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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2101242104
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Hilcorp Energy Company	OGRID 372171
Contact Name Jennifer Deal	Contact Telephone 505-801-6517
Contact email jdeal@hilcorp.com	Incident # nAPP2101242104
Contact mailing address 382 Road 3100, Aztec NM 87410	

Location of Release Source

Latitude 36.8899651 Longitude -108.04531
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Davis 9F	Site Type Well
Date Release Discovered 1/4/2021 @ 10:00am	API# *3004534094*

Unit Letter	Section	Township	Range	County
B	12	31N	12W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 29	Volume Recovered (bbls) 0
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A release of approximately 29 bbls of oil was released from a small hole in the tank due to corrosion. The release remained on location and inside the berm. 0 bbls were recovered. OCD will be notified 48 hours prior to sampling.

Incident ID	nAPP2101242104
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2101242104
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: ___Mitch Killough_____ Title: ____Environmental Specialist_____

Signature:_____ _____ Date: __03/30/2021_____

email: ___mkillough@hilcorp.com_____ Telephone: ___(713) 757-5247_____

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2101242104
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Mitch Killough Title: Environmental Specialist

Signature: _____ Date: 03/30/2021

email: mkillough@hilcorp.com Telephone: 713-757-5247

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 06/14/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

Summary of events

- Release of 29 bbls of oil was released on 1/4/21
  - ~140 yds of contaminated soil was disposed at IEI
  - 140 yds of clean soil was brought in from Mesa Sand and Gravel
  - Final size of excavation was 24x24x5’6”
- Confirmation sampling was scheduled for 3/26/21 @9am
  - Notice was sent on 3/22 at 11:47am
  - Kurt Hoekstra was the only person that attended

Velez, Nelson, EMNRD

From: Mitch Killough <mkillough@hilcorp.com>
Sent: Tuesday, June 14, 2022 11:24 AM
To: Velez, Nelson, EMNRD
Subject: [EXTERNAL] RE: Davis 9F - Lab Results (March 2021)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

I spoke with Jennifer and she indicated that the January samples were just internal assessment samples and not meant to be closure samples. Thus, a 48-hour notice was not submitted to the NMOCD.

Let me know if you need any additional detail.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Mitch Killough
Sent: Tuesday, June 14, 2022 12:08 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Davis 9F - Lab Results (March 2021)

Here is the lab report. I am working on the January 2021 notice right now.

Thanks Nelson.

Mitch Killough
Environmental Specialist
Hilcorp Energy Company
1111 Travis Street
Houston, TX 77002
713-757-5247 (office)
281-851-2338 (cell)
mkillough@hilcorp.com

Jennifer Deal

From:	Jennifer Deal
Sent:	Monday, March 22, 2021 11:47 AM
To:	cory.smith@state.nm.us; OCD.Enviro@state.nm.us
Cc:	Bobby Spearman; Kurt Hoekstra; Freddy Proctor; Shad Brown; Mitch Killough
Subject:	Confirmation Sampling - Davis 9F

Good morning,

Hilcorp is providing 48 hr notification of confirmation sampling to occur on Friday, March 26th at 9:00am at the Davis 9F (Incident #nAPP2101242104). Please let me know if you have any questions.

Thank you,

Jennifer Deal
Environmental Specialist
Hilcorp Energy – L48 West
jdeal@hilcorp.com
382 Road 3100
Aztec, NM 87410
Office: (505) 324-5128
Cell: (505) 801-6517

Topographic/Aerial Maps

Scaled Map

N


Sign in
Release area
Google
Imagery ©2021 Maxar Technologies, Map data ©2021
United States
3D Earth view is not available
Terms
Send feedback
50 ft

Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS
DAVIS 9F
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	MRO+DRO (mg/kg)	TPH (mg/kg)
East Wall	1/12/2021	<0.250	2.79	6.54	73.7	83.03	<20	2230.0	805.00	109.00	914.00	3144.00
Base	1/12/2021	<0.250	<2.50	3.68	39.7	43	<20	1370	490.00	40.50	530.50	1900.5
South Wall	1/12/2021	<0.100	<1.00	0.228	<0.30	0.23	<20	110	175.00	17.30	192.30	302.3
S. Wall	3/26/2021	<0.089	<0.18	<0.18	<0.36	<0.36	<60	<18	26.00	<45	26.00	26.0
E. Wall	3/26/2021	<0.019	<0.039	<0.039	<0.078	<0.078	<60	<3.9	<9.5	<47	<47	<47
N. Wall	3/26/2021	<0.020	0.062	0.13	1.8	1.99	<61	45	340.00	64.00	404.00	449.0
W. Wall	3/26/2021	<0.019	<0.038	<0.038	0.35	0.35	<60	8.6	91.00	<48	91.00	99.6
W 1/2 Base	3/26/2021	<0.017	<0.034	<0.034	<0.068	<0.068	<59	<3.4	<9.5	<47	<47	<47
E 1/2 Base	3/26/2021	<0.016	<0.032	<0.032	<0.064	<0.064	<60	<3.2	<8.7	<43	<43	<43
NMOCD Standards		**10**	**NE**	**NE**	**NE**	**50**	**10,000**	**NE**	**NE**	**NE**	**1,000**	**2,500**

