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	NCS2026629266
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 # NCS2026629266
Contact mailing address 382 Road 3100, Aztec NM 87410	

Location of Release Source

Latitude 36.9370079 Longitude -107.7794952
(NAD 83 in decimal degrees to 5 decimal places)

Site Name San Juan 32-9 Unit 282S	Site Type Gas Well
Date Release Discovered 6/25/2020	API# *30-045-32253*

Unit Letter	Section	Township	Range	County
P	33	32N	09W	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)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls) 210	Volume Recovered (bbls) 209 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) unknown	Volume Recovered (bbls) 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
On June 22, 2020, Hilcorp submitted a BGT Closure notice for the SJ 32-9 Unit 282S. Sampling occurred on June 25, 2020 and sample results came back above closure standard at 9,730 TPH. The BGT will be closed out and Part 29 will now apply to this site. Hilcorp plans to delineate the area to determine extent of contamination.

Incident ID	NCS2026629266
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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NCS2026629266
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: ___Jennifer Deal_____ Title: ____Environmental Specialist_____

Signature:_____ Jennifer Deal _____ Date: __9/22/2020_____

email: ___jdeal@hilcorp.com_____ Telephone: ___(505) 324-5128_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NCS2026629266
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: Jennifer Deal Title: Environmental Specialist

Signature: Jennifer Deal Date: 9/22/2020

email: jdeal@hilcorp.com Telephone: 505-801-6517

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.

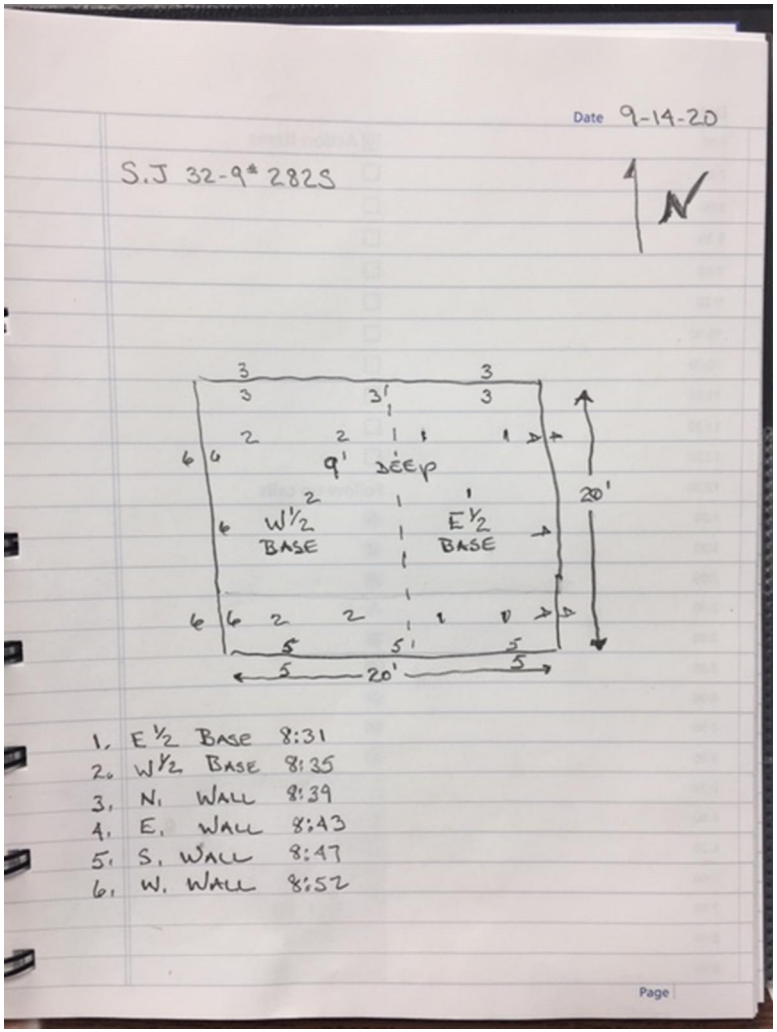
Closure Approved by: _____ Date: 03/19/2021

Printed Name: Cory Smith Title: Environmental Specialist

Scaled Map


N
Sign in
BGT Area
Google
Map data ©2020 , Map data ©2020
United States
3D Earth view is not available
Terms
Send feedback
20 ft

Field Data


Date 9-14-20
S.J 32-9 # 282S
N
9' DEEP
W½ BASE
E½ BASE
20'
20'
1. E½ BASE 8:31
2. W½ BASE 8:35
3. N. WALL 8:39
4. E. WALL 8:43
5. S. WALL 8:47
6. W. WALL 8:52
Page

Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS
SJ 32-9 282S
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Field Headspace	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes	Total BTEX	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	MRO+DRO (mg/kg)	TPH (mg/kg)
BGT Pit Closure Sample	6/25/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	1650.00	8080.00	9730	9730
East 1/2 of Base	9/14/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	4.59	9.77	14.36	14.36
West 1/2 of Base	9/14/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	19.30	95.80	115.10	115.10
North Wall	9/14/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	4.34	16.30	20.64	20.64
East Wall	9/14/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	<4.00	<4.00	<4.00	<4.00
South Wall	9/14/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	4.58	7.41	11.99	11.99
West Wall	9/14/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.10	23.70	130.00	153.70	153.70
NMOCD Standards		**NE**	**10**	**NE**	**NE**	**NE**	**50**	**10,000**	**NE**	**NE**	**NE**	**1,000**	**2,500**

