

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NMOC
AUG 06 2018
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.
DISTRICT III

Form C-141
Revised April 3, 2017

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Hilcorp Energy Company	Contact Clara Cardoza	
Address 382 CR 310 Aztec NM 87410	Telephone No. 505-564-0733	
Facility Name Zachry 48	Facility Type Well	
Surface Owner Federal	Mineral Owner Federal	API No. 30-045-25608

LOCATION OF RELEASE

Unit Letter G	Section 34	Township 29N	Range 10W	Feet from the 1980	North/South Line North	Feet from the 2145	East/West Line East	County San Juan
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Latitude 36.6843071 Longitude -107.8706284 NAD83

NATURE OF RELEASE

Type of Release Condensate	Volume of Release 12 gallons	Volume Recovered none
Source of Release Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 12/27/2017 04:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? NMOCD – Cory Smith BLM – Whitney Thomas	
By Whom?	Date and Hour 1/16/2018 Cory Smith @ 1:42 pm and Whitney Thomas @ 4:21 pm (left message because this was 2 nd attempt to reach) followed up with email to both on 1/16/2018	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

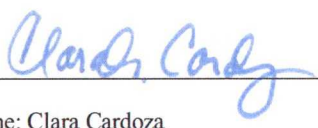
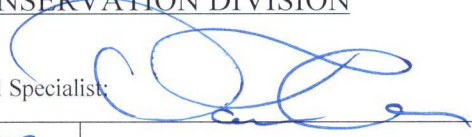
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A dump line from a condensate tank split do to cold temperatures. Initially the release was thought to be 12 gallons, the visually impacted soil, and the area of release was clean up. Later, on January 16, 2018 when facilities were being moved due to a recomplete job that was about to happen, the area under the tank was found to be impacted.

Describe Area Affected and Cleanup Action Taken.*

Hilcorp began excavating the impacted soil and removed approximately 135 cubic yards of impacted soil taken to Envirotech for landfarming. Attached are confirmation samples SC1-SC6 and a figure of the excavated area.

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





Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Clara Cardoza	Approved by Environmental Specialist: 	
Title: Environmental Specialist	Approval Date: 8/16/18	Expiration Date:
E-mail Address: ccardoza@hilcorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 08/03/2018	Phone: 505-564-0733	

* Attach Additional Sheets If Necessary

NCS1801735085

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Legend

-  Approximate Inner Wall of Excavation
-  Former Above Ground Storage Tank (AGT)
-  Former Below Grade Tank (BGT)
-  Former Berm



Source: Google Maps

Rule Engineering, LLC
Solutions to Regulations for Industry

0 3 6 12 18 Feet
1 inch = 8 feet



G-S34-T29N-R10W
N36.68453, W107.87039
San Juan County, NM
API: 30-045-25608

Figure A
Site Assessment Map
Zachry #48



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

January 24, 2018

Heather Woods

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

RE: Zachary #48

OrderNo.: 1801A37

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/23/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-1

Project: Zachary #48

Collection Date: 1/22/2018 9:30:00 AM

Lab ID: 1801A37-001

Matrix: SOIL

Received Date: 1/23/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/23/2018 11:26:25 AM	36142
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/23/2018 11:26:25 AM	36142
Surr: DNOP	94.9	70-130		%Rec	1	1/23/2018 11:26:25 AM	36142
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	1/23/2018 10:34:02 AM	36131
Surr: BFB	82.7	15-316		%Rec	1	1/23/2018 10:34:02 AM	36131
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	1/23/2018 10:34:02 AM	36131
Toluene	ND	0.043		mg/Kg	1	1/23/2018 10:34:02 AM	36131
Ethylbenzene	ND	0.043		mg/Kg	1	1/23/2018 10:34:02 AM	36131
Xylenes, Total	ND	0.085		mg/Kg	1	1/23/2018 10:34:02 AM	36131
Surr: 4-Bromofluorobenzene	89.0	80-120		%Rec	1	1/23/2018 10:34:02 AM	36131

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 9
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1801A37

