

OCT 15 2015

Form C-141
Revised August 8, 2011

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

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

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: San Juan 27-5 Unit 48	Facility Type: Gas
Surface Owner Private	Mineral Owner BLM
API No. 3003906974	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	19	27N	05W	1650	South	1650	West	Rio Arriba

Latitude 36.55738 Longitude -107.40399

NATURE OF RELEASE

Type of Release Historic Contamination	Volume of Release Unknown	Volume Recovered 647 c/yds
Source of Release Unknown	Date and Hour of Occurrence Unknown	Date and Hour of Discovery April 28, 2015
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

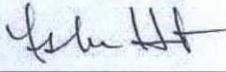
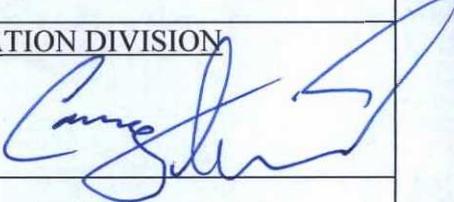
Describe Cause of Problem and Remedial Action Taken.*

Historic contamination was discovered optimization of location. Initial sample indicated high concentrations of hydrocarbons. Third-party contractor called to assess historic release

Describe Area Affected and Cleanup Action Taken.*

Historical hydrocarbon impacted soil was found during optimization for the subject well. The excavation was 24' x 26' x 28' in depth and 647 yds of soil was transported to IEI land farm and 647 yds of clean soil was transported from Montoya Ranch and placed in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Lisa Hunter	Approved by Environmental Specialist: 	
Title: Field Environmental Specialist	Approval Date: 12/18/15	Expiration Date:
E-mail Address: Lisa.Hunter@cop.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: October 13, 2015	Phone: (505) 326-9786	

* Attach Additional Sheets If Necessary

#NCS 1535237248

**San Juan 27-5 Unit 48
Release Report
Unit Letter K, Section 19, Township 27N, Range 05W
N36.55716, W107.40421
Rio Arriba County, New Mexico
October 7, 2015**

Prepared for:

ConocoPhillips
San Juan Business Unit
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:

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

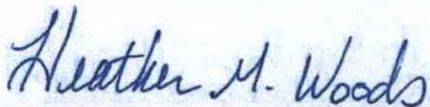
**ConocoPhillips
San Juan 27-5 Unit 48
Release Report**

Prepared for:

ConocoPhillips
San Juan Business Unit
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:

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



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

Reviewed by:



Russell Knight, PG, Principal Hydrogeologist

October 7, 2015

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1 Introduction

A historic release was discovered at the ConocoPhillips San Juan 27-5 Unit 48 well pad during trenching activities. The ConocoPhillips San Juan 27-5 Unit 48 well pad is located in Unit Letter K, Section 19, Township 27N, Range 5W in Rio Arriba County, New Mexico. Remedial activities included release assessment, excavation of hydrocarbon impacted soils, and confirmation soil sampling. A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

2 Release Summary

Site Name – San Juan 27-5 Unit 48

Location – Unit Letter K, Section 19, Township 27N, Range 05W

API Number – 30-039-06974

Location Latitude/Longitude – N36.55716 and W107.40421, respectively

Release Latitude/Longitude – N36.55738 and W107.40399, respectively

Land Jurisdiction – Federal

Agency Jurisdiction – New Mexico Oil Conservation Division (NMOCD)

Source of Release – Historic

Release Contents – Unknown

Release Volume – Unknown

NMOCD Ranking – 20

Date(s) of Rule Engineering, LLC (Rule) Field Work – May 8, May 27, June 29, and August 6, 2015

Disposal Facility – Industrial Ecosystems Inc. (IEI) Land Farm (Permit #NM-01-0010B)

Amount of Contaminated Soil Excavated/Disposed – approximately 647 cubic yards

3 Site Ranking

In accordance with EPO and New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 20 (Table 1). Based on the ranking score of 20, action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH).

Depth to groundwater at the site was estimated to be less than 50 feet below grade surface (bgs) based on a cathodic report for the San Juan 27-5 Unit #48 reporting depth to groundwater at 35 feet bgs.

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

The nearest surface water, Carrizo Wash, is located approximately 1,200 feet west of the release location.

4 Field Activities

On May 8, 2015, Rule personnel advanced six soil borings (SB-1 through SB-6) utilizing a hand auger to collect soils samples in the historic release area. Soil borings SB-1 through SB-6 were advanced to maximum depths ranging from approximately 8 to 13 feet bgs, where auger refusal or the limits of the equipment was reached. Based on the results of this assessment, impacted soils from an area of excavation measuring 24 feet by 24 feet by 15 feet in depth were transported to the IEI landfarm facility. On May 27, 2015, confirmation soil samples SC-1 through SC-4 were collected from the sidewalls of the excavation for laboratory analysis. Field screening activities indicated that contaminant concentrations exceeded NMOCD action levels for the base of the excavation, thus the base was not sampled for laboratory analysis. The excavation was backfilled with clean, imported material in anticipation of a continued site assessment to determine the vertical extent of contaminated soils.

On July 29, 2015, the continued site assessment was conducted utilizing a direct push drill rig. Four soil borings (GP-1 through GP-4) were advanced to approximate depths ranging from 24 to 36 feet bgs. Auger refusal was encountered in soil boring GP-2 at approximately 31 feet bgs. Soil boring GP-1 was advanced in the estimated hydrologic down-gradient direction of the release area, soil boring GP-2 was advanced within the release area footprint, and soil borings GP-3 and GP-4 were advanced in the estimated hydrologic cross-gradient directions of the release area. Figure 3 provides the locations and results of the soil samples collected during the release assessments.

Based on the results of the continued assessment, the top 15 feet of backfilled soil from the initial excavation was removed from the initial excavation footprint and set aside for final backfill material. The excavation was then extended to approximately 26 feet by 24 feet by 28 feet in depth. Confirmation soil samples SC-5 through SC-8 were collected from the lower half of each of the sidewalls and SC-9 was collected from the excavation base on August 6, 2015. Based on laboratory analytical results, TPH as gasoline range organics (GRO) and diesel range organics (DRO) exceeded the NMOCD action level. A Quantum Growth™ product was applied to the base of the excavation on August 11, 2015, and confirmation soil sample SB-10 was collected by ConocoPhillips personnel on August 13, 2015. The remainder of the contaminated soils were transported to the IEI landfarm facility. Figure 4 provides the locations and results of the soil samples collected during the excavation closure.

5 Soil Sampling

Rule collected a total of 50 soil samples from the ten soil borings (SB-1 through SB-6 and GP-1 through GP-4) advanced during the initial and continued release assessments. Rule also collected nine confirmation soil samples (SC-1 through SC-9) from the sidewalls and base of the excavation and ConocoPhillips personnel collected one confirmation soil sample (SC-10) from the base of the excavation.