Depth to water determination

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 33, 34 **Township:** 32N **Range:** 09W

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/28/20 9:55 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 4, 5 **Township:** 31N **Range:** 09W

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/28/20 9:56 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Depth to water determination – info from BGT Permit on OCD Website

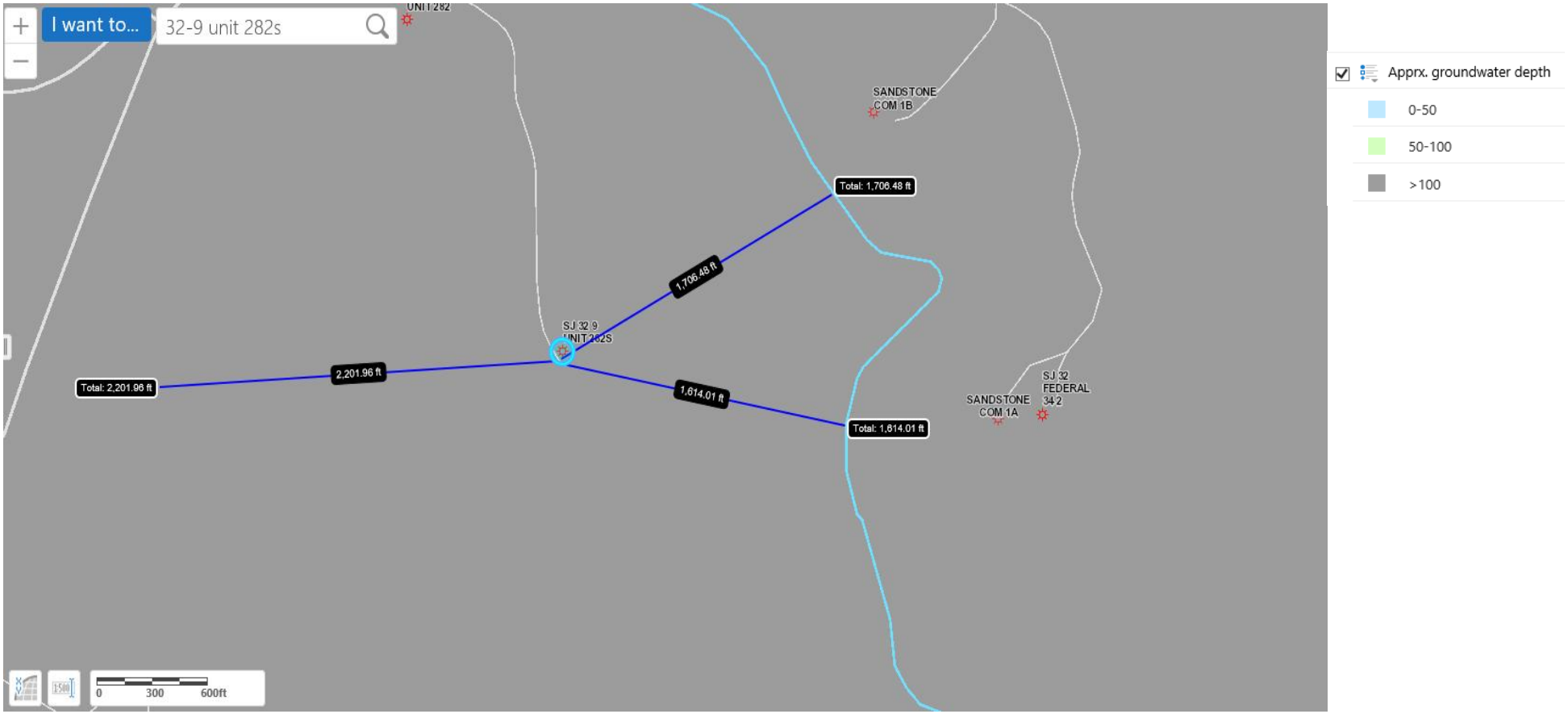
SAN JUAN 32-9 UNIT 282S

Site Specific Hydrogeology

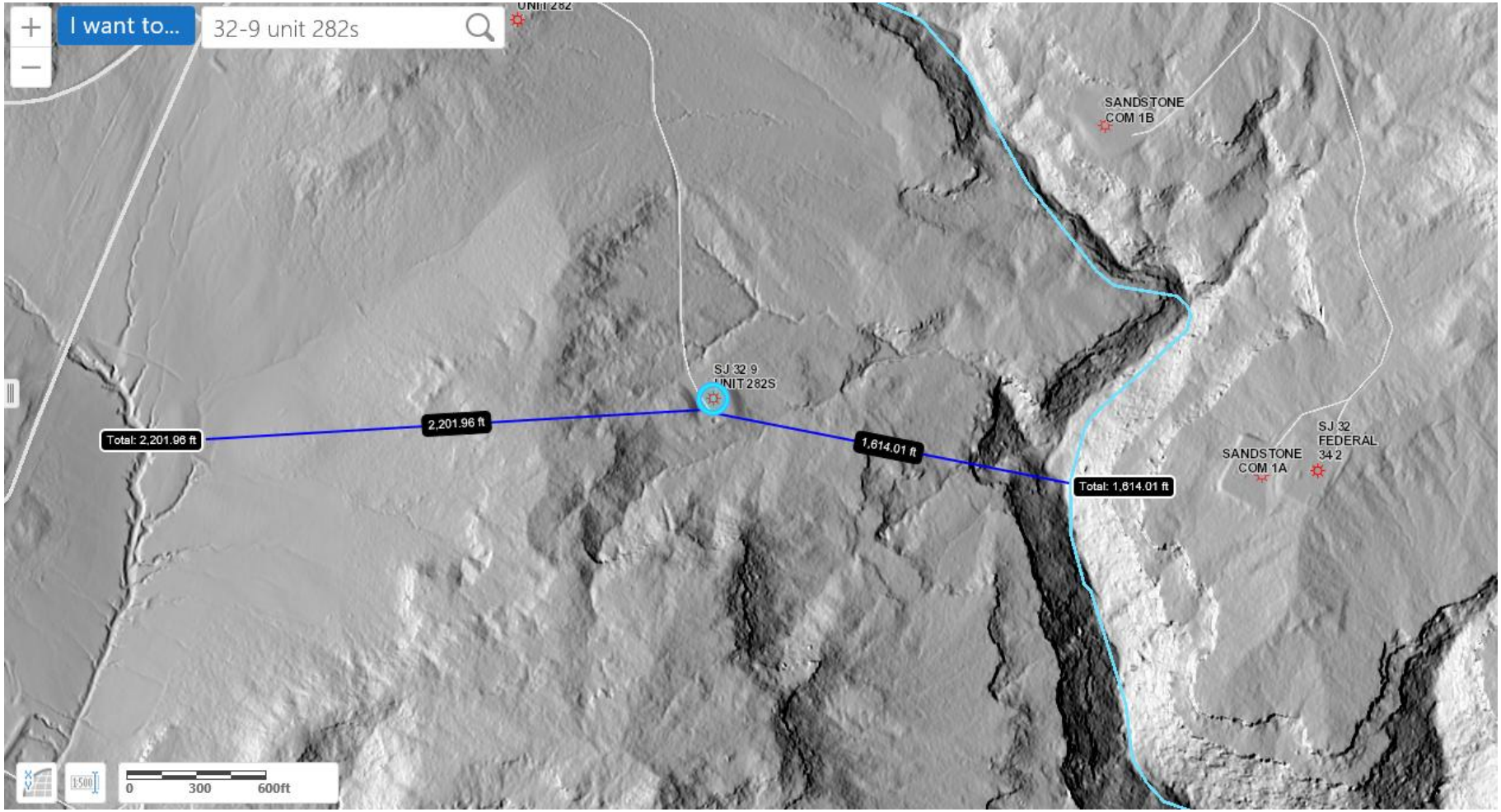
A visual site inspection confirming the information contained herein was performed on the well 'SAN JUAN 32-9 UNIT 282S', which is located at 36.93699 degrees North latitude and 107.77884 degrees West longitude. This location is located on the Mount Nebo 7.5' USGS topographic quadrangle. This location is in section 33 of Township 32 North Range 9 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in San Juan County, New Mexico. The nearest town is Cedar Hill, located 6.1 miles to the west. The nearest large town (population greater than 10,000) is Durango, located 24.0 miles to the north (National Atlas). The nearest highway is State Highway 511, located 5.8 miles to the east. The location is on BLM land and is 494 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Upper San Juan. Colorado. New Mexico, Sub-basin. This location is located 2023 meters or 6635 feet above sea level and receives 16 inches of rain each year. The vegetation at this location is classified as Colorado Plateau Pinion-Juniper Woodland as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 448 feet. This estimation is based on the data published on the New Mexico Engineer's iWaters Database website and water depth data from ConocoPhillips' Cathodic wells. Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. The nearest stream is 156 feet to the southeast and is classified by the USGS as an intermittent stream. The nearest perrenial stream is 6,901 feet to the southeast. The nearest water body is 2,423 feet to the north. It is classified by the USGS as an intermittent lake and is 0.1 acres in size. The nearest spring is 2,910 feet to the north. All stream, river, water body and spring information was determined as per the USGS Hydrographic Dataset (High Resolution), downloaded 3/2008. The nearest water well is 9,825 feet to the north. There is no wetland data available for this area. The slope at this location is 4 degrees to the northeast as calculated from USGS 30M National Elevation Dataset. This information is also discerned from the aerial and topographic map included. The surface geology at this location is SAN JOSE FORMATION--Siltstone, shale, and sandstone with a Sandstone dominated formations of all ages substrate. The soil at this location is 'Travessilla-Weska-Rock outcrop complex, moderately steep' and is well drained and not hydric with severe erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008. The nearest underground mine is 6.6 miles to the west as indicated on the Mines, Mills and Quarries Map of New Mexico provided.

Depth to water determination



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



Photographs – 9/14/20 Sampling Event

East Wall Sample

East Base Sample

Photographs – 9/14/20 Sampling Event

North Wall Sample

West Base Sample

Photographs – 9/14/20 Sampling Event

South Wall Sample

West Wall Sample

Topographic/Aerial Maps

Summary of events

- BGT closure with contamination found during final sampling
  - Initial BGT Closure sampling occurred on 6/25/2020 where contamination was found
  - ~40yds/3 was excavated and disposed of on 9/8/2020
  - ~40 yds/3 of clean soil was brought in from Mesa Sand & Gravel on 9/8/20
  - Final size of excavation was 20'x20'x9'deep
- Confirmation sampling occurred 9/14/2020
  - Kurt performed the sampling after a phone call was made to Cory with OCD to confirm sampling plan

Jennifer Deal

From: Mandi Walker
Sent: Monday, June 22, 2020 9:33 AM
To: 'Smith, Cory, EMNRD'; Kelly, Jonathan, EMNRD
Cc: Kurt Hoekstra; Jennifer Deal; Ramon Florez; Colter Faverino; Priscilla Shorty
Subject: FW: 72 Hour BGT Closure Notice: SJ 32-9 Unit 282S

