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	NRM2016457766
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 # NRM2016457766
Contact mailing address 382 Road 3100, Aztec NM 87410	

Location of Release Source

Latitude 36.850411 Longitude -107.723201
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Dawson Gas Com 1 Pipeline (SE of Dawson GC 1)	Site Type Pipeline
Date Release Discovered 6/3/2020	API# Closest Well *30-045-27336*

Unit Letter	Section	Township	Range	County
M	31	31N	08W	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) 21	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A release of ~21 bbls of produced water was released due to a failed poly fusion weld on the pipeline. The operator isolated and blew down the pipeline and completed LOTO. Release traveled ~485ft, off of a cliff and traveled another 60ft and stopped. 0 bbls were recovered. Environmental will provide OCD 48 hour notice of sampling.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2016457766
District RP	
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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?	☐ 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 State of New Mexico
Page 4 Oil Conservation Division

Incident ID	NRM2016457766
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: __8/18/2020_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM2016457766
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: 8/18/2020

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

OCD Only

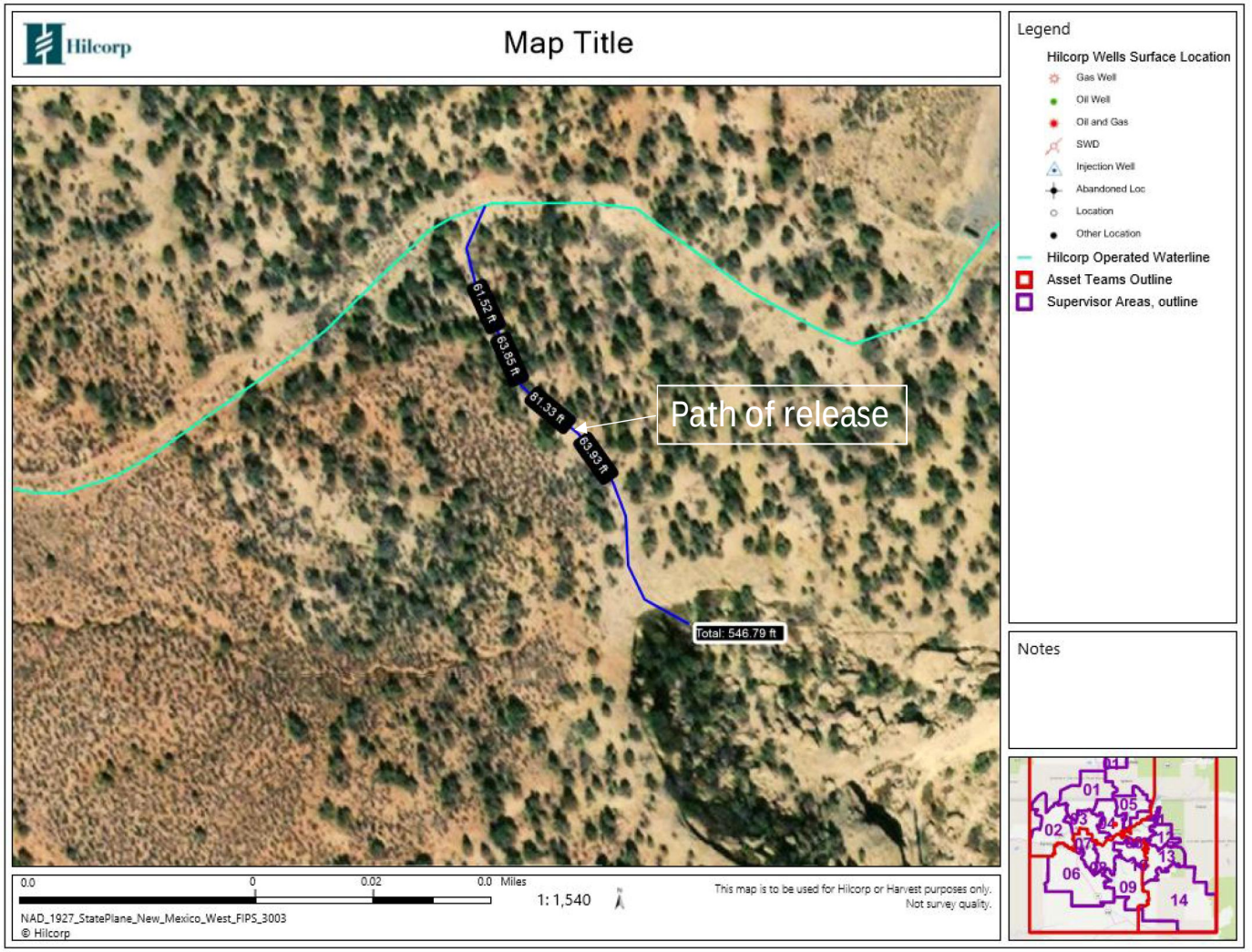
Received by: _____ Date: _____

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.

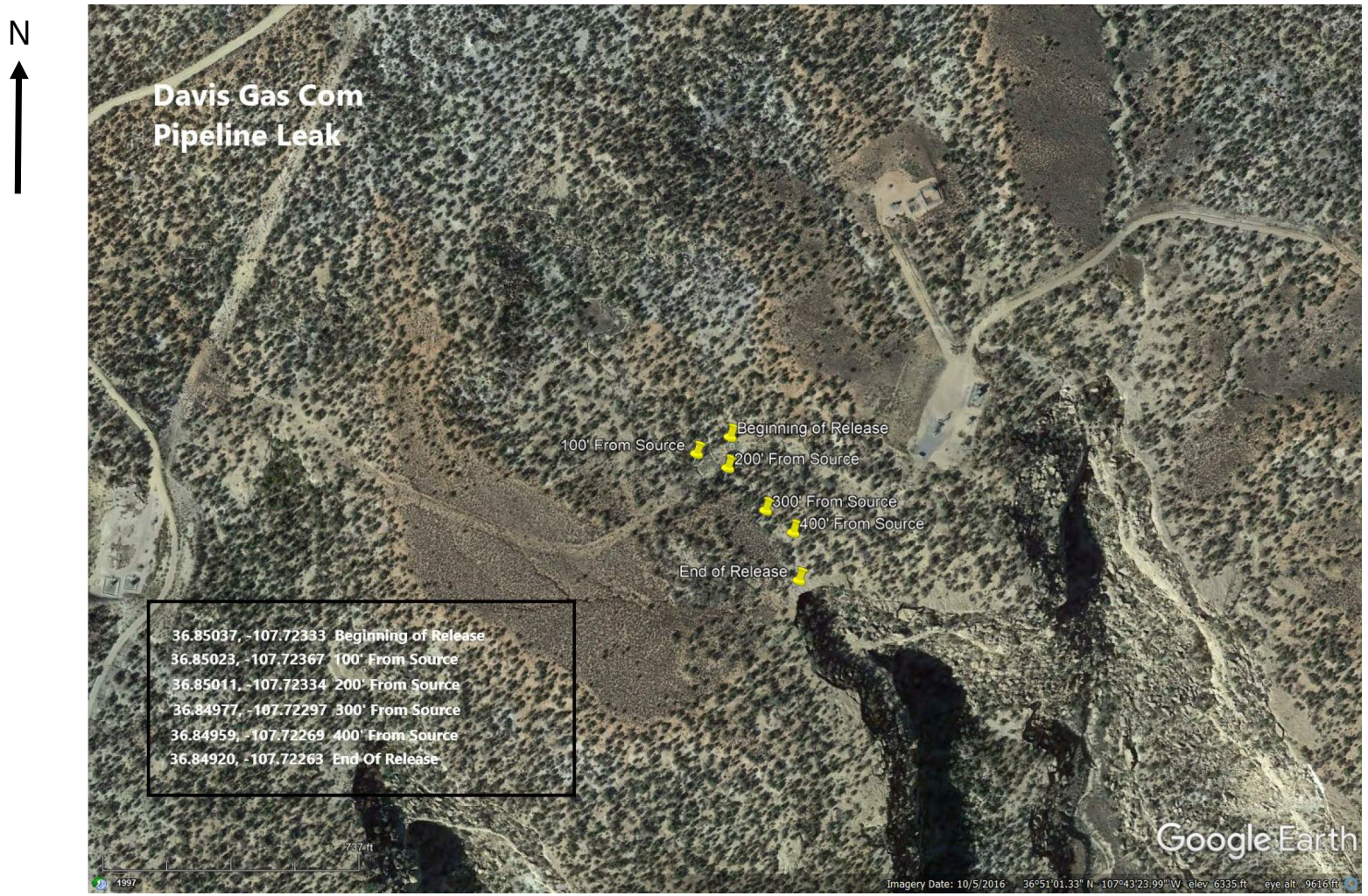
Closure Approved by: _____ Date: 6/24/2021