San Juan 27-5 Unit 48 Release Report

A portion of each soil sample collected by Rule was field screened for volatile organic compounds (VOCs) and selected samples were field analyzed for TPH per United States Environmental Protection Agency (USEPA) Method 418.1.

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

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.

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 or 8260B and TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015D.

Field screening results for the soil samples collected from the soils borings during the initial and continued assessments indicated VOC concentrations ranging from 0.5 ppm to 2,363 ppm and TPH concentrations for the selected samples ranging from 35.7 mg/kg to greater than 10,000 mg/kg. Field sampling results for the assessment samples are summarized in Table 2 and presented on Figure 3.

Laboratory analytical results for the excavation sidewall confirmation samples SC-1 through SC-8 reported benzene, total BTEX, and TPH as GRO/DRO concentrations below the applicable NMOCD action levels. Laboratory analytical results for the excavation base confirmation sample SC-9 reported benzene and total BTEX concentrations below the applicable NMOCD action levels, but exceed the NMOCD action level for TPH as GRO/DRO with 139 mg/kg. However, laboratory analytical results for confirmation sample SC-10 collected from the base of the excavation subsequent to application of the Quantum Growth™ product reported TPH as GRO/DRO concentrations below the NMOCD action level. Laboratory analytical results for the excavation confirmation samples are summarized in Table 3 and presented on Figure 4. The analytical laboratory reports are included in Appendix A.

6 Conclusions

A historic release was discovered at the ConocoPhillips San Juan 27-5 Unit 48 well pad during trenching activities. Remedial activities included excavation of a total of approximately 647 cubic yards of hydrocarbon contaminated soils from within the impacted area. The final excavation measured approximately 26 feet by 24 feet by 28 feet in depth. Confirmation soil samples were collected from the sidewalls of the original excavation on May 27, 2015. Additional soil confirmation samples were collected from the sidewalls and base of the excavation on August 6, 2015, and based on the

San Juan 27-5 Unit 48 Release Report

exceedance of the sample from the base of the excavation, the soils were amended with a remediation product and resampled on August 13, 2015.

Laboratory analytical results for the excavation confirmation samples (SC-1 through SC-10) reported benzene and total BTEX concentrations below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. Laboratory analytical results for the excavation base confirmation sample SC-9 reported benzene and total BTEX concentrations below the applicable NMOCD action levels, but exceed the NMOCD action level for TPH. However, laboratory analytical results for confirmation sample SC-10 collected from the base of the excavation subsequent to application of the Quantum Growth™ product reported TPH as GRO/DRO concentrations below the NMOCD action level of 100 mg/kg.

Based on the laboratory analytical results for the excavation confirmation samples, no further work is recommended.

7 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 proposal, the report, and Rule's 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
San Juan 27-5 Unit 48
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	20	Cathodic Report for the San Juan 27-5 Unit 48 reports depth to groundwater is 35 feet.	NMOCD Online database, Santos Peak 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, Santos Peak Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	0	Carrizo Wash is located approximately 1,200 feet west of the site.	Santos Peak Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		20		

**Table 2. Release Assessment Soil Sampling Results-VOCs and TPH
San Juan 27-5 Unit 48
Rio Arriba County, New Mexico
ConocoPhillips**

Sample ID	Date	Sample Depth (ft bgs)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)
NMOCD Action Levels**			100	100
SB-1	May 08, 15	0.0	147	---
		2.0	1,944	---
		4.0	1,990	>10,000
		8.0	1,482	---
		13.0	145	106
SB-2	May 08, 15	2.0	1.0	---
		4.5	0.9	---
		8.0	2.1	---
SB-3	May 08, 15	2.0	1.5	---
		4.0	0.8	---
		7.5	1,417	---
		8.5	2,363	701
SB-4	May 08, 15	2.5	1.1	---
		4.5	0.5	---
		8.5	2.6	43.5
SB-5	May 08, 15	2.0	2.6	---
		4.5	0.8	---
		8.5	0.7	---
SB-6	May 08, 15	2.5	1.0	---
		4.5	0.8	---
		8.0	1.0	35.7
GP-1	Jun 29, 15	4.0	NS	---
		8.0	NS	---
		12.0	1.5	---
		16.0	0.6	---
		20.0	0.7	---
		24.0	2.3	---
		28.0	2.9	---
		32.0	1.7	---
36.0	2.7	---		

Sample ID	Date	Sample Depth (ft bgs)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)
NMOCD Action Levels**			100	100
GP-2	Jun 29, 15	0-12	NS	---
		16.0	38.3	---
		20.0	1,168	---
		24.0	1,627	826
		28.0	109	---
		29.0	24.3	111
		30.5	43.2	41.0
		31.0	auger refusal	---
GP-3	Jun 29, 15	4.0	1.7	---
		8.0	1.0	---
		12.0	0.9	---
		16.0	0.6	---
		20.0	0.9	---
		24.0	1.0	---
GP-4	Jun 29, 15	4.0	2.1	---
		8.0	2.3	---
		12.0	2.1	---
		16.0	3.0	---
		20.0	1.8	---
		24.0	1.9	---

Notes:

* field results

VOCs - volatile organic compounds

PID - photo-ionization detector

ft bgs - feet below ground surface

ppm - parts per million

mg/kg - milligrams/kilograms

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH-total petroleum hydrocarbons per USEPA Method 418.1

