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	NRM2005259001
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 # NRM2005259001
Contact mailing address 382 Road 3100, Aztec NM 87410	

Location of Release Source

Latitude 36.9805527 Longitude -107.7271347

(NAD 83 in decimal degrees to 5 decimal places)

Site Name San Juan 32 Fed 13 1A	Site Type Gas Well
Date Release Discovered 2/7/2020 @ 9:00am	API# *30-045-31849*

Unit Letter	Section	Township	Range	County
J	13	32N	09W	San Juan

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 210	Volume Recovered (bbls) 209 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls) 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A release of ~210 bbls of produced water appears to be the result of the transfer pump discharge line being broke and leaking. The operator shut off inlet and outlet lines to transfer pump and removed from service. The release remained on location and inside the bermed area. ~209 bbls were recovered with a water truck. Environmental will provide OCD 48 hour notice of sampling.

Incident ID	NRM2005259001
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NRM2005259001
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: 4/22/2020

email: jdeal@hilcorp.com Telephone: (505) 324-5128

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NRM2005259001
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: 4/22/2020

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

OCD Only

Received by: OCD Date: 4/22/2020

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: Cory Smith Date: 8/3/2020

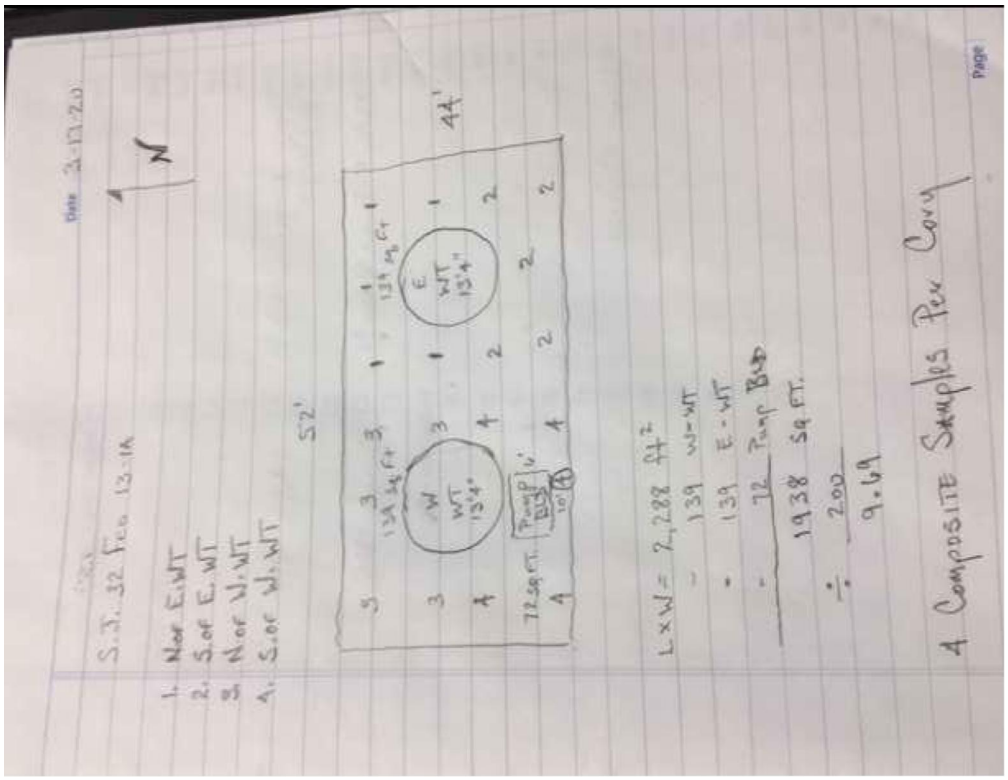
Printed Name: Cory Smith Title: Environmental Specialist

Scaled Map

N

Photographs – Initial Release (2/7/20)

Field Data


Date 2-12-20
S.3. 32 Tes. 13-1A
1. Nor E.WT
2. S.of E.WT
3. N.or W.WT
4. S.or W.WT
N
52'
44'
W WT 134'
E WT 134'
Pump Bldg
L x W = 2,288 ft²
- 139 W-WT
- 139 E-WT
- 72 Pump Bldg
1938 SQ FT.
÷ 200
9.69
4 Composite Samples Per Corn
Page

Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS
SJ 32 FEDERAL 13 1A
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Field Headspace	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes	Total BTEX	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	GRO+DRO (mg/kg)	TPH (mg/kg)
N. of E. W/T	3/17/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	184	<0.100	<4.00	<4.00	<4.000	<4.00
S. of E. W/T	3/17/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	162	<0.101	<4.00	4.98	<4.000	4.98
N. of W. W/T	3/17/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	267	<0.100	4.12	4.93	4.12	9.05
S. of W. W/T	3/17/2020		<0.0005	<0.005	<0.0005	<0.0015	<0.005	111	<0.100	<4.00	7.57	<4.00	7.57
NMOCD Standards		**NE**	**10**	**NE**	**NE**	**NE**	**50**	**10,000**	**NE**	**NE**	**NE**	**1,000**	**2,500**

Depth to water determination

OCD CATHODIC PROTECTION DEEPWELL GROUNDBED REPORT
DATA SHEET: NORTHWESTERN NEW MEXICO

SUBMIT 2 COPIES TO O.C.D. AZTEC OFFICE

OPERATOR: ConocoPhillips CO.
FARMINGTON, NM 87401
PHONE: 599-3400

LOCATION INFORMATION

API Number: 3004531849

WELL NAME OR PIPELINE SERVED: 32-FED 13 #1A
LEGAL LOCATION: 13-32-9
INSTALLATION DATE: 5/14/2004
PPCO. RECTIFIER NO.: FM-798
ADDITIONAL WELLS:
TYPE OF LEASE: FEDERAL
LEASE NUMBER: NMSF079329

GROUND BED INFORMATION

TOTAL DEPTH: 300
CASING DIAMETER: 8-IN
TYPE OF CASING: PVC
CASING DEPTH: 20'
CASING CEMENTED: ☐
TOP ANODE DEPTH: 190
BOTTOM ANODE DEPTH: 280
ANODE DEPTHS: 190,20,210,220,230,240,250,260,270,280
AMOUNT OF COKE: 2400#

WATER INFORMATION

WATER DEPTH (1): 140
WATER DEPTH (2):
GAS DEPTH:
CEMENT PLUGS:

MAR 2005
OIL CONS. DIV.
DIST. 3

OTHER INFORMATION

TOP OF VENT PERFORATIONS: 170
VENT PIPE DEPTH: 300
REMARKS: STATIC READ -.752 START UP 7-14-04

IF ANY OF THE ABOVE DATA IS UNAVAILABLE, PLEASE INDICATE SO. COPIES OF ALL LOGS, INCLUDING DRILLERS LOGS, WATER ANALYSIS, AND WELL BORE SCHEMATICS SHOULD BE SUBMITTED WHEN AVAILABLE. UNPLUGGED UNABANDONED WELLS ARE TO BE INCLUDED.

