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

Revised August 8, 2011

Form C-141

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505 Submit 1 Copy to appropriate District Office to accordance with 19.15.29 NMAC.

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0.00			Rele	ease Notific	catio	n and Co	orrec	tive A	ction	ı							
						OPERA'	TOR				tial Report	$\boxtimes$	Final Re	epor			
Name of Co	ompany C	onocoPhillips	Compan	у		Contact Lisa Hunter											
		0th St, Farm				Telephone 1	No. (5	05) 258-1	607								
Facility Nar	me: San J	uan 29-6 Un	it 9A			Facility Type: Gas Well											
Surface Ow	ner State	•		Mineral C	wner	State (E-28	39-3)	15		API N	lo. 300392	1311	- 1				
100				LOCA	ATIO	N OF RE	LEAS	SE									
Unit Letter	Section	Township	Range	Feet from the		h/South Line		from the	East/V	Vest Line							
E	36	29N	06W	1460		North		800	1	Vest	Rio Arri	ba					
				Latitude <u>36.</u>	<u>68548</u>	Longitu	de - <u>10</u>	7.42058									
				NAT	URE	OF REL	EASE	C									
Type of Release	e Hydro	ocarbon				Volume of	Releas	e Unkr	own	Volume	Recovered	ed 0					
Source of Relea	ase Below	Grade Tank	(BGT)			Date and H	lour of	Occurrenc	e	Date an	d Hour of D	scovery	/				
Was Immediate	Notice Giv	ven?				Unknown If YES, To	Whom	2									
was illiliculate	House Giv		es 🔲 1	No Not Requ	uired	N/A	WHOIL										
By Whom? N/A						Date and Hour N/A											
Was a Watercourse Reached?						If YES, Vo	olume I	mpacting t	he Wate	ercourse.							
		☐ Yes	s 🛛 No			N/A							*				
If a Watercours	e was Impa	cted, Describe	Fully.*														
Describe Cause Below-Grade T				Taken.* lles taken resulti	ng in c	onstituents ex	ceeded	standard	s outlin	ed by 19	.15.17.13 NI	MAC.					
sample was t	ade tank f hen trans	ield sample ported to the	results v	were above reg d analytical res s and Release;	ults w	ere below th	e regu	latory st	andard	s set fo	rth in the N	IMOCE	)				
regulations all onealth or the enoperations have	operators are vironment. failed to ad addition, I	e required to re The acceptant dequately inve- NMOCD acce	eport and/ce of a C-stigate and	true and complet for file certain released. The true of the certain released to the true of the true of the certain report do to the certain released to the cert	ease no NMOC mination	tifications and CD marked as ' on that pose a t	perform Final F threat to	n corrective Report" does o ground w	e action es not re ater, su	s for rele elieve the rface wat	ases which no operator of left. human he	nay end liability alth or	anger publ should the the	eir			
Signature:	Lisa Hunte	U.A.			,	Approved by		5	_	:	DIVISI	ON O	5	_			
Γitle: <b>Field En</b>						Approval Dat	C/-	10812	11.	Expiration							
ino. Pielu Ell		ripprovar Da	. 10	Lolox	<i>γ</i> (φ)	-Apriano	L Duto.										

Conditions of Approval:

Phone: (505) 258-1607

E-mail Address: Lisa.Hunter@cop.com

Date: November 7, 2016

Attached

<sup>\*</sup> Attach Additional Sheets If Necessary

November 11, 2016

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

Re: San Juan 29-6 #9A

**Below Grade Tank Closure Sampling Report** 

Dear Ms. Hunter:

This report summarizes the below grade tank (BGT) closure sampling activities conducted by Rule Engineering, LLC (Rule) at the ConocoPhillips San Juan 29-6 #9A located in Unit Letter E, Section 36, Township 29N, Range 6W in Rio Arriba County, New Mexico. Activities included collection and analysis of a 5-point composite soil confirmation sample from beneath the BGT on August 4, 2016. A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

**BGT Summary** 

Site Name – San Juan 29-6 #9A
Location – Unit Letter E, Section 36, Township 29N, Range 6W
API Number – 30-039-21311
Wellhead Latitude/Longitude – N36.68536 and W107.42069
BGT Latitude/Longitude – N36.68548 and W107.42058
Land Jurisdiction – State of New Mexico
Size of BGT – 120 barrels
Date of BGT Closure Soil Sampling – August 4, 2016

#### **BGT Closure Standards**

As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the San Juan 29-6 #9A are as follows: 0.2 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), 100 mg/kg total petroleum hydrocarbons (TPH), and 250 mg/kg chlorides.

