OIL CONS. DIV DIST. 3

JUL 11 2016

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: San Juan 32-9 17A	Facility Type: Gas well

Surface Owner: BLM	Mineral Owner: Fed	API No. 30045228930000

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	**8**	**31**	**9**	**1500**	**North**	**1600**	**West**	**San Juan**

Latitude 36.91557 Longitude -107.80631

NATURE OF RELEASE

Type of Release Condensate / Produce water	Volume of Release 10/70	Volume Recovered 10 / 70
Source of Release Pit tank	Date and Hour of Occurrence **2-26-16 11:00A**	Date and Hour of Discovery **Same**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Cory Smith NMOCD, Katherina Diemer BLM**	
By Whom? Lisa Hunter	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Separator back pressure regulator failed and dumped all liquids to low side of vessel. All liquids went to waterside dump and were dumped to pit. Pulled berm and pit as soon as discovered shut in well to repair separator.

Describe Area Affected and Cleanup Action Taken.*
5-26-16 Crew completed the following:
Excavated a the 16' x 16' BGT enclosure approximately 1'to 2' deeper than the original BGT enclosure. App. 16 c/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 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: RSpearman	OIL CONSERVATION DIVISION
Printed Name: **Bobby Spearman**	Approved by Environmental Specialist:
Title: **Field Environmental Specialist**	Approval Date: 7/14/2016 Expiration Date:
E-mail Address: **Robert.E.Spearman**@conocophillips.com	Conditions of Approval: Attached ☐
Date: 7/7/2016 Phone: (505) 320-3045	—

* Attach Additional Sheets If Necessary

NUF1606849299

25

San Juan 32-9 #17A Release Report

Unit Letter F, Section 08, Township 31 North, Range 09 West
San Juan County, New Mexico

June 29, 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
San Juan 32-9 #17A 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

June 29, 2016

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1.0 Introduction

The ConocoPhillips San Juan 32-9 #17A release site is located in Unit Letter F, Section 08, Township 31 North, Range 09 West, in San Juan County, New Mexico. The release of an estimated 70 barrels (bbls) of condensate/produced water, discovered on February 26, 2016, was the result of the failure of the separator back pressure regulator causing overflow of the below grade tank (BGT).

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	San Juan 32-9 #17A		
Site Location Description	Unit Letter F, Section 08, Township 31 North, Range 09 West		
Wellhead GPS Location	N36.91555 and W107.80671	***Release GPS Location***	N36.91557 and W107.80631
Land Jurisdiction	BLM	***Discovery Date***	February 26, 2016
Release Source	Below Grade Tank (BGT)	***Substance(s) Released***	Condensate/Produced Water
Volume Released	70 bbls	***Volume Recovered***	60 bbls
NMOCD Site Rank	10		
Distance to Nearest Surface Water	Unnamed, ephemeral wash located approximately 330 feet to the southwest which drain to John Brown Canyon		
Estimated Depth to Groundwater	Greater than 100 feet below grade surface (bgs)	***Distance to Nearest Water Well or Spring***	Greater than 1,000 feet
Contractor	Kelly Oilfield Services		

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 a cathodic well report for the San Juan 32-9 Unit 5 SWD, located approximately 0.8 miles to the southwest, reporting the depth to groundwater at 120 feet bgs. The release location is approximately 110 feet higher in elevation than San Juan 32-9 Unit 5 SWD.

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 ephemeral wash traverses the area approximately 330 feet southwest of the release location which drains to John Brown Canyon.

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

4.0 Field Activities

On May 26, 2016, ConocoPhillips initiated repair activities at the location. Kelly Oilfield Services provided heavy equipment operation and repair support. Rule Engineering, LLC (Rule) personnel provided excavation guidance and collected confirmation samples from the resultant excavation.

Approximately 14 cubic yards of soil was excavated from inside the BGT cribbing and transported to the landfarm for disposal/remediation. The maximum extent of the excavation measured approximately 16 feet by 16 feet by 6.5 feet (1.5 feet below the original depth inside the BGT cribbing) in depth. The excavation was backfilled with clean, imported material. A depiction of the final excavation with sample locations is included as Figure 2.

5.0 Soil Sampling

Rule collected two composite confirmation soil samples (SC-1 and SC-2). Sample SC-1 was collected from the final excavation (within the BGT cribbing) and sample SC-2 was collected from within the berm area surrounding the BGT and above grade tank. 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 volatile organic compounds (VOCs) and 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 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 U.S.

Environmental Protection Agency (USEPA) Method 8021B, TPH (GRO/DRO) per USEPA 8015D and chloride per USEPA Method 300.0. Laboratory analytical results are summarized in Table 2. The analytical laboratory report is included in Appendix A.