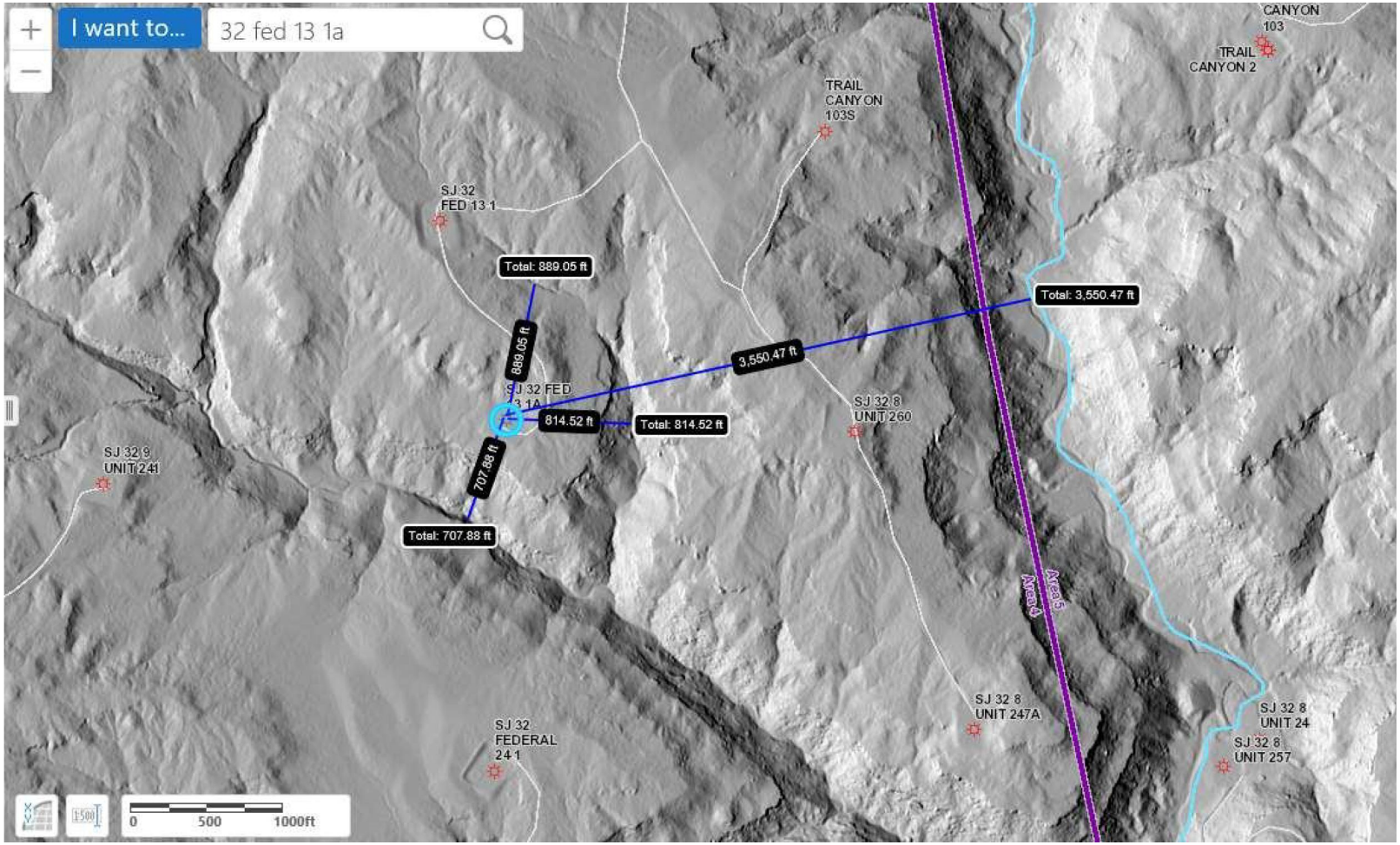
*- LAND TYPE MAY BE SHOWN: F-FEDERAL; I-INDIAN; S-STATE; P-FEE
IF FEDERAL OR INDIAN, ADD LEASE NUMBER.

Tuesday, January

Page 50 of 927

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

N



Photographs – 3/17/20 Sampling Event

East Side

Northeast Corner

Northwest Corner

Photographs – 3/17/20 Sampling Event

Northwest Corner

Southwest Sample

Southeast Corner

Photographs – 3/17/20 Sampling Event

Southeast Corner looking North

Middle of Tanks

Topographic/Aerial Maps

Summary of events

- 210 bbls of produced water released
  - ~209 bbls were recovered with water truck
    - Ground was frozen so minimal absorption
  - No excavation needed
- Confirmation sampling occurred on March 17, 2020 @9:00am
  - Notice was sent on March 10, 2020
  - Kurt performed sampling after discussing sampling plan with Cory on the phone
    - Agreed to 4 composite samples

Jennifer Deal

From: Jennifer Deal
Sent: Tuesday, March 10, 2020 9:46 AM
To: 'cory.smith@state.nm.us'
Cc: Ramon Florez; Colter Faverino; Kurt Hoekstra
Subject: Confirmation Sampling - SJ 32 Fed 13 1A

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning,

Hilcorp is providing 48 hour notice of confirmation sampling to occur on Tuesday, March 17th at 9:00am at the SJ 32 Fed 13 1A (Incident #: NRM2005259001). 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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 27, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1201326
Samples Received:	03/20/2020
Project Number:	
Description:	San Juan 32 Federal 13-1A
Site:	SJ 32 FED 13-1A
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.