#### **Field Activities**

On August 4, 2016, following removal of the BGT and liner, Rule personnel conducted a visual inspection for surface/subsurface indications of a release. Accumulated rainwater was present above the liner and some gray staining was observed in soils below the liner. Rule personnel then collected five soil samples (S-1 through S-5) from 0.5 feet beneath the floor of the BGT excavation. Figure 2

Ms. Lisa Hunter San Juan 29-6 #9A November 7, 2016 Page 2 of 3

provides the location of the soil samples collected from below the BGT. The field work summary sheet is attached.

### Soil Sampling

The five soil samples (S-1 through S-5) collected from below the floor of the BGT excavation were combined to create soil confirmation sample SC-1. A portion of SC-1 was field screened for volatile organic compounds (VOCs) and chlorides, and field analyzed for TPH.

Field screening for VOC vapors was conducted with a photo-ionization detector (PID). Prior to field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field analysis for TPH was conducted per U.S. Environmental Protection Agency (USEPA) Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure with includes calculation of a calibration curve using known concentration standards. Field screening for chloride was conducted using the Hach chloride low range test kit. Chloride concentrations were determined by drop count titration method using silver nitrate titrant.

The portion of SC-1 collected for laboratory analysis was placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. The sample was analyzed for BTEX per USEPA Method 8021B, TPH per USEPA Method 418.1 and 8015D, and chlorides per USEPA Method 300.0.

#### Field and Analytical Results

Field sampling results for soil confirmation sample SC-1 indicated a VOC concentration greater than 100 ppm and a TPH concentration of 92.6 mg/kg. Field chloride concentrations were reported at 60 mg/kg.

Laboratory analytical results for sample SC-1 reported the benzene concentration below the laboratory reporting limit of 0.024 mg/kg and a total BTEX concentration of 0.23 mg/kg. Laboratory analytical results for SC-1 reported the TPH concentrations below the laboratory reporting limit of 20 mg/kg by USEPA Method 418.1, below the laboratory reporting limit of 9.2 mg/kg as DRO per USEPA Method 8015D, and 9.2 mg/kg GRO by USEPA Method 8015D. The laboratory analytical result for SC-1 for chloride concentration was below the laboratory reporting limit of 7.5 mg/kg. Field and laboratory results for SC-1 are summarized in Table 1, and the analytical laboratory report is attached.

### Conclusions

On August 4, 2016, BGT closure sampling activities were conducted at the ConocoPhillips San Juan 29-6 #9A. Field and laboratory results for confirmation sample SC-1 were reported below the BGT closure standards for benzene, total BTEX, TPH, and chlorides as outlined in 19.15.17.13 NMAC. Based on field



Ms. Lisa Hunter San Juan 29-6 #9A November 7, 2016 Page 3 of 3

sampling results, a release of hydrocarbons may have occurred from the BGT; however, laboratory analytical results for benzene, total BTEX, TPH, and chlorides concentrations are below NMOCD BGT closure standards. Therefore, no further work is recommended.

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

Sincerely,

Rule Engineering, LLC

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

### Attachments:

Table 1. BGT Soil Sampling Results

Figure 1. Topographic Map

Figure 2. Aerial Site Map

Field Work Summary Sheet

**Analytical Laboratory Report** 

Table 1. BGT Soil Sampling Results ConocoPhillips San Juan 29-6 #9A Rio Arriba County, New Mexico

			Sample Depth	Field	Sampling Res	sults	Laboratory Analytical Results									
-		Sample	(ft below BGT	VOCs (PID) TPH - 418.1 Chloride**		Benzene	<b>Total BTEX</b>	TPH - 418.1	TPH - GRO	TPH - DRO	Chloride***					
Sample ID	Date	Type	liner)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)				
BGT Closure Standards*			-	100	250	0.2	50	100	10	00	250					
SC-1	8/4/16	Composite	0.5	>100	92.6	60	<0.024	0.23	<20	9.2 <9.2		<7.5				

Notes:

PID - photo-ionization detector

ppm - parts per million

mg/kg - milligrams/kilograms

VOCs - volatile organic compounds

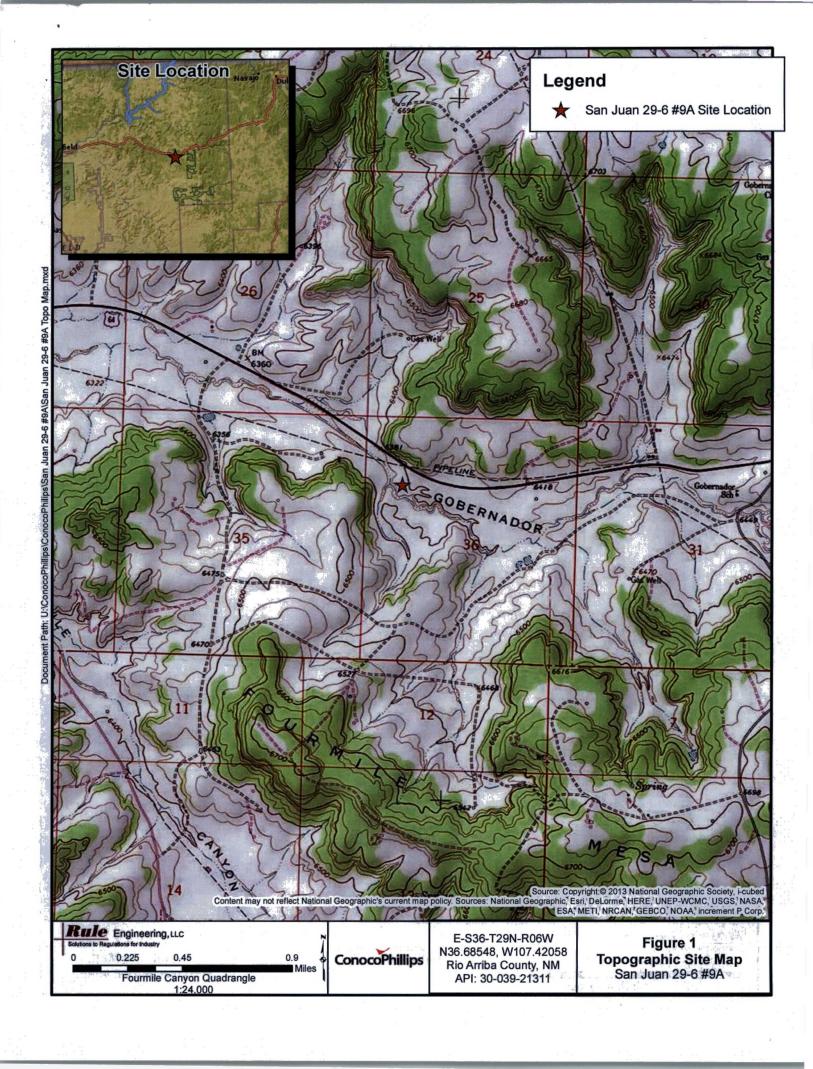
TPH - total petroleum hydrocarbons per USEPA Method 418.1

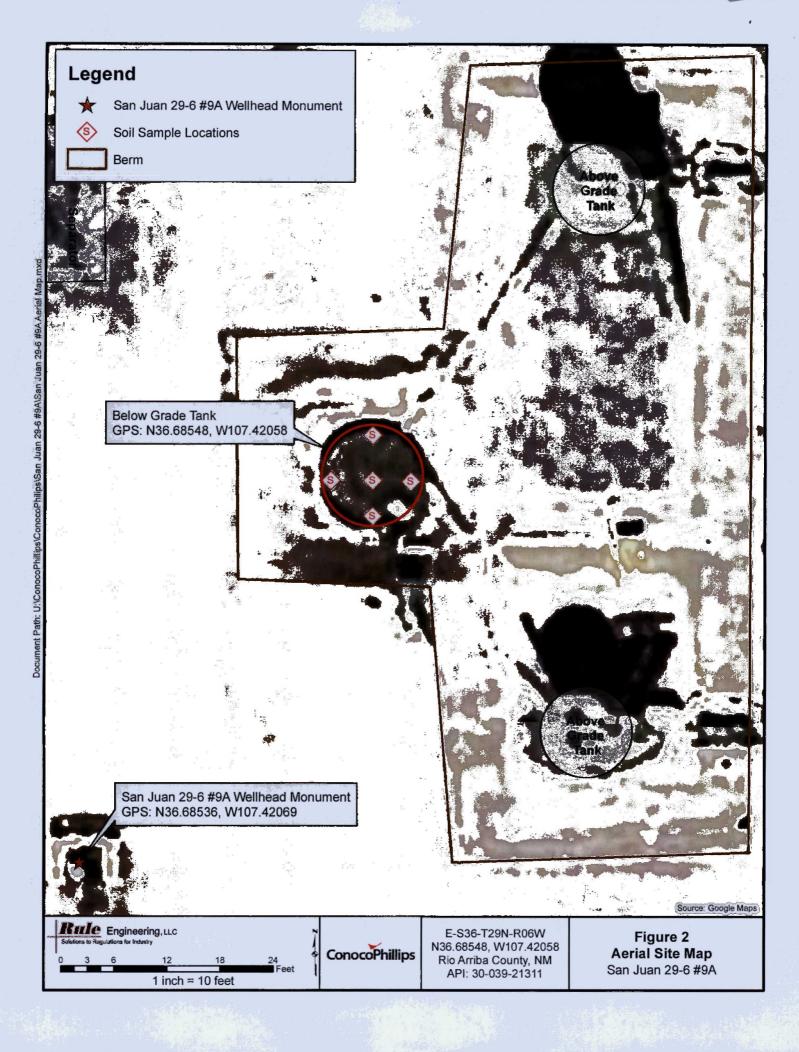
BTEX - benzene, toluene, ethylbenzene, and total xylenes

\*19.15.17.13 NMAC

\*\*Per Hach chloride low-range test kit

\*\*\*Per USEPA Method 300.0 chlorides





#### **Rule Engineering Field Work Summary Sheet**

Company:	ConocoPhillips	
Location:	San Juan 29-6 #9A	
API:	30-039-21311	
Legals:	E-S36-T29N-R6W	
County:	Rio Arriba	
Land Jurisd	iction: State of New Mexico	

Ī	Date:	8/4/16	
	Staff:	Justin Valdez	10

Wellhead GPS: 36.68536, -107.42069 BGT GPS: 36.68548, -107.42058

#### Siting Information based on BGT Location:

Site Rank 10

Groundwater: Estimated to be 131 feet below grade surface, based on elevation differential and

local cathodic well reports.

Surface Water: The wash of Gobernador Canyon is located approximately 200 feet southwest of the BGT location.

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

Objective: Closure sampling for BGT

Tank Size: 120 barrels, removed during closure activities

Liner: Liner present, removed during closure activities

Observations: Accumulated rainwater present above liner, some staining observed in soils below the liner.

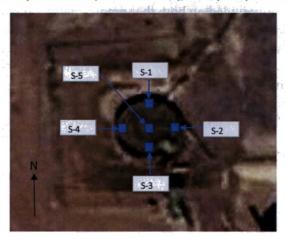
Notes:

**Field Sampling Information** 

Name	Type of	Collection	Collection	VOCs <sup>1</sup>	VOCs	TPH <sup>2</sup>	TPH	Chloride <sup>3</sup>	Chloride
	Sample	Time	Location	(ppm)	time	mg/kg	Time	mg/kg	Time
SC-1	Composite	11:30	See below	>100	11:37	92.6	12:15	60	12:20

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

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



#### **Field Sampling Notes:**

<sup>&</sup>lt;sup>3</sup>Field screening for chlorides was conducted using the Hach chloride low range test kit. Chloride concentrations are determined by drop count titration method using silver nitrate titrant.



<sup>&</sup>lt;sup>1</sup> Field screening for volatile organic compounds (VOC) vapors was conducted with a photo-ionization detector (PID). Before beginning field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas.

<sup>&</sup>lt;sup>2</sup> 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.



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

August 10, 2016

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

**FAX** 

RE: SJ 29-6 #9A

OrderNo.: 1608317

#### Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/5/2016 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

### **Analytical Report**

Lab Order 1608317

Date Reported: 8/10/2016

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Rule Engineering LLC

Client Sample ID: SC-1

Project: SJ 29-6 #9A

Collection Date: 8/4/2016 11:30:00 AM

Lab ID: 1608317-001

Matrix: SOIL

Received Date: 8/5/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH	**		वा			Analyst:	MAB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	8/8/2016	26812
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	ND	7.5		mg/Kg	5	8/8/2016 3:54:25 PM	26851
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS	8				Analyst:	JME
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/8/2016 10:49:10 AM	26824
Surr: DNOP	89.0	70-130		%Rec	1	8/8/2016 10:49:10 AM	26824
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	9.2	4.8		mg/Kg	1	8/8/2016 8:56:54 PM	26818
Surr: BFB	159	49.4-163		%Rec	1	8/8/2016 8:56:54 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2016 8:56:54 PM	26818
Toluene	ND	0.048		mg/Kg	1	8/8/2016 8:56:54 PM	26818
Ethylbenzene	ND	0.048		mg/Kg	1	8/8/2016 8:56:54 PM	26818
Xylenes, Total	0.23	0.097		mg/Kg	1	8/8/2016 8:56:54 PM	26818
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	8/8/2016 8:56:54 PM	26818

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

### 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 Page 1 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1608317

10-Aug-16

Client:

Rule Engineering LLC

Project:

SJ 29-6 #9A

Sample ID MB-26851

SampType: mblk

TestCode: EPA Method 300.0: Anions

LowLimit

Batch ID: 26851

PQL

1.5

RunNo: 36324

Client ID:

Prep Date:

Sample ID LCS-26851

SeqNo: 1125060

Units: mg/Kg

8/8/2016

Analysis Date: 8/8/2016

Analyte

Result

SPK value SPK Ref Val %REC

HighLimit

%RPD **RPDLimit**  Qual

Chloride

ND

SampType: Ics

TestCode: EPA Method 300.0: Anions

Client ID:

LCSS

Batch ID: 26851

RunNo: 36324

Prep Date:

8/8/2016

Analysis Date: 8/8/2016

PQL

1.5

SeqNo: 1125061

Units: mg/Kg

SPK value SPK Ref Val

%RPD **RPDLimit**  Qual

Analyte

15.00

LowLimit

HighLimit

110

Page 2 of 6

Chloride

14

%REC 92.9

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded H

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range E

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Detection Limit

P

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1608317

10-Aug-16

Client:

Rule Engineering LLC

Project:

SJ 29-6 #9A

Sample ID MB-26812

SampType: MBLK

TestCode: EPA Method 418.1: TPH

Client ID:

**PBS** 

Batch ID: 26812

**PQL** 

20

RunNo: 36293

Prep Date: 8/5/2016 Analysis Date: 8/8/2016

SeqNo: 1124223

Units: mg/Kg

HighLimit

%RPD

**RPDLimit** Qual

Analyte Petroleum Hydrocarbons, TR

Sample ID LCS-26812

ND

Result

SampType: LCS

TestCode: EPA Method 418.1: TPH

Client ID: LCSS

Batch ID: 26812

RunNo: 36293

Prep Date: 8/5/2016

SeqNo: 1124224

Units: mg/Kg

Analyte

Analysis Date: 8/8/2016

SPK value SPK Ref Val %REC LowLimit

%RPD

Petroleum Hydrocarbons, TR

Result 110 PQL SPK value SPK Ref Val 20 100.0

%REC 107

LowLimit 80.7 HighLimit 121 **RPDLimit** 

Qual

Sample ID LCSD-26812

Client ID: LCSS02

Prep Date: 8/5/2016

SampType: LCSD Batch ID: 26812 TestCode: EPA Method 418.1: TPH RunNo: 36293

Units: mg/Kg

**RPDLimit** Qual

Analyte

Analysis Date: 8/8/2016 Result

PQL

20

SPK value SPK Ref Val %REC LowLimit

SeqNo: 1124225

**HighLimit** 

%RPD

Petroleum Hydrocarbons, TR

110

100.0

109

80.7

1.33 121

20

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 В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 3 of 6

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1608317

10-Aug-16

Client:

Rule Engineering LLC

Project: SJ 29-6	#9A								3		
Sample ID MB-26824	SampType: M	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics			
Client ID: PBS	Batch ID: 20	8824	F	RunNo: 36290							
Prep Date: 8/8/2016	Analysis Date: 8	/8/2016	5	SeqNo: 1	124202	Units: mg/l	<b>K</b> g				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	<b>RPDLimit</b>	Qual		
Diesel Range Organics (DRO)	ND 10		=								
Surr: DNOP	8.7	10.00		86.6	70	130	×.				
Sample ID LCS-26824	SampType: Lo	cs	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics			
Client ID: LCSS	Batch ID: 26	8824	F	RunNo: 3	6290						
Prep Date: 8/8/2016	Analysis Date: 8	/8/2016	5	SeqNo: 1	124203	Units: mg/l	<b>(</b> g				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	40 10	50.00	0	80.6	62.6	124			3.3		
Surr: DNOP	4.1	5.000		81.9	70	130					
Sample ID 1608317-001AMS	SampType: M	S	Tes								
Client ID: SC-1	Batch ID: 26	824	F								
Prep Date: 8/8/2016	Analysis Date: 8	/8/2016	8	SeqNo: 1	124467	Units: mg/h	<b>(</b> g				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	<b>RPDLimit</b>	Qual		
Diesel Range Organics (DRO)	51 10	50.05	2.327	97.4	33.9	141					
Surr: DNOP	4.8	5.005		95.6	70	130					
Sample ID 1608317-001AMS	D SampType: M	SD	Tes	Code: EF	PA Method	8015M/D: Di	esel Rang	e Organics			
Client ID: SC-1	Batch ID: 26	824	F								
Prep Date: 8/8/2016	Analysis Date: 8	/8/2016	8	SeqNo: 1	124468	Units: mg/h	<b>(</b> g				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	59 10	50.81	2.327	111	33.9	141	14.2	20			
Surr: DNOP	5.0	5.081		98.4	70	130	0	0			

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range E

Analyte detected below quantitation limits

Page 4 of 6

Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

27

1200

5.0

25.00

1000

WO#:

1608317

10-Aug-16

Client:

Rule Engineering LLC

Project:

Gasoline Range Organics (GRO)

Surr: BFB

SJ 29-6 #9A

Sample ID MB-26818	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 26818	RunNo: 36301								
Prep Date: 8/5/2016	Analysis Date: 8/8/2016	SeqNo: 1124720	Units: mg/Kg							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLir	nit Qual						
Gasoline Range Organics (GRO)	ND 5.0									
Surr: BFB	1100 1000	105 49.4	163							
Sample ID LCS-26818	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 26818	RunNo: 36301								
Prep Date: 8/5/2016	Analysis Date: 8/8/2016	SeqNo: 1124721	Units: mg/Kg	1.40						
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLir	mit Qual						

0

108

119

80

49.4

120

163

#### Qualifiers:

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

. 11.1.

Page 5 of 6

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1608317

10-Aug-16

Client:

Rule Engineering LLC

Project:

SJ 29-6 #9A

Sample ID MB-26818	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles					
Client ID: PBS	Batc	h ID: 26	818	F	RunNo: 3	6301							
Prep Date: 8/5/2016	Analysis [	Date: 8/	8/2016	5	SeqNo: 1	124736	Units: mg/Kg						
Analyte	Result	PQL	PQL SPK value SPK Ref Val %REC LowLimit			HighLimit	%RPD	<b>RPDLimit</b>	Qual				
Benzene	ND	0.025											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 4-Bromofluorobenzene					120								
Sample ID LCS-26818	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles					
Client ID: LCSS	Batc	h ID: 26	818	F	RunNo: 3	6301							
Prep Date: 8/5/2016	Analysis [	Date: 8/	8/2016	8	SeqNo: 1	124737	Units: mg/k	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	0.96	0.025	1.000	0	96.2	75.3	123						
Toluene	1.0	0.050	1.000	0	102	80	124						
Ethylbenzene	1.1	0.050	1.000	0 0 109 82.8			121						
Xylenes, Total	3.2	0.10	3.000	0 0 106 83.9			122						
Surr: 4-Bromofluorobenzene	1.1		1.000		108	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
- J Analyte detected below quantitation
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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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 Ord	er Number:	1608317		RcptNo: 1	5 a
Received by/date: AT 08/05/16					7
Logged By: Anne Thorne 8/5/2016 7:	40:00 AM		am Il-	-	1
Completed By: Anne Thorne 8/5/2016			am Ilm		
Reviewed By: 0-5 08105	116			1.1	3
Chain of Custody	¥	-77			
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	
NO NO		Yes 🗹	No 🗆	NA 🗆	b.
4. Was an attempt made to cool the samples?		Yes 💌	, NO L	MA L	
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 🗹	# of preserved	
				bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗆	for pH: (<2 or:	>12 unless noted)
13. Are matrices correctly identified on Chain of Custody?		Yes 🗹	No 🗆	Adjusted?	
14. Is it clear what analyses were requested?		Yes 🗹	No 🗆		
15. Were all holding times able to be met?		Yes 🗹	No 🗆	Checked by:	
(If no, notify customer for authorization.)		2 0 000			1
Special Handling (if applicable)				*	
16. Was client notified of all discrepancies with this order?		Yes 🗌	No 🗆	NA 🗹	
		100			
Person Notified:	Date		Phone   Fax	☐ In Person	
By Whom: Regarding:	Via:	_ eMail _	Priorie     Pax	III Feisoli	
Client Instructions:	* * * * * * * * * * * * * * * * * * * *		e der mile im 5 ff v	additional of The State Street ."	
17. Additional remarks:				لسننا	
18. Cooler Information Cooler No.   Temp °C   Condition   Seal Intact   S	Seal No   5	Seal Date	Signed By		ï
1 1.0 Good Yes		- July 1940	Cignot by	in i	

Chain-of-Custody Record  lient: Rule Engineering, LLC				Turn-Around						H	ΙA	LL	E	NV	/IF	20	NI	1E	NT	AL	
ilent.	Rule	Engine	oring, LLC	☐ Standard	Rush	3 Day #9A				A	N	AL	YS	SIS	5 L	A	30	RA	TC	R	•
		•		Project Name	•	. An in	www.hallenvironmental.com														
ailing	Address	FOI Ai	port Dr. Suite 265	5) 2	29-6 3	#9A		49	01 H	lawki	ins N	IE -	Alb	uqu	erqu	e, N	M 87	109			
rewi	Won.	NM 87		Project #:			Tel. 505-345-3975 Fax 505-345-4107 Analysis Request														
nail o	Fax#: 5	DS 793	9484	Project Mana	iger:		_	(y	Ħ												
	Package:		□ Level 4 (Full Validation)	Heather Woods				TPH (Gas only)	DRO / MEED		1 -11	SIMS)		PO, 96	PCB's						
NEL		□ Othe	r <u></u>	Sampler: Justin /bldez Onlice: Yes U.No.			+ 145 (8021)	+	-	118.1)	504.1)	8270		O3,NB	s / 808;		( <b>Y</b> (			2	or N)
EDD	(Type)			Sample Tem	perature:		中	+ MTBE	3 (G	od 4	bo	10 0	etals		cide	€	i-VC			1	2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + 1	BTEX + M	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (ACINO3,Nez POL, SOz)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
1/8/4/e	1/30	Soil	SC-1	402 Glass	Cold	701	+		+	X				+					7.0		
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					14				-44 -44 -4			-4				10.0	1				
ato:	Time:	Relinquish	films / / /	Received by:		Date Time	Por	nark			- 1										
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ate:	1854	Relinquish	liste Watto	Jan	u Shor	08/05/16 07/40					4 U 3 S4	1. *					* . ·	F 6.		1.	