Printed Name: Environmental Specialist Title: Cory

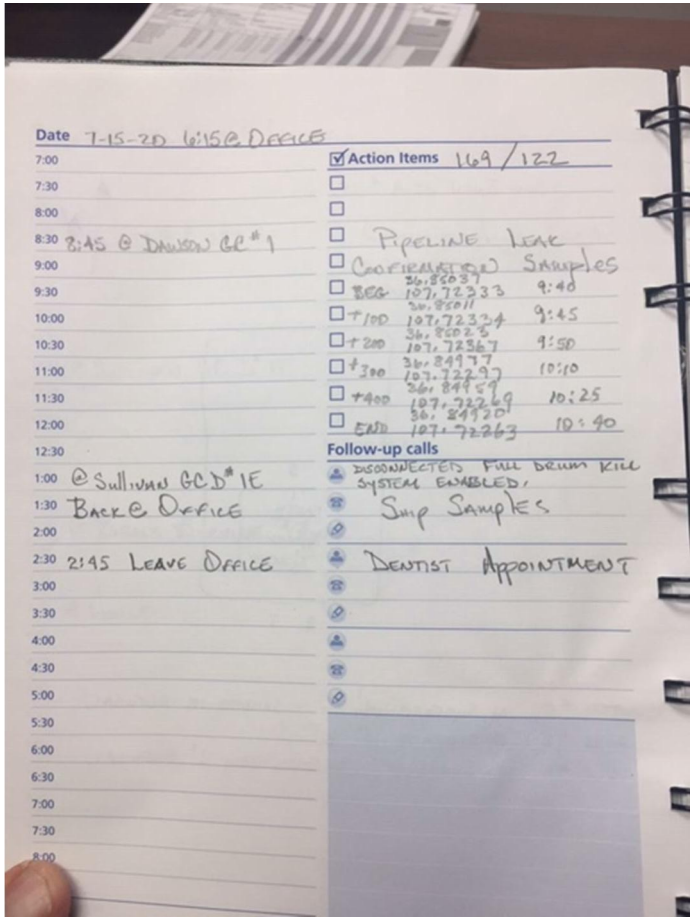
Scaled Map



Field Data



Field Data



Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS
DAWSON GAS COM 1 PIPELINE LEAK
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	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)
Beginning	7/15/2020	<0.0005	<0.005	<0.0005	0.00454	0.0045	4020.0	<0.100	20.40	29.40	49.80	49.80
+100'	7/15/2020	<0.0005	<0.005	<0.0005	<0.0015	<0.005	4090.0	<0.100	6.96	12.90	19.86	19.86
+200'	7/15/2020	<0.0005	<0.005	<0.0005	<0.0015	<0.005	<20	<0.100	6.41	11.80	18.21	18.21
+300'	7/15/2020	<0.0005	<0.005	<0.0005	<0.0015	<0.005	3500.0	<0.100	<4.00	<4.00	<4.00	<4.00
+400'	7/15/2020	0.000618	<0.005	<0.0005	<0.0015	0.0006	4170.0	0.3330	74.70	60.20	134.90	135.233
End	7/15/2020	<0.0005	<0.005	<0.0005	<0.0015	<0.005	2030	<0.100	<4.00	<4.00	<4.00	<4.00
Source 7' deep	7/20/2020	<0.0005	<0.005	<0.0005	<0.0015	<0.005	232	<0.100	6.21	<4.00	6.21	6.21
Down Gradient of Source	7/20/2020	Jar received broken in lab										
Down Gradient of Source	7/28/2020	<0.0005	<0.005	<0.0005	<0.0015	<0.005	194	<0.100	19.60	10.40	30.00	30.00
NMOCD Standards		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

(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	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00012		SJ	SJ			2	30	31N	08W	258218	4084189*	1021	475	546
SJ 00198		SJ	SJ	4	3	3	32	31N	08W	258895	4081451*	2003		
SJ 01167		SJ	SJ	3	4	4	24	31N	08W	266352	4084410*	465	390	75
SJ 01822		SJ	SJ	2	2	2	25	31N	08W	266540	4084216*	550	500	50
SJ 03306		SJ	SJ	4	4	1	25	31N	08W	265739	4083645*	600	500	100
SJ 04103 POD1		SJAR	SJ	4	1	3	08	31N	08W	240607	4088952	26		

Average Depth to Water: **466 feet**
Minimum Depth: **390 feet**
Maximum Depth: **500 feet**