TABLE OF CONTENTS

N. OF E. W/T L1201326-01 Solid

Collected by: K Hoekstra
Collected date/time: 03/17/20 10:08
Received date/time: 03/20/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1448543	1	03/23/20 14:30	03/24/20 02:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1449670	1	03/21/20 11:22	03/24/20 21:11	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1449455	1	03/25/20 15:57	03/26/20 00:00	KME	Mt. Juliet, TN

S. OF E. W/T L1201326-02 Solid

Collected by: K Hoekstra
Collected date/time: 03/17/20 10:13
Received date/time: 03/20/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1448543	1	03/23/20 14:30	03/24/20 02:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1449670	1.01	03/21/20 11:22	03/24/20 21:31	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1449455	1	03/25/20 15:57	03/26/20 00:39	KME	Mt. Juliet, TN

N. OF W. W/T L1201326-03 Solid

Collected by: K Hoekstra
Collected date/time: 03/17/20 10:23
Received date/time: 03/20/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1448543	1	03/23/20 14:30	03/24/20 03:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1449670	1	03/21/20 11:22	03/24/20 21:52	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1449455	1	03/25/20 15:57	03/26/20 00:55	KME	Mt. Juliet, TN

S. OF W. W/T L1201326-04 Solid

Collected by: K Hoekstra
Collected date/time: 03/17/20 10:32
Received date/time: 03/20/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1448543	1	03/23/20 14:30	03/24/20 04:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1449670	1	03/21/20 11:22	03/24/20 22:13	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1449455	1	03/25/20 15:57	03/26/20 01:09	KME	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	184		10.0	1	03/24/2020 02:15	WG1448543

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	03/24/2020 21:11	WG1449670
Toluene	ND		0.00500	1	03/24/2020 21:11	WG1449670
Ethylbenzene	ND		0.000500	1	03/24/2020 21:11	WG1449670
Total Xylene	ND		0.00150	1	03/24/2020 21:11	WG1449670
TPH (GC/FID) Low Fraction	ND		0.100	1	03/24/2020 21:11	WG1449670
(S) a,a,a-Trifluorotoluene(FID)	*92.5*		*77.0-120*		*03/24/2020 21:11*	WG1449670
(S) a,a,a-Trifluorotoluene(PID)	*98.2*		*72.0-128*		*03/24/2020 21:11*	WG1449670

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	03/26/2020 00:00	WG1449455
C28-C40 Oil Range	ND		4.00	1	03/26/2020 00:00	WG1449455
(S) o-Terphenyl	*48.8*		*18.0-148*		*03/26/2020 00:00*	WG1449455

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

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	162		10.0	1	03/24/2020 02:51	WG1448543

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000505	1.01	03/24/2020 21:31	WG1449670
Toluene	ND		0.00505	1.01	03/24/2020 21:31	WG1449670
Ethylbenzene	ND		0.000505	1.01	03/24/2020 21:31	WG1449670
Total Xylene	ND		0.00152	1.01	03/24/2020 21:31	WG1449670
TPH (GC/FID) Low Fraction	ND		0.101	1.01	03/24/2020 21:31	WG1449670
(S) a,a,a-Trifluorotoluene(FID)	*92.4*		*77.0-120*		*03/24/2020 21:31*	WG1449670
(S) a,a,a-Trifluorotoluene(PID)	*97.8*		*72.0-128*		*03/24/2020 21:31*	WG1449670

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	03/26/2020 00:39	WG1449455
C28-C40 Oil Range	4.98		4.00	1	03/26/2020 00:39	WG1449455
(S) o-Terphenyl	*55.7*		*18.0-148*		*03/26/2020 00:39*	WG1449455

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	267		10.0	1	03/24/2020 03:46	WG1448543

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	03/24/2020 21:52	WG1449670
Toluene	ND		0.00500	1	03/24/2020 21:52	WG1449670
Ethylbenzene	ND		0.000500	1	03/24/2020 21:52	WG1449670
Total Xylene	ND		0.00150	1	03/24/2020 21:52	WG1449670
TPH (GC/FID) Low Fraction	ND		0.100	1	03/24/2020 21:52	WG1449670
(S) a,a,a-Trifluorotoluene(FID)	*92.4*		*77.0-120*		*03/24/2020 21:52*	WG1449670
(S) a,a,a-Trifluorotoluene(PID)	*98.1*		*72.0-128*		*03/24/2020 21:52*	WG1449670

