

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	
District RP	
Facility ID	
Application ID	

## Release Notification

NMOC

### Responsible Party

MAR 25 2019

DISTRICT III

Responsible Party: Hilcorp Energy	OGRID: 372171
Contact Name: Lindsay Dumas	Contact Telephone: 281-794-9159
Contact email: Ldumas@hilcorp.com	Incident # (assigned by OCD) NCS1907752578
Contact mailing address: 1111 Travis St. Houston, TX 77002	

### Location of Release Source

Latitude 36.43239 Longitude -107.44795  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Canyon Largo Unit 252	Site Type: Gas
Date Release Discovered: 2/24/19	API# (if applicable) 30-039-20805

Unit Letter	Section	Township	Range	County
A	3	25N	06W	Rio Arriba

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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 11 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

#### Cause of Release

Corrosion around the man way door of the tank.

27

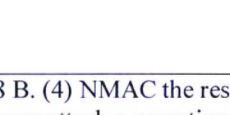
State of New Mexico  
Oil Conservation Division

Incident ID	
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<p>Was this a major release as defined by 19.15.29.7(A) NMAC?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>If YES, for what reason(s) does the responsible party consider this a major release?</p>
<p>If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?</p>	

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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: <u>Lindsay Dumas</u> Signature: <u></u> email: <u>Ldumas@hilcorp.com</u>	Title: Environmental Specialist _____ Date: 3/11/19 _____ Telephone: 832-839-4585 _____

**OCD Only**  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_



Incident ID	
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## 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

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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: Lindsay Dumas Title: Environmental Specialist  
Signature: Lindsay Dumas Date: 3-19-19  
email: ldumas@hilcorp.com Telephone: 832-839-4585

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_



State of New Mexico  
Oil Conservation Division

Incident ID	
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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: Dindsay Dumas Title: Environmental Specialist  
 Signature: Dindsay Dumas Date: 3-19-19  
 email: LDumas@hilcorp.com Telephone: 832-839-4585

**OCD Only**

Received by: [Signature] Date: 3/25/19

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: [Signature] Date: 4/8/19  
 Printed Name: Cory Title: Environmental Spec.

2/24/19 - Release discovered  
2/25/19 - Release reported to NMOCD and BLM  
3/1/19 - Hilcorp sent confirmation sampling notification to NMOCD and BLM for 3/5/19 at 9AM  
3/5/19 @ 6:39AM - Hilcorp postponed sampling to 3/7/19 due to road condition from weather  
3/7/19 - Hilcorp sampled the release impacted area  
3/11/19 - Hilcorp submitted the Initial C-141  
3/15/19 - Lab results available, all results were below NMOCD action level

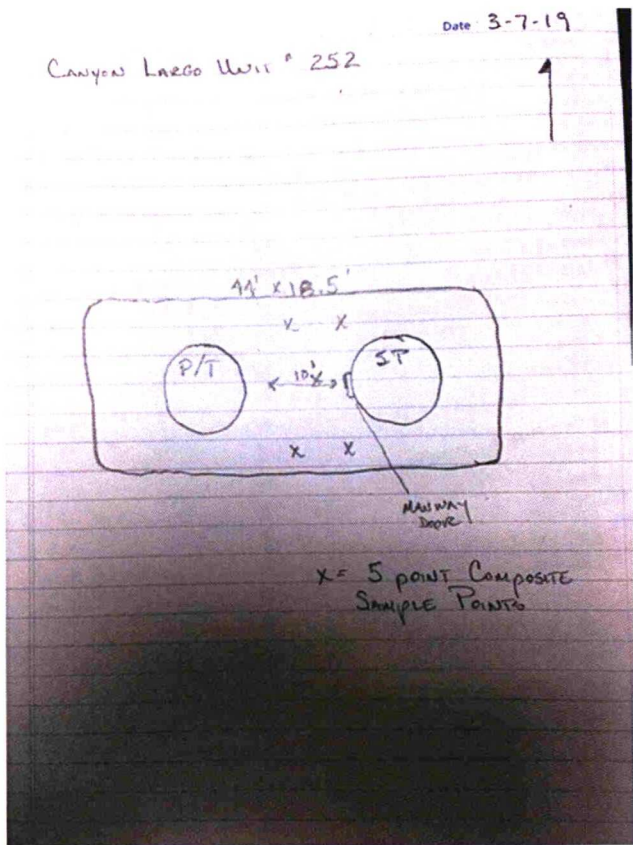
No further action.

