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	NCE2003651156
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 # NCE2003651156
Contact mailing address 382 Road 3100, Aztec NM 87410	

Location of Release Source

Latitude 36.878659 Longitude -108.191463
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Rio Bravo Pipeline	Site Type Pipeline
Date Release Discovered 1/17/2020 @4:45 pm	API# *Nearest Site Rio Bravo 1(3004524322)*

Unit Letter	Section	Township	Range	County
O	22	31N	13W	San Juan

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:Meriatt, Carl, Craig, and Denise*)

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) 8	Volume Recovered (bbls) 6
	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 8 bbls of produced water was released due to water gathering pipeline freezing and breaking. Operations excavated and repaired the pipeline. 6 bbls was recovered.

Incident ID	NCE2003651156
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?	<50 (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	NCE2003651156
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: __3/17/2020_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NCE2003651156
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: 3/17/2020

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

OCD Only

Received by: _____ Date: _____

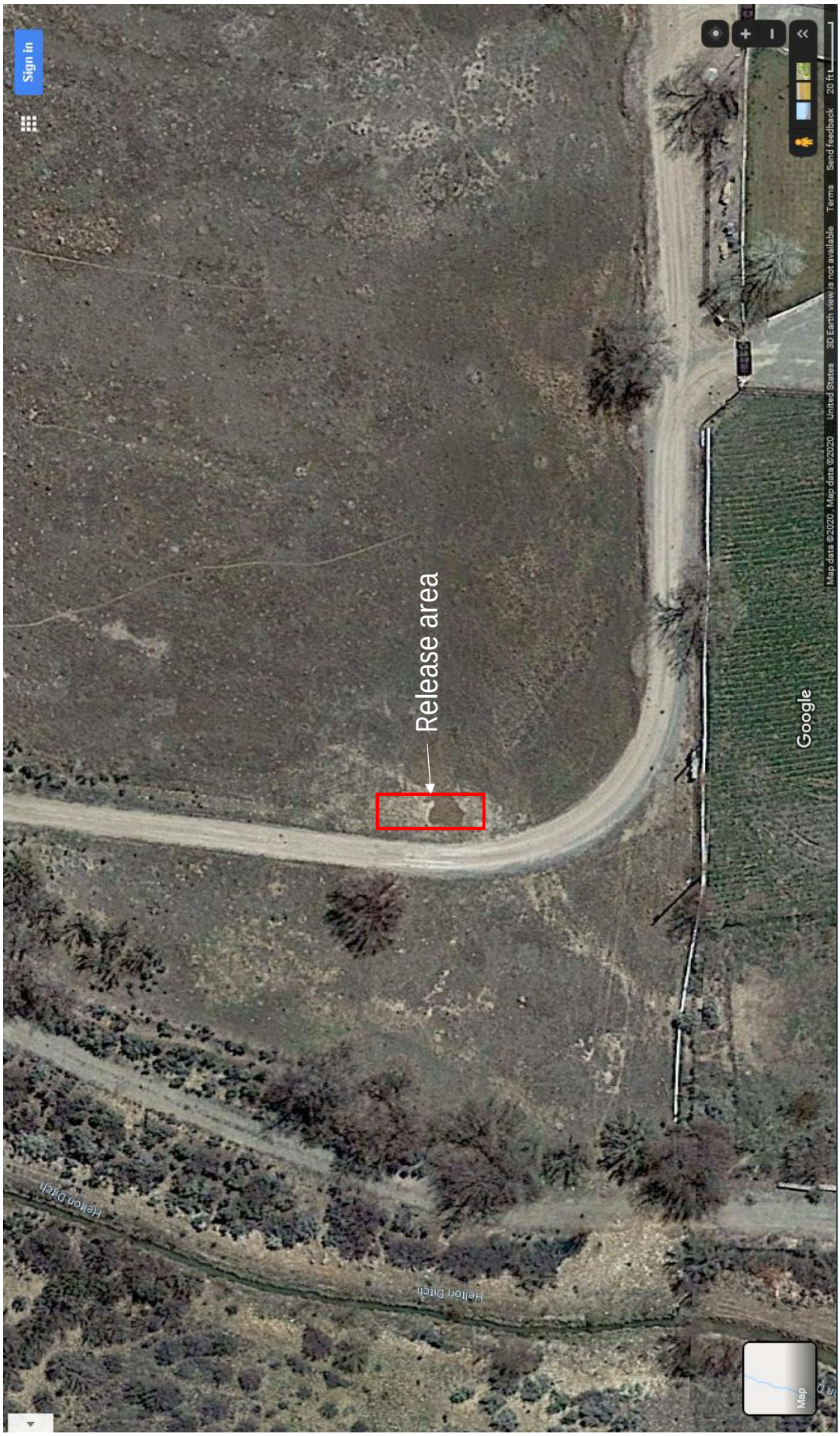
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