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.12		4.00	1	03/26/2020 00:55	WG1449455
C28-C40 Oil Range	4.93		4.00	1	03/26/2020 00:55	WG1449455
(S) o-Terphenyl	*62.2*		*18.0-148*		*03/26/2020 00:55*	WG1449455

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	111		10.0	1	03/24/2020 04:05	WG1448543

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	03/24/2020 22:13	WG1449670
Toluene	ND		0.00500	1	03/24/2020 22:13	WG1449670
Ethylbenzene	ND		0.000500	1	03/24/2020 22:13	WG1449670
Total Xylene	ND		0.00150	1	03/24/2020 22:13	WG1449670
TPH (GC/FID) Low Fraction	ND		0.100	1	03/24/2020 22:13	WG1449670
(S) a,a,a-Trifluorotoluene(FID)	*92.3*		*77.0-120*		*03/24/2020 22:13*	WG1449670
(S) a,a,a-Trifluorotoluene(PID)	*97.9*		*72.0-128*		*03/24/2020 22:13*	WG1449670

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	03/26/2020 01:09	WG1449455
C28-C40 Oil Range	7.57		4.00	1	03/26/2020 01:09	WG1449455
(S) o-Terphenyl	*46.0*		*18.0-148*		*03/26/2020 01:09*	WG1449455

Method Blank (MB)

(MB) R3511819-1 03/24/20 01:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	1.35	J	0.795	10.0

L1201326-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1201326-01 03/24/20 02:15 • (DUP) R3511819-3 03/24/20 02:33

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	184	169	1	8.41		20

L1201527-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1201527-01 03/24/20 05:37 • (DUP) R3511819-6 03/24/20 05:55

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1.84	1.94	1	5.38	J	20

Laboratory Control Sample (LCS)

(LCS) R3511819-2 03/24/20 01:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	205	102	90.0-110	

L1201326-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1201326-02 03/24/20 02:51 • (MS) R3511819-4 03/24/20 03:09 • (MSD) R3511819-5 03/24/20 03:28

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	162	682	656	104	98.9	1	80.0-120			3.91	20

Method Blank (MB)

(MB) R3513259-3 03/24/20 20:30

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)	*98.2*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*104*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3513259-1 03/24/20 19:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0429	85.8	76.0-121	
Toluene	0.0500	0.0478	95.6	80.0-120	
Ethylbenzene	0.0500	0.0505	101	80.0-124	
Total Xylene	0.150	0.142	94.7	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*96.9*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*98.4*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3513259-2 03/24/20 19:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.59	102	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*113*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*107*	*72.0-128*	

L1201599-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1201599-03 03/25/20 00:57 • (MS) R3513259-4 03/25/20 02:40 • (MSD) R3513259-5 03/25/20 03:01

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.576	0.0656	0.566	0.586	86.9	90.4	25	10.0-155			3.50	32
Toluene	0.576	ND	0.576	0.588	100	102	25	10.0-160			2.11	34
Ethylbenzene	0.576	0.0565	0.612	0.616	96.4	97.2	25	10.0-160			0.729	32
Total Xylene	1.73	0.0445	1.75	1.80	98.1	101	25	10.0-160			3.15	32
(S) a,a,a-Trifluorotoluene(FID)					*101*	*94.8*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*98.8*	*101*		*72.0-128*				

Sample Narrative:

OS: Cannot run lower, client sent only MeOH vial.

L1201599-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1201599-03 03/25/20 00:57 • (MS) R3513259-6 03/25/20 03:21 • (MSD) R3513259-7 03/25/20 03:42

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	63.4	3.64	65.9	68.0	98.1	101	25	10.0-151			3.17	28
(S) a,a,a-Trifluorotoluene(FID)					*109*	*110*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*109*	*119*		*72.0-128*				

Sample Narrative:

OS: Cannot run lower, client sent only MeOH vial.