6.0 Field Screening Results

Field screening results for soil confirmation samples SC-1 and SC-2 indicated VOC concentrations of 3.2 ppm and 2.0 ppm, respectively. The field TPH results for samples SC-1 and SC-2 were below the reporting limit of 20.0 mg/kg. Field screening results are summarized in Table 2.

7.0 Laboratory Analytical Results

Laboratory analytical results for excavation confirmation samples SC-1 and SC-2 reported benzene, total BTEX, and TPH (GRO/DRO) concentrations below the laboratory reporting limits, which are below the applicable NMOCD action levels. The chloride concentrations for samples SC-1 and SC-2 were reported below the laboratory reporting limits of 7.5 and 1.5 mg/kg, respectively.

Laboratory analytical results are summarized in Table 2. The analytical laboratory report is included in Appendix A.

8.0 Conclusions

The ConocoPhillips San Juan 32-9 #17A release site is located in Unit Letter F, Section 08, Township 31 North, Range 09 West, in San Juan County, New Mexico. The release of an estimated 70 barrels (bbls) of condensate/produced water, discovered on February 26, 2016, was the result of the failure of the separator back pressure regulator causing overflow of the BGT. Following the excavation of hydrocarbon impacted soils from within the BGT cribbing, confirmation sample SC-1 was collected from the resultant excavation which measured at the maximum extent approximately 16 feet by 16 feet by 6.5 feet (1.5 feet below the original depth inside the BGT cribbing) in depth. Sample SC-2 was collected from within the berm area surrounding the BGT and above grade tank. Laboratory analytical results for confirmation samples SC-1 and SC-2 reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below the applicable NMOCD action levels for a site rank of 10. Approximately 14 cubic yards of soil was transported to the landfarm for disposal/remediation. The excavation as backfilled with clean, imported material.

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

9.0 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
San Juan 32-9 #17A
San Juan County, New Mexico

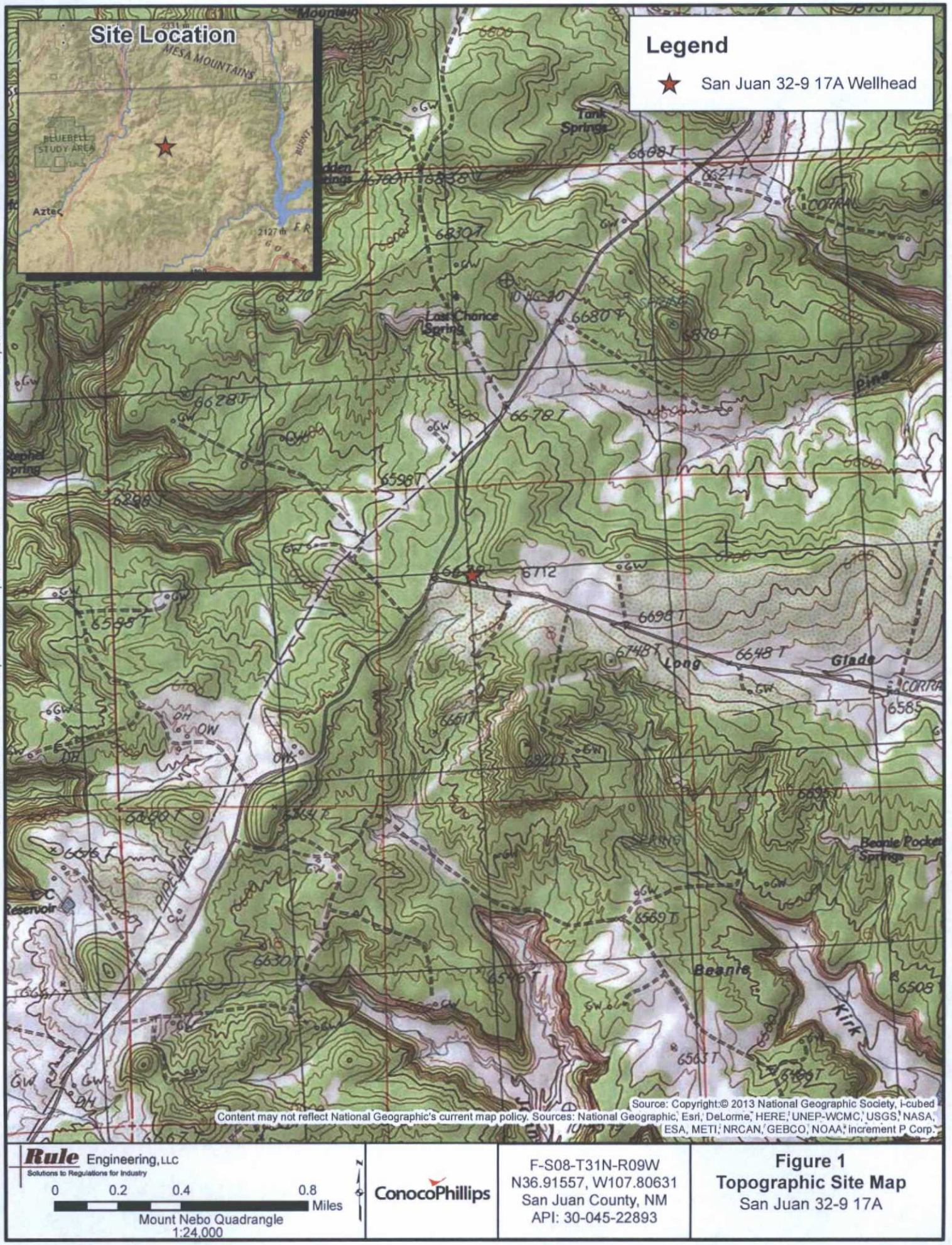
Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	A cathodic well report for the San Juan 32-9 Unit 5 SWD, located approximately 0.8 mile to the southwest, reports depth to groundwater at 120 feet. The release location is approximately 110 feet higher in elevation resulting in an estimated groundwater depth of 230 feet.	NMOCD Online database, NMOSE NMWRRS, Mount Nebo 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, Mount Nebo Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An unnamed, ephemeral wash is located approximately 330 feet southwest of release location which drains to the wash in John Brown Canyon.	Mount Nebo 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. Field Screening and Laboratory Analytical Results
ConocoPhillips
San Juan 32-9 #17A
San Juan County, New Mexico

Sample ID	Date	Sample Time	Sample Type	Sample Depth (ft)	Field Screening Results		Laboratory Analytical Results							
					VOCs (PID) (ppm)	TPH per Method 418.1 (mg/kg)	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)	Chloride (mg/kg)
NMOCD Action Levels*					100	1,000	10	--	--	--	50	1,000		--
SC-1	5/26/16	11:57	Composite	0.5	3.2	<20.0	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.4	<7.5
SC-2	5/26/16	12:20	Composite	6.5	2.0	<20.0	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.6	<1.5

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

Figures



Document Path: U:\ConocoPhillips\ConocoPhillips\San Juan 32-9 17A\San Juan 32-9 17A Topo.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

0 0.2 0.4 0.8 Miles

Mount Nebo Quadrangle
1:24,000

ConocoPhillips

F-S08-T31N-R09W
N36.91557, W107.80631
San Juan County, NM
API: 30-045-22893

Figure 1
Topographic Site Map
San Juan 32-9 17A

Document Path: U:\ConocoPhillips\ConocoPhillips\San Juan 32-9 17A\San Juan 32-9 17A Aerial.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

0 5 10 20 30 40 Feet

1:225

ConocoPhillips

F-S08-T31N-R09W
N36.91557, W107.80631
San Juan County, NM
API: 30-045-22893

Figure 2
Aerial Site Map
San Juan 32-9 17A

Appendix A

Analytical Laboratory Report

Rule

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

June 06, 2016

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

RE: COP San Juan 32-9 17A

OrderNo.: 1605C94

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/27/2016 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-1
Project: COP San Juan 32-9 17A
Collection Date: 5/26/2016 11:57:00 AM
Lab ID: 1605C94-001 **Matrix:** SOIL **Received Date:** 5/27/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	7.5		mg/Kg	5	6/2/2016 1:02:37 AM	25631
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/2/2016 7:38:36 AM	25585
Surr: DNOP	87.4	70-130		%Rec	1	6/2/2016 7:38:36 AM	25585
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/1/2016 1:56:00 PM	25568
Surr: BFB	113	80-120		%Rec	1	6/1/2016 1:56:00 PM	25568
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/1/2016 1:56:00 PM	25568
Toluene	ND	0.048		mg/Kg	1	6/1/2016 1:56:00 PM	25568
Ethylbenzene	ND	0.048		mg/Kg	1	6/1/2016 1:56:00 PM	25568
Xylenes, Total	ND	0.095		mg/Kg	1	6/1/2016 1:56:00 PM	25568
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	1	6/1/2016 1:56:00 PM	25568

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 San Juan 32-9 17A
Collection Date: 5/26/2016 12:20:00 PM
Lab ID: 1605C94-002 **Matrix:** SOIL **Received Date:** 5/27/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	1.5		mg/Kg	1	6/2/2016 1:52:16 AM	25631
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/2/2016 8:05:32 AM	25585
Surr: DNOP	82.1	70-130		%Rec	1	6/2/2016 8:05:32 AM	25585
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/1/2016 2:19:35 PM	25568
Surr: BFB	115	80-120		%Rec	1	6/1/2016 2:19:35 PM	25568
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/1/2016 2:19:35 PM	25568
Toluene	ND	0.049		mg/Kg	1	6/1/2016 2:19:35 PM	25568
Ethylbenzene	ND	0.049		mg/Kg	1	6/1/2016 2:19:35 PM	25568
Xylenes, Total	ND	0.099		mg/Kg	1	6/1/2016 2:19:35 PM	25568
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	1	6/1/2016 2:19:35 PM	25568