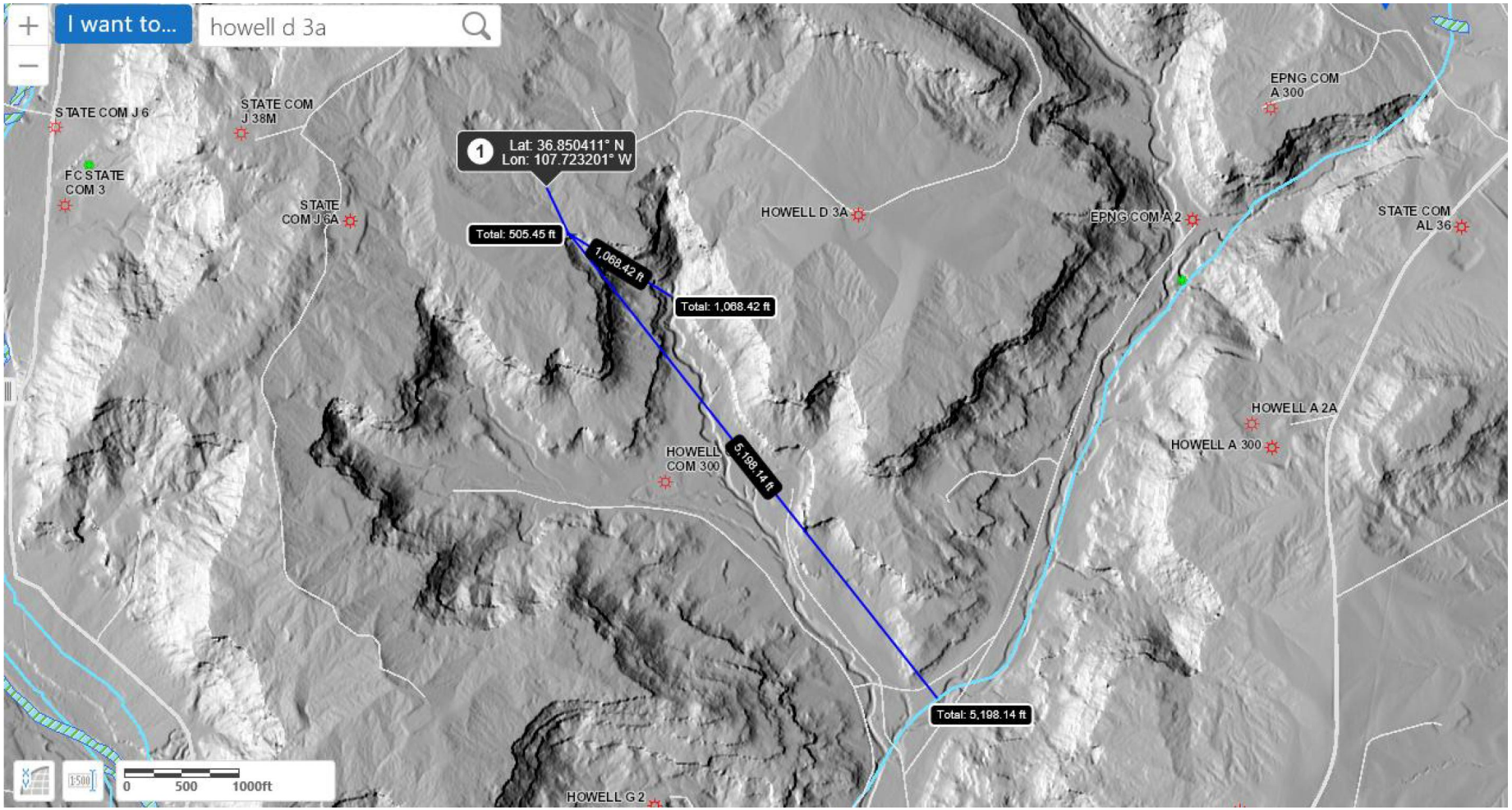
Record Count: 6

PLSS Search:

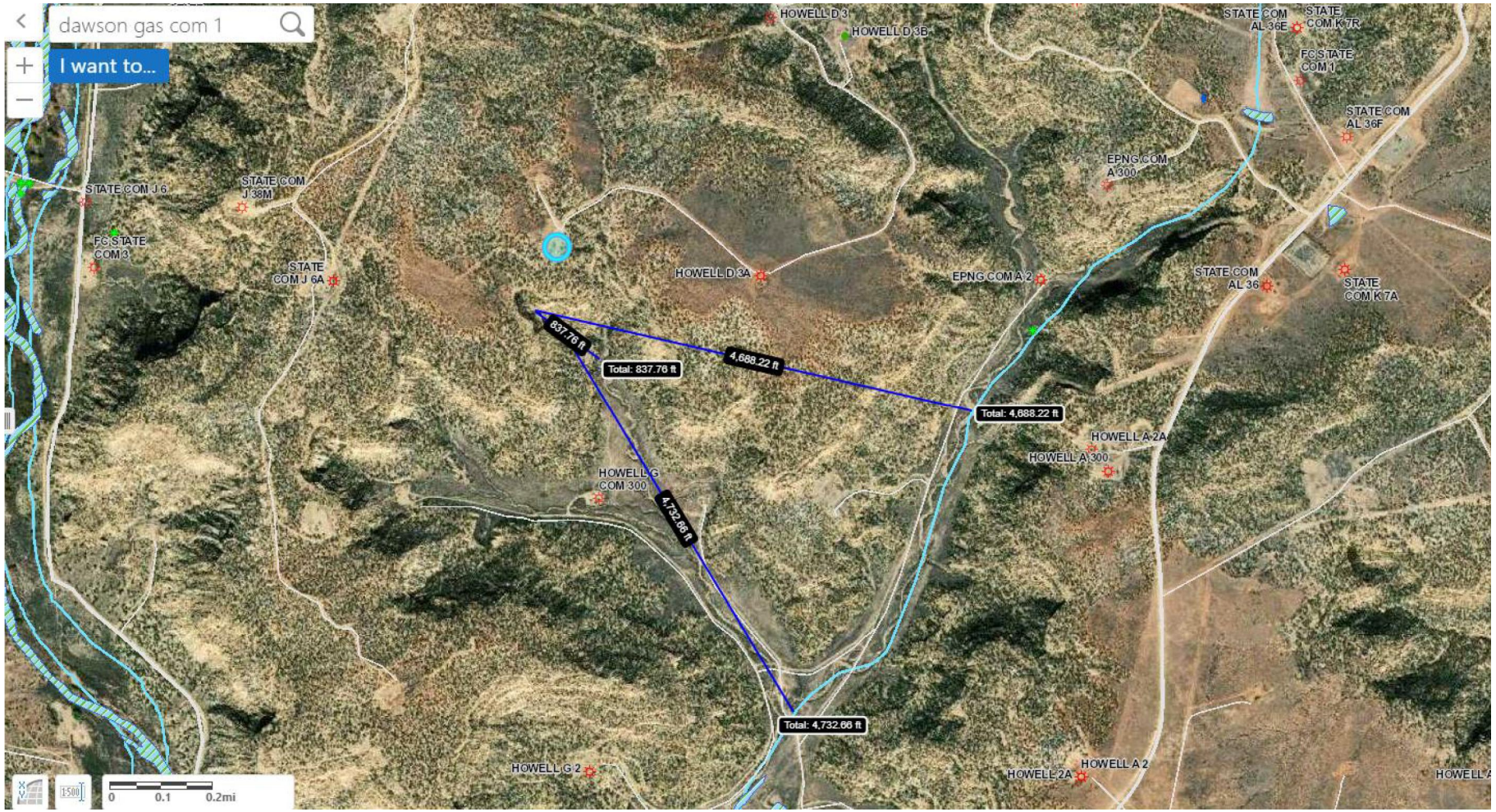
Township: 31N Range: 08W

*UTM location was derived from PLSS - see Help

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



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



Photographs – 7/15/2020 Sampling Event

including date and GIS information

Beginning of Release

+100 feet from Source

Photographs – 7/15/2020 Sampling Event

+200 feet from source

+300 feet from Source

+400 feet from Source

Photographs – 7/15/2020 Sampling Event

End of Release

Photographs – 7/20/2020 Sampling Event

Source Sample

Down Gradient of Source

Photographs – 7/28/2020 Sampling Event

Source and Down Gradient Sample

Summary of events

- ~21 bbl produced water release southeast of Dawson Gas Com 1 well site on June 3, 2020
  - No contaminated soil was removed
- Confirmation Sampling
  - Sampling of release path occurred on July 15th at 9:00am. Only Kurt was present but discussed sampling plan with Cory Smith over phone
  - Sampling of source area occurred on July 20th at 9:00am. Kurt and Cory Smith attended
    - Sample down gradient broke in transit so another sample was taken at the same place on July 28th

Jennifer Deal

From: Jennifer Deal
Sent: Thursday, July 16, 2020 9:32 AM
To: Smith, Cory, EMNRD; Adeloye, Abiodun A
Cc: Kurt Hoekstra; Colter Faverino; Ramon Florez
Subject: RE: [EXTERNAL] RE: Confirmation Sampling - Dawson Gas Com 1 Pipeline Leak

Follow Up Flag: Follow up
Flag Status: Flagged

Cory, Kurt is planning on going out to location on 7/20 at 9am to delineate using a hand auger. Let me know if you have any questions.

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, July 15, 2020 11:48 AM
To: Jennifer Deal <jdeal@hilcorp.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Kurt Hoekstra <khoekstra@hilcorp.com>; Colter Faverino <cfaverino@hilcorp.com>; Ramon Florez <rflorez@hilcorp.com>
Subject: [EXTERNAL] RE: Confirmation Sampling - Dawson Gas Com 1 Pipeline Leak

Jennifer,

I discussed the sampling plan with Kurt today and I am ok with sampling the release path with 5 samples.

However as discussed with Kurt since this pipeline is a subsurface pipeline and the area around the pipeline was not excavated the subsurface area around the pipeline needs to be properly delineated prior to closure being granted. With the details I was given the surface sample collected at the source is not sufficient.

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: Jennifer Deal <jdeal@hilcorp.com>
Sent: Monday, July 13, 2020 8:34 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Kurt Hoekstra <khoekstra@hilcorp.com>; Colter Faverino <cfaverino@hilcorp.com>; Ramon Florez

<rflorez@hilcorp.com>
Subject: [EXT] Confirmation Sampling - Dawson Gas Com 1 Pipeline Leak

Good morning,

Hilcorp is providing notification of confirmation sampling to occur on Wednesday, July 15th at 9:00am at the Dawson Gas Com 1 Pipeline Leak (Incident #NRM2016457766). See attached C-141 for lat and long. Please let me know if you have any questions.

Thank you,

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

Jennifer Deal

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, July 28, 2020 1:16 PM
To: Jennifer Deal
Subject: [EXTERNAL] RE: Dawson Gas Com 1 Pipeline Leak

Jennifer,

Please collect another sample down gradient.

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: Jennifer Deal <jdeal@hilcorp.com>
Sent: Tuesday, July 28, 2020 1:06 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Subject: [EXT] Dawson Gas Com 1 Pipeline Leak
Importance: High

Good afternoon Cory,

Attached are the delineation results for the Dawson Gas Com 1 Pipeline Leak. The sample that was taken down gradient from the source broke in transit. Since the source sample is below closure standards can we submit these results for the final report or would you like us to go out and grab another sample?

Thank you,

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

From: ostudebaker@pacenational.com [mailto:ostudebaker@pacenational.com]
Sent: Monday, July 27, 2020 4:22 PM
To: Jennifer Deal <jdeal@hilcorp.com>; Kurt Hoekstra <khoekstra@hilcorp.com>
Subject: [EXTERNAL] Pace Analytical National Level II Report for Dawson Gas Com #1 Pipeline Leak L1241845
Importance: High

"Privileged and Confidential"

Thank you for choosing Pace National!

Please find enclosed PDF report containing your laboratory analysis and chain of custody.

Pace Analytical® is the first commercial laboratory in the US to offer testing of wastewater for SARS-COV2 (the virus that causes COVID-19).
https://www.pacelabs.com/environmental-sciences/testing-services/specialty-services/covid-19-wastewater-testing.html

Pace National is leading the laboratory industry with our On-line Data Management tools. Please contact your Project Manager to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at https://www.pacenational.com.

Pace National ... "Your Lab of Choice"

Olivia Studebaker
Project Manager
615-773-9663
ostudebaker@pacenational.com

Pace Analytical National
12065 Lebanon Rd
Mount Juliet, TN 37122
www.pacenational.com

Recipients configured to receive report file: jdeal@hilcorp.com, khoekstra@hilcorp.com

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 23, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1240407
Samples Received:	07/16/2020
Project Number:	
Description:	Dawson Gas Com#1 Pipeline
Site:	DAWSON GAS COM#1 PIPELINE
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

BEGINNING L1240407-01 Solid

Collected by: K Hoekstra | Collected date/time: 07/15/20 09:40 | Received date/time: 07/16/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1511817	10	07/20/20 11:53	07/21/20 00:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1511269	1	07/17/20 15:54	07/18/20 14:56	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1511346	1	07/18/20 17:12	07/19/20 12:34	FM	Mt. Juliet, TN

+100' L1240407-02 Solid

Collected by: K Hoekstra | Collected date/time: 07/15/20 09:45 | Received date/time: 07/16/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1511817	10	07/20/20 11:53	07/21/20 07:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1511269	1	07/17/20 15:54	07/18/20 15:17	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1511346	1	07/18/20 17:12	07/19/20 13:38	FM	Mt. Juliet, TN

+200' L1240407-03 Solid

Collected by: K Hoekstra | Collected date/time: 07/15/20 09:50 | Received date/time: 07/16/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1511817	1	07/20/20 11:53	07/21/20 08:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1511269	1	07/17/20 15:54	07/18/20 15:37	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1511346	1	07/18/20 17:12	07/19/20 12:46	FM	Mt. Juliet, TN

+300' L1240407-04 Solid

Collected by: K Hoekstra | Collected date/time: 07/15/20 10:10 | Received date/time: 07/16/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1511817	10	07/20/20 11:53	07/21/20 08:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1511269	1	07/17/20 15:54	07/18/20 15:58	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1511346	1	07/18/20 17:12	07/19/20 12:21	FM	Mt. Juliet, TN

+400' L1240407-05 Solid

Collected by: K Hoekstra | Collected date/time: 07/15/20 10:25 | Received date/time: 07/16/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1511817	10	07/20/20 11:53	07/21/20 08:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1511269	1	07/17/20 15:54	07/18/20 16:19	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1511346	1	07/18/20 17:12	07/19/20 14:04	FM	Mt. Juliet, TN

END L1240407-06 Solid

Collected by: K Hoekstra | Collected date/time: 07/15/20 10:40 | Received date/time: 07/16/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1511817	5	07/20/20 11:53	07/21/20 09:07	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1511269	1	07/17/20 15:54	07/18/20 16:40	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1511348	1	07/18/20 17:16	07/19/20 17:38	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	4020		200	10	07/21/2020 00:54	WG1511817

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	07/18/2020 14:56	WG1511269
Toluene	ND		0.00500	1	07/18/2020 14:56	WG1511269
Ethylbenzene	ND		0.000500	1	07/18/2020 14:56	WG1511269
Total Xylene	0.00454		0.00150	1	07/18/2020 14:56	WG1511269
TPH (GC/FID) Low Fraction	ND		0.100	1	07/18/2020 14:56	WG1511269
(S) a,a,a-Trifluorotoluene(FID)	*103*		*77.0-120*		*07/18/2020 14:56*	WG1511269
(S) a,a,a-Trifluorotoluene(PID)	*98.6*		*72.0-128*		*07/18/2020 14:56*	WG1511269

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	20.4		4.00	1	07/19/2020 12:34	WG1511346
C28-C40 Oil Range	29.4		4.00	1	07/19/2020 12:34	WG1511346
(S) o-Terphenyl	*52.0*		*18.0-148*		*07/19/2020 12:34*	WG1511346

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	4090		200	10	07/21/2020 07:57	WG1511817

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	07/18/2020 15:17	WG1511269
Toluene	ND		0.00500	1	07/18/2020 15:17	WG1511269
Ethylbenzene	ND		0.000500	1	07/18/2020 15:17	WG1511269
Total Xylene	ND		0.00150	1	07/18/2020 15:17	WG1511269
TPH (GC/FID) Low Fraction	ND		0.100	1	07/18/2020 15:17	WG1511269
(S) a,a,a-Trifluorotoluene(FID)	*105*		*77.0-120*		*07/18/2020 15:17*	WG1511269
(S) a,a,a-Trifluorotoluene(PID)	*98.7*		*72.0-128*		*07/18/2020 15:17*	WG1511269

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	6.96		4.00	1	07/19/2020 13:38	WG1511346
C28-C40 Oil Range	12.9		4.00	1	07/19/2020 13:38	WG1511346
(S) o-Terphenyl	*54.0*		*18.0-148*		*07/19/2020 13:38*	WG1511346

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		20.0	1	07/21/2020 08:15	WG1511817

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	07/18/2020 15:37	WG1511269
Toluene	ND		0.00500	1	07/18/2020 15:37	WG1511269
Ethylbenzene	ND		0.000500	1	07/18/2020 15:37	WG1511269
Total Xylene	ND		0.00150	1	07/18/2020 15:37	WG1511269
TPH (GC/FID) Low Fraction	ND		0.100	1	07/18/2020 15:37	WG1511269
(S) a,a,a-Trifluorotoluene(FID)	*103*		*77.0-120*		*07/18/2020 15:37*	WG1511269
(S) a,a,a-Trifluorotoluene(PID)	*98.6*		*72.0-128*		*07/18/2020 15:37*	WG1511269

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	6.41	J6	4.00	1	07/19/2020 12:46	WG1511346
C28-C40 Oil Range	11.8		4.00	1	07/19/2020 12:46	WG1511346
(S) o-Terphenyl	*66.9*		*18.0-148*		*07/19/2020 12:46*	WG1511346

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	3500		200	10	07/21/2020 08:32	WG1511817

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	07/18/2020 15:58	WG1511269
Toluene	ND		0.00500	1	07/18/2020 15:58	WG1511269
Ethylbenzene	ND		0.000500	1	07/18/2020 15:58	WG1511269
Total Xylene	ND		0.00150	1	07/18/2020 15:58	WG1511269
TPH (GC/FID) Low Fraction	ND		0.100	1	07/18/2020 15:58	WG1511269
(S) a,a,a-Trifluorotoluene(FID)	*104*		*77.0-120*		*07/18/2020 15:58*	WG1511269
(S) a,a,a-Trifluorotoluene(PID)	*98.6*		*72.0-128*		*07/18/2020 15:58*	WG1511269

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	07/19/2020 12:21	WG1511346
C28-C40 Oil Range	ND		4.00	1	07/19/2020 12:21	WG1511346
(S) o-Terphenyl	*70.0*		*18.0-148*		*07/19/2020 12:21*	WG1511346

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	4170		200	10	07/21/2020 08:49	WG1511817

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000618		0.000500	1	07/18/2020 16:19	WG1511269
Toluene	ND		0.00500	1	07/18/2020 16:19	WG1511269
Ethylbenzene	ND		0.000500	1	07/18/2020 16:19	WG1511269
Total Xylene	ND		0.00150	1	07/18/2020 16:19	WG1511269
TPH (GC/FID) Low Fraction	0.333		0.100	1	07/18/2020 16:19	WG1511269
(S) a,a,a-Trifluorotoluene(FID)	*103*		*77.0-120*		*07/18/2020 16:19*	WG1511269
(S) a,a,a-Trifluorotoluene(PID)	*99.1*		*72.0-128*		*07/18/2020 16:19*	WG1511269

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	74.7		4.00	1	07/19/2020 14:04	WG1511346
C28-C40 Oil Range	60.2		4.00	1	07/19/2020 14:04	WG1511346
(S) o-Terphenyl	*61.7*		*18.0-148*		*07/19/2020 14:04*	WG1511346

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	2030		100	5	07/21/2020 09:07	WG1511817

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	07/18/2020 16:40	WG1511269
Toluene	ND		0.00500	1	07/18/2020 16:40	WG1511269
Ethylbenzene	ND		0.000500	1	07/18/2020 16:40	WG1511269
Total Xylene	ND		0.00150	1	07/18/2020 16:40	WG1511269
TPH (GC/FID) Low Fraction	ND		0.100	1	07/18/2020 16:40	WG1511269
(S) a,a,a-Trifluorotoluene(FID)	*100*		*77.0-120*		*07/18/2020 16:40*	WG1511269
(S) a,a,a-Trifluorotoluene(PID)	*98.6*		*72.0-128*		*07/18/2020 16:40*	WG1511269

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	07/19/2020 17:38	WG1511348
C28-C40 Oil Range	ND		4.00	1	07/19/2020 17:38	WG1511348
(S) o-Terphenyl	*55.7*		*18.0-148*		*07/19/2020 17:38*	WG1511348

Method Blank (MB)

(MB) R3551448-1 07/20/20 12:39

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

L1240208-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1240208-01 07/20/20 15:14 • (DUP) R3551448-3 07/20/20 15:37

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	152	153	1	0.674		20

L1241317-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1241317-03 07/21/20 01:45 • (DUP) R3551448-6 07/21/20 02:11

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) R3551448-2 07/20/20 13:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.3	90.0-110	

L1240407-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1240407-01 07/20/20 19:27 • (MS) R3551448-4 07/20/20 19:50 • (MSD) R3551448-5 07/20/20 20:13

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	4300	5230	5120	186	165	1	80.0-120	E V	E V	2.03	20

Method Blank (MB)

(MB) R3551593-3 07/18/20 13:16

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)	*105*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*101*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3551593-1 07/18/20 12:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0443	88.6	76.0-121	
Toluene	0.0500	0.0479	95.8	80.0-120	
Ethylbenzene	0.0500	0.0490	98.0	80.0-124	
Total Xylene	0.150	0.145	96.7	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*100*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3551593-2 07/18/20 12:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.78	123	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*109*	*72.0-128*	

L1239966-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1239966-03 07/18/20 20:48 • (MS) R3551593-4 07/18/20 21:09 • (MSD) R3551593-5 07/18/20 21:29

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	12.4	0.379	9.71	10.2	75.3	79.2	250	10.0-155			4.92	32
Toluene	12.4	ND	11.4	12.1	91.9	97.6	250	10.0-160			5.96	34
Ethylbenzene	12.4	3.17	14.6	15.4	92.2	98.6	250	10.0-160			5.33	32
Total Xylene	37.2	12.8	44.9	47.5	86.3	93.3	250	10.0-160			5.63	32
(S) a,a,a-Trifluorotoluene(FID)					*93.5*	*92.2*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*98.2*	*97.6*		*72.0-128*				

L1239966-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1239966-03 07/18/20 20:48 • (MS) R3551593-6 07/18/20 21:50 • (MSD) R3551593-7 07/18/20 22:11

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 %
TPH (GC/FID) Low Fraction	1360	613	1620	1640	74.0	75.5	250	10.0-151			1.23	28
(S) a,a,a-Trifluorotoluene(FID)					*96.6*	*96.5*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*106*	*106*		*72.0-128*				

Method Blank (MB)

(MB) R3551041-1 07/19/20 10:24

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	*53.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3551041-2 07/19/20 10:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	30.8	61.6	50.0-150	
(S) o-Terphenyl			*71.3*	*18.0-148*	

L1240407-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1240407-03 07/19/20 12:46 • (MS) R3551041-3 07/19/20 12:59 • (MSD) R3551041-4 07/19/20 13:12

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	48.9	6.41	26.0	29.8	40.1	47.9	1	50.0-150	J6	J6	13.6	20
(S) o-Terphenyl					*47.1*	*54.2*		*18.0-148*				

Method Blank (MB)

(MB) R3551042-1 07/19/20 16:46

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	*66.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3551042-2 07/19/20 16:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.3	66.6	50.0-150	
(S) o-Terphenyl			*74.9*	*18.0-148*	

L1240411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1240411-01 07/20/20 12:43 • (MS) R3551601-1 07/20/20 12:56 • (MSD) R3551601-2 07/20/20 13:09

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	49.0	138	139	164	2.04	52.8	5	50.0-150	J6		16.5	20
(S) o-Terphenyl					*46.3*	*51.5*		*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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

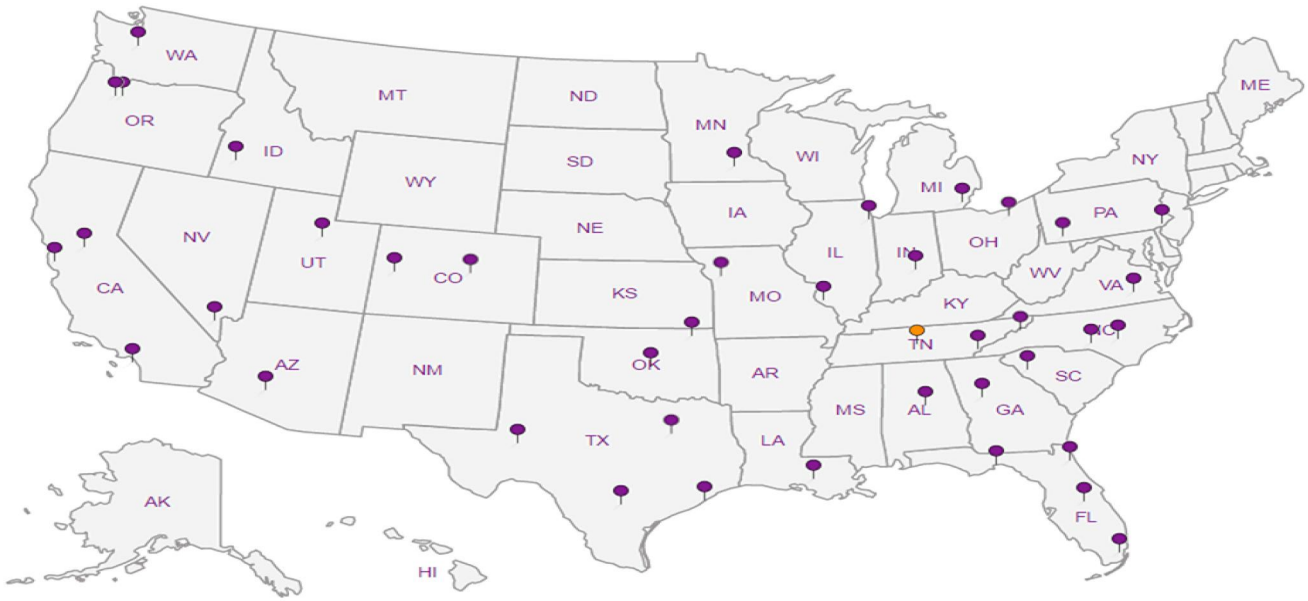
Third Party Federal Accreditations

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

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Template:
Prelogin:
TSR:
PB:
Shipped Via:

Report to: **Jennifer Deal**

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

Project Description: **Dawson Gas Com # 1 Pipeline**

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

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

Client Project #

Lab Project #

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

Site/Facility ID # **Dawson GC # 1 Pipeline**

P.O. #

Collected by (signature): Kent Hoekstra

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ 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)
Beginning	Grab	SS	0-6"	7-15-2020	9:40	1	X	X	X		-01
+ 100'	Grab	SS	0-6"	7-15-2020	9:45	1	X	X	X		-02
+200'	Grab	SS	0-6"	7-15-2020	9:50	1	X	X	X		-03
+300'	Grab	SS	0-6"	7-15-2020	10:10	1	X	X	X		-04
+400'	Grab	SS	0-6"	7-15-2020	10:25	1	X	X	X		-05
End	Grab		0-6"	7-15-2020	10:40	1	X	X	X		-06

* 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 # 443034227920

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
Kent Hoekstra	7-15-20	2:30		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: WA ATC 1.6, 1.1, 1.5 Bottles Received: 6
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/16/20 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 27, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1241845
Samples Received:	07/21/2020
Project Number:	
Description:	Dawson Gas Com #1 Pipeline Leak
Site:	DAWSON GC PIPELINE LEAK
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