Method Blank (MB)

(MB) R3512711-1 03/25/20 23:34

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	*63.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3512711-2 03/25/20 23:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	35.0	70.0	50.0-150	
(S) o-Terphenyl			*78.1*	*18.0-148*	

L1201326-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1201326-01 03/26/20 00:00 • (MS) R3512711-3 03/26/20 00:13 • (MSD) R3512711-4 03/26/20 00:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	ND	31.2	29.6	62.4	59.2	1	50.0-150			5.26	20
(S) o-Terphenyl					*59.6*	*59.5*		*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

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [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

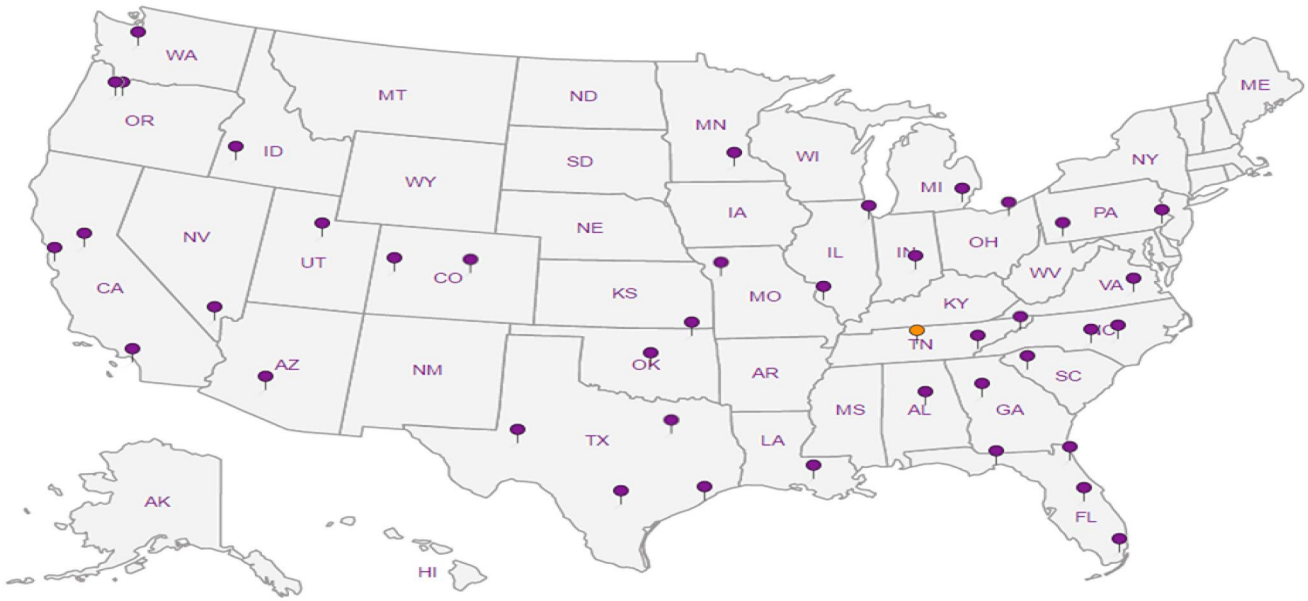
Third Party Federal Accreditations

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
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Fax: 615-758-5859

L # L1201326
D212

Report to: **Jennifer Deal**

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

Project Description: **San Juan 32 Federal 13-1A**

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

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

Client Project #

Lab Project #

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

Site/Facility ID # **SJ 32 Fed 13-1A**

P.O. #

Collected by (signature):

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

Immediately Packed on Ice N ___ Y _X_

Acctnum: **HILCORANM**
Template:
Prelogin:
TSR:
PB:
Shipped Via:

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)
N. Of E. W/T	Comp	SS		3-17	10:08	1	X	X	X		-01
S. Of E. W/T	Comp	SS		3-17	10:13	1	X	X	X		02
N. Of W. W/T	Comp	SS		3-17	10:23	1	X	X	X		03
S. Of W. W/T	Comp	SS		3-17	10:32	1	X	X	X		04

* 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 # 4430 3422 7627

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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Jennifer Deal	3/19/20	8:42am			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.8+.1=1.9 °C	Bottles Received: 4
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3-20-20	Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK