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 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.

			Rele	ease Notifica	atio	n and Co	orrective A	ction	1			
						OPERA			Initi	al Report	\boxtimes	Final Report
		onocoPhillips			_	Contact L						
		0 th St, Farm uan 28-7 Ur		(M			No. (505) 258-1 be: Gas Well	1607				
			III 133E				oe. Gas well				-	
Surface Ow	ner BLM	[Mineral O	vner	BLM			API No	3003926	460	
				LOCA	TIO	N OF RE	LEASE					
Unit Letter	Section	Township	Range			South Line	Feet from the		West Line	County		
С	22	27N	07W	1035		North	1830		West	Rio Arrib	a	
				Latitude 36.	56382	Longitud	e <u>-107. 56563</u>					
				NATI	URE	OF REL	EASE					
Type of Rele	ase Hyd	ocarbon/Pro	duced Wa	ter		Volume of 14bbls/3b			Volume I	Recovered	0	
Source of Re	lease Pro	duction Tank				Unknown	Hour of Occurrence	ce	The second secon	Hour of Dise @ 1:55p.m.	-	
Was Immedia	ate Notice (Yes	No Not Rec	quired	If YES, To N/A	Whom?					
By Whom?	N/A					Date and I			- (OIL CONS.	DIV	0107
Was a Watero	course Read		Yes 🛛 N	Jo		If YES, Vo	olume Impacting t	the Wat	ercourse.	00140	DIV	1151.3
						IVA				JAN 0	9 20	17
If a Watercou N/A	irse was Im	pacted, Descri	ibe Fully.*								20	11
Describe Cau		em and Remed										
		at bottom of p lled to transfe		tank was discov	ered d	uring tank g	auging activities.	. Well	was shut in	, tank was o	lrained	into pit
tank, and tr	ick was cal	neu to ti ansie	on to an	other tank.								
		and Cleanup A				halam NIMA	OCD Astism I a			4:		Th
		tached for r		alytical results	were	below NMC	OCD Action Lev	vels – 1	no further	r action rec	quired	The soil
				is true and comple								
				d/or file certain rele of a C-141 repor								
should their o	perations h	ave failed to a	dequately	investigate and re-	nediat	e contaminati	on that pose a thr	eat to g	round water	r, surface wa	ter, hur	nan health
		ddition, NMC ws and/or regu		tance of a C-141 re	eport d	oes not reliev	e the operator of	respons	ibility for c	ompliance w	ith any	other
1040141, 04414,		10 4114 01 1084					OIL CON	SERV	ATION	DIVISIO	N	
	Il	411.									_	
Signature:	421	W 401				Approved by	Environmental S	necialis	t: ()	
Printed Name	: Lisa Hu	nter						_	acon	2	>	
Title: Field I	Environme	ntal Specialis	t			Approval Da	te:2121201	1	Expiration	Date:		
E-mail Addre	ess: Lisa.Hı	unter@cop.co	m			Conditions of	f Approval:			Attached		
Date: Janua	ry 3, 2017	Pho	ne: (505)	258-1607		NOC	X88111	202	L	7 Kitaonoa		
Dute. Ganda	J 0, 2011	1 110	(505)	20 1007			1000	100				

^{*} Attach Additional Sheets If Necessary

San Juan 28-7 #155E Release Report

Unit Letter C, Section 22, Township 27 North, Range 7 West Rio Arriba County, New Mexico

January 3, 2017

OIL CONS. DIV DIST. 3

JAN 0 9 2017

Prepared for: ConocoPhillips 5525 Highway 64 Farmington, New Mexico 87401

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



ConocoPhillips San Juan 28-7 #155E 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, P.G., Area Manager

Reviewed by:

Russell Knight, PG, Principal Hydrogeologist

January 3, 2017

Table of Contents

1.0	Introduction1
2.0	Release Summary1
3.0	NMOCD Site Ranking1
4.0	Site Assessment
4.1	Field Activities
4.2	Soil Sampling
4.3	Field Screening Results
4.4	Laboratory Analytical Results
5.0	Excavation Confirmation Sampling3
5.1	Field Activities
5.2	Soil Sampling
5.3	Field Screening Results
5.4 6.0	Laboratory Analytical Results
7.0	Closure and Limitations
Table Table Table Table	 NMOCD Site Ranking Determination Site Assessment Field Screening and Laboratory Analytical Results
Figur	es
Figure Figure	1 Topographic Map

Appendices

Appendix A Analytical Laboratory Reports



1.0 Introduction

The ConocoPhillips San Juan 28-7 #155E release site is located in Unit Letter C, Section 22, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico. The release of approximately 14 barrels (bbls) of condensate and 3 bbls of produced water from the above grade storage tank was discovered on June 21, 2016. The release was contained within the berm surrounding the tank.

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 28-7 #155E		
Site Location Description	Unit Letter C, Section	22, Township 27 N	North, Range 7 West
Wellhead GPS Location	N36.56392 and W107.56532	Release GPS Location	N36.56382 and W107.56563
Land Jurisdiction	Bureau of Land Management	Discovery Date	June 21, 2016
Release Source	Above Grade Storage Tank	Substance(s) Released	Condensate and Produced Water
Estimated Volume Released	14 bbls condensate/ 3 bbls produced water	Volume Recovered	0 bbls
NMOCD Site Rank	10		•
Distance to Nearest Surface Water	A small, ephemeral w of the release location		roximately 375 feet west Cuervo Canyon
Estimated Depth to Groundwater	Greater than 100 feet below ground surface (bgs)	Distance to Nearest Water Well or Spring	Greater than 1,000 feet

3.0 NMOCD Site Ranking

In accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 10 (Table 1).

Depth to groundwater at the site is greater than 100 feet bgs based on the elevation differential between the location and Cuervo Canyon and the cathodic well report for San Juan 28-7 #153M reported "no groundwater encountered".



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.

A small, ephemeral wash is located approximately 375 feet west of the release location, which drains to Cuervo 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).

4.0 Site Assessment

4.1 Field Activities

On July 15, 2016, Rule Engineering, LLC (Rule) personnel conducted a site assessment to delineate the extent of the release which included advancing nine soil borings (SB-1 through SB-9) utilizing a hand auger. Soil borings were advanced to depths ranging from approximately 0.5 to 4 feet bgs where refusal was encountered on hard soils, sandstone, or shale. Boring locations are illustrated on Figure 2.

4.2 Soil Sampling

Rule collected soil samples from the soil borings at 0.5 to 2 foot intervals with an approximately 0.5 foot sample length at each interval. A five part composite sample (SC-1) was also collected from a depth of approximately 0.5 feet bgs within the visible release area. The lithology encountered at the site included interbedded clayey sand and poorly graded sand underlain by sandstone or shale to the maximum depths of the soil borings.

A portion of each sample was field screened for volatile organic compounds (VOCs) and selected samples were analyzed for TPH. Field screening for VOC vapors was conducted with a MiniRAE 3000 photoionization detector (PID). Prior to field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field analysis for TPH was conducted for selected samples per United States Environmental Protection Agency (USEPA) Method 418.1, utilizing a Buck Scientific HC-404 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. Rule's practical quantitation limit for USEPA Method 418.1 is 20 mg/kg.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per USEPA Method 8021B and TPH per USEPA 8015D.



Initial site assessment field screening and laboratory analytical results are summarized in Table 2. The analytical laboratory report is included in Appendix A.

4.3 Field Screening Results

Field screening results for samples collected from soil borings SB-1 through SB-9 and composite sample SC-1 indicated VOC concentrations ranging from 4.5 ppm to 2,030 ppm. Field TPH results for samples collected from soil borings SB-1 through SB-9 and composite sample SC-1 indicated TPH concentrations ranging from 35.7 mg/kg to greater than 5,000 mg/kg. Field screening results are summarized in Table 2.

4.4 Laboratory Analytical Results

Laboratory analytical results for site assessment sample SB-3 at 1 foot reported the benzene concentration below the laboratory reporting limit of 0.048 mg/kg, total BTEX concentration of 0.39 mg/kg, and TPH concentration of 86 mg/kg.

Site assessment field screening and laboratory analytical results are summarized in Table 2. The analytical laboratory report is included in Appendix A.

5.0 Excavation Confirmation Sampling

5.1 Field Activities

Following the excavation of hydrocarbon impacted soils, Rule personnel returned to the site on October 3, 2016, to collect confirmation samples from the excavation sidewalls and base. The maximum extent of the final excavation measured approximately 43 feet by 35 feet by 5 to 7 feet in depth. Excavated hydrocarbon impacted soils and rock were transported to a local NMOCD approved landfarm for disposal/remediation and the excavation was backfilled with clean, imported material. A depiction of the final excavation with sample locations is included on Figure 3.

5.2 Soil Sampling

Rule collected five composite confirmation soil samples (SC-1 through SC-5) on October 3, 2016. Each confirmation soil sample is a representative composite comprised of five equivalent portions of soil collected from the sampled area.

A portion of each sample was field screened for VOCs and selected samples were also field analyzed for TPH. Field screening for VOC vapors was conducted with a PID. Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards. Rule's practical quantitation limit for USEPA Method 418.1 is 20 mg/kg.



Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per USEPA Method 8021B, and TPH per USEPA Method 8015M/D.

Field screening and laboratory analytical results are summarized in Table 3. The analytical laboratory reports are included in Appendix A.

5.3 Field Screening Results

Field screening results for soil confirmation samples SC-1 through SC-5 indicated VOC concentrations ranging from 70.6 ppm to 2,600 ppm. The field TPH concentration results for these samples ranged from below the reporting limit of 20 mg/kg to 368 mg/kg. Field screening results are summarized in Table 3.

5.4 Laboratory Analytical Results

Laboratory analytical results for the excavation confirmation samples (SC-1 through SC-5) reported benzene concentrations ranging from below the laboratory reporting limit to 0.16 mg/kg, which are below the NMOCD action level of 10 mg/kg. Total BTEX concentrations for the excavation confirmation samples ranged from below the laboratory reporting limit to 9.8 mg/kg, which were below the NMOCD action level of 50 mg/kg. Laboratory analytical results for the excavation confirmation samples indicate that TPH concentrations range from below the laboratory reporting limit to 255 mg/kg, which are below the NMOCD action level of 1,000 for a site rank of 10.

Laboratory analytical results are summarized in Table 3. The analytical laboratory reports are included in Appendix A.

6.0 Conclusions

The ConocoPhillips San Juan 28-7 #155E release site is located in Unit Letter C, Section 22, Township 27 North, Range 7 West, in Rio Arriba County, New Mexico. The release of approximately 14 bbls of condensate and 3 bbls of produced water from the above grade storage tank was discovered on June 21, 2016. The release was contained within the berm surrounding the tank. A site assessment was conducted utilizing hand-auger soil borings to delineate the extent of the hydrocarbon impact. Following the excavation of impacted soils, confirmation samples SC-1 through SC-5 were collected from the excavation which measured approximately 43 feet by 35 feet by 5 to 7 feet in depth. Laboratory analytical results for confirmation samples SC-1 through SC-5 reported benzene, total BTEX, and TPH concentrations below the applicable NMOCD action levels for a site rank of 10. Excavated hydrocarbon impacted soils and rock were transported to a local NMOCD approved landfarm for disposal/remediation and the excavation was backfilled with clean, imported material.



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

7.0 Closure and Limitations

This report has been prepared for the exclusive use of ConocoPhillips and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with ConocoPhillips. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.



Tables



Table 1. NMOCD Site Ranking Determination ConocoPhillips San Juan 28-7 #155E Rio Arriba County, New Mexico

Ranking Criteria	Ranking	Site-Based	Basis for Determination	Data
	Score	Ranking Score		Sources
Depth to Groundwater				
<50 feet	20		Elevation differential between location and Cuervo	NMOCD Online database,
50-99 feet	10	0	Canyon derived from the topographic map of the area and no groundwater encountered on cathodic well report for the San Juan 28-7 #153M.	Gould Pass Quadrangle, Google Earth, and Visual Inspection
>100 feet	0		report for the Sair Suan 20-7 #155W.	mspection
Wellhead Protection Area			The state of the s	
<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, Gould Pass Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20		A small, ephemeral wash is located approximately 375	Gould Pass Quadrangle,
200 to 1,000 horizontal feet	10	10	feet west of the release location, which drains to	Google Earth, and Visual
>1,000 horizontal feet	0		Cuervo Canyon.	Inspection
Site Based Total Rank	ing Score	10		



Table 2. Site Assessment Field Screening and Laboratory Analytical Results ConocoPhillips
San Juan 27-8 #155E
Rio Arriba County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Field TPH by 418.1 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
	NMO	CD Action Level*	100	1,000**	10	NE	NE	NE	50	1,00	00**
SC-1	7/15/2016	0.5 (Composite)	1,936	>5,000							
		1	1,798	-							
SB-1	7/15/2016	3	1,496								
		3.5	1,679	2,060							
		0.5	1,949				_				
SB-2	7/15/2016	2	2,013								
3B-Z	11 13/2016	2.5	940		-		_				
		3	2,030								
SB-3	7/15/2016	0.5	1,624								
36-3	1113/2010	1	1,569	290	<0.048	<0.095	0.10	0.29	0.39	30	56
SB-4	7/15/2016	0.5	11.4			-					
3D-4	1113/2010	1	14.7	-	-		-				
		0.5	7.8					-			
SB-5	7/15/2016	1	6.9		-						
00-0	1713/2010	3	17.1				_				
		3.25	25.7		-						
		0.5	43.9								
SB-6	7/15/2016	2.5	72.8								
		4	492	35.7							
SB-7	7/15/2016	1	34.5								-
- CD-1	1710/2010	2	37.5								
SB-8	7/15/2016	0.5	7.6								
		1	4.9								
SB-9	7/15/2016	2.5	4.5	14-1							
		3	5.8								

Notes: All borings were terminated at auger refusal on shale or sandstone.

VOCs - volatile organic compounds ND - not detected above laboratory reporting limits PID - photoionization detector BTEX - benzene, toluene, ethylbenzene, and xylenes

ft bgs - feet below grade surface TPH - total petroleum hydrocarbons ppm - parts per million GRO - gasoline range organics mg/kg - milligrams per kilogram DRO - diesel range organics

NE - not-established NMOCD - New Mexico Oil Conservation Division
*Based on the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

^{**}Based on a site ranking of 10.



Table 3. Excavation Confirmation Field Screening and Laboratory Analytical Results ConocoPhillips
San Juan 28-7 #155E
Rio Arriba County, New Mexico

				Field Screen	ning Results			La	boratory An	alytical Resul	ts		
Sample Name	Date	Location	Approximate Sample Depth (ft bgs)	OVM by PID (ppm)	TPH per 418.1	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)	TPH as MRO (mg/kg)
		NMO	CD Action Level*	100	1,000**	10	NE	NE	NE	50	X X + X X X	1,000**	
					Excavatio	n Confirmation	on Samples		1 241 1 4		*		
SC-1	10/3/2016	West Wall	0.5 to 7	70.6	<20	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.2	<46
SC-2	10/3/2016	North Wall	0.5 to 7	2,600	293	0.16	2.3	0.43	6.9	9.8	190	65	<49
SC-3	10/3/2016	East Wall	0.5 to 7	1,712	368	<0.089	<0.18	<0.18	< 0.36	ND	<18	29	<49
SC-4	10/3/2016	South Wall	0.5 to 7	997	45.9	<0.025	<0.050	<0.050	< 0.099	ND	<5.0	<10	<50
SC-5	10/3/2016	Base	5 to 7	495	37.8	<0.024	< 0.049	<0.049	< 0.097	ND	<4.9	<9.8	<49

Notes:

VOCs - volatile organic compounds

PID - photoionization detector

ft bgs - feet below grade surface

ppm - parts per million

mg/kg - milligrams per kilogram

NE - not established

ND - not detected above laboratory reporting limits

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH - total petroleum hydrocarbons

GRO - gasoline range organics

DRO - diesel range organics

MRO - mineral oil range organics

NMOCD - New Mexico Oil Conservation Division

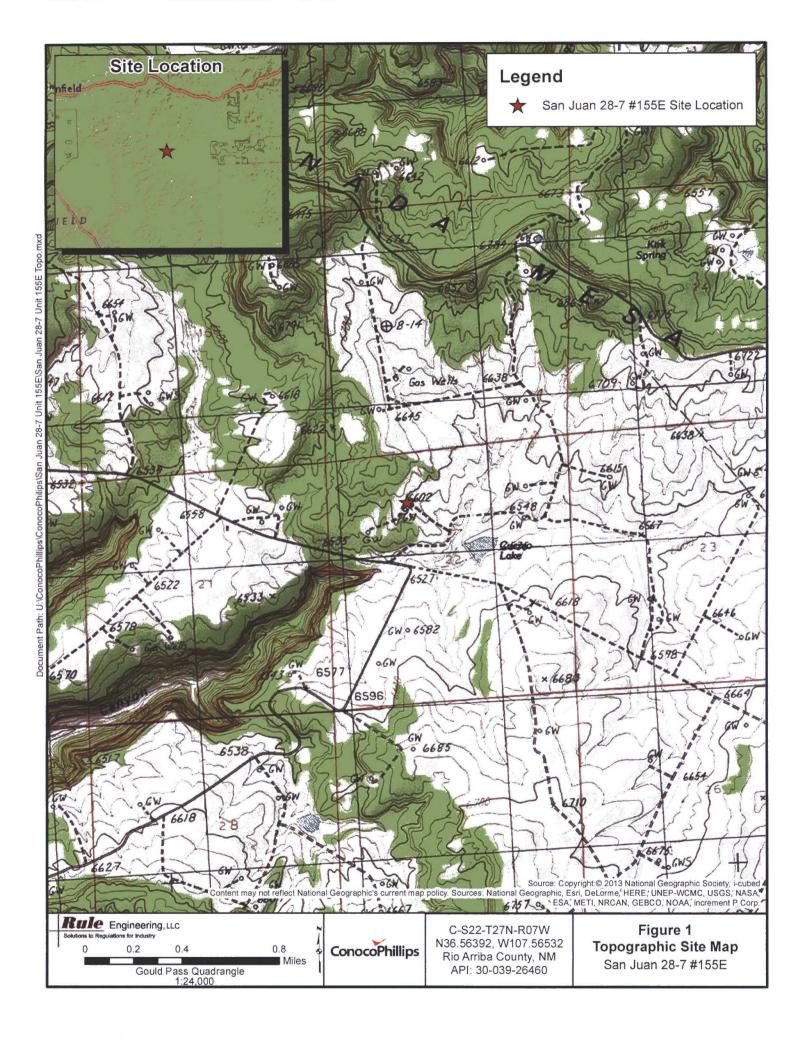
*Based on the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