SOURCE 7' DEEP L1241845-01 Solid

Collected by	Collected date/time	Received date/time
K Hoekstra	07/20/20 09:55	07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 19:23	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1515140	1	07/22/20 17:26	07/25/20 12:57	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 10:47	TJD	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	232		20.0	1	07/23/2020 19:23	WG1513059

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	07/25/2020 12:57	WG1515140
Toluene	ND		0.00500	1	07/25/2020 12:57	WG1515140
Ethylbenzene	ND		0.000500	1	07/25/2020 12:57	WG1515140
Total Xylene	ND		0.00150	1	07/25/2020 12:57	WG1515140
TPH (GC/FID) Low Fraction	ND		0.100	1	07/25/2020 12:57	WG1515140
(S) a,a,a-Trifluorotoluene(FID)	*109*		*77.0-120*		*07/25/2020 12:57*	WG1515140
(S) a,a,a-Trifluorotoluene(PID)	*102*		*72.0-128*		*07/25/2020 12:57*	WG1515140

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	6.21		4.00	1	07/26/2020 10:47	WG1515220
C28-C40 Oil Range	ND		4.00	1	07/26/2020 10:47	WG1515220
(S) o-Terphenyl	*58.1*		*18.0-148*		*07/26/2020 10:47*	WG1515220

Method Blank (MB)

(MB) R3553300-1 07/23/20 13:17

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

L1241738-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241738-01 07/23/20 14:09 • (DUP) R3553300-3 07/23/20 14:27

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

L1241903-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241903-01 07/23/20 21:25 • (DUP) R3553300-6 07/23/20 21:42

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	93.2	97.5	1	4.58		20

Laboratory Control Sample (LCS)

(LCS) R3553300-2 07/23/20 13:34

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

L1241845-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241845-01 07/23/20 19:23 • (MS) R3553300-4 07/23/20 19:40 • (MSD) R3553300-5 07/23/20 20:32

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	232	739	759	101	105	1	80.0-120			2.56	20

Method Blank (MB)

(MB) R3553489-3 07/25/20 11:24

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)	*104*			*72.0-128*
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*

Method Blank (MB)

(MB) R3553489-4 07/25/20 11:45

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)	*104*			*72.0-128*
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3553489-1 07/25/20 10:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0492	98.4	76.0-121	
Toluene	0.0500	0.0538	108	80.0-120	
Ethylbenzene	0.0500	0.0551	110	80.0-124	
Total Xylene	0.150	0.163	109	37.0-160	
(S) a,a,a-Trifluorotoluene(PID)			*103*	*72.0-128*	
(S) a,a,a-Trifluorotoluene(FID)			*110*	*77.0-120*	

Laboratory Control Sample (LCS)

(LCS) R3553489-2 07/25/20 10:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.94	108	72.0-127	
(S) a,a,a-Trifluorotoluene(PID)			*111*	*72.0-128*	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3553436-1 07/26/20 09:43

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	*73.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3553436-2 07/26/20 09:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.9	77.8	50.0-150	
(S) o-Terphenyl			*77.6*	*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
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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

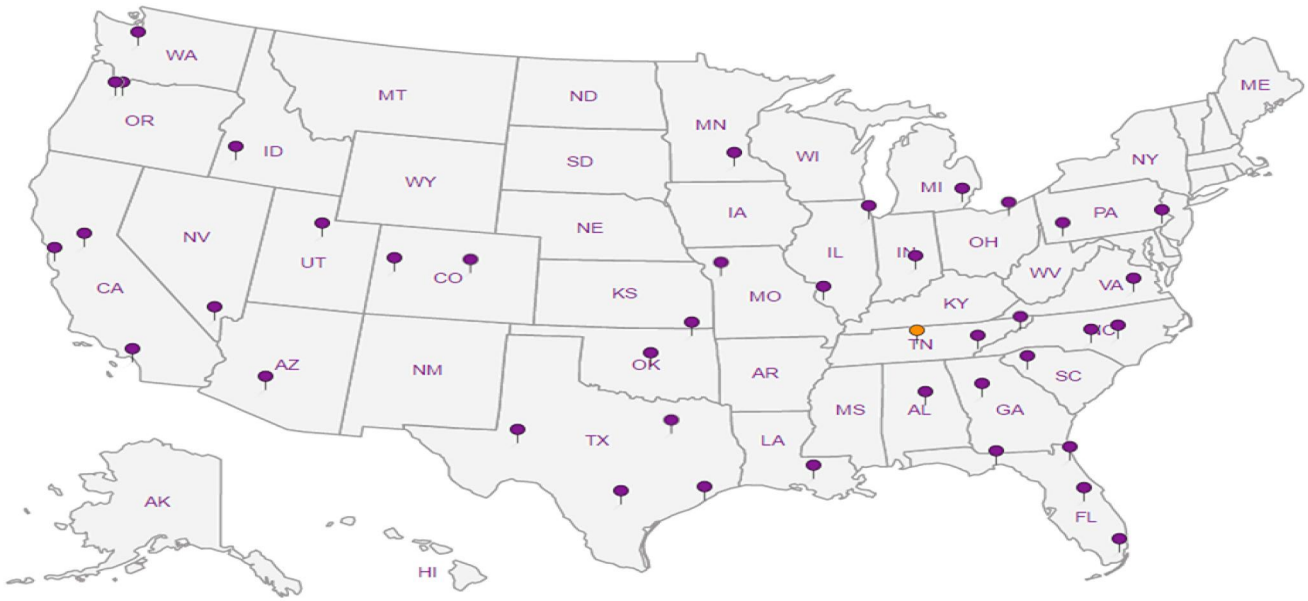
Third Party Federal Accreditations

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 # L1241845

C233

Acctnum: HILCORANM

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Report to: **Jennifer Deal**

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

Project Description: **Dawson Gas Com #1 Pipeline Leak**

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

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

Client Project #

Lab Project #

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

Site/Facility ID # **Dawson GC Pipeline Leak**

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ 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)
Source 7' Deep	Grab	SS	7'	7-20-20	9:55	1	X	X	X		-01
Down Gradient of Source	Grab	SS	7'	7-20-20	10:24	1	X	X	X		

* 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 # 1749 9996 9057

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	7-20-20	1:35		0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.6 °C Bottles Received: 1	
				4-3=.1	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 07/21/2020 Time: 8:45	Hold: Condition: NCF / OK

Jeremy W. Watkins

Pace Analytical®
National Center for Testing & Innovation

Login #: L1241845	Client: HILCORANM	Date: 7/21/20	Evaluated by: Jeremy

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
x	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received DOWN GRADIENT OF SOURCE broken. Unsalvageable.