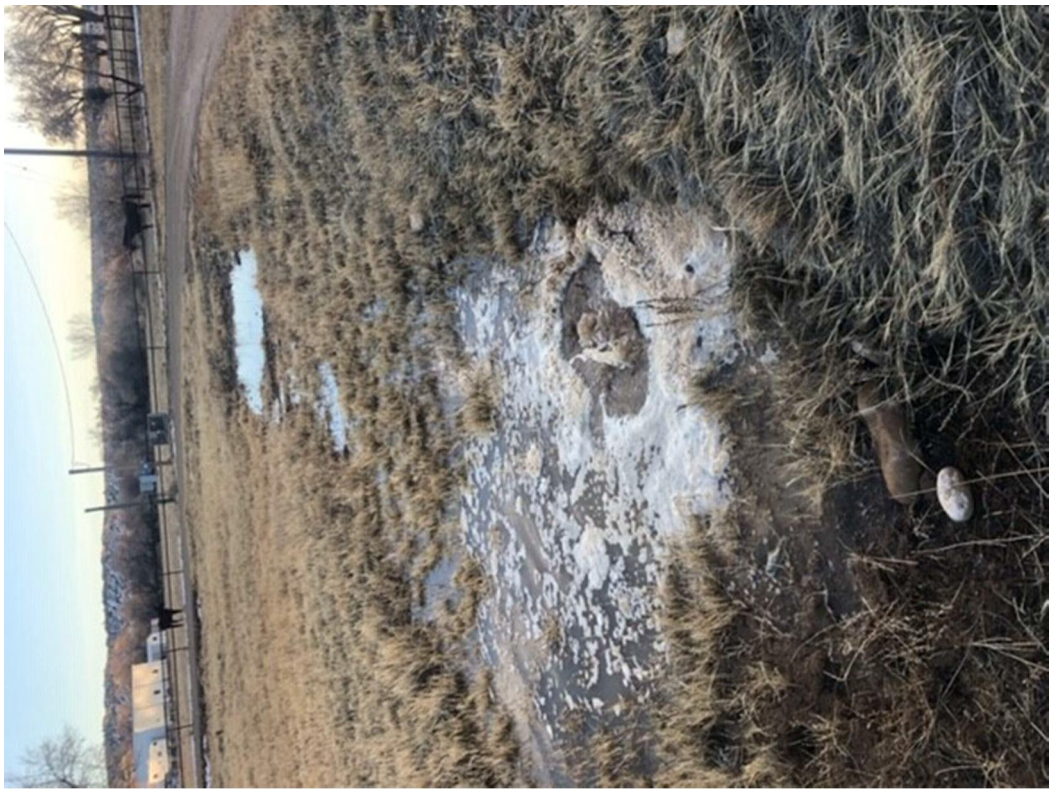
Closure Approved by: _____ Date: 6/17/2020