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

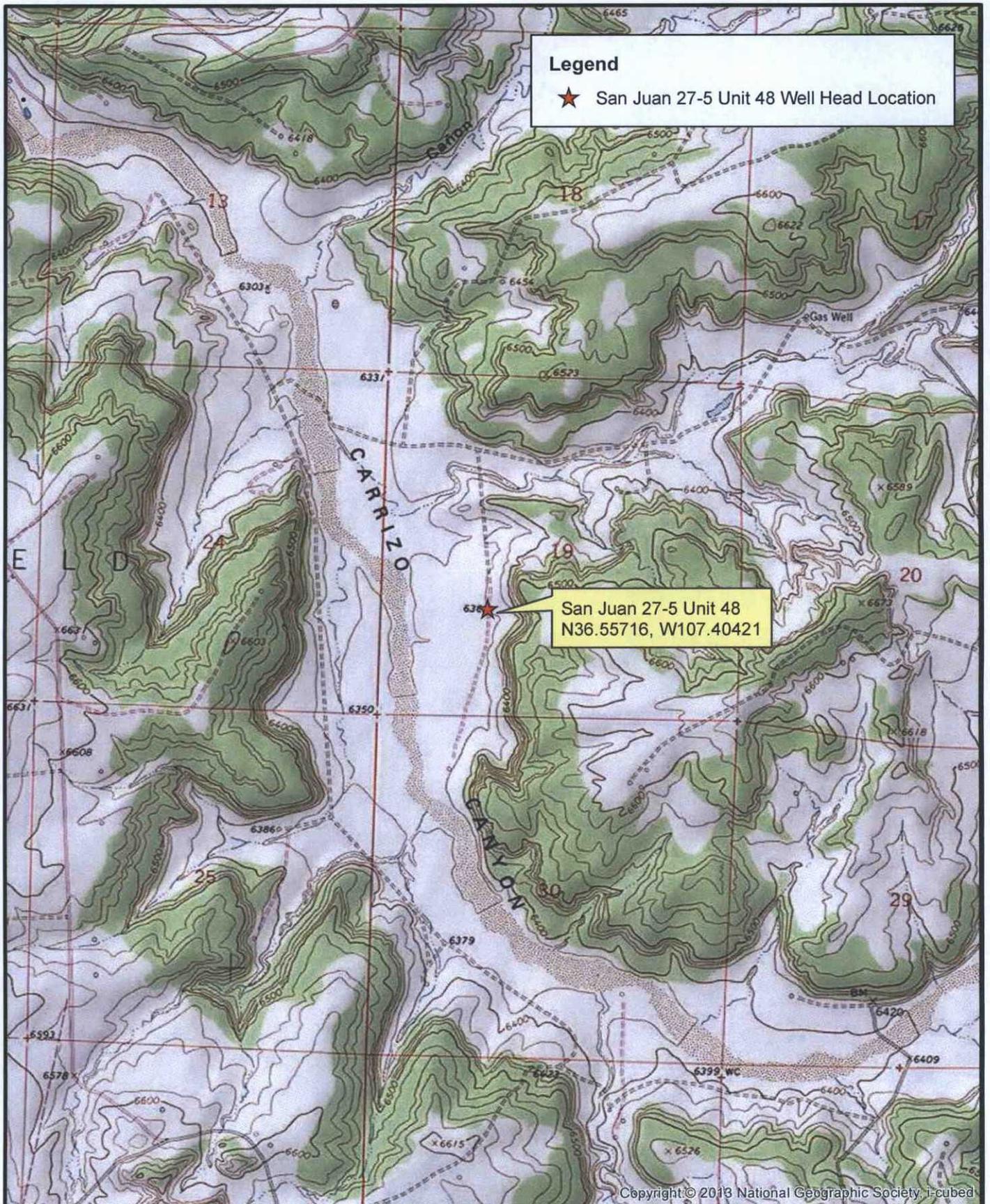
Table 3. Excavation Closure Laboratory Analytical Results
San Juan 28-7 Unit 48
Rio Arriba County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Type	Sample Depth (ft)	Laboratory Analytical Results						
				Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
NMOCD Action Levels*				10	--	--	--	50	100	
SC-1	May 27, 15	Composite	1 to 15	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<9.8
SC-2	May 27, 15	Composite	1 to 15	<0.049	<0.049	<0.049	<0.097	ND	<4.9	<9.6
SC-3	May 27, 15	Composite	1 to 15	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.8
SC-4	May 27, 15	Composite	1 to 15	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<9.6
SC-5	Aug 06, 15	Composite	15 to 28	<0.038	1.2	0.29	3.9	5.4	25	<10
SC-6	Aug 06, 15	Composite	15 to 28	<0.035	<0.035	<0.035	<0.071	ND	<3.5	<9.8
SC-7	Aug 06, 15	Composite	15 to 28	<0.034	<0.034	<0.034	<0.067	ND	<3.4	<9.5
SC-8	Aug 06, 15	Composite	15 to 28	<0.033	0.064	<0.033	0.36	0.42	3.4	<10
SC-9	Aug 06, 15	Composite	28	<0.032	0.094	<0.032	2.1	2.2	73	66
SC-10	Aug 13, 15	Composite	28	<0.032	0.094	<0.032	<0.064	ND	<3.2	<9.5

Notes: PID - photo-ionization detector
mg/kg - milligrams/kilograms
TPH - total petroleum hydrocarbons
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
GRO - gasoline range organics
DRO - diesel range organics
ND - not detected above the laboratory reporting limits
*NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993)

Figures

Document Path: R:\27 GIS CAD\ConocoPhillips\San Juan 27-5 Unit 48\151005 SJ 27-5 Topo Map.mxd



Legend
★ San Juan 27-5 Unit 48 Well Head Location

San Juan 27-5 Unit 48
N36.55716, W107.40421

Copyright © 2013 National Geographic Society, i-cubed

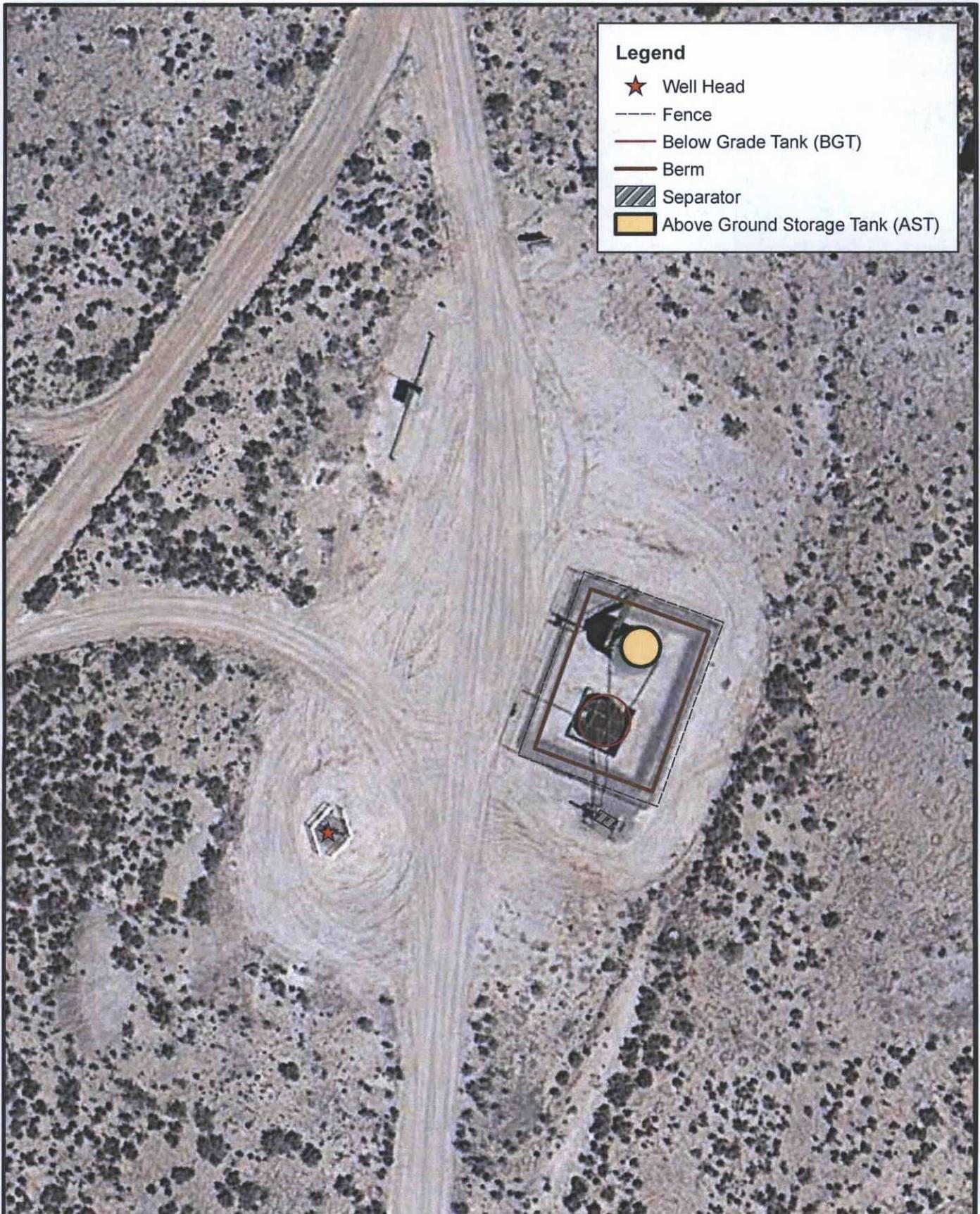
Rule Engineering, LLC
Solutions to Regulations for Industry