NOTES:

< - indicates result is less than the stated laboratory reporting limit

Bold Red - indicates value exceeds stated NMOCD standard

BTEX - benzene, toluene, ethylbenzene, total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

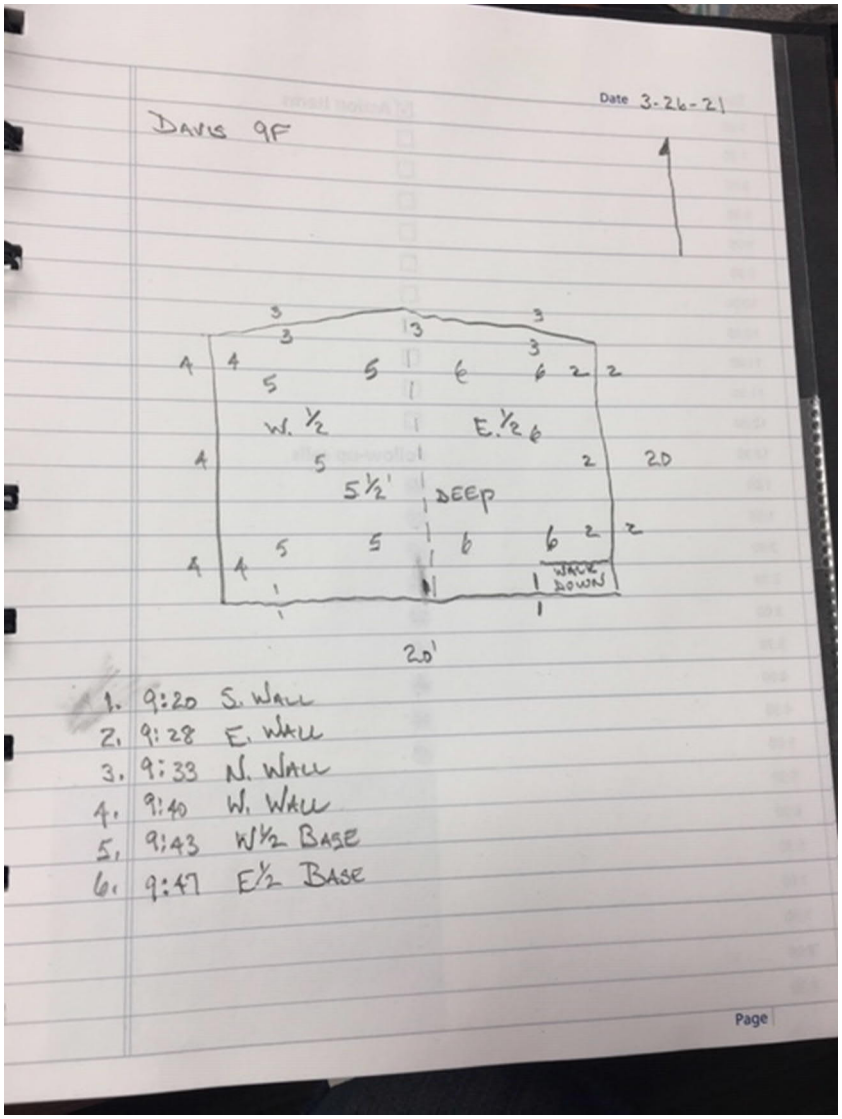
NE - Not Established

NMOCD - New Mexico Oil Conservation Division

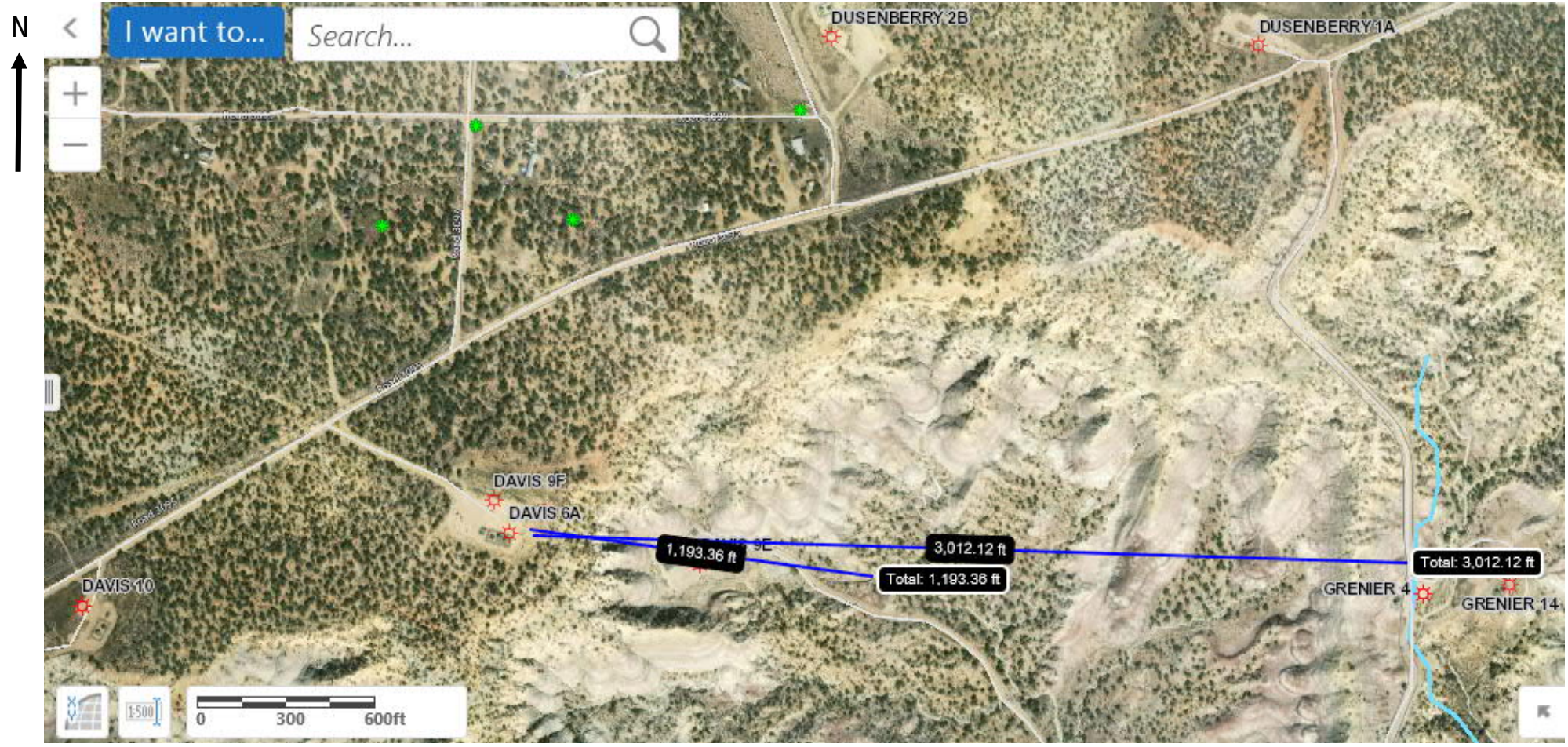
ppm - parts per million

TPH - total petroleum hydrocarbons

Field Data


Date 3-26-21
DAVIS 9F
W. ½
E. ½
5½' DEEP
20
WALK DOWN
20'
1. 9:20 S. WALL
2. 9:28 E. WALL
3. 9:33 N. WALL
4. 9:40 W. WALL
5. 9:43 W½ BASE
6. 9:47 E½ BASE
Page

Determination of water sources and significant watercourses within ½ mile of the lateral extent of the release



Depth to water determination