Printed Name: Cory Smith Title: Environmental Specialist

Scaled Map

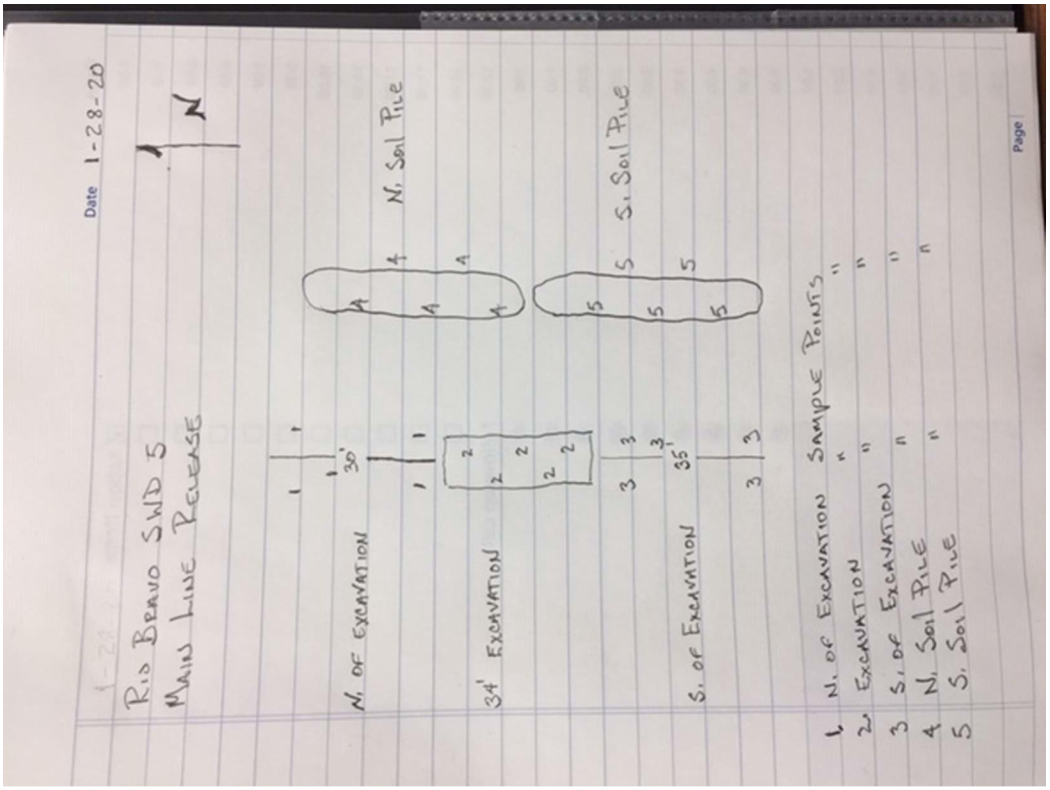
N


Release area
Helton Ditch
Helton Ditch
Google
Map data ©2020 Map data ©2020 United States 3D Earth view is not available Terms Send feedback 20 ft
Sign in
Map



Initial Release – 1/17/2020

Field Data


Date 1-28-20
Rio Bravo SWD 5
Main Line Release
N
N. of Excavation
30'
N. Soil Pile
34' Excavation
S. of Excavation
35'
S. Soil Pile
1 N. of Excavation Sample Points
2 Excavation "
3 S. of Excavation "
4 N. Soil Pile "
5 S. Soil Pile "
Page

Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS
RIO BRAVO 5 PIPELINE
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)	TPH (mg/kg)
Background	2/5/2020		N/A	N/A	N/A	N/A	N/A	785	N/A	N/A	N/A	N/A
N. of Excavation	1/28/2020		<0.0005	<0.005	<0.0005	<0.00150	<0.005	130	<0.100	<4.00	5.19	5.19
S. of Excavation	1/28/2020		<0.0005	<0.005	0.000695	0.0021	0.00280	206	<0.100	<4.00	<4.00	<4.00
Excavation	1/28/2020		0.00067	<0.005	<0.0005	<0.0015	0.00067	754	<0.100	<4.00	<4.00	<4.00
S. Stock Pile	1/28/2020		0.000799	<0.005	<0.0005	<0.0015	0.00080	843	<0.100	<4.00	<4.00	<4.00
N. Stock Pile	1/28/2020		0.000597	<0.005	<0.0005	<0.0015	0.00060	1250	<0.100	<4.00	<4.00	<4.00
NMOCD Standards		**NE**	**10**	**NE**	**NE**	**NE**	**50**	**785***	**NE**	**NE**	**NE**	**100**

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	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00965		SJLP	SJ			1	22	31N	13W	215155	4087391*	115	30	85
SJ 01820		SJLP	SJ		1	3	22	31N	13W	214931	4086778*	50	20	30
SJ 02737		SJLP	SJ		3	3	22	31N	13W	214907	4086365*	78	40	38
SJ 02836		SJLP	SJ	1	3	3	22	31N	13W	214806	4086464*	100	30	70
SJ 03197		SJLP	SJ	3	1	1	22	31N	13W	214877	4087489*	11	5	6
SJ 03797 POD1		SJLP	SJ	3	3	3	22	31N	13W	214806	4086264*	220	20	200