# Scaled Map





# Field Data



# Data table of soil contaminant concentration data

**SOIL ANALYTICAL RESULTS**  
**Canyon Largo Unit 252**  
**HILCORP ENERGY - L48 WEST**

Soil Sample Identification	Sample Date	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	GRO+DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
5 pt composite	3/7/2019	52	0	0	0.0014	0.0281	0.03	0.709	6.48	7.189	0	7.189
NMOCD Standards		20,000	10				50			1000		2,500

# Depth to water determination



## New Mexico Office of the State Engineer Water Column/Average Depth to Water

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

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

(quarters are 1=NNW 2=NNE 3=SWW 4=SSE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	Sub-basin	County	Q	Q	Q	Sec	Twp	Range	X	Y	Depth	Well	Depth	Water	Column
S7.00201		SJ	PA	1	4	03	22N	06W		280124	4034064	1346		500		\$46

Average Depth to Water: 500 feet  
Minimum Depth: 500 feet  
Maximum Depth: 500 feet

Record Count: 1

PLSS Search:

Section(s): 3 Township: 22N Range: 06W

\*UTM location was derived from PLSS - see Help

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

3/11/19 1:23 PM

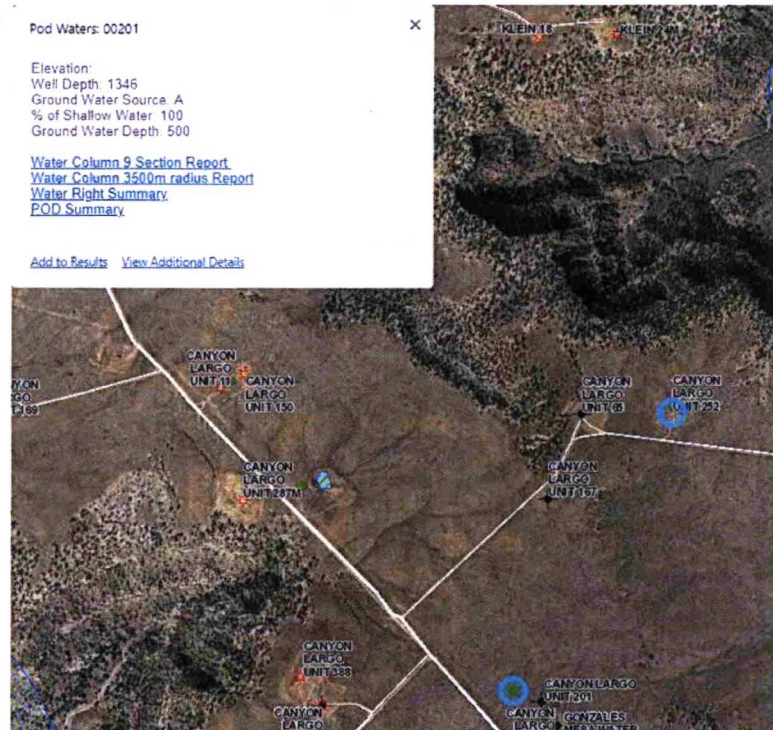
WATER COLUMN AVERAGE DEPTH TO WATER

Pod Waters: 00201

Elevation:  
Well Depth: 1346  
Ground Water Source: A  
% of Shallow Water: 100  
Ground Water Depth: 500