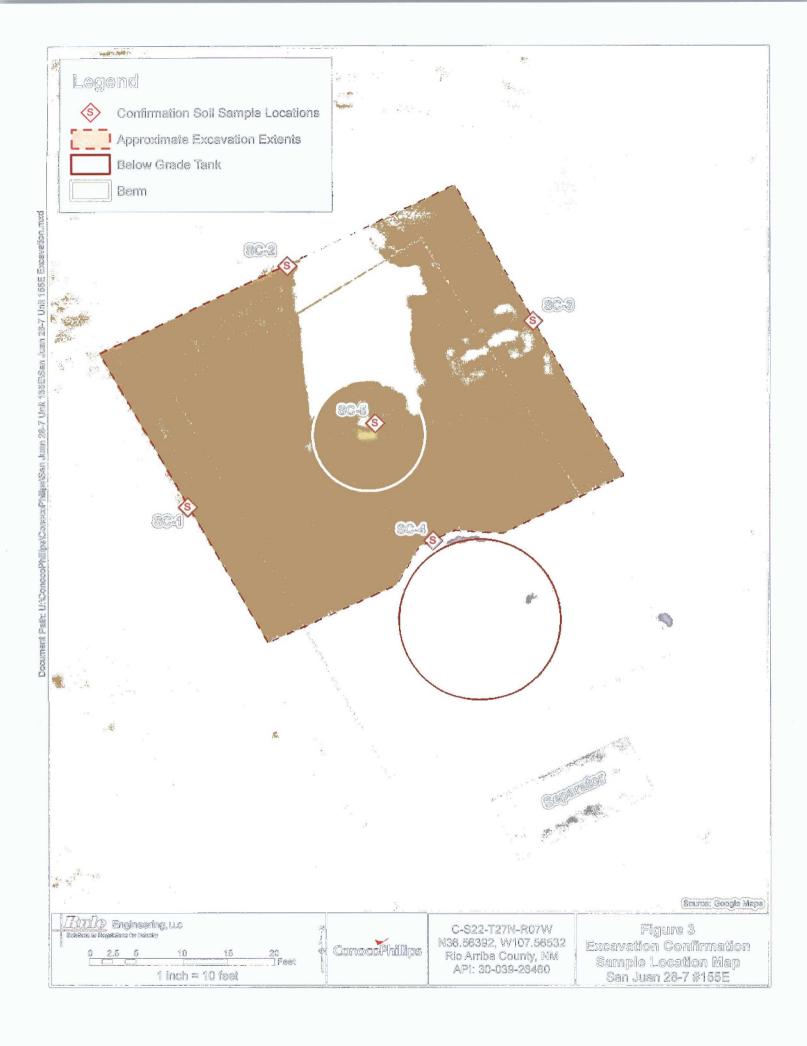
**Based on a site ranking of 10.



Figures







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

OrderNo.: 1607754

July 25, 2016

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

FAX

RE: CoP San Juan 28-7 # 155E

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/16/2016 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

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1607754

Date Reported: 7/25/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SB-3@1

Project: CoP San Juan 28-7 # 155E

Collection Date: 7/15/2016 1:40:00 PM

Lab ID: 1607754-001

Received Date: 7/16/2016 8:45:00 AM

Analyses	Result	PQL (Qual 1	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	56	9.4		mg/Kg	1	7/21/2016 11:30:28 PM	26455
Surr: DNOP	86.2	70-130		%Rec	1	7/21/2016 11:30:28 PM	26455
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	30	9.5		mg/Kg	2	7/19/2016 1:21:10 PM	26442
Surr: BFB	174	80-120	S	%Rec	2	7/19/2016 1:21:10 PM	26442
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.048		mg/Kg	2	7/19/2016 1:21:10 PM	26442
Toluene	ND	0.095		mg/Kg	2	7/19/2016 1:21:10 PM	26442
Ethylbenzene	0.10	0.095		mg/Kg	2	7/19/2016 1:21:10 PM	26442
Xylenes, Total	0.29	0.19		mg/Kg	2	7/19/2016 1:21:10 PM	26442
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	2	7/19/2016 1:21:10 PM	26442

Matrix: SOIL

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

- 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 4
- 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#: 1607754

25-Jul-16

Client:

Rule Engineering LLC

Project:	CoP Sar	1 Juan 28-7 # 155E
Sample ID I CS	26455	SamnTyne: LCS

Sample ID LCS-26455	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range	Organics
Client ID: LCSS	Batch ID: 26455	RunNo: 35794		
Prep Date: 7/18/2016	Analysis Date: 7/20/2016	SeqNo: 1108851	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 95.3 62.6	124	
Surr: DNOP	5.0 5.000	99.7 70	130	
Sample ID MB-26455	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range	Organics
Client ID: PBS	Batch ID: 26455	RunNo: 35794		
Prep Date: 7/18/2016	Analysis Date: 7/20/2016	SeqNo: 1108853	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	10 10.00	102 70	130	##150_00 points
Sample ID MB-26465	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: PBS	Batch ID: 26465	RunNo: 35794		
Prep Date: 7/19/2016	Analysis Date: 7/20/2016	SeqNo: 1110143	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: DNOP	10 10.00	101 70	130	
Sample ID LCS-26443	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: LCSS	Batch ID: 26443	RunNo: 35827		
Prep Date: 7/18/2016	Analysis Date: 7/20/2016	SeqNo: 1110532	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: DNOP	4.5 5.000	89.6 70	130	

Sample ID MB-26443	SampType: MBLK	TestCode	EPA Method 8015M/D	: Diesel Range	Organics	
Client ID: PBS	Batch ID: 26443	RunNo	: 35827			
Prep Date: 7/18/2016	Analysis Date: 7/20/20	SeqNo	: 1110534 Units: %	%Rec		
Analyte	Result PQL SPK	Value SPK Ref Val %R	EC LowLimit HighLir	nit %RPD	RPDLimit	Qual
Surr: DNOP	8.8	10.00 8	7.5 70 1	30		

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- 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 container temperature is out of limit as specified

Page 2 of 4

Hall Environmental Analysis Laboratory, Inc.

900

WO#: 1607754

25-Jul-16

Client:

Rule Engineering LLC

Project:

Surr: BFB

CoP San Juan 28-7 # 155E

Sample ID MB-26442	SampType: MBLK		Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch ID: 26442		R	RunNo: 3	5812				
Prep Date: 7/18/2016	Analysis Date: 7/19/2	2016	S	SeqNo: 1	108256	Units: mg/K	g		
Analyte	Result PQL SF	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5.0								
Surr: BFB	900	1000		89.8	80	120			
Sample ID LCS-26442	SampType: LCS		Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch ID: 26442		F	RunNo: 3	5812				
Prep Date: 7/18/2016	Analysis Date: 7/19/2	2016	8	SeqNo: 1	108257	Units: mg/K	g		
Analyte	Result PQL SF	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29 5.0	25.00	0	116	80	120			

90.0

80

120

1000

- * 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 3 of 4

- 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#: 1607754

25-Jul-16

Client:

Rule Engineering LLC

Project:	CoP San	Juan 28-7	# 155E								
Sample ID	MB-26442	SampT	уре: МЕ	BLK	Test	Code: EF	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batcl	n ID: 26	442	R	unNo: 3	5812				
Prep Date:	7/18/2016	Analysis D	Date: 7/	19/2016	S	eqNo: 1	108288	Units: mg/K	(g		
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-Brom	nofluorobenzene	1.0		1.000		103	80	120			
Sample ID	LCS-26442	Samp	ype: LC	S	Tes	Code: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batcl	n ID: 26	442	R	unNo: 3	5812				
Prep Date:	7/18/2016	Analysis D	Date: 7/	19/2016	S	eqNo: 1	108297	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	113	75.3	123			
Toluene		0.98	0.050	1.000	0	97.8	80	124			
Ethylbenzene		0.96	0.050	1.000	0	95.5	82.8	121			
Xylenes, Total		2.9	0.10	3.000	0	96.0	83.9	122			
Surr: 4-Bron	nofluorobenzene	1.0		1.000		101	80	120			
	TOTAGOTOBOTIZOTIO	1.0		1.000		101	00	120			
	1607754-001AMS		Гуре: М .S		Tes			8021B: Vola	tiles		
		Samp1	Type: MS	3			PA Method		tiles		
Sample ID	1607754-001AMS SB-3@1	Samp1	h ID: 26	6 442	F	tCode: El	PA Method 5812				
Sample ID Client ID:	1607754-001AMS SB-3@1	Samp1 Batcl	h ID: 26	3 442 19/2016	F	Code: El	PA Method 5812	8021B: Vola		RPDLimit	Qual
Sample ID Client ID: Prep Date:	1607754-001AMS SB-3@1	Samp Batcl	h ID: 26 Date: 7 /	3 442 19/2016	F	Code: El	PA Method 5812 108307	8021B: Vola	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte	1607754-001AMS SB-3@1	Samp Batcl Analysis E	h ID: 26 - Date: 7 /	5 442 19/2016 SPK value	SPK Ref Val	Code: El cunNo: 3: GeqNo: 1: %REC	PA Method 5812 108307 LowLimit	8021B: Vola Units: mg/F HighLimit	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene	1607754-001AMS SB-3@1	Samp1 Batcl Analysis D Result	PQL 0.049	SPK value 0.9728	SPK Ref Val	code: Electronic de la composition della composi	PA Method 5812 108307 LowLimit 71.5	8021B: Volate Units: mg/F HighLimit 122	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1607754-001AMS SB-3@1	Samp Batcl Analysis E Result 1.0 0.86	PQL 0.049 0.097	SPK value 0.9728 0.9728	SPK Ref Val	Code: Electronic 3: SeqNo: 1: %REC 103 88.5	PA Method 5812 108307 LowLimit 71.5 71.2	8021B: Volar Units: mg/F HighLimit 122 123	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1607754-001AMS SB-3@1	Samp Batcl Analysis E Result 1.0 0.86 0.95	PQL 0.049 0.097	SPK value 0.9728 0.9728 0.9728	SPK Ref Val 0 0 0.1006	Code: El cunNo: 3: deqNo: 1: %REC 103 88.5 87.0	PA Method 5812 108307 LowLimit 71.5 71.2 75.2	8021B: Volar Units: mg/k HighLimit 122 123 130	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron	1607754-001AMS SB-3@1 7/18/2016	Samp1 Batcl Analysis E Result 1.0 0.86 0.95 3.0 2.0	PQL 0.049 0.097	SPK value 0.9728 0.9728 0.9728 2.918 1.946	SPK Ref Val 0 0 0.1006 0.2894	Code: EI cunNo: 3: seqNo: 1: %REC 103 88.5 87.0 93.4 101	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80	8021B: Volar Units: mg/F HighLimit 122 123 130 131	Kg %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron	1607754-001AMS SB-3@1 7/18/2016	Sampil Batcl Analysis II Result 1.0 0.86 0.95 3.0 2.0 D Sampil	PQL 0.049 0.097 0.097 0.19	SPK value 0.9728 0.9728 0.9728 0.9728 2.918 1.946	SPK Ref Val 0 0 0.1006 0.2894	Code: EI cunNo: 3: seqNo: 1: %REC 103 88.5 87.0 93.4 101	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80	8021B: Volar Units: mg/F HighLimit 122 123 130 131 120	Kg %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron	1607754-001AMS SB-3@1 7/18/2016 nofluorobenzene 1607754-001AMSI SB-3@1	Sampil Batcl Analysis II Result 1.0 0.86 0.95 3.0 2.0 D Sampil	PQL 0.049 0.097 0.097 0.19 0.097	SPK value 0.9728 0.9728 0.9728 2.918 1.946	SPK Ref Val 0 0 0.1006 0.2894	**Code: EI** **Cod	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80 PA Method	8021B: Volar Units: mg/F HighLimit 122 123 130 131 120	%RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID:	1607754-001AMS SB-3@1 7/18/2016 nofluorobenzene 1607754-001AMSI SB-3@1	Sampi Batcl Analysis D Result 1.0 0.86 0.95 3.0 2.0 D Sampi Batcl Analysis D	PQL 0.049 0.097 0.097 0.19 Type: MS h ID: 260 Date: 7/	SPK value 0.9728 0.9728 0.9728 2.918 1.946 SD 442 19/2016 SPK value	SPK Ref Val 0 0 0.1006 0.2894 Tes:	RCode: El RunNo: 3: REC 103 88.5 87.0 93.4 101 Code: El RunNo: 3: ReqNo: 1:	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 5812 108308 LowLimit	8021B: Volar Units: mg/k HighLimit 122 123 130 131 120 8021B: Volar Units: mg/k HighLimit	%RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date: Analyte Benzene	1607754-001AMS SB-3@1 7/18/2016 nofluorobenzene 1607754-001AMSI SB-3@1	Sampi Batol Analysis D Result 1.0 0.86 0.95 3.0 2.0 D Sampi Batol Analysis D Result 0.97	PQL 0.049 0.097 0.097 0.19 Type: MS h ID: 26- Date: 7/ PQL 0.048	SPK value 0.9728 0.9728 0.9728 2.918 1.946 SD 442 (19/2016 SPK value 0.9579	SPK Ref Val 0 0 0.1006 0.2894 Tes: SSPK Ref Val 0	**Code: El ** ** **Code: El ** ** **Code: El ** ** ** ** ** ** ** ** ** ** ** ** **	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 5812 108308 LowLimit 71.5	8021B: Volar Units: mg/F HighLimit 122 123 130 131 120 8021B: Volar Units: mg/F HighLimit 122	%RPD tiles %RPD 2.76	RPDLimit 20	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date: Analyte	1607754-001AMS SB-3@1 7/18/2016 nofluorobenzene 1607754-001AMSI SB-3@1	Sampi Batol Analysis D Result 1.0 0.86 0.95 3.0 2.0 D Sampi Batol Analysis D Result 0.97 0.85	PQL 0.049 0.097 0.19 Type: MS h ID: 26-0ate: 7/ PQL 0.048 0.096	SPK value 0.9728 0.9728 0.9728 2.918 1.946 SD 442 19/2016 SPK value 0.9579 0.9579	SPK Ref Val 0 0 0.1006 0.2894 Tes: SPK Ref Val 0 0	Code: El (2000) 103 (2	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 5812 108308 LowLimit 71.5 71.2	8021B: Volar Units: mg/F HighLimit 122 123 130 131 120 8021B: Volar Units: mg/F HighLimit 122 123	%RPD tiles %RPD 2.76 0.958	RPDLimit 20 20	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date: Analyte Benzene	1607754-001AMS SB-3@1 7/18/2016 nofluorobenzene 1607754-001AMSI SB-3@1	Sampi Batol Analysis D Result 1.0 0.86 0.95 3.0 2.0 D Sampi Batol Analysis D Result 0.97 0.85 0.94	PQL 0.049 0.097 0.097 0.19 Type: MS h ID: 26- Date: 7/ PQL 0.048	SPK value 0.9728 0.9728 0.9728 2.918 1.946 SD 442 19/2016 SPK value 0.9579 0.9579 0.9579	SPK Ref Val 0 0 0.1006 0.2894 Tes: SSPK Ref Val 0	Code: Electron 3: 2 (2000) 1:	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 5812 108308 LowLimit 71.5 71.2 75.2	8021B: Volar Units: mg/F HighLimit 122 123 130 131 120 8021B: Volar Units: mg/F HighLimit 122	%RPD tiles %RPD 2.76	RPDLimit 20 20 20 20	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1607754-001AMS SB-3@1 7/18/2016 nofluorobenzene 1607754-001AMSI SB-3@1	Sampi Batol Analysis D Result 1.0 0.86 0.95 3.0 2.0 D Sampi Batol Analysis D Result 0.97 0.85	PQL 0.049 0.097 0.19 Type: MS h ID: 26-0ate: 7/ PQL 0.048 0.096	SPK value 0.9728 0.9728 0.9728 2.918 1.946 SD 442 19/2016 SPK value 0.9579 0.9579	SPK Ref Val 0 0 0.1006 0.2894 Tes: SPK Ref Val 0 0	Code: El RunNo: 3: REC 103 88.5 87.0 93.4 101 Code: El RunNo: 3: ReqNo: 1: %REC 101 89.0	PA Method 5812 108307 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 5812 108308 LowLimit 71.5 71.2	8021B: Volar Units: mg/F HighLimit 122 123 130 131 120 8021B: Volar Units: mg/F HighLimit 122 123	%RPD tiles %RPD 2.76 0.958	RPDLimit 20 20	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 4 of 4

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmenial.com

Sample Log-In Check List

Client Name:	RULE ENGINEERING LL	Work Order Number:	1607754		RcptNo: 1
Received by/date	· H	orlille			a con a control mentioned
Logged By:	Lindsay Mangin	7/16/2016 8:45:00 AM		Julythas	
Completed By:	Lindsay Mangin	7/16/2016 9;14:09 AM		July Alligo	
Reviewed By:	w las	07/18/16			
Chain of Cus	tody	V THOILY		CS 504004	
1. Custody sea	als intact on sample bottles?		Yes	No 🗆	Not Present
2. Is Chain of C	Custody complete?		Yes 🗸	No 🗌	Not Present
3. How was the	e sample delivered?		Courier		
Log In					
4. Was an atte	empt made to cool the sample:	\$?	Yes 🗹	No 🗆	NA 🗆
5. Were all san	mples received at a temperatu	re of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆
6. Sample(s) in	n proper container(s)?		Yes 🗸	No 🗆	
7. Sufficient sa	imple volume for indicated tes	t(s)?	Yes 🗹	No 🗌	
8. Are samples	(except VOA and ONG) prop	erly preserved?	Yes 🗸	No 🗌	
9. Was present	valive added to bottles?		Yes	No 🗹	NA 🗆
10. VOA vials ha	ave zero headspace?		Yes 🗆	No 🗆	No VOA Viais
11. Were any s	ample containers received bro	ken?	Yes	No 🗹	# of preserved bottles checked
	work match bottle labels?		Yes 🗸	No 🗌	for pH: (<2 or >12 unless noted)
13. Are matrices	s correctly identified on Chain	of Custody?	Yes 🗸	No 🗌	Adjusted?
14, Is it clear wh	nat analyses were requested?		Yes 🗸	No 🗌	
	ding times able to be met? customer for authorization.)		Yes 🗸	No 🗌	Checked by:
Special Hand	iling (if applicable)				
16. Was client r	notified of all discrepancies wit	h this order?	Yes	No 🗌	NA 🗹
Person	n Notified:	Date	THE LATER BUILDING TO SERVE STREET	× 1000	4
By Wh	hom:	Via:	eMail	Phone Fax	☐ In Person
Regar	rding:				
Client	Instructions:				
17. Additional r	remarks:	THE RESERVE OF THE PARTY OF THE			and the second s
18. Cooler Info					
Cooler N			Seal Date	Signed By	
þ	3.8 Good Y	'es			

0	hain	-of-Cu	ustody Record	Turn-Around	Time:					ы	AI		EN	uv.	TE	20	N P	ЛF	NT	AL	
			ring, LLC	Standard	□ Rush															OR	
		•	·	Project Name	a :				5 /			.hall									
ailing	Address	501 A	inport Dr. Sulte 205	COP San	Juan 28	1-7 #155E		49	01 H	awkir	ns N	E -	Albu	uque	arqu	e, N	M 87	109			
			67401	Project #:				Te	l. 50	5-34	5-39	75	Fa	ax :	505-	345	4107	7			
		716-										Ar	naly	sis	Req	uest					
nail o	r Fax#: V	woods@	ruleen incering com	Project Mana	ager:		=	nly)	(SINE)					8							
VQC	Package:		0	No. W.			s (8021)	(Gas only)	-			MS)		04,8	CB's						
-	itation		☐ Level 4 (Full Validation)	Heather		1 11 1 11 11	781		ORG			S		D'2	82 F						
NEL		□ Othe	er	Sampler: He	ZYes Wa	ods/Justin Valdra	1	+ TPH	1/0	8.1)	74.1	8270		N.E	/ 80		8				S
EDD	(Type)			Sample Tem		218	E +	띪	(GR	d 41	50	o	tals	S.	des	2	0				ک
)ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX + NATBE	BTEX + MTBE	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
5/16	1340	Soil	SB-3@1	(1) 402 (1)	Cold	-001	Χ		χ												
_																			T		
												\neg	1								
			MES	4																	
											T										
te:	Time:	Relinquish		Received by:	. \	Date Time	Ren	narks	S: D	irect	Ball	to	Con	DCC	Pni.	Hip	S				
114	1715	Thai	the M. Woods	Mister	e Walte	7/15/16 1715				HILL											
ite:	Time:	Relinquish	ned by:	Received by:	1) Date Time	50	peru	1201	Eru	inv										
// Le	1841	MIL	Stripalle	1 4	7	1414 0845	_			r. L.		_	_								
1	f necessary,	samples sub	mitted to Hall Environmental may be sub-	contracted to other a	ceredited laboratorio	es. This serves as notice of this	s possit	bility.	Any su	ib-cortr	acted	data v	vill be	dear	y rota	iteo or	भाभ वा	ralytica	il repor	rL	



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

October 06, 2016

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

FAX

RE: San Juan 28-7 155E

OrderNo.: 1610087

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/4/2016 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

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1610087

Date Reported: 10/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: San Juan 28-7 155E

Lab ID: 1610087-001

Client Sample ID: SC-1

Collection Date: 10/3/2016 10:15:00 AM

Received Date: 10/4/2016 7:10:00 AM

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	S			Analys	: TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	10/5/2016 1:12:41 PM	27886
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	10/5/2016 1:12:41 PM	27886
Surr: DNOP	94.8	70-130	%Rec	1	10/5/2016 1:12:41 PM	27886
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/5/2016 2:52:00 PM	27885
Surr: BFB	88.2	68.3-144	%Rec	1	10/5/2016 2:52:00 PM	27885
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.024	mg/Kg	1	10/5/2016 2:52:00 PM	27885
Toluene	ND	0.049	mg/Kg	1	10/5/2016 2:52:00 PM	27885
Ethylbenzene	ND	0.049	mg/Kg	1	10/5/2016 2:52:00 PM	27885
Xylenes, Total	ND	0.098	mg/Kg	1.	10/5/2016 2:52:00 PM	27885
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	10/5/2016 2:52:00 PM	27885

Matrix: SOIL

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

- 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

Lab Order 1610087

Date Reported: 10/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: San Juan 28-7 155E

Lab ID: 1610087-002

Client Sample ID: SC-4

Collection Date: 10/3/2016 10:30:00 AM

Received Date: 10/4/2016 7:10:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	: том
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/5/2016 1:37:16 PM	27886
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/5/2016 1:37:16 PM	27886
Surr: DNOP	101	70-130	%Rec	1	10/5/2016 1:37:16 PM	27886
EPA METHOD 8015D: GASOLINE RAN	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	10/5/2016 4:02:32 PM	27885
Surr: BFB	86.2	68.3-144	%Rec	1	10/5/2016 4:02:32 PM	27885
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	10/5/2016 4:02:32 PM	27885
Toluene	ND	0.050	mg/Kg	1	10/5/2016 4:02:32 PM	27885
Ethylbenzene	ND	0.050	mg/Kg	1	10/5/2016 4:02:32 PM	27885
Xylenes, Total	ND	0.099	mg/Kg	1	10/5/2016 4:02:32 PM	27885
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	10/5/2016 4:02:32 PM	27885

Matrix: SOIL

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

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

Lab Order 1610087

Date Reported: 10/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC Client Sample ID: SC-5

 Project:
 San Juan 28-7 155E
 Collection Date: 10/3/2016 10:35:00 AM

 Lab ID:
 1610087-003
 Matrix: SOIL
 Received Date: 10/4/2016 7:10:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	10/5/2016 1:59:05 PM	27886
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/5/2016 1:59:05 PM	27886
Surr: DNOP	101	70-130	%Rec	1	10/5/2016 1:59:05 PM	27886
EPA METHOD 8015D: GASOLINE RAN	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/5/2016 5:12:38 PM	27885
Surr: BFB	89.0	68.3-144	%Rec	1	10/5/2016 5:12:38 PM	27885
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	10/5/2016 5:12:38 PM	27885
Toluene	ND	0.049	mg/Kg	1	10/5/2016 5:12:38 PM	27885
Ethylbenzene	ND	0.049	mg/Kg	1	10/5/2016 5:12:38 PM	27885
Xylenes, Total	ND	0.097	mg/Kg	1	10/5/2016 5:12:38 PM	27885
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	10/5/2016 5:12:38 PM	27885

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

- 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 3 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#: **1610087**

06-Oct-16

Client:

Rule Engineering LLC

Project:

San Juan 28-7 155E

Project: San Juan	28-7 155E							
Sample ID LCS-27886	SampType	: LCS	Test	Code: EPA Meth	od 8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch ID:	27886	R	unNo: 37693				
Prep Date: 10/4/2016	Analysis Date:	10/5/2016	S	eqNo: 1174187	Units: mg/F	(g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLin	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10 50.00	0	84.3 62	2.6 124			
Surr: DNOP	4.0	5.000		80.5	70 130			
Sample ID MB-27886	SampType	: MBLK	Test	Code: EPA Meth	od 8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch ID:	27886	R	unNo: 37693				
Prep Date: 10/4/2016	Analysis Date:	10/5/2016	S	eqNo: 1174188	Units: mg/h	(g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLin	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10						
Motor Oil Range Organics (MRO)	ND	50						
Surr: DNOP	8.7	10.00		86.8	70 130			
Sample ID 1610087-001AMS	SampType	: MS	Test	Code: EPA Meth	od 8015M/D: Di	esel Rang	e Organics	
Client ID: SC-1	Batch ID:	27886	R	unNo: 37693				
Prep Date: 10/4/2016	Analysis Date:	10/5/2016	S	eqNo: 1174301	Units: mg/h	(g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLin	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.6 47.76	3.203	78.6 33	3.9 141			
Surr: DNOP	3.8	4.776		80.6	70 130			
Sample ID 1610087-001AMS	D SampType	MSD	Test	Code: EPA Meth	od 8015M/D: Di	esel Rang	e Organics	
Client ID: SC-1	Batch ID:	27886	R	unNo: 37693				
Prep Date: 10/4/2016	Analysis Date:	10/5/2016	0	egNo: 1174388	Units: mg/h			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Diesel Range Organics (DRO)

Surr: DNOP

H Holding times for preparation or analysis exceeded

Result

45

4.0

PQL

9.5

SPK value SPK Ref Val

3.203

47.57

4.757

- 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

%REC

84.3

LowLimit

33.9

70

HighLimit

130

%RPD

9.87

0

RPDLimit

20

0

Qual

- J Analyte detected below quantitation limits
- Page 4 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#: 1610087

06-Oct-16

Client: Project:

Rule Engineering LLC San Juan 28-7 155E

Sample ID MB-27885

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS

Batch ID: 27885

RunNo: 37701

%REC

Prep Date: 10/4/2016 Analysis Date: 10/5/2016

Units: mg/Kg

Analyte

PQL

SeqNo: 1174827

144

HighLimit

%RPD **RPDLimit** Qual

Gasoline Range Organics (GRO)

Result ND 850

1000

25.00

1000

994.0

SPK value SPK Ref Val

84.7 68.3

74.6

LowLimit

Surr: BFB

SampType: LCS

5.0

TestCode: EPA Method 8015D: Gasoline Range

Sample ID LCS-27885 Client ID:

LCSS

Batch ID: 27885

RunNo: 37701

Prep Date:

10/4/2016

Analysis Date: 10/5/2016

30

SeqNo: 1174828

Units: mg/Kg HighLimit

Analyte

Gasoline Range Organics (GRO)

Result PQL SPK value

SPK Ref Val %REC LowLimit

118

%RPD **RPDLimit** Qual

Surr: BFB

920

5.0

92.4

123 68.3 144

Sample ID 1610087-002AMS Client ID:

SampType: MS SC-4 Batch ID: 27885 TestCode: EPA Method 8015D: Gasoline Range RunNo: 37701

0

Units: mg/Kg

143

144

Analyte Surr: BFB

Prep Date:

Gasoline Range Organics (GRO)

10/4/2016

Analysis Date: 10/5/2016 Result PQL 30 5.0

SPK value SPK Ref Val 24.85 0

%REC LowLimit 120 59.3

SeaNo: 1174831

HighLimit

RPDLimit Qual

%RPD

Qual

S

Sample ID 1610087-002AMSD

Prep Date:

10/4/2016

SampType: MSD

TestCode: EPA Method 8015D: Gasoline Range

Client ID: SC-4

Batch ID: 27885

RunNo: 37701

97.9

Units: mg/Kg

RPDLimit

Analyte

Result

Analysis Date: 10/5/2016 POL SPK value SPK Ref Val

4.9

0

SeqNo: 1174832

68.3

68.3

HighLimit

%RPD

20

Gasoline Range Organics (GRO) Surr: BFB

36 950

970

24.70 988.1

%REC 145

96.6

LowLimit

59.3

143 144

0

18.6

0

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- 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
- 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 container temperature is out of limit as specified

Page 5 of 6

Hall Environmental Analysis Laboratory, Inc.

WO#: 1610087

06-Oct-16

Client:

Rule Engineering LLC

Project:	San Juan	28-7 155E									
Sample ID	MB-27885	SampT	ype: ME	BLK	Test	Code: EF	PA Method	8021B: Volat	tiles		
Client ID:	PBS	Batch	ID: 27	885	R	unNo: 3	7701				
Prep Date:	10/4/2016	Analysis D	ate: 10	/5/2016	S	eqNo: 1	174838	Units: mg/K	ζg		
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-Brom	nofluorobenzene	1.0		1.000		100	80	120			
Sample ID	LCS-27885	SampT	ype: LC	S	Test	Code: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batch	1D: 27	885	R	unNo: 3	7701				
Prep Date:	10/4/2016	Analysis D	ate: 10	0/5/2016	S	eqNo: 1	174839	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.95	0.025	1.000	0	95.3	75.2	115			
Toluene		0.97	0.050	1.000	0	97.0	80.7	112			
Ethylbenzene		1.0	0.050	1.000	0	101	78.9	117			
Xylenes, Total		3.0	0.10	3.000	0	99.8	79.2	115			
Surr 4-Brow	nofluorobenzene	1.1		1.000		105	80	120			
	TOTILLOTODETIZETTE	Ja I		1.000		105	00	120			
	1610087-001AMS		уре: М		Tes			8021B: Vola	tiles		
	1610087-001AMS	SampT	ype: MS	3			PA Method		tiles		
Sample ID Client ID:	1610087-001AMS	SampT	n ID: 27	885	R	tCode: El	PA Method				
Sample ID Client ID:	1610087-001AMS SC-1	SampT	n ID: 27	885 0/5/2016	R	tCode: El	PA Method	8021B: Vola		RPDLimit	Qual
Sample ID Client ID: Prep Date:	1610087-001AMS SC-1	SampT Batch Analysis D	n ID: 27 0	885 0/5/2016	R	tCode: El tunNo: 3' seqNo: 1	PA Method 7701 174841	8021B: Volar	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte	1610087-001AMS SC-1	SampT Batch Analysis D Result	n ID: 27 Pate: 1 0	885 0/5/2016 SPK value	R S SPK Ref Val	tCode: El RunNo: 3' SeqNo: 1' %REC	PA Method 7701 174841 LowLimit	8021B: Volati Units: mg/K HighLimit	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene	1610087-001AMS SC-1	SampT Batch Analysis D Result 0.94	PQL 0.025	885 0/5/2016 SPK value 0.9843	SPK Ref Val	tCode: El tunNo: 3 teqNo: 1 %REC 95.5	PA Method 7701 174841 LowLimit 71.5	8021B: Volate Units: mg/F HighLimit 122	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1610087-001AMS SC-1	SampT Batch Analysis D Result 0.94 1.0	PQL 0.025 0.049	885 0/5/2016 SPK value 0.9843 0.9843	SPK Ref Val	RunNo: 3 ReqNo: 1 REC 95.5 104	PA Method 7701 174841 LowLimit 71.5 71.2	8021B: Volar Units: mg/k HighLimit 122 123	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1610087-001AMS SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1	PQL 0.025 0.049	8885 0/5/2016 SPK value 0.9843 0.9843 0.9843	SPK Ref Val 0 0 0	RunNo: 3' SeqNo: 1' %REC 95.5 104 112	PA Method 7701 174841 LowLimit 71.5 71.2 75.2	8021B: Volate Units: mg/K HighLimit 122 123 130	(g	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom	1610087-001AMS SC-1 10/4/2016	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1	PQL 0.025 0.049	8885 0/5/2016 SPK value 0.9843 0.9843 2.953 0.9843	SPK Ref Val 0 0 0 0	RunNo: 3° SeqNo: 1° SeqNo:	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80	8021B: Volate Units: mg/F HighLimit 122 123 130 131	(g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom	1610087-001AMS SC-1 10/4/2016	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1	PQL 0.025 0.049 0.098	SPK value 0.9843 0.9843 0.9843 2.953 0.9843	SPK Ref Val 0 0 0 0 Tes	RunNo: 3° SeqNo: 1° SeqNo:	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80	8021B: Volate Units: mg/F HighLimit 122 123 130 131 120	(g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom	1610087-001AMS SC-1 10/4/2016 nofluorobenzene 1610087-001AMSE SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1	PQL 0.025 0.049 0.098 0.098 0.098	SPK value 0.9843 0.9843 0.9843 2.953 0.9843	SPK Ref Val 0 0 0 0 Tess	RunNo: 3 ReqNo: 1 REC 95.5 104 112 110 107	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80 PA Method	8021B: Volate Units: mg/F HighLimit 122 123 130 131 120	%RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID:	1610087-001AMS SC-1 10/4/2016 nofluorobenzene 1610087-001AMSE SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1 SampT Batch	PQL 0.025 0.049 0.098 0.098 0.098	SPK value 0.9843 0.9843 0.9843 2.953 0.9843 8D 885	SPK Ref Val 0 0 0 0 Tess	RunNo: 3 ReqNo: 1 %REC 95.5 104 112 110 107 RCOde: El	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80 PA Method	8021B: Volar Units: mg/k HighLimit 122 123 130 131 120 8021B: Volar	%RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date:	1610087-001AMS SC-1 10/4/2016 nofluorobenzene 1610087-001AMSE SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1 D SampT Batch Analysis D	PQL 0.025 0.049 0.098 0.098 0.098 0.098	SPK value 0.9843 0.9843 0.9843 2.953 0.9843 8D 885	SPK Ref Val 0 0 0 0 Tesi	8 ceqNo: 1 2 3 5 ceqNo: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 7701	8021B: Volar Units: mg/k HighLimit 122 123 130 131 120 8021B: Volar Units: mg/k	%RPD		
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte	1610087-001AMS SC-1 10/4/2016 nofluorobenzene 1610087-001AMSE SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1 D SampT Batch Analysis D Result	PQL 0.025 0.049 0.098 0.008 0.008 0.008 0.008 0.008 0.008 0.008 0.	8885 0/5/2016 SPK value 0.9843 0.9843 2.953 0.9843 6D 8885 0/5/2016 SPK value	SPK Ref Val 0 0 0 0 Test SPK Ref Val 0 0	Rec 2006: El 2007: REC 2007: 100 100 100 100 100 100 100 100 100 10	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 7701 174842 LowLimit	8021B: Volar Units: mg/k HighLimit 122 123 130 131 120 8021B: Volar Units: mg/k HighLimit	%RPD tiles %RPD	RPDLimit 20 20	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene	1610087-001AMS SC-1 10/4/2016 nofluorobenzene 1610087-001AMSE SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1 D SampT Batch Analysis D Result 0.99 1.0 1.0	PQL 0.025 0.049 0.098 0.	SPK value 0.9843 0.9843 0.9843 2.953 0.9843 8D 885 0/5/2016 SPK value 0.9569 0.9569 0.9569	SPK Ref Val 0 0 0 0 Test SPK Ref Val 0	RunNo: 3 SeqNo: 1 %REC 95.5 104 112 110 107 RunNo: 3 SeqNo: 1 %REC 103 104 107	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 7701 174842 LowLimit 71.5 71.2 75.2	8021B: Volar Units: mg/k HighLimit 122 123 130 131 120 8021B: Volar Units: mg/k HighLimit 122	%RPD tiles %RPD 4.91	RPDLimit 20 20 20 20	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1610087-001AMS SC-1 10/4/2016 nofluorobenzene 1610087-001AMSE SC-1	SampT Batch Analysis D Result 0.94 1.0 1.1 3.3 1.1 D SampT Batch Analysis D Result 0.99 1.0	PQL 0.025 0.049 0.098 0.	SPK value 0.9843 0.9843 0.9843 2.953 0.9843 6D 885 0/5/2016 SPK value 0.9569 0.9569	SPK Ref Val 0 0 0 0 Test SPK Ref Val 0 0	Rec El RunNo: 3 SeqNo: 1 %REC 110 107 RunNo: 3 SeqNo: 1 %REC 103 104	PA Method 7701 174841 LowLimit 71.5 71.2 75.2 72.4 80 PA Method 7701 174842 LowLimit 71.5 71.2	8021B: Volar Units: mg/k HighLimit 122 123 130 131 120 8021B: Volar Units: mg/k HighLimit 122 123	(g %RPD tiles %RPD 4.91 2.56	RPDLimit 20 20	

