

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Hilcorp Energy Company	Contact Lindsay Dumas
Address 1111 Travis St. Houston, TX 77002	Telephone No. (281)794-9159
Facility Name: San Juan 28-6 #148N	Facility Type: Gas

Surface Owner BLM	Mineral Owner Federal	API No. 3003929890
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LOCATION OF RELEASE

Unit Letter G	Section 28	Township 28N	Range 06W	Feet from the 1882	North/South Line North	Feet from the 1628	East/West Line East	County Rio Arriba
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Latitude 36.6343231 Longitude -107.4690323

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 9 bbls	Volume Recovered 0 bbls
Source of Release Production Tank	Date and Hour of Occurrence 1/19/18 8:30AM	Date and Hour of Discovery 1/19/18 8:30AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
The release as a result of corrosion on the bottom of the production tank. There was no standing product to recover.

Describe Area Affected and Cleanup Action Taken.*
The corroded tank sits on a liner, 4 samples approximately 1' down were taken on 1/22/18. Pictures are attached. Samples were submitted for BTEX 8021, TPH to include DRO-GRO-MRO 8015, and chlorides. All analytical results are below NMOCD action levels, no further remediation required.

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: <i>Lindsay Dumas</i>	OIL CONSERVATION DIVISION	
Printed Name: Lindsay Dumas	Appr	DENIED BY: <u>Cory Smith</u> DATE: <u>1/17/18</u> (505) 334-6178 Ext. 115 checked <input type="checkbox"/>
Title: Environmental Specialist	Appr	
E-mail Address: Ldumas@hilcorp.com	Con	
Date: 9/9/2018 Phone: (281)794-9159		

* Attach Additional Sheets If Necessary

NCS 1803751908

NMOCD

SEP 13 2018

DISTRICT III

17

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Wednesday, October 17, 2018 2:28 PM
To: Lindsay Dumas
Cc: Thomas, Leigh; Fields, Vanessa, EMNRD
Subject: RE: Final C-141: San Juan 28-6 148N

Lindsay,

OCD received a Final C-141 on September 13, 2018 on the old C-141 after review it has been denied.

As the previous email indicates Please submit on the new C-141 and follow 19.15.29 NMAC Closure report requirements.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Fields, Vanessa, EMNRD
Sent: Monday, September 10, 2018 9:12 AM
To: Lindsay Dumas <ldumas@hilcorp.com>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Thomas, Leigh <l1thomas@blm.gov>
Subject: RE: Final C-141: San Juan 28-6 148N

Good morning Lindsay,

Please submit on the new C-141 and follow 19.15.29 Closure requirements.

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Lindsay Dumas <ldumas@hilcorp.com>
Sent: Sunday, September 9, 2018 11:52 AM

To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>

Cc: Thomas, Leigh <l1thomas@blm.gov>

Subject: Final C-141: San Juan 28-6 148N

Please find attached the Final C-141 for the release on the San Juan 28-6 148N.

Kind regards,

Lindsay Dumas

Environmental Specialist

Hilcorp Energy – L48 West

Office: 832-839-4585

Mobile: 281-794-9159

Hilcorp Energy Company's address is 1111 Travis St, Houston, TX 77002



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

February 05, 2018

Lindsay Dumas

Hilcorp Energy

PO Box 61529

Houston, TX 77208-1529

TEL: (337) 276-7676

FAX

RE: San Juan 28 6 148N

OrderNo.: 1801C54

Dear Lindsay Dumas:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/26/2018 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", is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1801C54

Date Reported: 2/5/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: East

Project: San Juan 28 6 148N

Collection Date: 1/23/2018 10:45:00 AM

Lab ID: 1801C54-001

Matrix: SOIL

Received Date: 1/26/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	2/2/2018 7:48:21 PM	36330
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/30/2018 2:36:15 PM	36249
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/30/2018 2:36:15 PM	36249
Surr: DNOP	101	70-130		%Rec	1	1/30/2018 2:36:15 PM	36249
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/31/2018 1:46:03 PM	36238
Surr: BFB	101	15-316		%Rec	1	1/31/2018 1:46:03 PM	36238
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	1/31/2018 1:46:03 PM	36238
Benzene	ND	0.025		mg/Kg	1	1/31/2018 1:46:03 PM	36238
Toluene	ND	0.050		mg/Kg	1	1/31/2018 1:46:03 PM	36238
Ethylbenzene	ND	0.050		mg/Kg	1	1/31/2018 1:46:03 PM	36238
Xylenes, Total	ND	0.10		mg/Kg	1	1/31/2018 1:46:03 PM	36238
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/31/2018 1:46:03 PM	36238

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 8
	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 **1801C54**

Date Reported: 2/5/2018

CLIENT: Hilcorp Energy

Client Sample ID: North

Project: San Juan 28 6 148N

Collection Date: 1/23/2018 10:30:00 AM

Lab ID: 1801C54-002

Matrix: SOIL

Received Date: 1/26/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	2/2/2018 8:00:45 PM	36330
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/30/2018 2:58:13 PM	36249
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/30/2018 2:58:13 PM	36249
Surr: DNOP	108	70-130		%Rec	1	1/30/2018 2:58:13 PM	36249
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2018 2:09:19 PM	36238
Surr: BFB	101	15-316		%Rec	1	1/31/2018 2:09:19 PM	36238
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	1/31/2018 2:09:19 PM	36238
Benzene	ND	0.024		mg/Kg	1	1/31/2018 2:09:19 PM	36238
Toluene	ND	0.049		mg/Kg	1	1/31/2018 2:09:19 PM	36238
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2018 2:09:19 PM	36238
Xylenes, Total	ND	0.098		mg/Kg	1	1/31/2018 2:09:19 PM	36238
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/31/2018 2:09:19 PM	36238

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

Analytical Report

Lab Order **1801C54**

Date Reported: 2/5/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Project: San Juan 28 6 148N

Lab ID: 1801C54-003

Matrix: SOIL

Client Sample ID: West

Collection Date: 1/23/2018 11:00:00 AM

Received Date: 1/26/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	2/2/2018 8:13:09 PM	36330
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/30/2018 3:20:22 PM	36249
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/30/2018 3:20:22 PM	36249
Surr: DNOP	104	70-130		%Rec	1	1/30/2018 3:20:22 PM	36249
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2018 2:32:32 PM	36238
Surr: BFB	102	15-316		%Rec	1	1/31/2018 2:32:32 PM	36238
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	1/31/2018 2:32:32 PM	36238
Benzene	ND	0.025		mg/Kg	1	1/31/2018 2:32:32 PM	36238
Toluene	ND	0.049		mg/Kg	1	1/31/2018 2:32:32 PM	36238
Ethylbenzene	ND	0.049		mg/Kg	1	1/31/2018 2:32:32 PM	36238
Xylenes, Total	ND	0.098		mg/Kg	1	1/31/2018 2:32:32 PM	36238
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/31/2018 2:32:32 PM	36238

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 1801C54

Date Reported: 2/5/2018

CLIENT: Hilcorp Energy

Client Sample ID: South

Project: San Juan 28 6 148N

Collection Date: 1/23/2018 11:10:00 AM

Lab ID: 1801C54-004

Matrix: SOIL

Received Date: 1/26/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	2/2/2018 8:25:34 PM	36330
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/30/2018 3:42:25 PM	36249
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/30/2018 3:42:25 PM	36249
Surr: DNOP	108	70-130		%Rec	1	1/30/2018 3:42:25 PM	36249
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/31/2018 2:55:52 PM	36238
Surr: BFB	99.0	15-316		%Rec	1	1/31/2018 2:55:52 PM	36238
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	1/31/2018 2:55:52 PM	36238
Benzene	ND	0.024		mg/Kg	1	1/31/2018 2:55:52 PM	36238
Toluene	ND	0.048		mg/Kg	1	1/31/2018 2:55:52 PM	36238
Ethylbenzene	ND	0.048		mg/Kg	1	1/31/2018 2:55:52 PM	36238
Xylenes, Total	ND	0.097		mg/Kg	1	1/31/2018 2:55:52 PM	36238
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	1/31/2018 2:55:52 PM	36238

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#: 1801C54

05-Feb-18

Client: Hilcorp Energy
Project: San Juan 28 6 148N

Sample ID	MB-36330	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	36330	RunNo:	48884					
Prep Date:	2/2/2018	Analysis Date:	2/2/2018	SeqNo:	1573131	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36330	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	36330	RunNo:	48884					
Prep Date:	2/2/2018	Analysis Date:	2/2/2018	SeqNo:	1573132	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.8	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
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#: 1801C54

05-Feb-18

Client: Hilcorp Energy
Project: San Juan 28 6 148N

Sample ID	LCS-36249		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36249		RunNo: 48775					
Prep Date:	1/29/2018		Analysis Date: 1/30/2018		SeqNo: 1569177		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	70	130			
Surr: DNOP	4.5		5.000		90.5	70	130			

Sample ID	MB-36249	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 36249			RunNo: 48775					
Prep Date:	1/29/2018	Analysis Date: 1/30/2018			SeqNo: 1569178		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	9.8		10.00		97.6	70	130			

Sample ID	LCS-36275		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36275		RunNo: 48777					
Prep Date:	1/30/2018		Analysis Date: 1/31/2018		SeqNo: 1570270		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.8	70	130			

Sample ID	MB-36275		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 36275		RunNo: 48777					
Prep Date:	1/30/2018		Analysis Date: 1/31/2018		SeqNo: 1570272		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		88.6	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#: 1801C54

05-Feb-18

Client: Hilcorp Energy
Project: San Juan 28 6 148N

Sample ID	LCS-36238	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	36238	RunNo:	48820					
Prep Date:	1/29/2018	Analysis Date:	1/31/2018	SeqNo:	1570842	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	1100		1000		115	15	316			

Sample ID	LCS-36252	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	36252	RunNo:	48820					
Prep Date:	1/30/2018	Analysis Date:	1/31/2018	SeqNo:	1570843	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	15	316			

Sample ID	MB-36238	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	36238	RunNo:	48820					
Prep Date:	1/29/2018	Analysis Date:	1/31/2018	SeqNo:	1570844	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	1000		1000		101	15	316			

Sample ID	MB-36252	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	36252	RunNo:	48820					
Prep Date:	1/30/2018	Analysis Date:	1/31/2018	SeqNo:	1570845	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.4	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#: 1801C54

05-Feb-18

Client: Hilcorp Energy
Project: San Juan 28 6 148N

Sample ID	LCS-36238		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 36238		RunNo: 48820					
Prep Date:	1/29/2018		Analysis Date: 1/31/2018		SeqNo: 1570883		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.98	0.10	1.000	0	97.7	70.1	121			
Benzene	1.0	0.025	1.000	0	104	77.3	128			
Toluene	1.0	0.050	1.000	0	104	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	102	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	105	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	LCS-36252		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 36252		RunNo: 48820					
Prep Date:	1/30/2018		Analysis Date: 1/31/2018		SeqNo: 1570884		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Sample ID	MB-36238	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: 36238			RunNo: 48820					
Prep Date:	1/29/2018	Analysis Date: 1/31/2018			SeqNo: 1570885		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	MB-36252	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: 36252			RunNo: 48820					
Prep Date:	1/30/2018	Analysis Date: 1/31/2018			SeqNo: 1570886		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.98		1.000		98.2	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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



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: HILCORP ENERGY

Work Order Number: 1801C54

RcptNo: 1

Received By: Erin Melendrez

1/26/2018 8:00:00 AM

EM

Completed By: Dennis Suazo

1/26/2018 8:48:13 AM

DS

Reviewed By: ENM

1/26/18

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 ☐ # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? _____
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 ☐ 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	2.4	Good	Not Present			

☐ EDD (Type) _____

Sample Temperature: $3.1 - 0.7 (C.F.) = 2.4$

[illegible][illegible]

Received by: W. A. courier Date 1/26/18 Time 08

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





