

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

### Responsible Party

NMOC

FEB 14 2019

Initial Report

Responsible Party Hilcorp Energy	OGRID 372171
Contact Name Clara Cardoza	Contact Telephone 505-564-0733
Contact email <a href="mailto:ccardoza@hilcorp.com">ccardoza@hilcorp.com</a>	Incident # (assigned by OCD)
Contact mailing address 382 CR 3100 Aztec NM 87410	NCS 18339420 96

### Location of Release Source

Latitude 36.70916 Longitude -107.55528  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name San Juan 29-7 Unit 191	Site Type Well Site
Date Release Discovered 11/13/2018	API# (if applicable) 30-039-27474

Unit Letter	Section	Township	Range	County
2	22	29N	7W	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 type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (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 checked="" type="checkbox"/> Other (describe) Anit-freeze	Volume/Weight Released (provide units) 200 gallons	Volume/Weight Recovered (provide units) None

#### Cause of Release

The water bath on the separator over pressured and ruptured. The pressure release resulted in a catastrophic failure of the water bath and damage to the adjacent equipment. The water bath began building pressure when the temperature controller (T-12) failed, and continued to engage the main burner, even after the water bath had reached the 70 ° F set point. The water bath is not designed to be pressurized, and typically has a flapper/rain cap on the filler neck, or a bull plug with a hole in it to prevent dirt/debris from getting into the water bath (while allowing the water bath to vent). This particular unit had a valve on the filler neck in the closed position (it is unknown why and when the valve was installed).

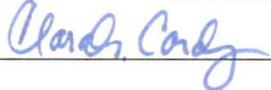
23

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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? 19.15.29.7.A(2)(d) – an unauthorized release of volume that substantially damages property or the environment.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? 11/13/2018 – NMOCD, Cory Smith @ 3:12 p.m. 11/13/2018 – BLM, left a voicemail for Whitney Thomas @ 3:23 p.m. Followed up with email to both agencies on 11/13/2018 @3:43 p.m.	

### 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:  All above actions have been completed.	
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>Clara Cardoza</u>	Title: <u>Environmental Specialist</u>
Signature: 	Date: <u>11/28/2018</u>
email: <u>ccardoza@hilcorp.com</u>	Telephone: <u>505.564.0733</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

## Clara Cardoza

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**From:** Clara Cardoza  
**Sent:** Wednesday, November 21, 2018 2:00 PM  
**To:** 'cory.smith@state.nm.us'; 'Griswold, Jim, EMNRD'; 'whitney thomas (l1thomas@blm.gov)'  
**Cc:** 'Fields, Vanessa, EMNRD'; 'Abiodun Adeloje'  
**Subject:** RE: Notification follow-up: Incident at HEC SJ 29-7 191

Follow-up info from further investigation.

On November 12, 2018 at 8:13 pm the water bath on the separator for the San Juan 29-7 unit # 191 over pressured and ruptured. The pressure release resulted in a catastrophic failure of the water bath and damage to the adjacent equipment. The water bath began building pressure when the T-12 failed, and continued to engage the main burner, even after the water bath had reached the 70 ° F set point. The water bath is not designed to be pressurized, and typically has a flapper/rain cap on the filler neck, or a bull plug with a hole in it to prevent dirt/debris from getting into the water bath (while allowing the water bath to vent). This particular unit had a valve on the filler neck in the closed position (it is unknown why and when the valve was installed).

The impacted soil has been removed. Confirmation sampling will be scheduled next week.

Please let me know if you have any questions.

Thank you,  
Clara

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**From:** Clara Cardoza  
**Sent:** Tuesday, November 13, 2018 3:43 PM  
**To:** cory.smith@state.nm.us; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; whitney thomas (l1thomas@blm.gov) <l1thomas@blm.gov>  
**Cc:** whitney thomas (l1thomas@blm.gov) <l1thomas@blm.gov>; Abiodun Adeloje <aadeloje@blm.gov>  
**Subject:** Notification follow-up: Incident at HEC SJ 29-7 191

Please let this serve as a notification follow up and additional information for the incident at the Hilcorp Energy SJ 29-7 191. There was a separator failure at the facility we approximate happened last night 11/12 at 8:00 pm. The operator came to the site this afternoon and found the separator approximately 40-50 yards from the original location. The site has been secure, there were no injuries or EMS called. Approximately 200 galls of antifreeze was release on an area about 150 ft x 15 ft and no more than 0.5 inch deep. All impacts on location.

Additional information will follow as it becomes available.

Thank you,

*Clara M Cardoza*  
Environmental Specialist  
505-564-0733 (O)  
505-793-2784 (C)

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 1/2-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.

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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: Clara Cardoza Title: Environmental Specialist

Signature:  Date: 02/14/2019

email: ccardoza@hilcorp.com Telephone: 505.564.0733

**OCD Only**

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

Incident ID	
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### 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: Clara Cardoza Title: Environmental Specialist

Signature:  Date: 02/14/2019

email: ccardoza@hilcorp.com Telephone: 505.564.0733

**OCD Only**

Received by:  Date: 2/14/19

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:  Date: 3/4/19

Printed Name: Cory Title: Environmental Spec.

# Topographic/Aerial Map



## Field Data/Sampling notes

- A fine mist of ethylene glycol sprayed in the area of the projectile.
- Minimal soil was removed as part of cleanup.
- NMOCD requested sampling for 8015 since EG was released

# Data Table

Sample	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)	GRO+DRO (mg/kg)
Closure Criteria - Table 1	-	-	-	2500 mg/kg	1,000 mg/kg
Sample 1 (12/12/18)	ND	6.91	4.70	11.61	6.91

# Depth to water determination



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

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec 28	Tws 29N	Rng 07W	X	Y	DepthWell	DepthWater	Water Column
<a href="#">SJ01112</a>		SJ	RA	4	4	2	28	29N	07W	270543	4064431*	2453	900	1553
<a href="#">SJ01228</a>		SJ	RA	1	2	23	29N	07W	273312	4066455*	285	205	80	
													Average Depth to Water:	<b>552 feet</b>
													Minimum Depth:	<b>205 feet</b>
													Maximum Depth:	<b>900 feet</b>

**Record Count:** 2

**PLSS Search:**

**Section(s):** 14, 15, 16, 21, 22, 23, 26, 27, 28  
**Township:** 29N  
**Range:** 07W

\*UTM location was derived from PLSS - see Help

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.

2/13/19 11:24 AM

WATER COLUMN/ AVERAGE DEPTH  
TO WATER



# Topographic/Aerial Map



Approximate projectile of equipment

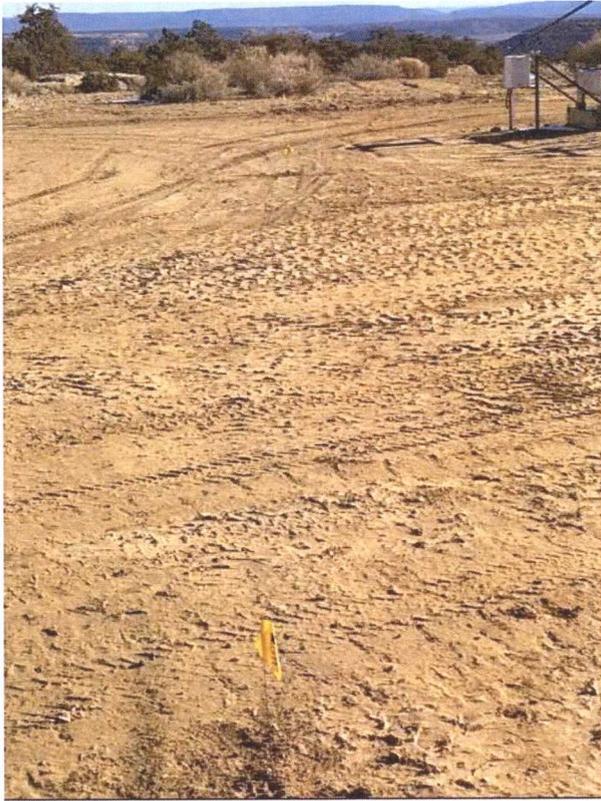
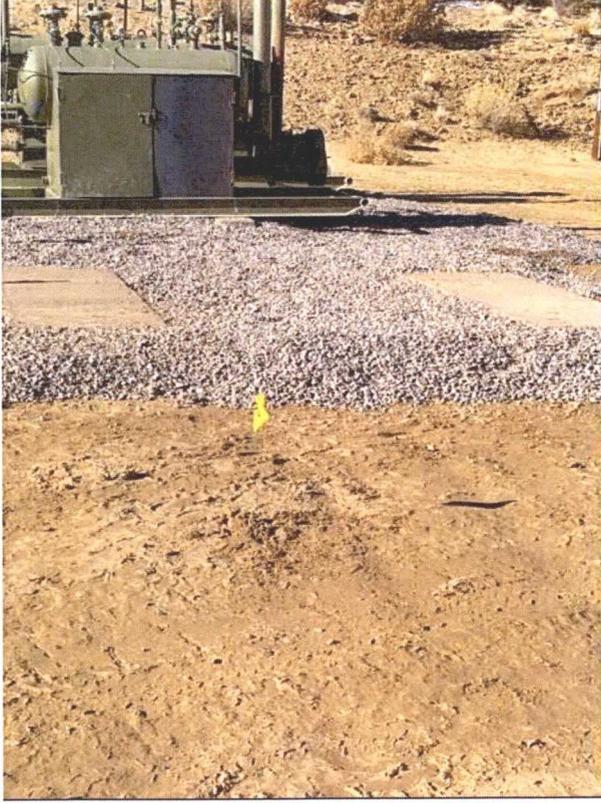


Approximate resting spot on equipment



Approximate sample locations

Samples taken on 12/12/2018



December 19, 2018

## HilCorp-Farmington, NM

Sample Delivery Group: L1052851  
Samples Received: 12/13/2018  
Project Number:  
Description: SJ 29-7 #191  
Site: SJ 29-7 191  
Report To: Clara Cardoza  
382 Road 3100  
Aztec, NM 87401

Entire Report Reviewed By:



Jason Romer  
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.



Cp: Cover Page	1	<sup>1</sup> Cp
Tc: Table of Contents	2	<sup>2</sup> Tc
Ss: Sample Summary	3	<sup>3</sup> Ss
Cn: Case Narrative	4	<sup>4</sup> Cn
Sr: Sample Results	5	<sup>5</sup> Sr
SAMPLE 1 L1052851-01	5	
Qc: Quality Control Summary	6	<sup>6</sup> Qc
Volatile Organic Compounds (GC) by Method 8015D/GRO	6	
Semi-Volatile Organic Compounds (GC) by Method 8015	7	
Gl: Glossary of Terms	8	<sup>7</sup> Gl
Al: Accreditations & Locations	9	<sup>8</sup> Al
Sc: Sample Chain of Custody	10	<sup>9</sup> Sc

# SAMPLE SUMMARY



SAMPLE 1 L1052851-01 Solid

Collected by: Clara Cardoza  
Collected date/time: 12/12/18 09:59  
Received date/time: 12/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1212245	1	12/14/18 11:27	12/18/18 19:03	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1212993	1	12/18/18 23:40	12/19/18 11:29	KME

<sup>1</sup>Cp

<sup>2</sup>Tc

<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.

Jason Romer  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	12/18/2018 19:03	<a href="#">WG1212245</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	101		77.0-120		12/18/2018 19:03	<a href="#">WG1212245</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

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	6.91		4.00	1	12/19/2018 11:29	<a href="#">WG1212993</a>
C28-C40 Oil Range	4.70		4.00	1	12/19/2018 11:29	<a href="#">WG1212993</a>
(S) <i>o</i> -Terphenyl	61.7		18.0-148		12/19/2018 11:29	<a href="#">WG1212993</a>

<sup>4</sup> Cn

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3369677-5 12/18/18 14:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	106			77.0-120

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

(LCS) R3369677-3 12/18/18 13:02 • (LCSD) R3369677-4 12/18/18 13:23

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 %
TPH (GC/FID) Low Fraction	5.50	5.60	5.69	102	103	72.0-127			1.60	20
(S) <i>a,a,a</i> -Trifluorotoluene(FID)				92.3	92.8	77.0-120				

L1053198-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1053198-04 12/18/18 21:11 • (MS) R3369677-8 12/18/18 22:58 • (MSD) R3369677-9 12/18/18 23:20

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	5.50	882	1360	1340	43.4	41.7	200	10.0-151			1.40	28
(S) <i>a,a,a</i> -Trifluorotoluene(FID)					98.7	101		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3369504-1 12/19/18 09:18

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	65.9			18.0-148

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

(LCS) R3369504-2 12/19/18 09:32 • (LCSD) R3369504-3 12/19/18 09:48

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 %
C10-C28 Diesel Range	50.0	31.3	33.2	62.6	66.4	50.0-150			5.89	20
(S) o-Terphenyl				62.6	66.1	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

7 Gl

8 Al

9 Sc



## 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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

8 Al

9 Sc

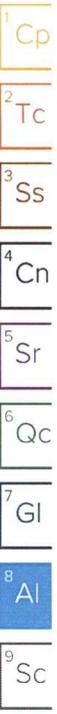


Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our 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	T 104704245-17-14
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.