The subject well has a below-grade tank that will begin the closure process between 72 hours and one week from this notification. Please contact me at any time if you have any questions or concerns.
Well Name: SJ 32-9 Unit 282S
API#: 30-045-32253
Location: P Sec. 33 T32N R 09W
Footages: 1140' FSL & 960' FEL
Surface Owner: BLM
Scheduled Date & Time of Start: Thursday June 25th @ 9:30am

Mandi Walker
San Juan North Regulatory Technician
Hilcorp Energy
505.324.5122
mwalker@hilcorp.com

Jennifer Deal

From: Jennifer Deal
Sent: Wednesday, September 9, 2020 8:20 AM
To: Smith, Cory, EMNRD; Adeloye, Abiodun A
Cc: Mandi Walker
Subject: RE: [EXTERNAL] Confirmation Sampling - SJ 32-9 282S
Attachments: Initial C-141 - SJ 32-9 282S -.pdf

Here is the initial C-141 with all the information on it.

Thank you,

Jennifer Deal
Environmental Specialist
Hilcorp Energy – L48 West
jdeal@hilcorp.com
Office: (505) 324-5128
Cell: 505-801-6517

From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
Sent: Wednesday, September 9, 2020 8:14 AM
To: Adeloye, Abiodun A <aadeloye@blm.gov>; Jennifer Deal <jdeal@hilcorp.com>
Cc: Kurt Hoekstra <khoekstra@hilcorp.com>; Bobby Spearman <bspearman@hilcorp.com>; Colter Faverino <cfaverino@hilcorp.com>; Ramon Florez <rflorez@hilcorp.com>; Mandi Walker <mwalker@hilcorp.com>
Subject: RE: [EXTERNAL] Confirmation Sampling - SJ 32-9 282S

Jennifer,

Do you have the API#, Lat/Long of the release since there is no incident# for information.

Thanks,

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: Adeloye, Abiodun A <aadeloye@blm.gov>
Sent: Wednesday, September 9, 2020 7:57 AM
To: Jennifer Deal <jdeal@hilcorp.com>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Kurt Hoekstra <khoekstra@hilcorp.com>; Bobby Spearman <bspearman@hilcorp.com>; Colter Faverino <cfaverino@hilcorp.com>; Ramon Florez <rflorez@hilcorp.com>; Mandi Walker <mwalker@hilcorp.com>
Subject: [EXT] Re: [EXTERNAL] Confirmation Sampling - SJ 32-9 282S

Hi Jennifer, please follow the recommended soil sampling method as BLM will not be available for the sampling.
Thank you

Abiodun Adeloye (Emmanuel), NRS
Bureau of Land Management
Farmington Field Office
6251 College Blvd., Suite A
Farmington, NM 87402
Office Phone: 505-564-7665
Cell Phone: 505-635-0984

From: Jennifer Deal <jdeal@hilcorp.com>
Sent: Wednesday, September 9, 2020 7:43 AM
To: cory.smith@state.nm.us <cory.smith@state.nm.us>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Kurt Hoekstra <khoekstra@hilcorp.com>; Bobby Spearman <bspearman@hilcorp.com>; Colter Faverino <cfaverino@hilcorp.com>; Ramon Florez <rflorez@hilcorp.com>; Mandi Walker <mwalker@hilcorp.com>
Subject: [EXTERNAL] Confirmation Sampling - SJ 32-9 282S

Cory,

Hilcorp Energy is providing 48 hour notice of confirmation sampling to occur on Monday, September 14 at 8am. This project was originally a BGT closure but closure samples came back above standards. Mandi submitted the paperwork for the BGT and the initial C-141 but we have not received an incident number for this project yet.

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 02, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1234167
Samples Received:	06/27/2020
Project Number:	
Description:	San Juan 32 Unit 282 S
Site:	S.J. 32-9 UNIT 282 S
Report To:	Jennifer Deal 382 Road 3100 Aztec, NM 87410

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

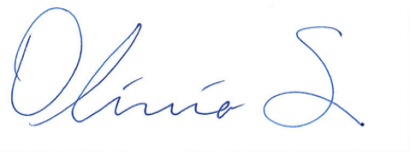
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory 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.

BGT PIT CLOSURE SAMPLE L1234167-01 Solid

Collected by: K Hoekstra
Collected date/time: 06/25/20 09:40
Received date/time: 06/27/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1501363	1	06/30/20 18:25	07/01/20 06:29	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1502218	1	06/27/20 18:50	07/01/20 14:36	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1501443	100	06/29/20 22:16	07/01/20 18:08	JDG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1501443	20	06/29/20 22:16	07/01/20 00:09	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	07/01/2020 06:29	WG1501363

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	07/01/2020 14:36	WG1502218
Toluene	ND		0.00500	1	07/01/2020 14:36	WG1502218
Ethylbenzene	ND		0.000500	1	07/01/2020 14:36	WG1502218
Total Xylene	ND		0.00150	1	07/01/2020 14:36	WG1502218
TPH (GC/FID) Low Fraction	ND		0.100	1	07/01/2020 14:36	WG1502218
(S) a,a,a-Trifluorotoluene(FID)	*101*		*77.0-120*		*07/01/2020 14:36*	WG1502218
(S) a,a,a-Trifluorotoluene(PID)	*99.7*		*72.0-128*		*07/01/2020 14:36*	WG1502218