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded H
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 6 of 6

- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com **RULE ENGINEERING LL** Client Name: Work Order Number: 1610087 RcptNo: 1 10/04/16 Received by/date: am Ilm Logged By: 10/4/2016 7:10:00 AM **Anne Thorne** ame Ihr Completed By: Anne Thorne 10/4/2016 Reviewed By: , 60/4/16 Chain of Custody Yes V No 🗌 Not Present 1. Custody seals intact on sample bottles? No 🗆 Not Present 2. Is Chain of Custody complete? Yes V 3. How was the sample delivered? Courier Log In No 🗌 NA 🗌 Yes 🗸 4. Was an attempt made to cool the samples? NA 🗌 No 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes V No 🗌 6. Sample(s) in proper container(s)? Yes V 7. Sufficient sample volume for indicated test(s)? No 🗌 Yes 🗸 8. Are samples (except VOA and ONG) properly preserved? Yes No 🗹 NA 🗌 9. Was preservative added to bottles? No 🗌 Yes No VOA Vials 10. VOA vials have zero headspace? Yes No 🗸 11. Were any sample containers received broken? # of preserved bottles checked Yes 🗸 No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗔 13. Are matrices correctly identified on Chain of Custody? Yes V No 🗌 Yes 🗸 14. Is it clear what analyses were requested? Yes 🗸 No 🗌 Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 No 🗌 NA 🗸 16. Was client notified of all discrepancies with this order? Person Notified: Date By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Condition Cooler No Temp °C Seal Intact | Seal No | Seal Date Signed By Good

C	hain-	-of-Cu	stody Record	Turn-Around	Time:									NI V	TE	20	BIB	4EI	NT	W I	
Client:	Rule '	Enginee	ning, LLC	Standard Project Name				S.S.		F	N	AL	YS	SIS	S L	A	30			RY	P II
Mailing	Address			1			_					v.hal									
			months suite 2005	Project #	n 328-1	155 SE								-			M 87				
			47401	- Tojoot ir.				Te	el. 50)5-34	45-3					345- uesi	4107	7	1	·, · · · ·	
		793 94		Drainet Mana				5	a l	7			many		Req	ues					
OA/OC I	Package:	valcez	@ruleengineering.co	AProject Mana	ger:		21)	on		\$ \f				SO4	3,8						
Stan			☐ Level 4 (Full Validation)	Hankhan	Woods		TEN (8021)	BTEX + MTBE + TPH (Gas only)	(TPH 8015B (GRO / DRO /	517		PAH's (8310 or 8270 SIMS)		Anions (F,CI,NO3,NO2,PO4,SO4)	PCB's						
Accredi				Sampler: \	etia Vald	20	儠	H-	DR	_	=	20 S		102,1	082						
□ NEL	AP	□ Othe	er	On Ice:	stin Vald AYes	□ No ()	+	+	RO,	18.	.40	827		03,1	8/8		(F)				or N
□ EDD	(Type)_		1	Sample Tem	perature:	00	H	BE	3 (G	od 4	od 5	0 0	etals	Ž	cide	(A	Ϋ́				5
				Container	Preservative	A SAN DE PROPERTY.	1 +	Σ)15E	/leth	EDB (Method 504.1)	(831	RCRA 8 Metals	F)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Type and #	Type	HEAL NO HEAL	×	Ä	H 8(H	S) B(H's	KA.	ions	81 F	60B	0/				Buk
					4	Ke10187		ВТ	F	유	山	PA	8	Ą	8	82	82	_	\bot		Ą
10/3/16		Soil	50-1	402 Glass	Cold	-001	+		×												
10/3/18	1030	Soil	56-4			002	7		X												
10/3/14	1035	Soil	50-5	1	V	7003	7		X												
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																			+	+	
Date:	Time:	Relinquish	ed by:	Received by:		Date Time	Rer	mark	s:												
10/3/16	418	(Tustin	Colder	Heather	M. Wood	L 10/3/16 16/18															
Date:	Time:	Relinquish	ed by:	Received by:	,)	Date Time	1														
10/3/14	1044	Flear	th.M. Woods	Must	ne Wall	en "/3/10 1444															
0/3/14	necessary,	Samples sub	mitted to Hall Environmental may be sub	contracted to other a	ccredited laboratories	es. This serves as notice of this	possi O	bility.	Any si	ub-con	tracte	d data	will be	e clear	ly nota	ated or	n the a	nalytical	report.		



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

October 06, 2016

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

FAX

RE: San Juan 28-7 155E OrderNo.: 1610082

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/4/2016 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1610082

Date Reported: 10/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: San Juan 28-7 155E

Lab ID: 1610082-001

Client Sample ID: SC-2

Collection Date: 10/3/2016 12:30:00 PM

Received Date: 10/4/2016 7:10:00 AM

Analyses	Result	PQL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S				Analyst	том
Diesel Range Organics (DRO)	65	9.8		mg/Kg	1	10/4/2016 9:57:32 AM	27865
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/4/2016 9:57:32 AM	27865
Surr: DNOP	88.5	70-130		%Rec	1	10/4/2016 9:57:32 AM	27865
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	NSB
Gasoline Range Organics (GRO)	190	17		mg/Kg	5	10/4/2016 11:24:15 AM	27846
Surr: BFB	184	68.3-144	S	%Rec	5	10/4/2016 11:24:15 AM	27846
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	0.16	0.085		mg/Kg	5	10/4/2016 11:24:15 AM	27846
Toluene	. 2.3	0.17		mg/Kg	5	10/4/2016 11:24:15 AM	27846
Ethylbenzene	0.43	0.17		mg/Kg	5	10/4/2016 11:24:15 AM	27846
Xylenes, Total	6.9	0.34		mg/Kg	5	10/4/2016 11:24:15 AM	27846
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	5	10/4/2016 11:24:15 AM	27846

Matrix: SOIL

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

- 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 5
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1610082

Date Reported: 10/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: San Juan 28-7 155E

Lab ID: 1610082-002

Client Sample ID: SC-3

Collection Date: 10/3/2016 12:40:00 PM

Received Date: 10/4/2016 7:10:00 AM

Analyses	Result	PQL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	том
Diesel Range Organics (DRO)	29	9.8	mg/Kg	1	10/4/2016 10:19:09 AM	27865
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/4/2016 10:19:09 AM	27865
Surr: DNOP	93.4	70-130	%Rec	1	10/4/2016 10:19:09 AM	27865
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	18	mg/Kg	5	10/4/2016 11:47:50 AM	27846
Surr: BFB	99.4	68.3-144	%Rec	5	10/4/2016 11:47:50 AM	27846
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.089	mg/Kg	5	10/4/2016 11:47:50 AM	27846
Toluene	ND	0.18	mg/Kg	5	10/4/2016 11:47:50 AM	27846
Ethylbenzene	ND	0.18	mg/Kg	5	10/4/2016 11:47:50 AM	27846
Xylenes, Total	ND	0.36	mg/Kg	5	10/4/2016 11:47:50 AM	27846
Surr: 4-Bromofluorobenzene	107	80-120	%Rec	5	10/4/2016 11:47:50 AM	27846

Matrix: SOIL

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

- 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 2 of 5
- 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.

