM	B35949
Toluene	ND	0.081		mg/Kg	2	7/25/2016 7:35:04 PM	B35949
Ethylbenzene	ND	0.081		mg/Kg	2	7/25/2016 7:35:04 PM	B35949
Xylenes, Total	1.6	0.16		mg/Kg	2	7/25/2016 7:35:04 PM	B35949
Surr: 4-Bromofluorobenzene	126	80-120	S	%Rec	2	7/25/2016 7:35:04 PM	B35949

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: CoP Pierce A #4M
Collection Date: 7/22/2016 9:50:00 AM
Lab ID: 1607C03-003
Matrix: MEOH (SOIL)
Received Date: 7/23/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	160	9.7		mg/Kg	1	7/25/2016 6:17:24 PM	26575
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/25/2016 6:17:24 PM	26575
Surr: DNOP	89.3	70-130		%Rec	1	7/25/2016 6:17:24 PM	26575
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	520	20		mg/Kg	5	7/25/2016 7:58:29 PM	R35949
Surr: BFB	647	80-120	S	%Rec	5	7/25/2016 7:58:29 PM	R35949
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	0.12	0.10		mg/Kg	5	7/25/2016 7:58:29 PM	B35949
Toluene	3.4	0.20		mg/Kg	5	7/25/2016 7:58:29 PM	B35949
Ethylbenzene	2.0	0.20		mg/Kg	5	7/25/2016 7:58:29 PM	B35949
Xylenes, Total	21	0.40		mg/Kg	5	7/25/2016 7:58:29 PM	B35949
Surr: 4-Bromofluorobenzene	139	80-120	S	%Rec	5	7/25/2016 7:58:29 PM	B35949

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-4
Project: CoP Pierce A #4M
Collection Date: 7/22/2016 9:43:00 AM
Lab ID: 1607C03-004
Matrix: MEOH (SOIL)
Received Date: 7/23/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	25	9.8		mg/Kg	1	7/25/2016 6:39:33 PM	26575
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2016 6:39:33 PM	26575
Surr: DNOP	90.0	70-130		%Rec	1	7/25/2016 6:39:33 PM	26575
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	44	3.8		mg/Kg	1	7/25/2016 8:21:53 PM	R35949
Surr: BFB	353	80-120	S	%Rec	1	7/25/2016 8:21:53 PM	R35949
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.019		mg/Kg	1	7/25/2016 8:21:53 PM	B35949
Toluene	0.14	0.038		mg/Kg	1	7/25/2016 8:21:53 PM	B35949
Ethylbenzene	0.12	0.038		mg/Kg	1	7/25/2016 8:21:53 PM	B35949
Xylenes, Total	1.5	0.075		mg/Kg	1	7/25/2016 8:21:53 PM	B35949
Surr: 4-Bromofluorobenzene	123	80-120	S	%Rec	1	7/25/2016 8:21:53 PM	B35949

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: CoP Pierce A #4M
Collection Date: 7/22/2016 9:21:00 AM
Lab ID: 1607C03-005
Matrix: MEOH (SOIL)
Received Date: 7/23/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	15	10		mg/Kg	1	7/25/2016 7:01:29 PM	26575
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/25/2016 7:01:29 PM	26575
Surr: DNOP	94.8	70-130		%Rec	1	7/25/2016 7:01:29 PM	26575
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	23	3.7		mg/Kg	1	7/25/2016 8:45:16 PM	R35949
Surr: BFB	213	80-120	S	%Rec	1	7/25/2016 8:45:16 PM	R35949
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.018		mg/Kg	1	7/25/2016 8:45:16 PM	B35949
Toluene	0.16	0.037		mg/Kg	1	7/25/2016 8:45:16 PM	B35949
Ethylbenzene	0.077	0.037		mg/Kg	1	7/25/2016 8:45:16 PM	B35949
Xylenes, Total	0.91	0.074		mg/Kg	1	7/25/2016 8:45:16 PM	B35949
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	7/25/2016 8:45:16 PM	B35949

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-6
Project: CoP Pierce A #4M
Collection Date: 7/22/2016 9:15:00 AM
Lab ID: 1607C03-006
Matrix: MEOH (SOIL)
Received Date: 7/23/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	19	9.9		mg/Kg	1	7/25/2016 7:23:34 PM	26575
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2016 7:23:34 PM	26575
Surr: DNOP	90.1	70-130		%Rec	1	7/25/2016 7:23:34 PM	26575
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/25/2016 9:08:42 PM	R35949
Surr: BFB	107	80-120		%Rec	1	7/25/2016 9:08:42 PM	R35949
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	7/25/2016 9:08:42 PM	B35949
Toluene	ND	0.041		mg/Kg	1	7/25/2016 9:08:42 PM	B35949
Ethylbenzene	ND	0.041		mg/Kg	1	7/25/2016 9:08:42 PM	B35949
Xylenes, Total	ND	0.082		mg/Kg	1	7/25/2016 9:08:42 PM	B35949
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	7/25/2016 9:08:42 PM	B35949

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#: **1607C03**

03-Oct-16

Client: Rule Engineering LLC

Project: CoP Pierce A #4M

Sample ID	LCS-26575	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	26575		RunNo:	35945				
Prep Date:	7/25/2016	Analysis Date:	7/25/2016		SeqNo:	1112935	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	76.7	62.6	124			
Surr: DNOP	4.4		5.000		88.4	70	130			

Sample ID	MB-26575	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	26575		RunNo:	35945				
Prep Date:	7/25/2016	Analysis Date:	7/25/2016		SeqNo:	1112936	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.4	70	130			

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#: **1607C03**

03-Oct-16

Client: Rule Engineering LLC

Project: CoP Pierce A #4M

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R35949**	RunNo: **35949**
Prep Date:	Analysis Date: **7/25/2016**	SeqNo: **1114408** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.6	80	120			
Surr: BFB	1100		1000		110	80	120			

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R35949**	RunNo: **35949**
Prep Date:	Analysis Date: **7/25/2016**	SeqNo: **1114409** 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			

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#: **1607C03**

03-Oct-16

Client: Rule Engineering LLC

Project: CoP Pierce A #4M

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B35949**	RunNo: **35949**
Prep Date:	Analysis Date: **7/25/2016**	SeqNo: **1114429** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	75.3	123			
Toluene	0.99	0.050	1.000	0	99.1	80	124			
Ethylbenzene	1.0	0.050	1.000	0	101	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	101	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B35949**	RunNo: **35949**
Prep Date:	Analysis Date: **7/25/2016**	SeqNo: **1114438** 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	0.98		1.000		98.2	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

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: 1607C03 RcptNo: 1

Received by/date: 07/23/16

Logged By: Lindsay Mangin 7/23/2016 8:30:00 AM

Completed By: Lindsay Mangin 7/23/2016 9:52:53 AM

Reviewed By: JB 7/29/16

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

ent: Rule Engineering, LLC

illing Address: 501 Airport Dr. Suite 205

armington, NM 87401

one #: (505) 716-2787

ail or Fax#: hwoods@ruleengineering.com

/QC Package:

Standard ☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush Next Day 7/12/16

Project Name:

Enterprise ConP Pierce A #4M

Project #:

Project Manager:

Heather Woods

Sampler: Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1607C03	BTEX + ~~Oxy~~ + ~~DIPE~~ (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)					Air Bubbles (Y or N)
7/12	934	Soil	SC-1	(1) 4oz Glass	Cold	-001	X		X													
"	928	"	SC-2	"	"	-002	X		X													
"	950	"	SC-3	"	"	-003	X		X													
"	943	"	SC-4	"	"	-004	X		X													
"	921	"	SC-5	"	"	-005	X		X													
"	915	"	SC-6	"	"	-006	X		X													

Date	Time	Relinquished by:	Received by:	Date	Time
7/12	1615	Heather M. Woods	Christine Walters	7/12/16	1615
7/12	1941	Christine Walters		07/13/16	0830

Remarks: Direct Bill to ConocoPhillips

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.