Date Reported: 1/24/2018

CLIENT: Rule Engineering LLC

Client Sample ID: SC-2

Project: Zachary #48

Collection Date: 1/22/2018 9:35:00 AM

Lab ID: 1801A37-002

Matrix: SOIL

Received Date: 1/23/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/23/2018 11:48:31 AM	36142
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/23/2018 11:48:31 AM	36142
Surr: DNOP	99.3	70-130		%Rec	1	1/23/2018 11:48:31 AM	36142
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/23/2018 10:57:24 AM	36131
Surr: BFB	81.5	15-316		%Rec	1	1/23/2018 10:57:24 AM	36131
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/23/2018 10:57:24 AM	36131
Toluene	ND	0.047		mg/Kg	1	1/23/2018 10:57:24 AM	36131
Ethylbenzene	ND	0.047		mg/Kg	1	1/23/2018 10:57:24 AM	36131
Xylenes, Total	ND	0.093		mg/Kg	1	1/23/2018 10:57:24 AM	36131
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	1/23/2018 10:57:24 AM	36131

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1801A37

Date Reported: 1/24/2018

CLIENT: Rule Engineering LLC

Client Sample ID: SC-3

Project: Zachary #48

Collection Date: 1/22/2018 9:40:00 AM

Lab ID: 1801A37-003

Matrix: SOIL

Received Date: 1/23/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/23/2018 12:10:25 PM	36142
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/23/2018 12:10:25 PM	36142
Surr: DNOP	95.8	70-130		%Rec	1	1/23/2018 12:10:25 PM	36142
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	1/23/2018 11:20:52 AM	36131
Surr: BFB	80.8	15-316		%Rec	1	1/23/2018 11:20:52 AM	36131
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	1/23/2018 11:20:52 AM	36131
Toluene	ND	0.040		mg/Kg	1	1/23/2018 11:20:52 AM	36131
Ethylbenzene	ND	0.040		mg/Kg	1	1/23/2018 11:20:52 AM	36131
Xylenes, Total	ND	0.080		mg/Kg	1	1/23/2018 11:20:52 AM	36131
Surr: 4-Bromofluorobenzene	86.2	80-120		%Rec	1	1/23/2018 11:20:52 AM	36131

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1801A37

Date Reported: 1/24/2018

CLIENT: Rule Engineering LLC

Client Sample ID: SC-4

Project: Zachary #48

Collection Date: 1/22/2018 9:45:00 AM

Lab ID: 1801A37-004

Matrix: SOIL

Received Date: 1/23/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	29	9.1		mg/Kg	1	1/23/2018 12:32:30 PM	36142
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/23/2018 12:32:30 PM	36142
Surr: DNOP	97.4	70-130		%Rec	1	1/23/2018 12:32:30 PM	36142
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	1/23/2018 11:44:26 AM	36131
Surr: BFB	82.6	15-316		%Rec	1	1/23/2018 11:44:26 AM	36131
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	1/23/2018 11:44:26 AM	36131
Toluene	ND	0.038		mg/Kg	1	1/23/2018 11:44:26 AM	36131
Ethylbenzene	ND	0.038		mg/Kg	1	1/23/2018 11:44:26 AM	36131
Xylenes, Total	ND	0.076		mg/Kg	1	1/23/2018 11:44:26 AM	36131
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	1/23/2018 11:44:26 AM	36131

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1801A37

Date Reported: 1/24/2018

CLIENT: Rule Engineering LLC

Client Sample ID: SC-5

Project: Zachary #48

Collection Date: 1/22/2018 9:50:00 AM

Lab ID: 1801A37-005

Matrix: SOIL

Received Date: 1/23/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/23/2018 12:54:28 PM	36142
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/23/2018 12:54:28 PM	36142
Surr: DNOP	99.8	70-130		%Rec	1	1/23/2018 12:54:28 PM	36142
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	1/23/2018 12:07:51 PM	36131
Surr: BFB	82.4	15-316		%Rec	1	1/23/2018 12:07:51 PM	36131
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	1/23/2018 12:07:51 PM	36131
Toluene	ND	0.041		mg/Kg	1	1/23/2018 12:07:51 PM	36131
Ethylbenzene	ND	0.041		mg/Kg	1	1/23/2018 12:07:51 PM	36131
Xylenes, Total	ND	0.082		mg/Kg	1	1/23/2018 12:07:51 PM	36131
Surr: 4-Bromofluorobenzene	89.2	80-120		%Rec	1	1/23/2018 12:07:51 PM	36131

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

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

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Rule Engineering LLC**Client Sample ID:** SC-6**Project:** Zachary #48**Collection Date:** 1/22/2018 9:55:00 AM**Lab ID:** 1801A37-006**Matrix:** SOIL**Received Date:** 1/23/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/23/2018 1:16:28 PM	36142
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/23/2018 1:16:28 PM	36142
Surr: DNOP	101	70-130		%Rec	1	1/23/2018 1:16:28 PM	36142
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	1/23/2018 12:31:16 PM	36131
Surr: BFB	82.6	15-316		%Rec	1	1/23/2018 12:31:16 PM	36131
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	1/23/2018 12:31:16 PM	36131
Toluene	ND	0.042		mg/Kg	1	1/23/2018 12:31:16 PM	36131
Ethylbenzene	ND	0.042		mg/Kg	1	1/23/2018 12:31:16 PM	36131
Xylenes, Total	ND	0.084		mg/Kg	1	1/23/2018 12:31:16 PM	36131
Surr: 4-Bromofluorobenzene	89.2	80-120		%Rec	1	1/23/2018 12:31:16 PM	36131

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801A37

24-Jan-18

Client: Rule Engineering LLC

Project: Zachary #48

Sample ID	LCS-36142		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36142		RunNo: 48617					
Prep Date:	1/23/2018		Analysis Date: 1/23/2018		SeqNo: 1563800		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.7	70	130			
Surr: DNOP	4.5		5.000		90.6	70	130			

Sample ID	MB-36142	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 36142			RunNo: 48617					
Prep Date:	1/23/2018	Analysis Date: 1/23/2018			SeqNo: 1563801		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.6	70	130			

Sample ID	MB-36132		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 36132		RunNo: 48617					
Prep Date:	1/22/2018		Analysis Date: 1/23/2018		SeqNo: 1564448		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.6	70	130			

Sample ID	LCS-36132		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36132		RunNo: 48617					
Prep Date:	1/22/2018		Analysis Date: 1/23/2018		SeqNo: 1564495		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801A37

24-Jan-18

Client: Rule Engineering LLC

Project: Zachary #48

Sample ID	MB-36131	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID: 36131			RunNo: 48626					
Prep Date:	1/22/2018	Analysis Date: 1/23/2018			SeqNo: 1564548		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		81.5	15	316			

Sample ID	LCS-36131		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 36131		RunNo: 48626					
Prep Date:	1/22/2018		Analysis Date: 1/23/2018		SeqNo: 1564549		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	75.9	131			
Surr: BFB	930		1000		92.9	15	316			

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
PQL Practical Quantitative Limit
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801A37

24-Jan-18

Client: Rule Engineering LLC

Project: Zachary #48

Sample ID	MB-36131		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	36131		RunNo:	48626			
Prep Date:	1/22/2018		Analysis Date:	1/23/2018		SeqNo:	1564562		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.7	80	120			

Sample ID	LCS-36131		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	36131		RunNo:	48626			
Prep Date:	1/22/2018		Analysis Date:	1/23/2018		SeqNo:	1564563		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	98.5	77.3	128			
Toluene	0.99	0.050	1.000	0	99.0	79.2	125			
Ethylbenzene	0.99	0.050	1.000	0	98.6	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	99.9	81.6	129			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.4	80	120			

Qualifiers:

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



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

Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1801A37

RcptNo: 1

Received By: Anne Thorne

1/23/2018 6:55:00 AM

Anne Thorne

Completed By: Anne Thorne

1/23/2018 7:10:39 AM

Anne Thorne

Reviewed By: *MT 1/23/18*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

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

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