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#: **1605C94**

06-Jun-16

Client: Rule Engineering LLC

Project: COP San Juan 32-9 17A

Sample ID	MB-25631	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	25631		RunNo:	34627				
Prep Date:	6/1/2016	Analysis Date:	6/1/2016		SeqNo:	1068006	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-25631	SampType:	LCS		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS	Batch ID:	25631		RunNo:	34627				
Prep Date:	6/1/2016	Analysis Date:	6/1/2016		SeqNo:	1068007	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1605C94**

06-Jun-16

Client: Rule Engineering LLC

Project: COP San Juan 32-9 17A

Sample ID	LCS-25585	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	25585		RunNo:	34626				
Prep Date:	5/31/2016	Analysis Date:	6/1/2016		SeqNo:	1068523	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.8	62.6	124			
Surr: DNOP	4.2		5.000		83.9	70	130			

Sample ID	MB-25585	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	25585		RunNo:	34626				
Prep Date:	5/31/2016	Analysis Date:	6/1/2016		SeqNo:	1068524	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.6		10.00		86.0	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#: **1605C94**

06-Jun-16

Client: Rule Engineering LLC

Project: COP San Juan 32-9 17A

Sample ID	MB-25568	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	25568		RunNo:	34598				
Prep Date:	5/31/2016	Analysis Date:	6/1/2016		SeqNo:	1067457	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	1100		1000		112	80	120			

Sample ID	LCS-25568	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	25568		RunNo:	34598				
Prep Date:	5/31/2016	Analysis Date:	6/1/2016		SeqNo:	1067458	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.1	80	120			
Surr: BFB	1200		1000		125	80	120			S

Sample ID	MB-25547	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	25547		RunNo:	34598				
Prep Date:	5/27/2016	Analysis Date:	6/1/2016		SeqNo:	1067478	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		118	80	120			

Sample ID	LCS-25547	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	25547		RunNo:	34598				
Prep Date:	5/27/2016	Analysis Date:	6/1/2016		SeqNo:	1067479	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1300		1000		127	80	120			S

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#: **1605C94**

06-Jun-16

Client: Rule Engineering LLC

Project: COP San Juan 32-9 17A

Sample ID **MB-25568**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **25568**	RunNo: **34598**
Prep Date: **5/31/2016**	Analysis Date: **6/1/2016**	SeqNo: **1067503** 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	1.2		1.000		116	80	120			

Sample ID **LCS-25568**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **25568**	RunNo: **34598**
Prep Date: **5/31/2016**	Analysis Date: **6/1/2016**	SeqNo: **1067504** 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	103	75.3	123			
Toluene	1.0	0.050	1.000	0	101	80	124			
Ethylbenzene	0.99	0.050	1.000	0	98.9	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.3	83.9	122			
Surr: 4-Bromofluorobenzene	1.2		1.000		124	80	120			S

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: 1605C94 RcptNo: 1

Received by/date: LM 05/27/16

Logged By: Anne Thorne 5/27/2016 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 5/27/2016 Anne Thorne

Reviewed By: JA 05/31/16

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	1.3	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

Client: Rule Engineering, LLC	Turn-Around Time: ☒ Standard ☒ Rush
	Project Name: CoP San Juan 32-9 #17A
Mailing Address: 501 Airport Dr, Suite 205 Farmington, NM 87401	Project #:
Phone #: (505) 716-2787	
Email or Fax#: hwoods@ruleengineering.com	Project Manager: H. Woods
QA/QC Package: Standard ☐ Level 4 (Full Validation)	Sampler: H. Woods
Accreditation: NELAP ☐ Other	On Ice: ☒ Yes ☐ No
EDD (Type)	Sample Temperature: 1.3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1605094	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) 300.0	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
5/6/17	1157	Soil	SC-1	(1) 4oz Glass	Cold	001	X		X					X								
5/6/17	1220	Soil	SC-2	(1) 4oz Glass	Cold	002	X		X					X								

Date	Time	Relinquished by:	Received by:	Date	Time
5/6/16	1707	Heather M. Woods	Christine Walters	5/26/16	1707
5/26/16	2010	Christine Walters		05/27/16	0700

Remarks: Direct Bill to ~~Burlington~~ 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.

Confirmation Sampling Photograph Log
ConocoPhillips
San Juan 32-9 #17A
Unit Letter F, Section 08, Township 31N, Range 09W
N36.91557, W107.80631
San Juan County, NM
May 26, 2016

Photograph 1. View facing southwest: final excavation following removal of hydrocarbon impacted soils.

Rule