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	1650		80.0	20	07/01/2020 00:09	WG1501443
C28-C40 Oil Range	8080		400	100	07/01/2020 18:08	WG1501443
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*07/01/2020 18:08*	WG1501443
(S) o-Terphenyl	*76.7*	J7	*18.0-148*		*07/01/2020 00:09*	WG1501443

Method Blank (MB)

(MB) R3545579-1 06/30/20 20:25

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

L1233377-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1233377-01 07/01/20 00:39 • (DUP) R3545579-3 07/01/20 00:57

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

L1233795-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1233795-06 07/01/20 05:52 • (DUP) R3545579-8 07/01/20 06:10

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

Laboratory Control Sample (LCS)

(LCS) R3545579-2 06/30/20 20:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	204	102	90.0-110	

L1233408-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1233408-01 07/01/20 01:34 • (MS) R3545579-4 07/01/20 01:52 • (MSD) R3545579-5 07/01/20 02:11

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	497	493	99.4	98.5	1	80.0-120			0.832	20

L1233795-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1233795-04 07/01/20 04:38 • (MS) R3545579-6 07/01/20 04:56 • (MSD) R3545579-7 07/01/20 05:15

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	20.3	515	519	99.0	99.8	1	80.0-120			0.833	20

Method Blank (MB)

(MB) R3545440-3 07/01/20 13:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		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(PID)	*103*			*72.0-128*
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3545440-1 07/01/20 12:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0470	94.0	76.0-121	
Toluene	0.0500	0.0510	102	80.0-120	
Ethylbenzene	0.0500	0.0519	104	80.0-124	
Total Xylene	0.150	0.154	103	37.0-160	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*72.0-128*	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Laboratory Control Sample (LCS)

(LCS) R3545440-2 07/01/20 12:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.97	109	72.0-127	
(S) a,a,a-Trifluorotoluene(PID)			*109*	*72.0-128*	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

Method Blank (MB)

(MB) R3544695-1 06/30/20 12:45

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	*58.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3544695-2 06/30/20 12:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	26.7	53.4	50.0-150	
(S) o-Terphenyl			*51.2*	*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
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
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	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

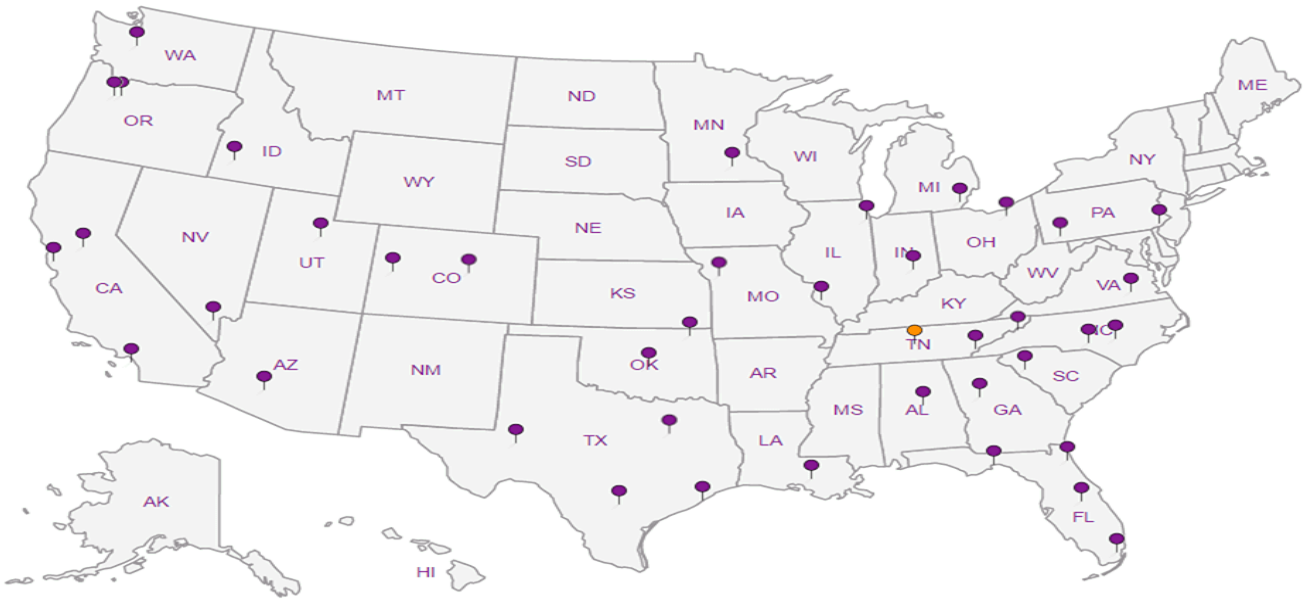
Third Party Federal Accreditations

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		

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



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 # L1234167

Table # B093

Acctnum: HILCORANM

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Report to: Jennifer Deal

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

Project Description: San Juan 32-9 Unit 282 S

City/State Collected: Aztec, NM

Phone: 505-324-5128
Fax:

Client Project #

Lab Project #

Collected by (print): K Hoekstra

Site/Facility ID # S.J. 32-9 Unit 282 S

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

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)
BGT Pit Closure Sample	Comp	SS		6-25	9:40	1	X	X	X		01

* 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 __ FedEx __ Courier __ _____

Tracking # 1676 2757 035

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	If preservation required by Login: Date/Time
Kurt Hoekstra	6-26-20	6:30			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.8 °C Bottles Received: 1	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/27/20 Time: 8:45	Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 17, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1262288
Samples Received:	09/16/2020
Project Number:	
Description:	San Juan 32-9 Unit 282S
Site:	SAN JUAN 32-9 UNIT 282S
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.