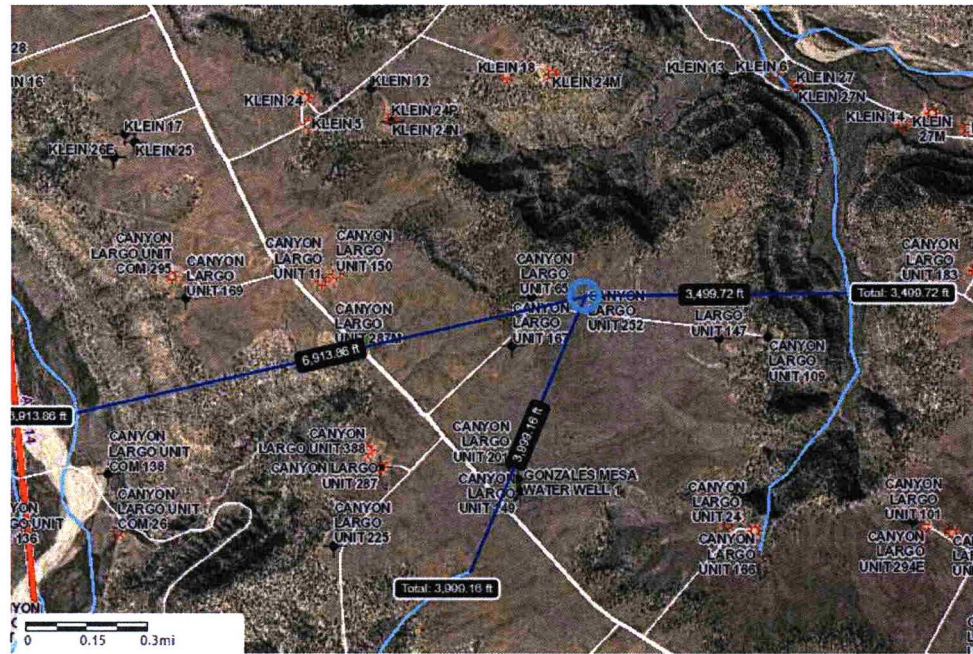
[Water Column 9 Section Report](#)  
[Water Column 3500m radius Report](#)  
[Water Right Summary](#)  
[POD Summary](#)

[Add to Results](#) [View Additional Details](#)





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



## Photographs – 3/7/19 Confirmation Sampling Event

5 pt Composite



5 pt Composite





# Topographic/Aerial Maps







# ANALYTICAL REPORT

March 14, 2019

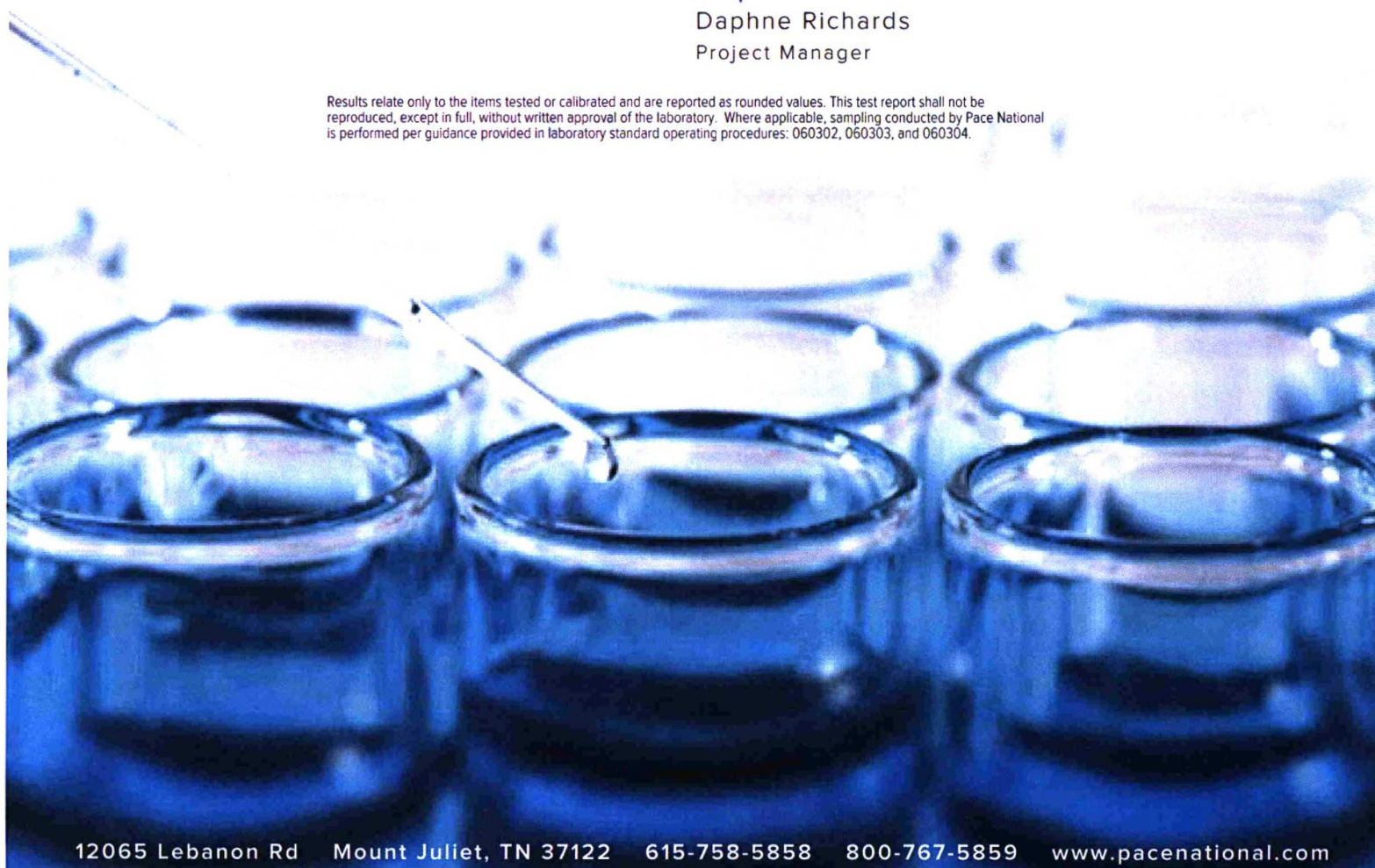
## HilCorp-Farmington, NM

Sample Delivery Group: L1077278  
Samples Received: 03/09/2019  
Project Number:  
Description: Canyon Largo Unit #252  
Site: CANYON LARGO UNIT #252  
Report To: Lindsay Dumas  
382 Road 3100  
Aztec, NM 87401

Entire Report Reviewed By:

Daphne Richards  
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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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ONE LAB. NATIONWIDE.



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# SAMPLE SUMMARY

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SPILL SAMPLE L1077278-01 Solid

Collected by  
Kurt

Collected date/time  
03/07/19 09:30

Received date/time  
03/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1248113	1	03/13/19 14:45	03/13/19 19:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1248756	1	03/10/19 21:56	03/12/19 20:27	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1247957	1	03/11/19 07:23	03/11/19 21:32	KME	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





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.

Daphne Richards  
Project Manager

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

## SPILL SAMPLE

Collected date/time: 03/07/19 09:30

## SAMPLE RESULTS - 01

L1077278

ONE LAB. NATIONWIDE.



## Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	51.7		10.0	1	03/13/2019 19:51	<a href="#">WG1248113</a>

Cp

<sup>2</sup>Tc

## 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	03/12/2019 20:27	<a href="#">WG1248756</a>
Toluene	ND		0.00500	1	03/12/2019 20:27	<a href="#">WG1248756</a>
Ethylbenzene	0.00140		0.000500	1	03/12/2019 20:27	<a href="#">WG1248756</a>
Total Xylene	0.0281		0.00150	1	03/12/2019 20:27	<a href="#">WG1248756</a>
TPH (GC/FID) Low Fraction	0.709		0.100	1	03/12/2019 20:27	<a href="#">WG1248756</a>
(S) a,a,a-Trifluorotoluene(FID)	89.0		77.0-120		03/12/2019 20:27	<a href="#">WG1248756</a>
(S) a,a,a-Trifluorotoluene(PID)	92.6		72.0-128		03/12/2019 20:27	<a href="#">WG1248756</a>

<sup>3</sup>Ss<sup>4</sup>Cn<sup>5</sup>Sr<sup>6</sup>Qc<sup>7</sup>Gl

## 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	6.48		4.00	1	03/11/2019 21:32	<a href="#">WG1247957</a>
C28-C40 Oil Range	ND		4.00	1	03/11/2019 21:32	<a href="#">WG1247957</a>
(S) o-Terphenyl	109		18.0-148		03/11/2019 21:32	<a href="#">WG1247957</a>

<sup>8</sup>Al<sup>9</sup>Sc



## Method Blank (MB)

(MB) R3391415-1 03/13/19 15:59

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		0.795	10.0

## L1077065-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1077065-06 03/13/19 17:12 • (DUP) R3391415-3 03/13/19 17:28

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	ND	6.73	1	4.25	J	15

## L1077354-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1077354-08 03/13/19 23:54 • (DUP) R3391415-6 03/14/19 00:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	54.0	53.2	1	1.61		15

## Laboratory Control Sample (LCS)

(LCS) R3391415-2 03/13/19 16:14

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	217	109	80.0-120	

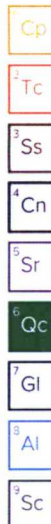
## L1077347-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1077347-03 03/13/19 20:07 • (MS) R3391415-4 03/13/19 20:23 • (MSD) R3391415-5 03/13/19 20:39

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	500	14.0	528	507	103	98.7	1	80.0-120			4.03	15

ACCOUNT:  
HilCorp-Farmington, NM

PROJECT:

SDG:  
L1077278DATE/TIME:  
03/14/19 10:10PAGE:  
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WG1248756

Volatile Organic Compounds (GC) by Method 8015/8021

## QUALITY CONTROL SUMMARY

L1077278-01

ONE LAB. NATIONWIDE.



## Method Blank (MB)

(MB) R3391116-4 03/12/19 15:34

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	0.0237	J	0.0217	0.100
(S)				
a,a,a-Trifluorotoluene(FID)	91.4			77.0-120
(S)				
a,a,a-Trifluorotoluene(PID)	94.4			72.0-128

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3391116-1 03/12/19 13:43 • (LCSD) R3391116-2 03/12/19 14:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0473	0.0478	94.6	95.6	76.0-121			1.08	20
Toluene	0.0500	0.0442	0.0446	88.4	89.2	80.0-120			0.930	20
Ethylbenzene	0.0500	0.0467	0.0476	93.3	95.1	80.0-124			1.92	20
Total Xylene	0.150	0.140	0.142	93.1	94.3	37.0-160			1.28	20
(S)										
a,a,a-Trifluorotoluene(FID)				90.5	91.2	77.0-120				
(S)										
a,a,a-Trifluorotoluene(PID)				91.8	92.6	72.0-128				

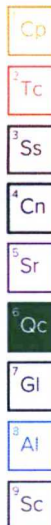
## Laboratory Control Sample (LCS)

(LCS) R3391116-3 03/12/19 14:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.22	94.8	72.0-127	
(S)					
a,a,a-Trifluorotoluene(FID)			102	77.0-120	
(S)					
a,a,a-Trifluorotoluene(PID)			99.4	72.0-128	

ACCOUNT:  
HillCorp-Farmington, NM

PROJECT:

SDG:  
L1077278DATE/TIME:  
03/14/19 10:10PAGE:  
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WG1247957

Semi-Volatile Organic Compounds (GC) by Method 8015

## QUALITY CONTROL SUMMARY

L1077278-01

ONE LAB. NATIONWIDE



## Method Blank (MB)

(MB) R3390601-1 03/11/19 19:35

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	110			18.0-148

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390601-2 03/11/19 19:49 • (LCSD) R3390601-3 03/11/19 20:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	41.0	40.3	82.0	80.6	50.0-150			1.72	20
C10-C28 Diesel Range	50.0	40.8	38.9	81.6	77.8	50.0-150			4.77	20
(S) o-Terphenyl				145	158	18.0-148	J1			

## L1077088-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1077088-01 03/11/19 22:12 • (MS) R3390601-4 03/11/19 22:26 • (MSD) R3390601-5 03/11/19 22:40

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 %
Extractable Petroleum Hydrocarbon	48.6	26.4	56.0	73.4	60.9	94.0	2	50.0-150		J3	26.9	20
C10-C28 Diesel Range	48.6	9.19	39.3	49.6	62.0	80.8	2	50.0-150		J3	23.2	20
(S) o-Terphenyl					64.8	73.1		18.0-148				

ACCOUNT:

HilCorp-Farmington, NM

PROJECT:

SDG:

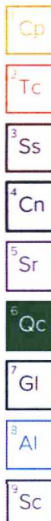
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## Guide to Reading and Understanding Your Laboratory Report

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.

### 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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



# 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.

## 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

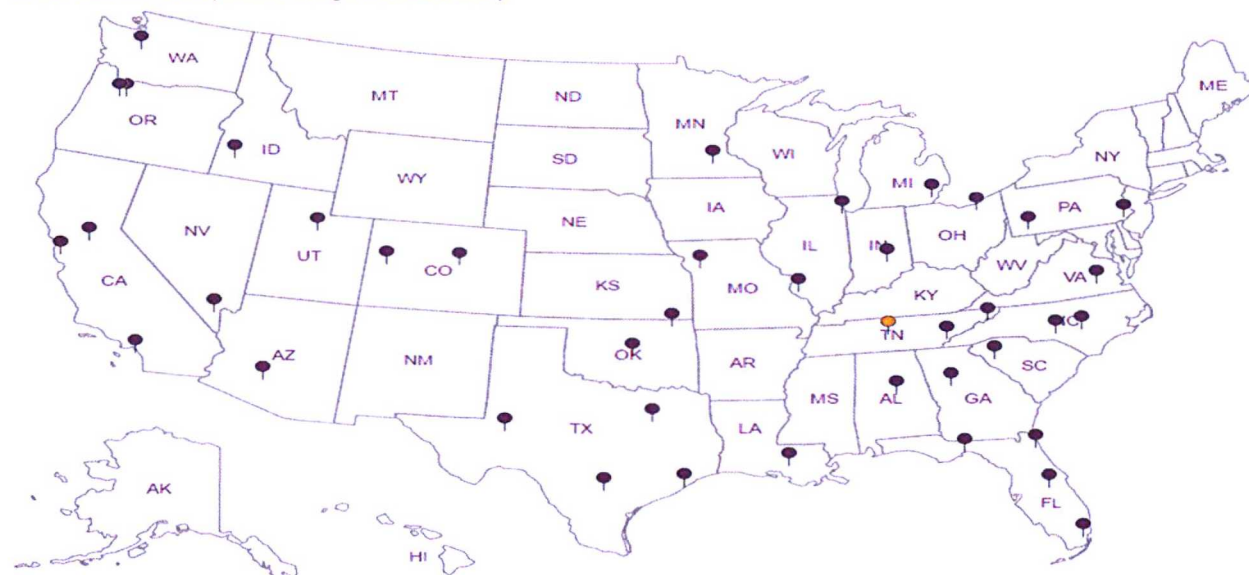
## Third Party Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA - ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



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**Matt Shacklock**

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**From:** Daphne Richards  
**Sent:** Friday, March 8, 2019 10:38 AM  
**To:** Login  
**Subject:** Rush arriving 3/9 HILCORANM R4

1 SS arrives 3/9 from HILCORANM. Please log as R4 due 3/14

BTEXGRO  
DRORLA

Thanks  
Daphne



## Lindsay Dumas

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**From:** Lindsay Dumas  
**Sent:** Tuesday, March 5, 2019 7:39 AM  
**To:** 'l1thomas@blm.gov'; 'aadeloye@blm.gov'; 'cory.smith@state.nm.us'; 'Vanessa.fields@state.nm.us'; 'jim.griswold@state.nm.us'  
**Cc:** Kurt Hoekstra  
**Subject:** RE: 11.04 bbl produced water release Canyon Largo 252

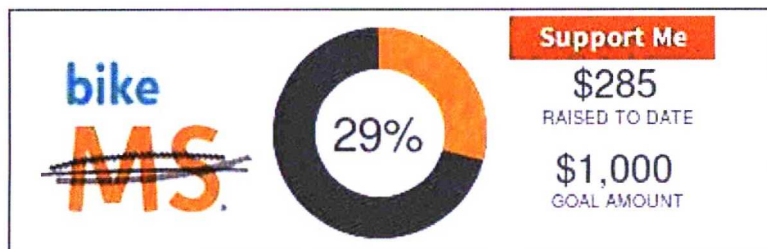
This confirmation sampling is postponed until Thursday due to muddy roads. Thanks!

**From:** Lindsay Dumas  
**Sent:** Friday, March 1, 2019 9:17 AM  
**To:** 'l1thomas@blm.gov'; 'aadeloye@blm.gov'; 'cory.smith@state.nm.us'; 'Vanessa.fields@state.nm.us'; 'jim.griswold@state.nm.us'  
**Cc:** Kurt Hoekstra  
**Subject:** RE: 11.04 bbl produced water release Canyon Largo 252

Hilcorp would like to schedule confirmation sampling for Tuesday March 5<sup>th</sup> at 9:00AM.

Kind regards,

*Lindsay Dumas*  
Environmental Specialist  
Hilcorp Energy – L48 West  
Office: 832-839-4585  
Mobile: 281-794-9159



**From:** Terry Nelson  
**Sent:** Monday, February 25, 2019 9:36 AM  
**To:** 'l1thomas@blm.gov' <[l1thomas@blm.gov](mailto:l1thomas@blm.gov)>; 'aadeloye@blm.gov' <[aadeloye@blm.gov](mailto:aadeloye@blm.gov)>; 'cory.smith@state.nm.us' <[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)>; 'Vanessa.fields@state.nm.us' <[Vanessa.fields@state.nm.us](mailto:Vanessa.fields@state.nm.us)>; 'jim.griswold@state.nm.us' <[jim.griswold@state.nm.us](mailto:jim.griswold@state.nm.us)>  
**Cc:** Nick Kunze <[nkunze@hilcorp.com](mailto:nkunze@hilcorp.com)>; Lindsay Dumas <[ldumas@hilcorp.com](mailto:ldumas@hilcorp.com)>  
**Subject:** 11.04 bbl produced water release Canyon Largo 252

On 2/24/2019 at 1pm, Hilcorp Energy discovered a release on the Canyon Largo 252, 30-039-20805, 36.43239, -107.44795, A, 3, 25N, 06W. Field Operator discovered ice buildup around the man way door of the tank, upon further investigation and gauging the tank realized a loss of 11.04 bbl of produced water, remaining fluids were transferred. Tank is on schedule for inspection and repair. The release remained in the berm'd area. Zero fluid was recovered.

Hilcorp Environmental will submit an Initial C-141 within 15 days, and follow up with spill assessment.

***Terry Nelson***  
***Sr. Foreman Area 14***  
***Hilcorp Energy***  
***505-320-2503***