Location
K-19-27N-5W
N36.55716, W107.40421
Rio Arriba County, New Mexico

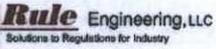
Topographic Map
ConocoPhillips
San Juan 27-5 Unit 48
API: 30-039-06974

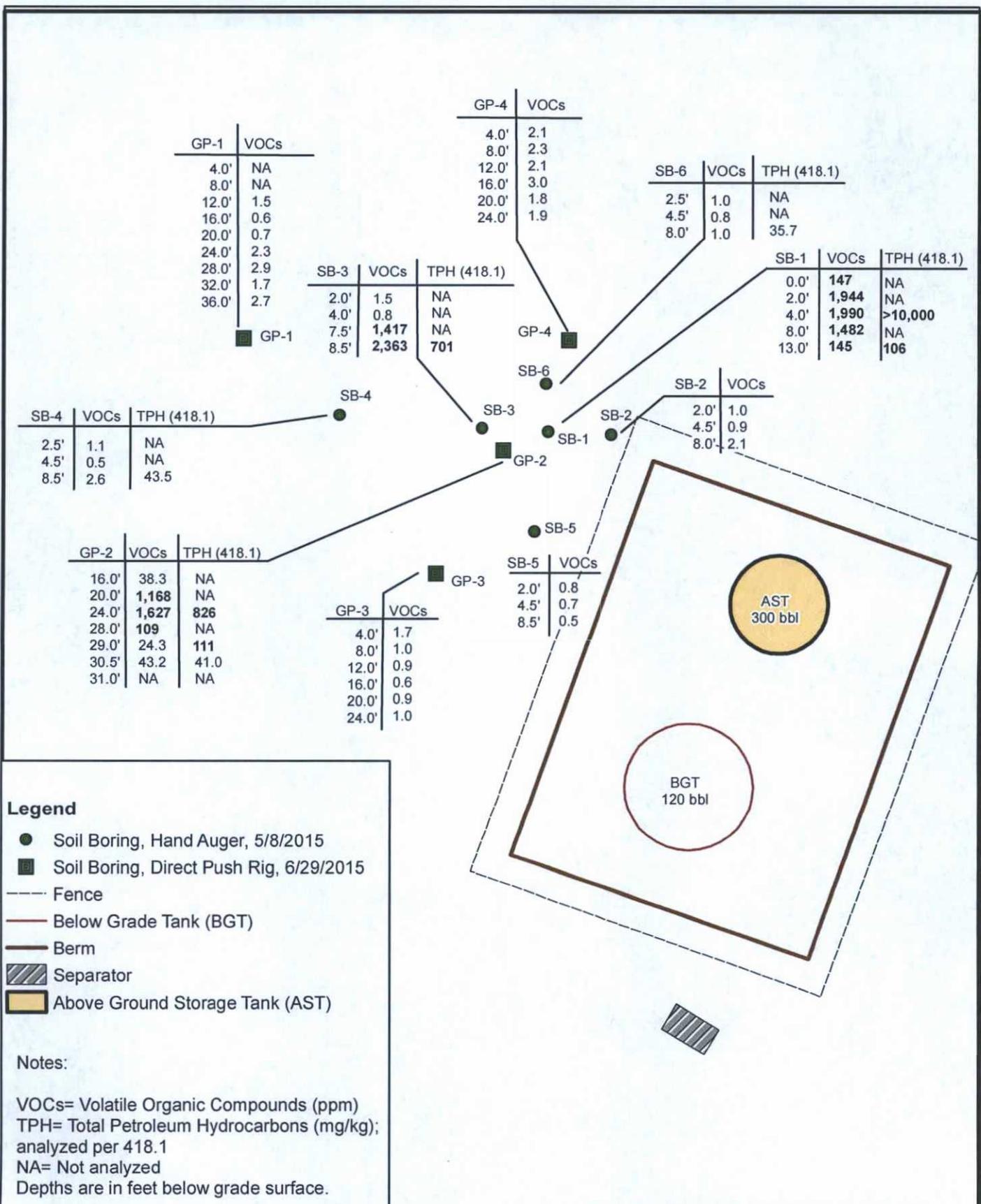
Date: 10/5/2015 | File: 151005 SJ 27-5 Topo Map | Figure: 1



Legend

- ★ Well Head
- Fence
- Below Grade Tank (BGT)
- Berm
- ▨ Separator
- Above Ground Storage Tank (AST)

 Rule Engineering, LLC Solutions to Regulations for Industry			Location	Aerial Site Map
			K-19-27N-5W N36.55716, W107.40421 Rio Arriba County, New Mexico	ConocoPhillips San Juan 27-5 Unit 48 API: 30-039-06974
Date: 10/5/2015			File: 151005 SJ 27-5 Unit 48 Aerial Map	Figure: 2

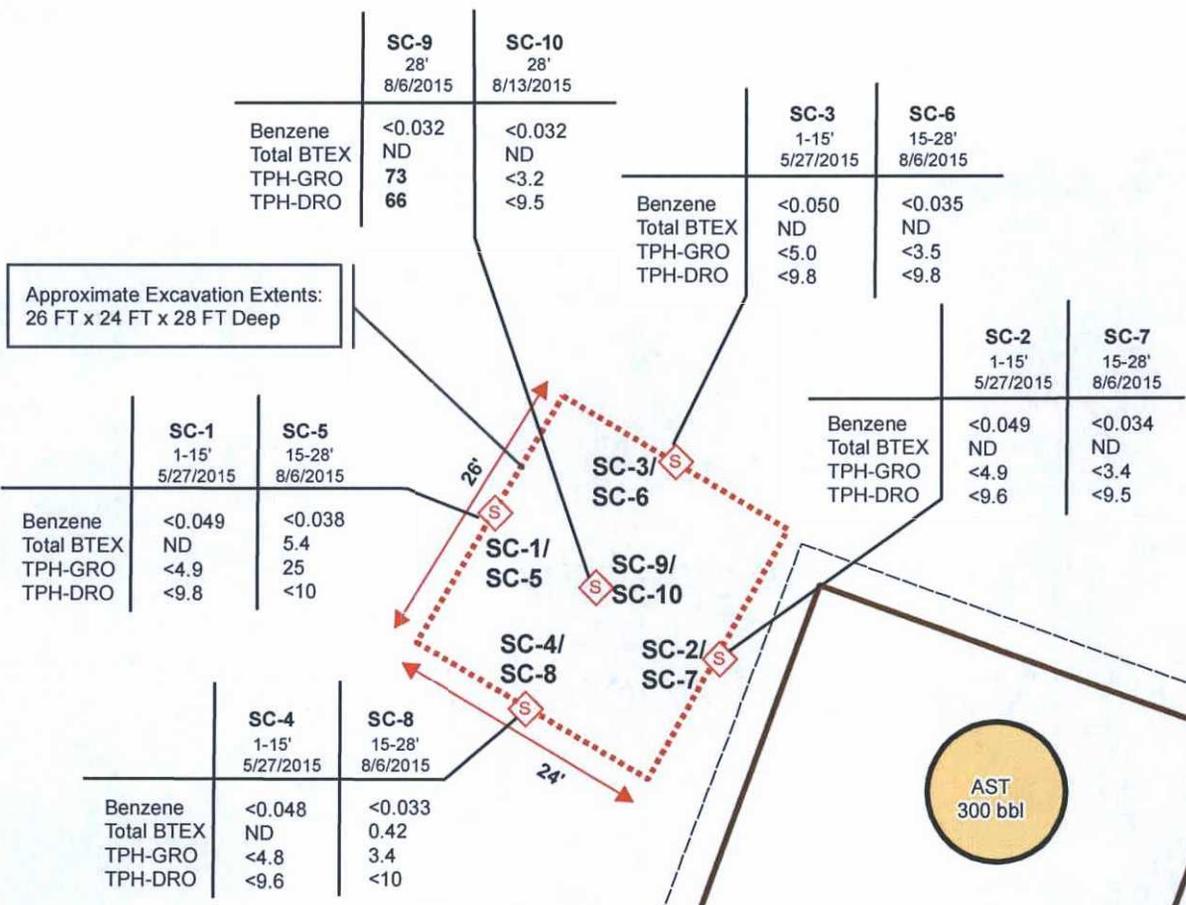


Legend

- Soil Boring, Hand Auger, 5/8/2015
- Soil Boring, Direct Push Rig, 6/29/2015
- Fence
- Below Grade Tank (BGT)
- Berm
- ▨ Separator
- Above Ground Storage Tank (AST)

Notes:

VOCs= Volatile Organic Compounds (ppm)
 TPH= Total Petroleum Hydrocarbons (mg/kg); analyzed per 418.1
 NA= Not analyzed
 Depths are in feet below grade surface.



Approximate Excavation Extents:
26 FT x 24 FT x 28 FT Deep

Legend

- Confirmation Soil Sample
- Recommended Area of Excavation
- Fence
- Above Ground Storage Tank (AST)
- Below Grade Tank (BGT)
- Berm
- Separator

Notes:
 All samples are composite.
 BTEX= benzene, toluene, ethylbenzene, and total xylenes
 TPH= total petroleum hydrocarbons
 GRO= gasoline range organics
 DRO= diesel range organics
 ND= not detected above laboratory report limits
 Results are in milligrams per kilogram.



Appendix A
Analytical Laboratory Reports



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

June 02, 2015

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

RE: San Juan 27-5 Unit 48

OrderNo.: 1505B81

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/28/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1505B81

Date Reported: 6/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-2

Project: San Juan 27-5 Unit 48

Collection Date: 5/27/2015 8:50:00 AM

Lab ID: 1505B81-002

Matrix: SOIL

Received Date: 5/28/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/29/2015 2:34:48 PM	19441
Surr: DNOP	103	57.9-140		%REC	1	5/29/2015 2:34:48 PM	19441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2015 2:31:12 PM	19435
Surr: BFB	93.8	75.4-113		%REC	1	5/29/2015 2:31:12 PM	19435
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	5/29/2015 2:31:12 PM	19435
Toluene	ND	0.049		mg/Kg	1	5/29/2015 2:31:12 PM	19435
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2015 2:31:12 PM	19435
Xylenes, Total	ND	0.097		mg/Kg	1	5/29/2015 2:31:12 PM	19435
Surr: 4-Bromofluorobenzene	95.0	80-120		%REC	1	5/29/2015 2:31:12 PM	19435

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	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-3

Project: San Juan 27-5 Unit 48

Collection Date: 5/27/2015 8:40:00 AM

Lab ID: 1505B81-003

Matrix: SOIL

Received Date: 5/28/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/29/2015 2:56:04 PM	19441
Surr: DNOP	102	57.9-140		%REC	1	5/29/2015 2:56:04 PM	19441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2015 7:18:38 PM	19435
Surr: BFB	87.6	75.4-113		%REC	1	5/29/2015 7:18:38 PM	19435
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	5/29/2015 7:18:38 PM	19435
Toluene	ND	0.050		mg/Kg	1	5/29/2015 7:18:38 PM	19435
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2015 7:18:38 PM	19435
Xylenes, Total	ND	0.099		mg/Kg	1	5/29/2015 7:18:38 PM	19435
Surr: 4-Bromofluorobenzene	91.2	80-120		%REC	1	5/29/2015 7:18:38 PM	19435

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		

Analytical Report

Lab Order 1505B81

Date Reported: 6/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-4

Project: San Juan 27-5 Unit 48

Collection Date: 5/27/2015 10:20:00 AM

Lab ID: 1505B81-004

Matrix: SOIL

Received Date: 5/28/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/29/2015 3:17:18 PM	19441
Surr: DNOP	96.5	57.9-140		%REC	1	5/29/2015 3:17:18 PM	19441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/29/2015 7:47:21 PM	19435
Surr: BFB	87.1	75.4-113		%REC	1	5/29/2015 7:47:21 PM	19435
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	5/29/2015 7:47:21 PM	19435
Toluene	ND	0.048		mg/Kg	1	5/29/2015 7:47:21 PM	19435
Ethylbenzene	ND	0.048		mg/Kg	1	5/29/2015 7:47:21 PM	19435
Xylenes, Total	ND	0.095		mg/Kg	1	5/29/2015 7:47:21 PM	19435
Surr: 4-Bromofluorobenzene	93.5	80-120		%REC	1	5/29/2015 7:47:21 PM	19435

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#: 1505B81
 02-Jun-15

Client: Rule Engineering LLC
Project: San Juan 27-5 Unit 48

Sample ID MB-19441	SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: PBS	Batch ID: 19441		RunNo: 26483							
Prep Date: 5/28/2015	Analysis Date: 5/29/2015		SeqNo: 787162		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	11		10.00		106	57.9	140			

Sample ID LCS-19441	SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 19441		RunNo: 26483							
Prep Date: 5/28/2015	Analysis Date: 5/29/2015		SeqNo: 787632		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.3	67.8	130			
Surr: DNOP	5.2		5.000		105	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1505B81

02-Jun-15

Client: Rule Engineering LLC

Project: San Juan 27-5 Unit 48

Sample ID	MB-19435	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	19435	RunNo:	26493					
Prep Date:	5/28/2015	Analysis Date:	5/29/2015	SeqNo:	787646	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	880		1000		87.7	75.4	113			

Sample ID	LCS-19435	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	19435	RunNo:	26493					
Prep Date:	5/28/2015	Analysis Date:	5/29/2015	SeqNo:	787647	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	98.0	64	130			
Surr: BFB	930		1000		93.4	75.4	113			

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#: 1505B81
 02-Jun-15

Client: Rule Engineering LLC
Project: San Juan 27-5 Unit 48

Sample ID	MB-19435	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	19435	RunNo:	26493					
Prep Date:	5/28/2015	Analysis Date:	5/29/2015	SeqNo:	787670	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	0.96		1.000		95.7	80	120			

Sample ID	LCS-19435	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	19435	RunNo:	26493					
Prep Date:	5/28/2015	Analysis Date:	5/29/2015	SeqNo:	787671	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	107	76.6	128			
Toluene	1.1	0.050	1.000	0	106	75	124			
Ethylbenzene	1.1	0.050	1.000	0	106	79.5	126			
Xylenes, Total	3.2	0.10	3.000	0	106	78.8	124			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **RULE ENGINEERING LL**

Work Order Number: **1505B81**

RcptNo: **1**

Received by/date: AG 05/28/15
 Logged By: **Ashley Gallegos** 5/28/2015 7:00:00 AM AG
 Completed By: **Ashley Gallegos** 5/28/2015 7:45:16 AM AG
 Reviewed By: AG 5/28/15

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering

Mailing Address: 501 Airport Drive
Suite 205 Farmington NM

Phone #: 505 860 2712

email or Fax#:

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

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name:
San Juan 27-5 Unit 48

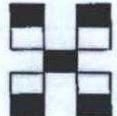
Project #:

Project Manager:
D Watson

Sampler: D Watson

On Ice: Yes No

Sample Temperature: 1.7



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 + MTBE (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / GRO 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)
5-27-15	843	Soil	SC-1	2-oz glass	Cold	1505B81-001	X	X										
5-27-15	850		SC-2			-002	X	X										
5-27-15	840		SC-3			-003	X	X										
5-27-15	1020		SC-4			-004	X	X										

Date: 5/27/15 Time: 1710 Relinquished by: Debrah Waete

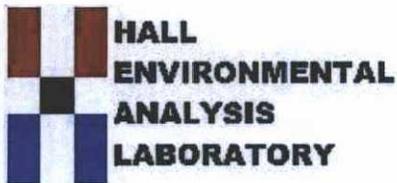
Date: 5/27/15 Time: 1745 Relinquished by: Christa Waete

Received by: Christa Waete Date: 5/27/15 Time: 1710

Received by: AM Gallardo Date: 05/28/15 Time: 0700

Remarks: Ball 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.



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

August 11, 2015

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

RE: CoP San Juan 27-5 #48

OrderNo.: 1508276

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/7/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1508276

Date Reported: 8/11/2015

CLIENT: Rule Engineering LLC
Project: CoP San Juan 27-5 #48

Lab Order: 1508276

Lab ID: 1508276-001

Collection Date: 8/6/2015 10:48:00 AM

Client Sample ID: SC-5

Matrix: MEOH (SOIL)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Analyst: KJH							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/7/2015 10:52:35 AM	20664
Surr: DNOP	99.7	57.9-140		%REC	1	8/7/2015 10:52:35 AM	20664
EPA METHOD 8015D: GASOLINE RANGE							
Analyst: RAA							
Gasoline Range Organics (GRO)	25	3.8		mg/Kg	1	8/7/2015 11:18:57 AM	20637
Surr: BFB	142	75.4-113	S	%REC	1	8/7/2015 11:18:57 AM	20637
EPA METHOD 8021B: VOLATILES							
Analyst: RAA							
Benzene	ND	0.038		mg/Kg	1	8/7/2015 11:18:57 AM	20637
Toluene	1.2	0.038		mg/Kg	1	8/7/2015 11:18:57 AM	20637
Ethylbenzene	0.29	0.038		mg/Kg	1	8/7/2015 11:18:57 AM	20637
Xylenes, Total	3.9	0.075		mg/Kg	1	8/7/2015 11:18:57 AM	20637
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	8/7/2015 11:18:57 AM	20637

Lab ID: 1508276-002

Collection Date: 8/6/2015 10:50:00 AM

Client Sample ID: SC-6

Matrix: MEOH (SOIL)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Analyst: KJH							
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/7/2015 11:19:33 AM	20664
Surr: DNOP	99.8	57.9-140		%REC	1	8/7/2015 11:19:33 AM	20664
EPA METHOD 8015D: GASOLINE RANGE							
Analyst: RAA							
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/7/2015 11:43:58 AM	20637
Surr: BFB	87.7	75.4-113		%REC	1	8/7/2015 11:43:58 AM	20637
EPA METHOD 8021B: VOLATILES							
Analyst: RAA							
Benzene	ND	0.035		mg/Kg	1	8/7/2015 11:43:58 AM	20637
Toluene	ND	0.035		mg/Kg	1	8/7/2015 11:43:58 AM	20637
Ethylbenzene	ND	0.035		mg/Kg	1	8/7/2015 11:43:58 AM	20637
Xylenes, Total	ND	0.071		mg/Kg	1	8/7/2015 11:43:58 AM	20637
Surr: 4-Bromofluorobenzene	94.4	80-120		%REC	1	8/7/2015 11:43:58 AM	20637

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	Page 1 of 7
	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		

Analytical Report

Lab Order: 1508276

Date Reported: 8/11/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: CoP San Juan 27-5 #48

Lab Order: 1508276

Lab ID: 1508276-003

Collection Date: 8/6/2015 10:58:00 AM

Client Sample ID: SC-7

Matrix: MEOH (SOIL)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Analyst: KJH							
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/7/2015 11:46:29 AM	20664
Surr: DNOP	102	57.9-140		%REC	1	8/7/2015 11:46:29 AM	20664
EPA METHOD 8015D: GASOLINE RANGE							
Analyst: RAA							
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/7/2015 12:08:49 PM	20637
Surr: BFB	87.7	75.4-113		%REC	1	8/7/2015 12:08:49 PM	20637
EPA METHOD 8021B: VOLATILES							
Analyst: RAA							
Benzene	ND	0.034		mg/Kg	1	8/7/2015 12:08:49 PM	20637
Toluene	ND	0.034		mg/Kg	1	8/7/2015 12:08:49 PM	20637
Ethylbenzene	ND	0.034		mg/Kg	1	8/7/2015 12:08:49 PM	20637
Xylenes, Total	ND	0.067		mg/Kg	1	8/7/2015 12:08:49 PM	20637
Surr: 4-Bromofluorobenzene	95.0	80-120		%REC	1	8/7/2015 12:08:49 PM	20637

Lab ID: 1508276-004

Collection Date: 8/6/2015 12:28:00 PM

Client Sample ID: SC-8

Matrix: MEOH (SOIL)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Analyst: KJH							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/7/2015 12:13:24 PM	20664
Surr: DNOP	101	57.9-140		%REC	1	8/7/2015 12:13:24 PM	20664
EPA METHOD 8015D: GASOLINE RANGE							
Analyst: RAA							
Gasoline Range Organics (GRO)	3.4	3.3		mg/Kg	1	8/7/2015 12:33:40 PM	20637
Surr: BFB	96.9	75.4-113		%REC	1	8/7/2015 12:33:40 PM	20637
EPA METHOD 8021B: VOLATILES							
Analyst: RAA							
Benzene	ND	0.033		mg/Kg	1	8/7/2015 12:33:40 PM	20637
Toluene	0.064	0.033		mg/Kg	1	8/7/2015 12:33:40 PM	20637
Ethylbenzene	ND	0.033		mg/Kg	1	8/7/2015 12:33:40 PM	20637
Xylenes, Total	0.36	0.067		mg/Kg	1	8/7/2015 12:33:40 PM	20637
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/7/2015 12:33:40 PM	20637

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	

Analytical Report

Lab Order: 1508276

Date Reported: 8/11/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: CoP San Juan 27-5 #48

Lab Order: 1508276

Lab ID: 1508276-005

Collection Date: 8/6/2015 11:44:00 AM

Client Sample ID: SC-9

Matrix: MEOH (SOIL)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	66	10		mg/Kg	1	8/7/2015 12:40:14 PM	20664
Surr: DNOP	98.2	57.9-140		%REC	1	8/7/2015 12:40:14 PM	20664
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	73	3.2		mg/Kg	1	8/7/2015 12:58:31 PM	20637
Surr: BFB	581	75.4-113	S	%REC	1	8/7/2015 12:58:31 PM	20637
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.032		mg/Kg	1	8/7/2015 12:58:31 PM	20637
Toluene	0.094	0.032		mg/Kg	1	8/7/2015 12:58:31 PM	20637
Ethylbenzene	ND	0.032		mg/Kg	1	8/7/2015 12:58:31 PM	20637
Xylenes, Total	2.1	0.063		mg/Kg	1	8/7/2015 12:58:31 PM	20637
Surr: 4-Bromofluorobenzene	141	80-120	S	%REC	1	8/7/2015 12:58:31 PM	20637

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	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508276

11-Aug-15

Client: Rule Engineering LLC

Project: CoP San Juan 27-5 #48

Sample ID	MB-20664	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	20664	RunNo:	28026					
Prep Date:	8/7/2015	Analysis Date:	8/7/2015	SeqNo:	843785	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.8		10.00		98.5	57.9	140			

Sample ID	LCS-20664	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	20664	RunNo:	28026					
Prep Date:	8/7/2015	Analysis Date:	8/7/2015	SeqNo:	843786	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.4	57.4	139			
Surr: DNOP	4.8		5.000		95.7	57.9	140			

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1508276
 11-Aug-15

Client: Rule Engineering LLC
Project: CoP San Juan 27-5 #48

Sample ID	LCS-20637	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	20637	RunNo:	28035					
Prep Date:	8/6/2015	Analysis Date:	8/7/2015	SeqNo:	844373	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.9	79.6	122			
Surr: BFB	920		1000		92.2	75.4	113			

Sample ID	MB-20637	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	20637	RunNo:	28035					
Prep Date:	8/6/2015	Analysis Date:	8/7/2015	SeqNo:	844374	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	880		1000		87.8	75.4	113			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508276

11-Aug-15

Client: Rule Engineering LLC
Project: CoP San Juan 27-5 #48

Sample ID	LCS-20637		SampType: LCS	TestCode: EPA Method 8021B: Volatiles						
Client ID:	LCSS		Batch ID: 20637	RunNo: 28035						
Prep Date:	8/6/2015		Analysis Date: 8/7/2015	SeqNo: 844420	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.050	1.000	0	94.4	76.6	128			
Toluene	0.94	0.050	1.000	0	93.5	75	124			
Ethylbenzene	0.90	0.050	1.000	0	90.5	79.5	126			
Xylenes, Total	2.9	0.10	3.000	0	98.1	78.8	124			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	LCS-20638		SampType: LCS	TestCode: EPA Method 8021B: Volatiles						
Client ID:	LCSS		Batch ID: 20638	RunNo: 28035						
Prep Date:	8/6/2015		Analysis Date: 8/7/2015	SeqNo: 844421	Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		98.9	80	120			

Sample ID	LCS-20639		SampType: LCS	TestCode: EPA Method 8021B: Volatiles						
Client ID:	LCSS		Batch ID: 20639	RunNo: 28035						
Prep Date:	8/6/2015		Analysis Date: 8/8/2015	SeqNo: 844422	Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.3	80	120			

Sample ID	MB-20637		SampType: MBLK	TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS		Batch ID: 20637	RunNo: 28035						
Prep Date:	8/6/2015		Analysis Date: 8/7/2015	SeqNo: 844423	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	0.97		1.000		96.6	80	120			

Sample ID	MB-20638		SampType: MBLK	TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS		Batch ID: 20638	RunNo: 28035						
Prep Date:	8/6/2015		Analysis Date: 8/7/2015	SeqNo: 844424	Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		94.8	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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1508276

11-Aug-15

Client: Rule Engineering LLC
Project: CoP San Juan 27-5 #48

Sample ID	MB-20639	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	20639	RunNo:	28035					
Prep Date:	8/6/2015	Analysis Date:	8/8/2015	SeqNo:	844425	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	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



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: **1508276**

RecptNo: **1**

Received by/date: AG 08/07/15

Logged By: **Ashley Gallegos** 8/7/2015 8:00:00 AM AG

Completed By: **Ashley Gallegos** 8/7/2015 8:52:47 AM AG

Reviewed By: CS 08/07/15

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering

Mailing Address: Fmtn. NM 87401

Phone #:

Email or Fax#:

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

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush Same day

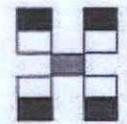
Project Name:
COP San Juan 27-5 #48

Project #:

Project Manager:
Heather Woods

Sampler:
 On Ice: Yes No

Sample Temperature: 2.7



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 + NEBE + TMIB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MSB)	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)
16/15	1048	Soil	SC-5	4 oz Glass Mechl	Non/Noth	1508270-001	X	X										
16/15	1050	Soil	SC-6	↓	↓	-002	X	X										
16/15	1058	Soil	SC-7	↓	↓	-003	X	X										
16/15	1228	Soil	SC-8	↓	↓	-004	X	X										
16/15	1144	Soil	SC-9	↓	↓	-005	X	X										

Date: 8/6/15 Time: 2107 Relinquished by: Heather M. Woods Received by: Christine Weber Date: 8/6/15 Time: 2107

Date: 8/6/15 Time: 2110 Relinquished by: Christine Weber Received by: A. Gallagos Date: 08/07/15 Time: 0800

Remarks: Direct bill to Conoco Project lead: Mike Smith
 WO: 208 10810
 User ID: K GARCIA Requested by: Lisa Hunter
 Activity: D2600

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



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

August 17, 2015

Lisa Hunter
Conoco Phillips Farmington
3401 E 30th St
Farmington, NM 87402
TEL:
FAX

RE: San Juan 27- 5 #48

OrderNo.: 1508670

Dear Lisa Hunter:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/14/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508670

Date Reported: 8/17/2015

CLIENT: Conoco Phillips Farmington

Client Sample ID: San Juan 27-5 #48

Project: San Juan 27- 5 #48

Collection Date: 8/13/2015 10:45:00 AM

Lab ID: 1508670-001

Matrix: SOIL

Received Date: 8/14/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/14/2015 10:45:42 AM	R28204
Surr: BFB	99.6	70-130		%REC	1	8/14/2015 10:45:42 AM	R28204
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/14/2015 10:09:50 AM	20793
Surr: DNOP	99.1	57.9-140		%REC	1	8/14/2015 10:09:50 AM	20793
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.032		mg/Kg	1	8/14/2015 10:45:42 AM	R28204
Toluene	ND	0.032		mg/Kg	1	8/14/2015 10:45:42 AM	R28204
Ethylbenzene	ND	0.032		mg/Kg	1	8/14/2015 10:45:42 AM	R28204
Xylenes, Total	ND	0.064		mg/Kg	1	8/14/2015 10:45:42 AM	R28204
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	1	8/14/2015 10:45:42 AM	R28204
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	8/14/2015 10:45:42 AM	R28204
Surr: Dibromofluoromethane	119	70-130		%REC	1	8/14/2015 10:45:42 AM	R28204
Surr: Toluene-d8	95.1	70-130		%REC	1	8/14/2015 10:45:42 AM	R28204

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	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508670

17-Aug-15

Client: Conoco Phillips Farmington

Project: San Juan 27- 5 #48

Sample ID	MB-20793	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	20793	RunNo:	28190					
Prep Date:	8/14/2015	Analysis Date:	8/14/2015	SeqNo:	849641	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	11		10.00		105	57.9	140			

Sample ID	LCS-20793	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	20793	RunNo:	28190					
Prep Date:	8/14/2015	Analysis Date:	8/14/2015	SeqNo:	849645	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.5	57.4	139			
Surr: DNOP	5.0		5.000		99.3	57.9	140			

Sample ID	1508670-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	San Juan 27-5 #48	Batch ID:	20793	RunNo:	28190					
Prep Date:	8/14/2015	Analysis Date:	8/14/2015	SeqNo:	850239	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.30	0	98.4	42.3	146			
Surr: DNOP	5.0		5.030		99.4	57.9	140			

Sample ID	1508670-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	San Juan 27-5 #48	Batch ID:	20793	RunNo:	28190					
Prep Date:	8/14/2015	Analysis Date:	8/14/2015	SeqNo:	850240	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.8	48.97	0	97.7	42.3	146	3.44	28.9	
Surr: DNOP	4.9		4.897		99.7	57.9	140	0	0	

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508670

17-Aug-15

Client: Conoco Phillips Farmington

Project: San Juan 27- 5 #48

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID:	R28204	RunNo:	28204					
Prep Date:		Analysis Date:	8/14/2015	SeqNo:	852314	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: 1,2-Dichloroethane-d4	0.49		0.5000		97.8	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130			
Surr: Toluene-d8	0.49		0.5000		98.6	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS	Batch ID:	R28204	RunNo:	28204					
Prep Date:		Analysis Date:	8/14/2015	SeqNo:	852315	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	70	130			
Toluene	1.0	0.050	1.000	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.1	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.47		0.5000		94.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508670

17-Aug-15

Client: Conoco Phillips Farmington

Project: San Juan 27- 5 #48

Sample ID rb1	SampType: MBLK		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: PBS	Batch ID: R28204		RunNo: 28204							
Prep Date:	Analysis Date: 8/15/2015		SeqNo: 852409		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	490		500.0		98.5	70	130			

Sample ID 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: LCSS	Batch ID: R28204		RunNo: 28204							
Prep Date:	Analysis Date: 8/14/2015		SeqNo: 852410		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	102	70	123			
Surr: BFB	490		500.0		97.6	70	130			

Sample ID 1508670-001ams	SampType: MS		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: San Juan 27-5 #48	Batch ID: R28204		RunNo: 28204							
Prep Date:	Analysis Date: 8/14/2015		SeqNo: 852411		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.2	15.98	0	101	54.9	131			
Surr: BFB	320		319.7		99.6	70	130			

Sample ID 1508670-001amsd	SampType: MSD		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: San Juan 27-5 #48	Batch ID: R28204		RunNo: 28204							
Prep Date:	Analysis Date: 8/14/2015		SeqNo: 852412		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.2	15.98	0	106	54.9	131	4.86	20	
Surr: BFB	340		319.7		106	70	130	0	0	

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

Sample Log-In Check List

Client Name: Conoco Phillips Farmingt

Work Order Number: 1508670

RcptNo: 1

Received by/date: AG 08/14/15

Logged By: Anne Thorne 8/14/2015 7:00:00 AM *Anne Thorne*

Completed By: Anne Thorne 8/14/2015 *Anne Thorne*

Reviewed By: *JB* 8/14/15

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? Yes No
(Note discrepancies on chain of custody)
- 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? Yes No
(If no, notify customer for authorization.)

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	3.0	Good	Yes			