TABLE OF CONTENTS

EAST 1/2 OF BASE L1262288-01 Solid

Collected by: K. Hoekstra | Collected date/time: 09/14/20 08:31 | Received date/time: 09/16/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1543832	1	09/16/20 18:56	09/17/20 05:22	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1544092	1	09/16/20 13:33	09/16/20 16:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1544024	1	09/17/20 04:23	09/17/20 11:11	JN	Mt. Juliet, TN

WEST 1/2 OF BASE L1262288-02 Solid

Collected by: K. Hoekstra | Collected date/time: 09/14/20 08:35 | Received date/time: 09/16/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1543832	1	09/16/20 18:56	09/17/20 05:32	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1544092	1	09/16/20 13:33	09/16/20 16:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1544024	1	09/17/20 04:23	09/17/20 11:25	JN	Mt. Juliet, TN

NORTH WALL L1262288-03 Solid

Collected by: K. Hoekstra | Collected date/time: 09/14/20 08:39 | Received date/time: 09/16/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1543832	1	09/16/20 18:56	09/17/20 05:41	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1544092	1	09/16/20 13:33	09/16/20 16:57	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1544024	1	09/17/20 04:23	09/17/20 13:25	JN	Mt. Juliet, TN

EAST WALL L1262288-04 Solid

Collected by: K. Hoekstra | Collected date/time: 09/14/20 08:43 | Received date/time: 09/16/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1543832	1	09/16/20 18:56	09/17/20 06:10	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1544092	1	09/16/20 13:33	09/16/20 17:19	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1544024	1	09/17/20 04:23	09/17/20 11:51	JN	Mt. Juliet, TN

SOUTH WALL L1262288-05 Solid

Collected by: K. Hoekstra | Collected date/time: 09/14/20 08:47 | Received date/time: 09/16/20 09:30

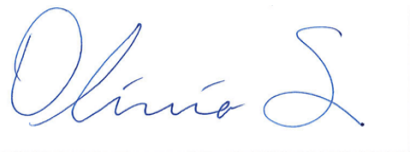
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1543832	1	09/16/20 18:56	09/17/20 06:19	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1544092	1	09/16/20 13:33	09/16/20 17:41	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1544024	1	09/17/20 04:23	09/17/20 12:05	JN	Mt. Juliet, TN

WEST WALL L1262288-06 Solid

Collected by: K. Hoekstra | Collected date/time: 09/14/20 08:52 | Received date/time: 09/16/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1543832	1	09/16/20 18:56	09/17/20 06:29	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1544092	1	09/16/20 13:33	09/16/20 18:04	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1544024	1	09/17/20 04:23	09/17/20 12:18	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	09/17/2020 05:22	WG1543832

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	09/16/2020 16:12	WG1544092
Toluene	ND		0.00500	1	09/16/2020 16:12	WG1544092
Ethylbenzene	ND		0.000500	1	09/16/2020 16:12	WG1544092
Total Xylene	ND		0.00150	1	09/16/2020 16:12	WG1544092
TPH (GC/FID) Low Fraction	ND		0.100	1	09/16/2020 16:12	WG1544092
(S) a,a,a-Trifluorotoluene(FID)	*98.1*		*77.0-120*		*09/16/2020 16:12*	WG1544092
(S) a,a,a-Trifluorotoluene(PID)	*99.6*		*72.0-128*		*09/16/2020 16:12*	WG1544092

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	4.59		4.00	1	09/17/2020 11:11	WG1544024
C28-C40 Oil Range	9.77		4.00	1	09/17/2020 11:11	WG1544024
(S) o-Terphenyl	*66.9*		*18.0-148*		*09/17/2020 11:11*	WG1544024

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	09/17/2020 05:32	WG1543832

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	09/16/2020 16:34	WG1544092
Toluene	ND		0.00500	1	09/16/2020 16:34	WG1544092
Ethylbenzene	ND		0.000500	1	09/16/2020 16:34	WG1544092
Total Xylene	ND		0.00150	1	09/16/2020 16:34	WG1544092
TPH (GC/FID) Low Fraction	ND		0.100	1	09/16/2020 16:34	WG1544092
(S) a,a,a-Trifluorotoluene(FID)	*98.0*		*77.0-120*		*09/16/2020 16:34*	WG1544092
(S) a,a,a-Trifluorotoluene(PID)	*99.1*		*72.0-128*		*09/16/2020 16:34*	WG1544092

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	19.3		4.00	1	09/17/2020 11:25	WG1544024
C28-C40 Oil Range	95.8		4.00	1	09/17/2020 11:25	WG1544024
(S) o-Terphenyl	*75.4*		*18.0-148*		*09/17/2020 11:25*	WG1544024

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	09/17/2020 05:41	WG1543832

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	09/16/2020 16:57	WG1544092
Toluene	ND		0.00500	1	09/16/2020 16:57	WG1544092
Ethylbenzene	ND		0.000500	1	09/16/2020 16:57	WG1544092
Total Xylene	ND		0.00150	1	09/16/2020 16:57	WG1544092
TPH (GC/FID) Low Fraction	ND		0.100	1	09/16/2020 16:57	WG1544092
(S) a,a,a-Trifluorotoluene(FID)	*97.8*		*77.0-120*		*09/16/2020 16:57*	WG1544092
(S) a,a,a-Trifluorotoluene(PID)	*98.7*		*72.0-128*		*09/16/2020 16:57*	WG1544092

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	4.34		4.00	1	09/17/2020 13:25	WG1544024
C28-C40 Oil Range	16.3		4.00	1	09/17/2020 13:25	WG1544024
(S) o-Terphenyl	*70.4*		*18.0-148*		*09/17/2020 13:25*	WG1544024

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	09/17/2020 06:10	WG1543832

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	09/16/2020 17:19	WG1544092
Toluene	ND		0.00500	1	09/16/2020 17:19	WG1544092
Ethylbenzene	ND		0.000500	1	09/16/2020 17:19	WG1544092
Total Xylene	ND		0.00150	1	09/16/2020 17:19	WG1544092
TPH (GC/FID) Low Fraction	ND		0.100	1	09/16/2020 17:19	WG1544092
(S) a,a,a-Trifluorotoluene(FID)	*97.9*		*77.0-120*		*09/16/2020 17:19*	WG1544092
(S) a,a,a-Trifluorotoluene(PID)	*99.0*		*72.0-128*		*09/16/2020 17:19*	WG1544092

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	ND		4.00	1	09/17/2020 11:51	WG1544024
C28-C40 Oil Range	ND		4.00	1	09/17/2020 11:51	WG1544024
(S) o-Terphenyl	*70.4*		*18.0-148*		*09/17/2020 11:51*	WG1544024

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	09/17/2020 06:19	WG1543832

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	09/16/2020 17:41	WG1544092
Toluene	ND		0.00500	1	09/16/2020 17:41	WG1544092
Ethylbenzene	ND		0.000500	1	09/16/2020 17:41	WG1544092
Total Xylene	ND		0.00150	1	09/16/2020 17:41	WG1544092
TPH (GC/FID) Low Fraction	ND		0.100	1	09/16/2020 17:41	WG1544092
(S) a,a,a-Trifluorotoluene(FID)	*98.6*		*77.0-120*		*09/16/2020 17:41*	WG1544092
(S) a,a,a-Trifluorotoluene(PID)	*98.4*		*72.0-128*		*09/16/2020 17:41*	WG1544092

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	4.58		4.00	1	09/17/2020 12:05	WG1544024
C28-C40 Oil Range	7.41		4.00	1	09/17/2020 12:05	WG1544024
(S) o-Terphenyl	*77.6*		*18.0-148*		*09/17/2020 12:05*	WG1544024

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	09/17/2020 06:29	WG1543832

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	09/16/2020 18:04	WG1544092
Toluene	ND		0.00500	1	09/16/2020 18:04	WG1544092
Ethylbenzene	ND		0.000500	1	09/16/2020 18:04	WG1544092
Total Xylene	ND		0.00150	1	09/16/2020 18:04	WG1544092
TPH (GC/FID) Low Fraction	ND		0.100	1	09/16/2020 18:04	WG1544092
(S) a,a,a-Trifluorotoluene(FID)	*97.5*		*77.0-120*		*09/16/2020 18:04*	WG1544092
(S) a,a,a-Trifluorotoluene(PID)	*98.8*		*72.0-128*		*09/16/2020 18:04*	WG1544092

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	23.7		4.00	1	09/17/2020 12:18	WG1544024
C28-C40 Oil Range	130		4.00	1	09/17/2020 12:18	WG1544024
(S) o-Terphenyl	*68.2*		*18.0-148*		*09/17/2020 12:18*	WG1544024

Method Blank (MB)

(MB) R3571398-1 09/17/20 03:09

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

L1258953-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1258953-06 09/17/20 03:38 • (DUP) R3571398-3 09/17/20 03:47

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	353	317	1	10.7		20

L1262288-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1262288-06 09/17/20 06:29 • (DUP) R3571398-6 09/17/20 06:39

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

Laboratory Control Sample (LCS)

(LCS) R3571398-2 09/17/20 03:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	190	94.9	90.0-110	

L1262288-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262288-03 09/17/20 05:41 • (MS) R3571398-4 09/17/20 05:51 • (MSD) R3571398-5 09/17/20 06:00

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	498	498	99.6	99.6	1	80.0-120			0.0587	20

Method Blank (MB)

(MB) R3571357-3 09/16/20 14:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		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)	*99.5*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*102*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3571357-1 09/16/20 11:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0530	106	76.0-121	
Toluene	0.0500	0.0555	111	80.0-120	
Ethylbenzene	0.0500	0.0554	111	80.0-124	
Total Xylene	0.150	0.164	109	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*98.4*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3571357-2 09/16/20 13:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.17	112	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*108*	*72.0-128*	

L1260902-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1260902-04 09/16/20 19:56 • (MS) R3571357-4 09/17/20 01:51 • (MSD) R3571357-5 09/17/20 02:14

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	1.43	ND	1.40	1.43	97.9	100	28.5	10.0-155			2.12	32
Toluene	1.43	ND	1.36	1.38	95.1	96.5	28.5	10.0-160			1.46	34
Ethylbenzene	1.43	ND	1.38	1.41	96.5	98.6	28.5	10.0-160			2.15	32
Total Xylene	4.27	ND	4.04	4.12	94.6	96.5	28.5	10.0-160			1.96	32
(S) a,a,a-Trifluorotoluene(FID)					*99.0*	*98.6*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*100*	*99.7*		*72.0-128*				

L1261003-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1261003-06 09/17/20 01:29 • (MS) R3571357-6 09/17/20 02:36 • (MSD) R3571357-7 09/17/20 02:59