Client informed by:		Call	x	Email		Voice Mail		Date: 7/22/20	Time: 1158
TSR Initials: OS	Client Contact: Kurt Hoekstra								

Client has been notified. Please proceed with intact sample Source 7' Deep

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 05, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1245027
Samples Received:	07/30/2020
Project Number:	
Description:	Dawson Gas Com 1 Pipeline Leak
Site:	DAWSON GC PIPELINE LEAK
Report To:	Jennifer Deal 382 Road 3100 Aztec, NM 87410

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 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.

DOWN GRADIENT FROM SOURCE L1245027-01 Solid

Collected by: K Hoekstra
Collected date/time: 07/28/20 14:45
Received date/time: 07/30/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1518249	1	08/01/20 10:00	08/01/20 23:27	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1519076	1	07/31/20 18:27	08/02/20 13:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1519555	1	08/04/20 10:14	08/04/20 19:23	FM	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.

Jason Romer
Project Manager

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	194		20.0	1	08/01/2020 23:27	WG1518249

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	08/02/2020 13:47	WG1519076
Toluene	ND		0.00500	1	08/02/2020 13:47	WG1519076
Ethylbenzene	ND		0.000500	1	08/02/2020 13:47	WG1519076
Total Xylene	ND		0.00150	1	08/02/2020 13:47	WG1519076
TPH (GC/FID) Low Fraction	ND		0.100	1	08/02/2020 13:47	WG1519076
(S) a,a,a-Trifluorotoluene(FID)	*90.5*		*77.0-120*		*08/02/2020 13:47*	WG1519076
(S) a,a,a-Trifluorotoluene(PID)	*99.7*		*72.0-128*		*08/02/2020 13:47*	WG1519076

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	19.6		4.00	1	08/04/2020 19:23	WG1519555
C28-C40 Oil Range	10.4		4.00	1	08/04/2020 19:23	WG1519555
(S) o-Terphenyl	*68.4*		*18.0-148*		*08/04/2020 19:23*	WG1519555

Method Blank (MB)

(MB) R3555550-1 08/01/20 12:46

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

L1244955-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1244955-01 08/01/20 18:07 • (DUP) R3555550-5 08/01/20 18:30

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

L1245027-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1245027-01 08/01/20 23:27 • (DUP) R3555550-6 08/01/20 23:50

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	194	180	1	7.50		20

Laboratory Control Sample (LCS)

(LCS) R3555550-2 08/01/20 13:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	198	98.9	90.0-110	

L1244096-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1244096-01 08/01/20 14:40 • (MS) R3555550-3 08/01/20 15:03 • (MSD) R3555550-4 08/01/20 15:26

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	78.2	553	552	95.0	94.7	1	80.0-120			0.277	20

Method Blank (MB)

(MB) R3555645-3 08/02/20 09:13

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)	*94.0*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*106*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3555645-1 08/02/20 08:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0502	100	76.0-121	
Toluene	0.0500	0.0512	102	80.0-120	
Ethylbenzene	0.0500	0.0455	91.0	80.0-124	
Total Xylene	0.150	0.128	85.3	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*92.1*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*98.2*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3555645-2 08/02/20 08:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.93	89.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*105*	*72.0-128*	

L1245081-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1245081-07 08/02/20 18:35 • (MS) R3555645-4 08/02/20 18:56 • (MSD) R3555645-5 08/02/20 19:17

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	2720	1220	3540	3410	85.3	80.5	500	10.0-151			3.74	28
(S) α,α,α-Trifluorotoluene(FID)					*114*	*114*		*77.0-120*				
(S) α,α,α-Trifluorotoluene(PID)					*113*	*106*		*72.0-128*				

Method Blank (MB)

(MB) R3556328-1 08/04/20 17:41

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	*80.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3556328-2 08/04/20 17:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.9	81.8	50.0-150	
(S) o-Terphenyl			*93.2*	*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
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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

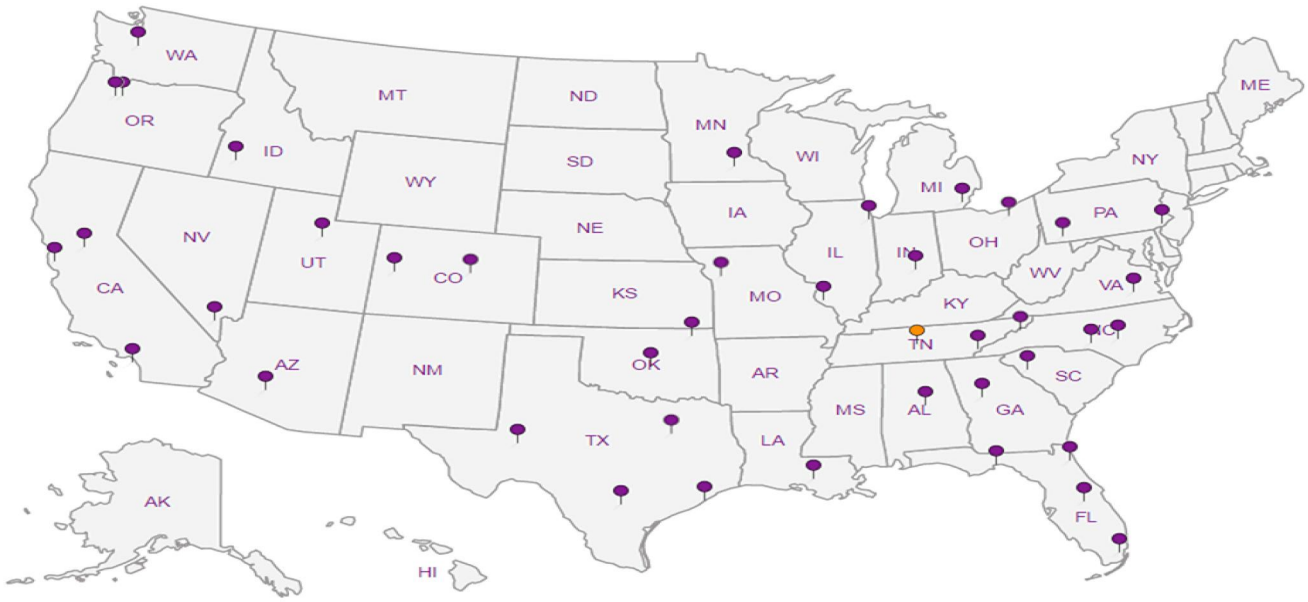
Third Party Federal Accreditations

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

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

L # 1245027

H171

Acctnum: HILCORANM

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Report to: **Jennifer Deal**

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

Project Description: **Dawson Gas Com 1 Pipeline Leak**

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

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

Client Project #

Lab Project #

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

Site/Facility ID # **Dawson GC Pipeline Leak**

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ 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)
Down Gradient from Source	Grab	SS	7'	7-28-20	2:45	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 # 7150 cool 7140

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
Kurt Hoekstra	7-29-20	7:00		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.4-.1=3 °C Bottles Received: 1
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Dennis	Date: 7/30/20 Time: 9:00

If preservation required by Login: Date/Time

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

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 9759
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
csmith	None	6/24/2021