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

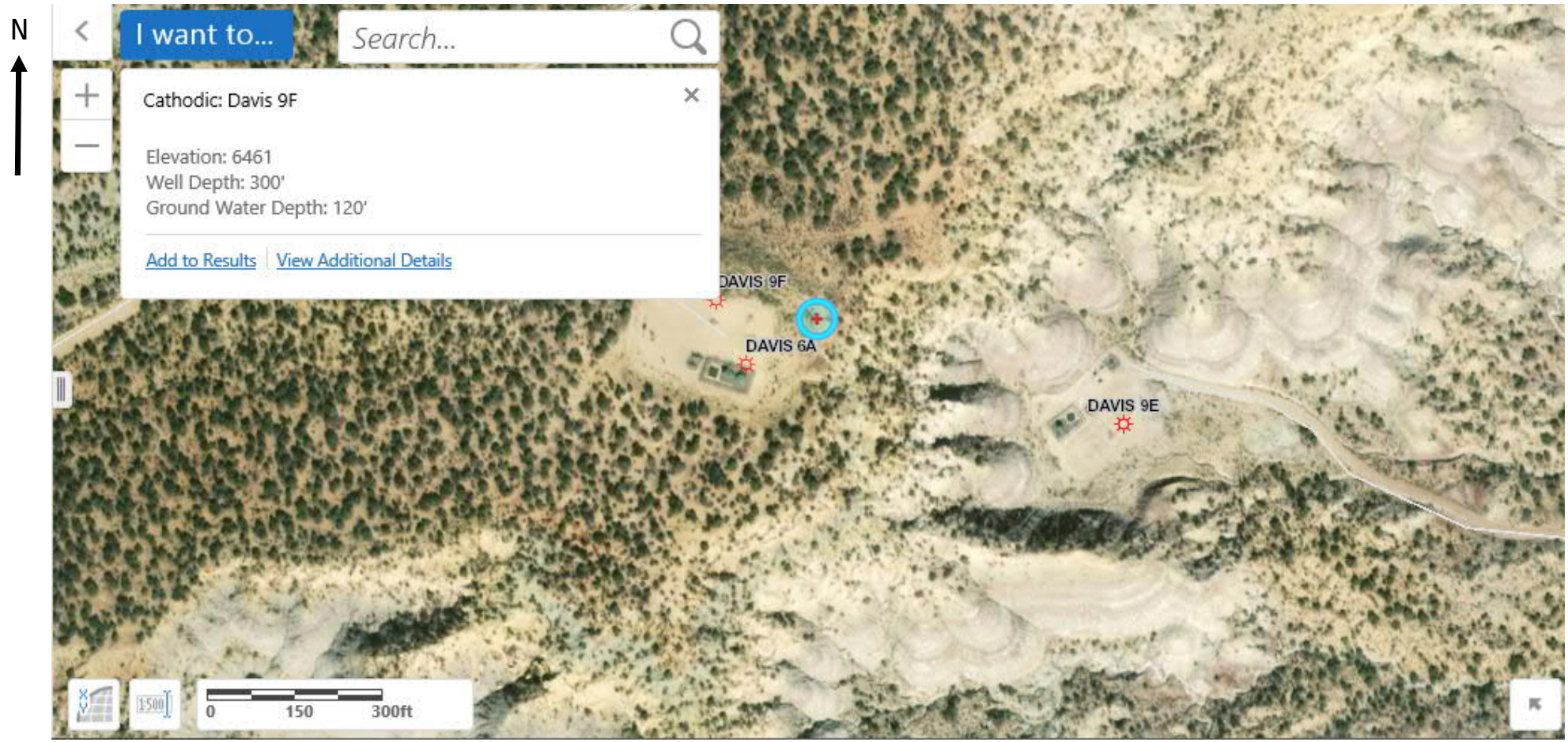
POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
SJ 01649		SJ	SJ	4	3	4	01	31N	12W	228764	4090461*	220	161	59
SJ 01660		SJ	SJ	3	3	4	01	31N	12W	228564	4090461*	320	275	45
SJ 02034		SJ	SJ		3	4	01	31N	12W	228665	4090562*	85	55	30
SJ 02099		SJ	SJ		4	4	01	31N	12W	229006	4090568*	95		
SJ 03022		SJ	SJ	2	3	4	01	31N	12W	228764	4090661*	490	250	240
SJ 03134		SJ	SJ	2	3	4	01	31N	12W	228764	4090661*	80	20	60
SJ 03488		SJ	SJ	2	3	3	01	31N	12W	228084	4090678*	150		
SJ 03660		SJ	SJ	4	3	4	01	31N	12W	228764	4090461*	70	42	28
SJ 03738 POD1		SJ	SJ	3	1	4	01	31N	12W	228612	4090866*	115	50	65
SJ 03987 POD1		SJ	SJ	1	2	1	01	31N	12W	228272	4091932	90	70	20
SJ 03995 POD1		SJ	SJ		2	1	01	31N	12W	228385	4091765	160	50	110

Average Depth to Water: **108 feet**

Minimum Depth: **20 feet**

Maximum Depth: **275 feet**

Determination of water sources and significant watercourses within ½ mile of the lateral extent of the release



Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 25, 2021

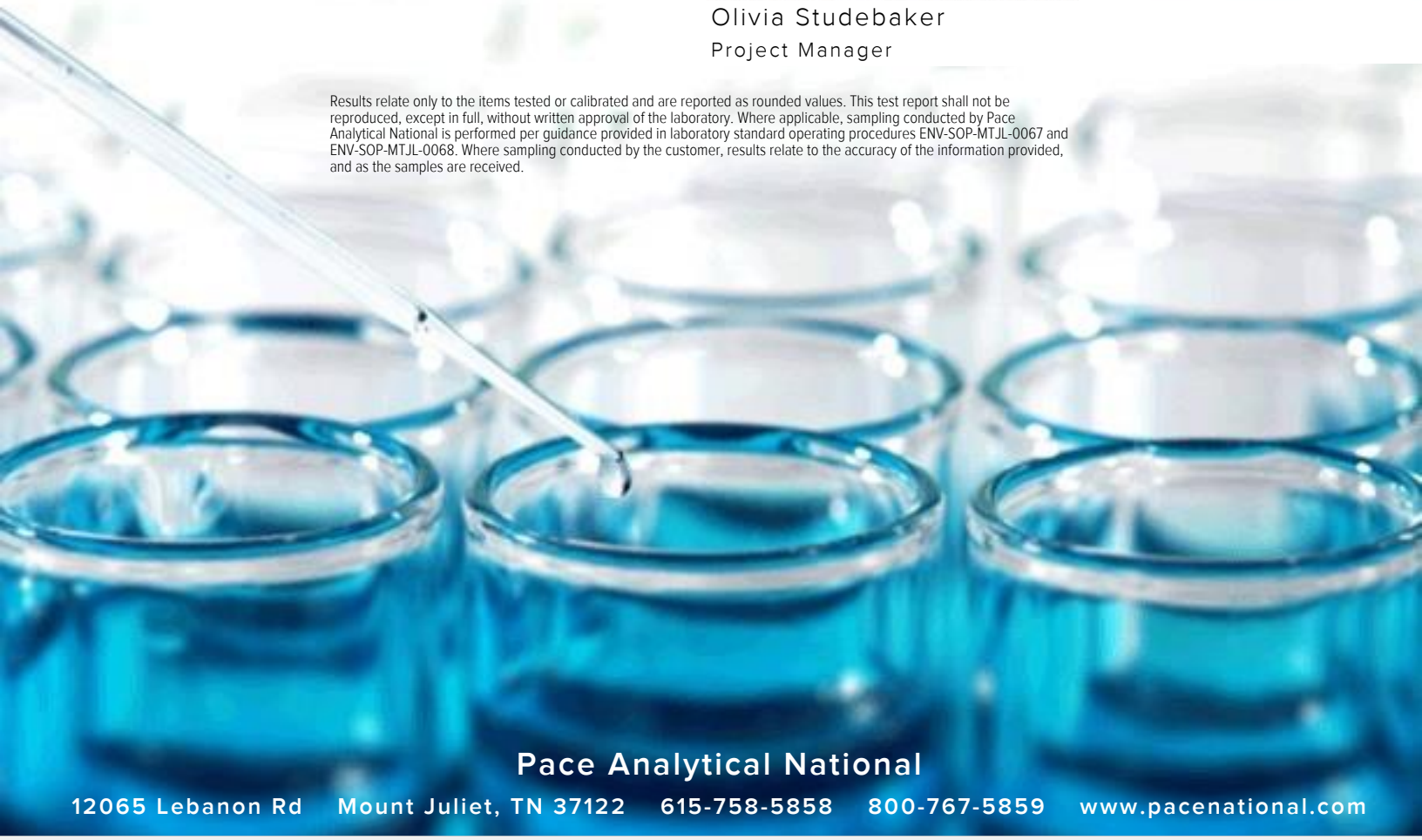
HilCorp-Farmington, NM

Sample Delivery Group:	L1307381
Samples Received:	01/16/2021
Project Number:	
Description:	David #9F
Site:	DAVIS #9F
Report To:	Jennifer Deal 382 Road 3100 Aztec, NM 87410

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

EAST WALL L1307381-01 Solid

Collected by: Bobby Spearman
Collected date/time: 01/12/21 13:00
Received date/time: 01/16/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1610464	1	01/23/21 14:05	01/23/21 18:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1610184	500	01/20/21 14:06	01/22/21 22:45	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610099	5	01/22/21 16:53	01/23/21 18:36	CAG	Mt. Juliet, TN

BASE L1307381-02 Solid

Collected by: Bobby Spearman
Collected date/time: 01/12/21 13:05
Received date/time: 01/16/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1610464	1	01/23/21 14:05	01/23/21 18:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1610184	500	01/20/21 14:06	01/22/21 23:08	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610101	1	01/22/21 23:57	01/24/21 09:46	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610101	5	01/22/21 23:57	01/24/21 17:46	TJD	Mt. Juliet, TN

SOUTH WALL L1307381-03 Solid

Collected by: Bobby Spearman
Collected date/time: 01/12/21 13:10
Received date/time: 01/16/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1610464	1	01/23/21 14:05	01/23/21 19:02	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1610184	200	01/20/21 14:06	01/22/21 23:30	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610101	1	01/22/21 23:57	01/24/21 06:05	JN	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Olivia Studebaker
Project Manager

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	01/23/2021 18:15	WG1610464

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.250	500	01/22/2021 22:45	WG1610184
Toluene	2.79		2.50	500	01/22/2021 22:45	WG1610184
Ethylbenzene	6.54		0.250	500	01/22/2021 22:45	WG1610184
Total Xylene	73.7		0.750	500	01/22/2021 22:45	WG1610184
TPH (GC/FID) Low Fraction	2230		50.0	500	01/22/2021 22:45	WG1610184
(S) a,a,a-Trifluorotoluene(FID)	*95.7*		*77.0-120*		*01/22/2021 22:45*	WG1610184
(S) a,a,a-Trifluorotoluene(PID)	*101*		*72.0-128*		*01/22/2021 22:45*	WG1610184

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	805		20.0	5	01/23/2021 18:36	WG1610099
C28-C40 Oil Range	109		20.0	5	01/23/2021 18:36	WG1610099
(S) o-Terphenyl	*70.7*		*18.0-148*		*01/23/2021 18:36*	WG1610099

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	01/23/2021 18:34	WG1610464

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.250	500	01/22/2021 23:08	WG1610184
Toluene	ND		2.50	500	01/22/2021 23:08	WG1610184
Ethylbenzene	3.68		0.250	500	01/22/2021 23:08	WG1610184
Total Xylene	39.7		0.750	500	01/22/2021 23:08	WG1610184
TPH (GC/FID) Low Fraction	1370		50.0	500	01/22/2021 23:08	WG1610184
(S) a,a,a-Trifluorotoluene(FID)	*95.9*		*77.0-120*		*01/22/2021 23:08*	WG1610184
(S) a,a,a-Trifluorotoluene(PID)	*101*		*72.0-128*		*01/22/2021 23:08*	WG1610184

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	490		20.0	5	01/24/2021 17:46	WG1610101
C28-C40 Oil Range	40.5		4.00	1	01/24/2021 09:46	WG1610101
(S) o-Terphenyl	*79.6*		*18.0-148*		*01/24/2021 17:46*	WG1610101
(S) o-Terphenyl	*75.8*		*18.0-148*		*01/24/2021 09:46*	WG1610101

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	01/23/2021 19:02	WG1610464

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.100	200	01/22/2021 23:30	WG1610184
Toluene	ND		1.00	200	01/22/2021 23:30	WG1610184
Ethylbenzene	0.228		0.100	200	01/22/2021 23:30	WG1610184
Total Xylene	ND		0.300	200	01/22/2021 23:30	WG1610184
TPH (GC/FID) Low Fraction	110		20.0	200	01/22/2021 23:30	WG1610184
(S) a,a,a-Trifluorotoluene(FID)	*99.2*		*77.0-120*		*01/22/2021 23:30*	WG1610184
(S) a,a,a-Trifluorotoluene(PID)	*100*		*72.0-128*		*01/22/2021 23:30*	WG1610184

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	175		4.00	1	01/24/2021 06:05	WG1610101
C28-C40 Oil Range	17.3		4.00	1	01/24/2021 06:05	WG1610101
(S) o-Terphenyl	*68.2*		*18.0-148*		*01/24/2021 06:05*	WG1610101

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3615640-1 01/23/21 17:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

L1307381-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1307381-01 01/23/21 18:15 • (DUP) R3615640-3 01/23/21 18:24

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	ND	1	0.000		20

L1309378-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1309378-10 01/23/21 21:06 • (DUP) R3615640-6 01/23/21 21:16

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	215	219	1	1.76		20

Laboratory Control Sample (LCS)

(LCS) R3615640-2 01/23/21 17:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	200	100	90.0-110	

L1307381-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307381-02 01/23/21 18:34 • (MS) R3615640-4 01/23/21 18:43 • (MSD) R3615640-5 01/23/21 18:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	ND	499	502	99.8	100	1	80.0-120			0.543	20

Method Blank (MB)

(MB) R3615513-3 01/22/21 14:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000186	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.7*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*102*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3615513-1 01/22/21 13:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0471	94.2	76.0-121	
Toluene	0.0500	0.0493	98.6	80.0-120	
Ethylbenzene	0.0500	0.0492	98.4	80.0-124	
Total Xylene	0.150	0.148	98.7	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*99.7*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*102*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3615513-2 01/22/21 13:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.67	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*108*	*72.0-128*	

L1307381-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307381-01 01/22/21 22:45 • (MS) R3615513-4 01/22/21 23:53 • (MSD) R3615513-5 01/23/21 00:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	24.8	ND	20.7	24.9	83.2	100	500	10.0-155			18.4	32
Toluene	24.8	2.79	26.9	31.8	97.2	117	500	10.0-160			16.7	34
Ethylbenzene	24.8	6.54	28.2	33.5	87.3	109	500	10.0-160			17.2	32
Total Xylene	74.3	73.7	145	164	96.0	122	500	10.0-160			12.3	32
(S) a,a,a-Trifluorotoluene(FID)					*95.7*	*95.4*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*101*	*101*		*72.0-128*				

Method Blank (MB)

(MB) R3615555-3 01/24/21 11:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*96.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3615555-4 01/24/21 11:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.6	73.2	50.0-150	
(S) o-Terphenyl			*82.0*	*18.0-148*	

L1307418-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307418-04 01/23/21 17:51 • (MS) R3615555-1 01/23/21 18:06 • (MSD) R3615555-2 01/23/21 18:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	36.7	51.2	46.7	29.0	20.0	1	50.0-150	J6	J6	9.19	20
(S) o-Terphenyl					*42.0*	*45.0*		*18.0-148*				

Method Blank (MB)

(MB) R3615655-1 01/24/21 05:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*85.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3615655-2 01/24/21 05:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	48.6	97.2	50.0-150	
(S) o-Terphenyl			*103*	*18.0-148*	

L1307390-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307390-01 01/24/21 06:19 • (MS) R3615655-3 01/24/21 06:32 • (MSD) R3615655-4 01/24/21 06:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	ND	50.4	51.6	101	103	1	50.0-150			2.35	20
(S) o-Terphenyl					*102*	*99.7*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

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Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Billing Information:

ATTN: Jennifer Deal

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 1307381

A119

Table

Acctnum: HILCORANM

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Report to: Jennifer Deal

Email To: jdeal@hilcorp.com; khoekstra@hilcorp

Project Description: Davis # 9F

City/State Collected: Aztec, NM

Phone: 505-324-5128
Fax:

Client Project #

Lab Project #

Collected by (print): Bobby Spearman

Site/Facility ID #: Davis # 9F

P.O. #

Collected by (signature): B Spearman

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH - 8015 - DRO, GRO, MRO	BTEX 8021	Chloride 300.0							Remarks	Sample # (lab only)
East Wall	Grab	SS	5'	1-12-21	1:00	1	X	X	X								01
Base	Grab	SS	7'	1-12-21	1:05	1	X	X	X								02
South Wall	Grab	SS	5'	1-12-21	1:10	1	X	X	X								03

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other________

Remarks:

pH ________ Temp ________

Flow ________ Other ________

Samples returned via:
__ UPS X FedEx __ Courier __ ______

Tracking # 9348 1611 2456

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP _Y _N
COC Signed/Accurate: ✓Y _N
Bottles arrive intact: ✓Y _N
Correct bottles used: ✓Y _N
Sufficient volume sent: ✓Y _N
If Applicable
VOA Zero Headspace: _Y _N
Preservation Correct/Checked: _Y _N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeOH TBR
B Spearman	1-15-21	07:40A		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: [illegible] °C Bottles Received: G.1+.2=0.3 3
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) B. Barrar	Date: 1-16-21 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 30, 2021

Jennifer Deal

Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX:

RE: Davis 9F OrderNo.: 2103C84

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/27/2021 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2103C84**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: S. Wall
Project: Davis 9F
Collection Date: 3/26/2021 9:20:00 AM
Lab ID: 2103C84-001
Matrix: MEOH (SOIL)
Received Date: 3/27/2021 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	3/27/2021 7:37:17 PM	59016
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	26	9.1		mg/Kg	1	3/29/2021 3:53:04 PM	59015
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/29/2021 3:53:04 PM	59015
Surr: DNOP	96.9	70-130		%Rec	1	3/29/2021 3:53:04 PM	59015
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	3/29/2021 10:44:58 AM	59012
Surr: BFB	104	75.3-105		%Rec	5	3/29/2021 10:44:58 AM	59012
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.089		mg/Kg	5	3/29/2021 10:44:58 AM	59012
Toluene	ND	0.18		mg/Kg	5	3/29/2021 10:44:58 AM	59012
Ethylbenzene	ND	0.18		mg/Kg	5	3/29/2021 10:44:58 AM	59012
Xylenes, Total	ND	0.36		mg/Kg	5	3/29/2021 10:44:58 AM	59012
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	5	3/29/2021 10:44:58 AM	59012

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

Qualifiers:

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

Analytical Report
Lab Order **2103C84**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy **Client Sample ID:** E. Wall
Project: Davis 9F **Collection Date:** 3/26/2021 9:28:00 AM
Lab ID: 2103C84-002 **Matrix:** MEOH (SOIL) **Received Date:** 3/27/2021 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	3/27/2021 7:49:41 PM	59016
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/29/2021 4:06:20 PM	59015
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2021 4:06:20 PM	59015
Surr: DNOP	99.6	70-130		%Rec	1	3/29/2021 4:06:20 PM	59015
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	3/29/2021 11:08:50 AM	59012
Surr: BFB	96.8	75.3-105		%Rec	1	3/29/2021 11:08:50 AM	59012
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	3/29/2021 11:08:50 AM	59012
Toluene	ND	0.039		mg/Kg	1	3/29/2021 11:08:50 AM	59012
Ethylbenzene	ND	0.039		mg/Kg	1	3/29/2021 11:08:50 AM	59012
Xylenes, Total	ND	0.078		mg/Kg	1	3/29/2021 11:08:50 AM	59012
Surr: 4-Bromofluorobenzene	98.7	80-120		%Rec	1	3/29/2021 11:08:50 AM	59012

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103C84**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: N. Wall
Project: Davis 9F
Collection Date: 3/26/2021 9:33:00 AM
Lab ID: 2103C84-003
Matrix: MEOH (SOIL)
Received Date: 3/27/2021 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	61		mg/Kg	20	3/27/2021 8:26:55 PM	59016
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	340	9.5		mg/Kg	1	3/29/2021 4:19:09 PM	59015
Motor Oil Range Organics (MRO)	64	48		mg/Kg	1	3/29/2021 4:19:09 PM	59015
Surr: DNOP	93.8	70-130		%Rec	1	3/29/2021 4:19:09 PM	59015
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	45	3.9		mg/Kg	1	3/29/2021 11:32:38 AM	59012
Surr: BFB	353	75.3-105	S	%Rec	1	3/29/2021 11:32:38 AM	59012
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	3/29/2021 11:32:38 AM	59012
Toluene	0.062	0.039		mg/Kg	1	3/29/2021 11:32:38 AM	59012
Ethylbenzene	0.13	0.039		mg/Kg	1	3/29/2021 11:32:38 AM	59012
Xylenes, Total	1.8	0.079		mg/Kg	1	3/29/2021 11:32:38 AM	59012
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/29/2021 11:32:38 AM	59012

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103C84**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: W. Wall
Project: Davis 9F
Collection Date: 3/26/2021 9:40:00 AM
Lab ID: 2103C84-004
Matrix: MEOH (SOIL)
Received Date: 3/27/2021 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	3/27/2021 8:39:19 PM	59016
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	91	9.5		mg/Kg	1	3/29/2021 4:57:38 PM	59015
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/29/2021 4:57:38 PM	59015
Surr: DNOP	94.4	70-130		%Rec	1	3/29/2021 4:57:38 PM	59015
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	8.6	3.8		mg/Kg	1	3/29/2021 11:56:24 AM	59012
Surr: BFB	150	75.3-105	S	%Rec	1	3/29/2021 11:56:24 AM	59012
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	3/29/2021 11:56:24 AM	59012
Toluene	ND	0.038		mg/Kg	1	3/29/2021 11:56:24 AM	59012
Ethylbenzene	ND	0.038		mg/Kg	1	3/29/2021 11:56:24 AM	59012
Xylenes, Total	0.35	0.075		mg/Kg	1	3/29/2021 11:56:24 AM	59012
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/29/2021 11:56:24 AM	59012

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103C84**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: W 1/2 Base
Project: Davis 9F
Collection Date: 3/26/2021 9:43:00 AM
Lab ID: 2103C84-005
Matrix: MEOH (SOIL)
Received Date: 3/27/2021 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	59		mg/Kg	20	3/27/2021 8:51:43 PM	59016
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/29/2021 5:10:26 PM	59015
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2021 5:10:26 PM	59015
Surr: DNOP	94.4	70-130		%Rec	1	3/29/2021 5:10:26 PM	59015
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	3/29/2021 12:20:16 PM	59012
Surr: BFB	106	75.3-105	S	%Rec	1	3/29/2021 12:20:16 PM	59012
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	3/29/2021 12:20:16 PM	59012
Toluene	ND	0.034		mg/Kg	1	3/29/2021 12:20:16 PM	59012
Ethylbenzene	ND	0.034		mg/Kg	1	3/29/2021 12:20:16 PM	59012
Xylenes, Total	ND	0.068		mg/Kg	1	3/29/2021 12:20:16 PM	59012
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	1	3/29/2021 12:20:16 PM	59012

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2103C84**
Date Reported: **3/30/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: E 1/2 Base
Project: Davis 9F
Collection Date: 3/26/2021 9:47:00 AM
Lab ID: 2103C84-006
Matrix: MEOH (SOIL)
Received Date: 3/27/2021 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	3/27/2021 9:04:08 PM	59016
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	3/29/2021 5:23:31 PM	59015
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	3/29/2021 5:23:31 PM	59015
Surr: DNOP	95.5	70-130		%Rec	1	3/29/2021 5:23:31 PM	59015
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	3/29/2021 12:44:01 PM	59012
Surr: BFB	104	75.3-105		%Rec	1	3/29/2021 12:44:01 PM	59012
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.016		mg/Kg	1	3/29/2021 12:44:01 PM	59012
Toluene	ND	0.032		mg/Kg	1	3/29/2021 12:44:01 PM	59012
Ethylbenzene	ND	0.032		mg/Kg	1	3/29/2021 12:44:01 PM	59012
Xylenes, Total	ND	0.064		mg/Kg	1	3/29/2021 12:44:01 PM	59012
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	3/29/2021 12:44:01 PM	59012

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C84**
30-Mar-21

Client: Hilcorp Energy
Project: Davis 9F

Sample ID: **MB-59016**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **59016**	RunNo: **76258**
Prep Date: **3/27/2021**	Analysis Date: **3/27/2021**	SeqNo: **2700053** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-59016**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **59016**	RunNo: **76258**
Prep Date: **3/27/2021**	Analysis Date: **3/27/2021**	SeqNo: **2700054** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

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 Quanitative 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C84**

30-Mar-21

Client: Hilcorp Energy

Project: Davis 9F

Sample ID: **mb-59012**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **59012**	RunNo: **76294**
Prep Date: **3/26/2021**	Analysis Date: **3/29/2021**	SeqNo: **2701262** 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		100	75.3	105			

Sample ID: **lcs-59012**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **59012**	RunNo: **76294**
Prep Date: **3/26/2021**	Analysis Date: **3/29/2021**	SeqNo: **2701263** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.6	80	120			
Surr: BFB	1100		1000		109	75.3	105			S

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 Quanitative 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2103C84**

30-Mar-21

Client: Hilcorp Energy

Project: Davis 9F

Sample ID: **mb-59012** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **59012** RunNo: **76294**

Prep Date: **3/26/2021** Analysis Date: **3/29/2021** SeqNo: **2701308** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Sample ID: **LCS-59012** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **59012** RunNo: **76294**

Prep Date: **3/26/2021** Analysis Date: **3/29/2021** SeqNo: **2701309** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	80	120			
Toluene	0.97	0.050	1.000	0	97.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	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 Quanitative 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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Hilcorp Energy** Work Order Number: **2103C84** RcptNo: 1

Received By: **Cheyenne Cason** **3/27/2021 8:40:00 AM**

Completed By: **Cheyenne Cason** **3/27/2021 8:46:41 AM**

Reviewed By: CM 03/27/2021

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° 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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: CM 3/27/21

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp Energy

Mailing Address:

Phone #: 505-486-9543

email or Fax#: jdeal@hilcorp.com

QA/QC Package: khoekstra@hilcorp.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: ~~☒ Standard~~ ☒ Rush Next Day Results by 3/30

Project Name: DAVIS 9F

Project #:

Project Manager: JENNIFER DEAL

Sampler: KURT

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.9-0.2=1.7 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2103084 (3/27/21 ENC)	BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	CHLORIDE 300.0					
3-26	9:20	SS	S. WALL	(1) 4oz Jar	ON ICE	001	X	X									X					
"	9:28	"	E. WALL	"	"	002	X	X									X					
"	9:33	"	N. WALL	"	"	003	X	X									X					
"	9:40	"	W. WALL	"	"	004	X	X									X					
"	9:43	"	W ½ BASE	"	"	005	X	X									X					
"	9:47	"	E ½ BASE	"	"	006	X	X									X					

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/26/21	1126	Kurt Hoekstra	Christ Waeta		3/26/21	1126
3/26/21	1754	Christian Walters	[illegible]	Courier	3/27/21	0840

Remarks:

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

Photographs – 1/4/2021 Initial Release

Photographs – 3/26/21 Sampling Event

East Half of Base Sample

East Wall Sample

Photographs – 3/26/21 Sampling Event

North Wall Sample

South Wall Sample

Photographs – 3/26/21 Sampling Event

West Half of Base Sample

West Wall Sample

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 22621

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 22621
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	6/14/2022