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 %
TPH (GC/FID) Low Fraction	138	ND	70.9	76.9	51.4	55.7	25	10.0-151			8.12	28
(S) a,a,a-Trifluorotoluene(FID)					*103*	*104*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*102*	*102*		*72.0-128*				

Method Blank (MB)

(MB) R3571383-1 09/17/20 08:32

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	0.606	J	0.274	4.00
(S) o-Terphenyl	*75.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3571383-2 09/17/20 08:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.9	69.8	50.0-150	
(S) o-Terphenyl			*83.2*	*18.0-148*	

L1262288-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262288-06 09/17/20 12:18 • (MS) R3571383-3 09/17/20 12:31 • (MSD) R3571383-4 09/17/20 12:45

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	47.6	23.7	56.4	53.6	68.7	62.3	1	50.0-150			5.09	20
(S) o-Terphenyl					*77.6*	*71.9*		*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.

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.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
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	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

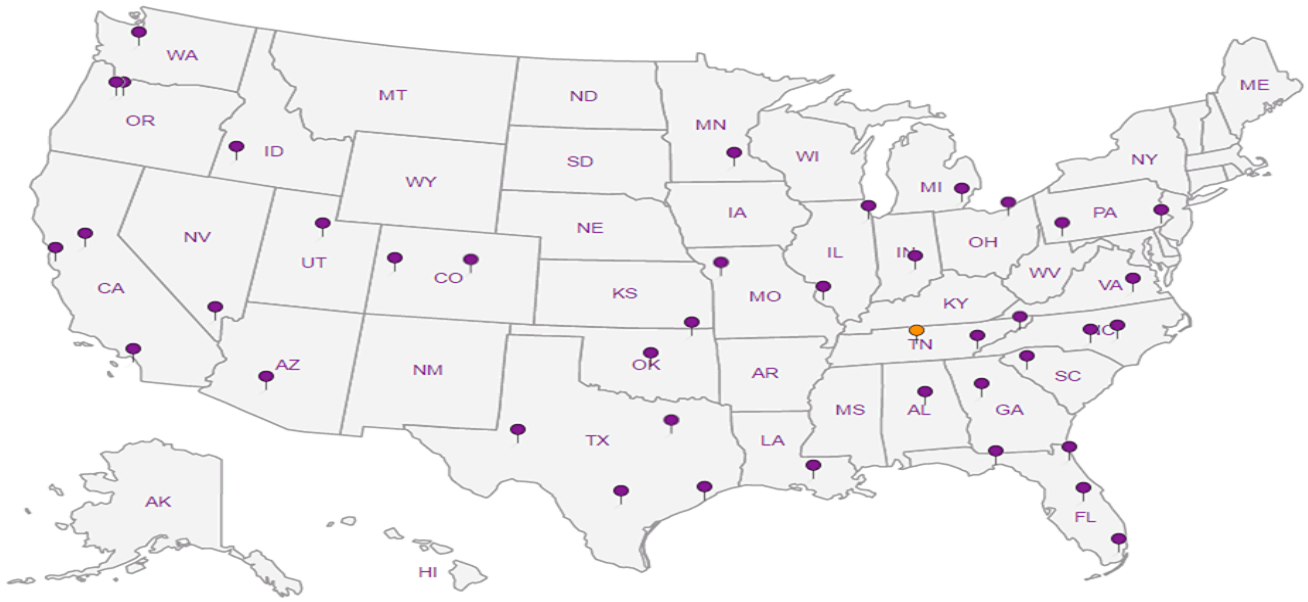
Third Party Federal Accreditations

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		

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Billing Information: **ATTN: Jennifer Deal**

Pres Chk

Report to: **Jennifer Deal**

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

Project Description: **San Juan 32-9 Unit 282S**

City/State Collected: **Aztec, NM**

Phone: **505-324-5128** Fax:

Client Project #

Lab Project #

Collected by (print): **K Hoekstra**

Site/Facility ID # **S.J. 32-9 # 282 S**

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

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

Analysis / Container / Preservative

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 1/2 of Base	Comp	SS		9-14	8:31	1	X	X	X		01
West 1/2 of Base	Comp	SS		9-14	8:35	1	X	X	X		02
North Wall	Comp	SS		9-14	8:39	1	X	X	X		03
East Wall	Comp	SS		9-14	8:43	1	X	X	X		04
South Wall	Comp	SS		9-14	8:47	1	X	X	X		05
West Wall	Comp	SS		9-14	8:52	1	X	X	X		06

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 # 126288

H103

Acctnum: **HILCORANM**

Template:

Prelogin:

TSR:

PB:

Shipped Via:

* 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 # 1845 4325 2645

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	If preservation required by Login: Date/Time
Kurt Hoekstra	9-15-20	2:21			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.2 °C Bottles Received: 6	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) NPappas	Date: 9-16-20 Time: 930	Hold: Condition: NCF / OK

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

COMMENTS

Action 10298

COMMENTS

Operator:			OGRID:	Action Number:	Action Type:
HILCORP ENERGY COMPANY	1111 Travis Street	Houston, TX77002	372171	10298	C-141

Created By	Comment	Comment Date
csmith	Please Remember to include Depth to water information when referencing the BGT Permit or any other application. (Ie the Cathodic Well)	03/19/2021

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
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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 10298

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
HILCORP ENERGY COMPANY	1111 Travis Street	Houston, TX77002	372171	10298	C-141

OCD Reviewer	Condition
csmith	None