8.0

WO#:

1610082

06-Oct-16

Client:

Rule Engineering LLC

Surr: DNOP

20 7 1550

Project: San Jua	n 28-7 155E									
Sample ID LCS-27865	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch	ID: 27	865	F	RunNo: 3	7650				
Prep Date: 10/4/2016	Analysis D	ate: 10	0/4/2016	8	SeqNo: 1	172655	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.4	62.6	124			
Surr: DNOP	4.1		5.000	- Horizon	82.7	70	130			
Sample ID MB-27865	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch	ID: 27	865	F	RunNo: 3	7650				
Prep Date: 10/4/2016	Analysis D	ate: 10	0/4/2016	8	SeqNo: 1	172656	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								

80.2

70

130

10.00

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % 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 J
- Page 3 of 5

- P Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610082 06-Oct-16

Client:

Rule Engineering LLC

Project:

Analyte

San Juan 28-7 155E

Sample ID MB-27846

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS

Batch ID: 27846

PQL

5.0

RunNo: 37668

%REC

Prep Date: 10/3/2016 Analysis Date: 10/4/2016

SeqNo: 1173372

Units: mg/Kg

HighLimit

RPDLimit Qual

Gasoline Range Organics (GRO)

ND

84.5

%RPD

Surr: BFB

850

1000

SPK value SPK Ref Val

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

LowLimit

68.3

144

Sample ID LCS-27846

LCSS

SampType: LCS

930

Result

RunNo: 37668

0

Prep Date: 10/3/2016

Client ID:

Batch ID: 27846 Analysis Date: 10/4/2016

SeqNo: 1173373 %REC

Units: mg/Kg

RPDLimit

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result PQL 30 5.0

SPK value SPK Ref Val 25.00 1000

119 92.5 74.6 68.3 123 144

HighLimit %RPD Qual

Qualifiers:

D

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded H

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits % Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank В

E

Analyte detected below quantitation limits J

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Value above quantitation range

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610082

06-Oct-16

Client:

Rule Engineering LLC

Project:

San Juan 28-7 155E

Sample ID MB-27846	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	846	R								
Prep Date: 10/3/2016	0/4/2016	S								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID LCS-27846	nple ID LCS-27846 SampType: LCS					TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batch	n ID: 27	846	R											
Prep Date: 10/3/2016	Analysis Date: 10/4/2016			S	SeqNo: 1	173384	Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit %RPD		RPDLimit	Qual					
Benzene	0.88	0.025	1.000	0	88.3	75.2	115								
Toluene	0.95	0.050	1.000	0	94.9	80.7	112								
Ethylbenzene	1.0	0.050	1.000	0	102	78.9	117								
Xylenes, Total	3.1	0.10	3.000	0	102	79.2	115								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120								

- 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
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 5 of 5

- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified



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:	r: 1610	082		RcptNo:	11		
Received by/d	ate: A-10	104/14					
Logged By:	Anne Thorne	10/4/2016 7:10:00 AN	1		ame A	K	
Completed By	: Anne Thorne	10/4/2016			ame A	<u></u>	
Reviewed By:	25	1014 116					
Chain of Cu	<u>istody</u>						
1. Custody s	eals intact on sample bo	ttles?	Yes		No 🗆	Not Present ✓	
2. Is Chain of Custody complete?				\checkmark	No 🗆	Not Present	
3. How was t	Cour	<u>ier</u>					
Log In							
4. Was an a	ttempt made to cool the	samples?	Yes	\checkmark	No 🗆	□ NA □	
5. Were all s	amples received at a ter	nperature of >0° C to 6.0°C	Yes	\checkmark	No 🗆	NA 🗆	
6. Sample(s)	in proper container(s)?		Yes	V	No []	,
7. Sufficient	sample volume for indica	ated test(s)?	Yes	\checkmark	No []	
8. Are samples (except VOA and ONG) properly preserved?				✓	No .]	
9. Was prese	ervative added to bottles	?	Yes		No 🗸	NA 🗆	
10.VOA vials	have zero headspace?		. 00		No 🗆	110 1071 11010	
11. Were any	sample containers rece	ived broken?	Yes		No ¥	# of preserved bottles checked	
12. Does pape	erwork match bottle labe	ls?	Yes	✓	No 🗆	for pH:	
(Note disc	repancies on chain of cu	stody)		_	_	Objective Address of O	or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?				✓	No L	_	
14. Is it clear what analyses were requested?				\checkmark	No C		
	olding times able to be r fy customer for authorize		Yes	✓	No L	Checked by.	
		*					
Special Har	ndling (if applicable	<u>e)</u>					
16. Was client	t notified of all discrepan	cies with this order?	Yes		No 🗆	NA ☑	¬
Pers	son Notified:	Date	rentranta alla	* ****			
By V	Vhom:	Via:	☐ eMa	ail 🔲 F	Phone Fa	ax In Person	
	arding:	erante de regionalité de la company de la co			Franchista shakara thiff hadd	e due a contra e desa e disentanta a servici par s	
	nt Instructions:		_				
17. Additiona							
18. Cooler In		ition Seal Intact Seal No	Seel D	ata I.	Signed By	. 1	
1	1.0 Good	Yes Yes	Oeal Di	210	Signed by		
						-	

Chain-of-Custody Record		Turn-Around Time:						-	10		E	NV	TE	0	MIN	4FI	MT	ΔI			
:lient: Rule Engineering, LLC		□ Standard ☑ Rush Same Day Project Name:				HALL ENVIRONMENTAL ANALYSIS LABORATORY															
						www.hallenvironmental.com															
failing Address: (N) (N) (N)		(1) 207 100				4901 Hawkins NE - Albuquerque, NM 87109															
Tailing Address: 501 Airport Dr. Suite		San Juan 28-7 1555 Project #:				Tel. 505-345-3975 Fax 505-345-4107															
DS.	tami	ngton, N	74 8 1401 70- 9401	,				Analysis Request													
D5 Farmington, NM 87401 hone #: 78 505 793 9486		Project Manager:				2	6				liai,						100				
Mail or Fax#: jualdez@Meengineering.com		Project Manager.				on	MR					SO,	B's								
Stan			☐ Level 4 (Full Validation)	Heatner Woods				Gas	DRO / MRO)			SIMS)		Po	2	İ					
ccredi				Sampler: \	Stin Val	den	+ James (8021)	TPH (Gas only)	PR			20 S		02,	082						
] NEL	AP	□ Othe	r	Sampler: Justin Vallez On Lee: RY'es INO				+	(GRO)	18	4.	827		3,7	8/8		₹				P
1 EDD	(Type)			Sample Temperature:			品	MTBE	<u>0</u>	bd 4	0d 5	0 0	etals	Ž,	ide	F	ξ				کا
				AT 10/04/16	Dragonistivo	HEAL No.	量	Σ	8015B	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	(VOA)	(Semi-VOA)				Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Type and #	Type	HEAL No.	×	*	1 80	3	8	J's (R.	suo	7 P	8260B	5) 0.	1			Bab
				MOH Ket		1410082	BTEX	BTEX	TPH	교		PA	RC	Ani	808	826	8270				Ąi
13/16	1230	Soil	56-2	402 6 luss	Cold	70	+		+												
13/16	1240	Soil	54-3	Mot HKet	Cold	7002	4		+												
-													,								
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		-					-											-	+	+	+
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ate:	Time:	Refinquishe	ed by: i / /	Received by:		Date Time	Rer	nark	e.												\dashv
3/10 4:33 (Juni) Male		Heath M. Whord 10/3/16 1633				Remarks:															
Pate: Time: Relinquished by:		Received by: Date Time																			
Oh 1144 Heath M. Whomas		Church	(Mister Was to 10/3/16 1644)																		
17113	f necessary,	samples subn	nitted to Hall Environmental may be subc	intracted to other ac	credited laboratorio		s possi	bility.	Any su	ib-con	tracted	d data	will be	e clear	ly nota	ated on	the a	nalytica	ıl repor	t.	