Average Depth to Water: **24 feet**

Minimum Depth: **5 feet**

Maximum Depth: **40 feet**

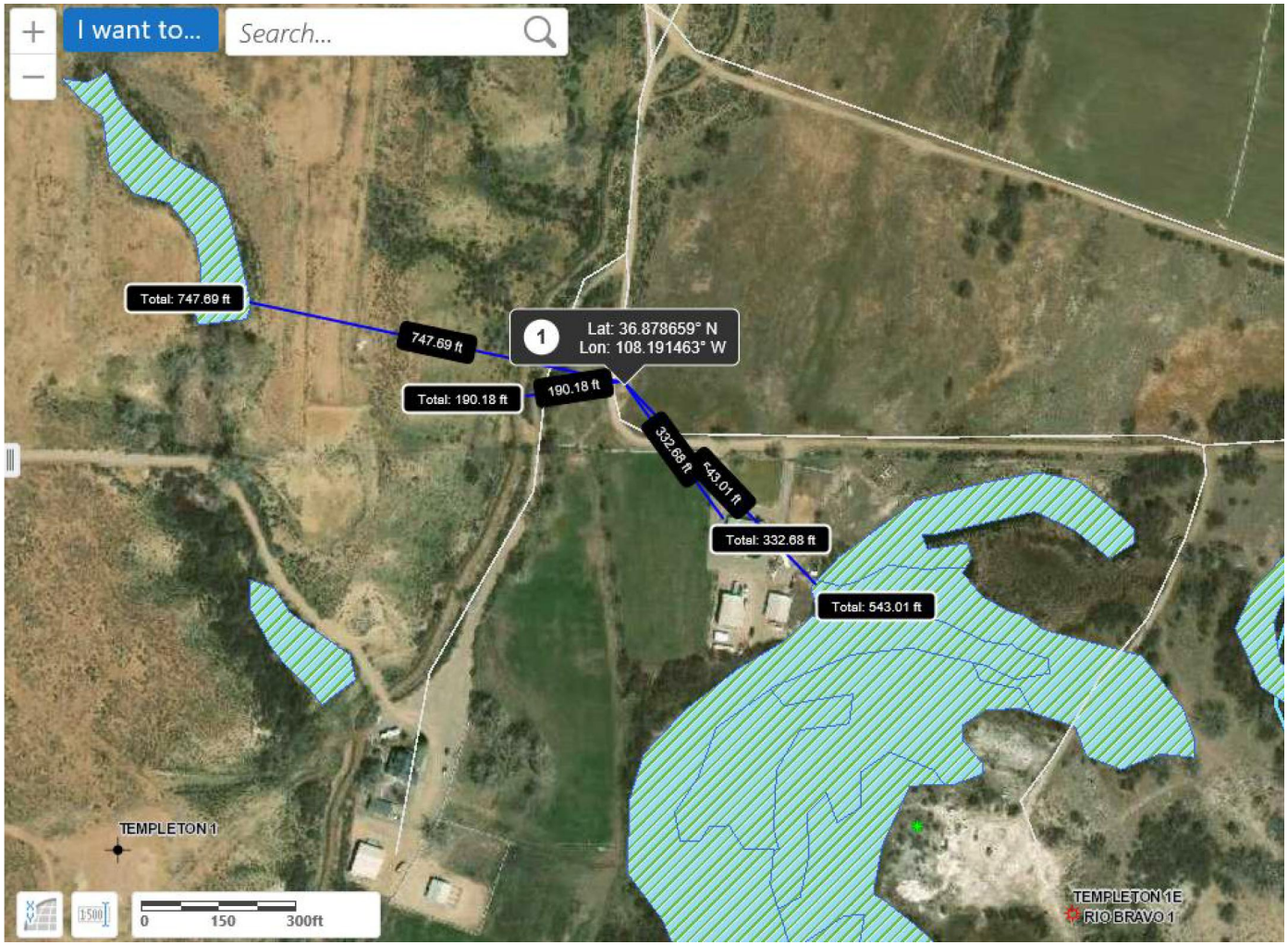
Record Count: 6

PLSS Search:

Section(s): 22 **Township:** 31N **Range:** 13W

***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

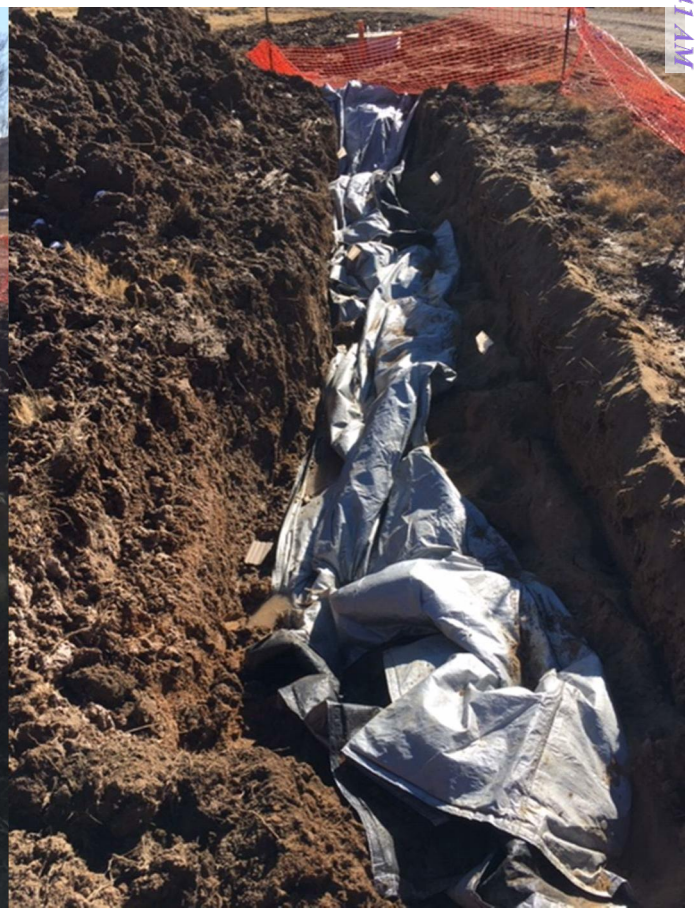


Photographs – 1/28/2020 Sampling Event

North of Excavation

North Soil Pile

Excavation



Photographs – 1/28/2020 Sampling Event

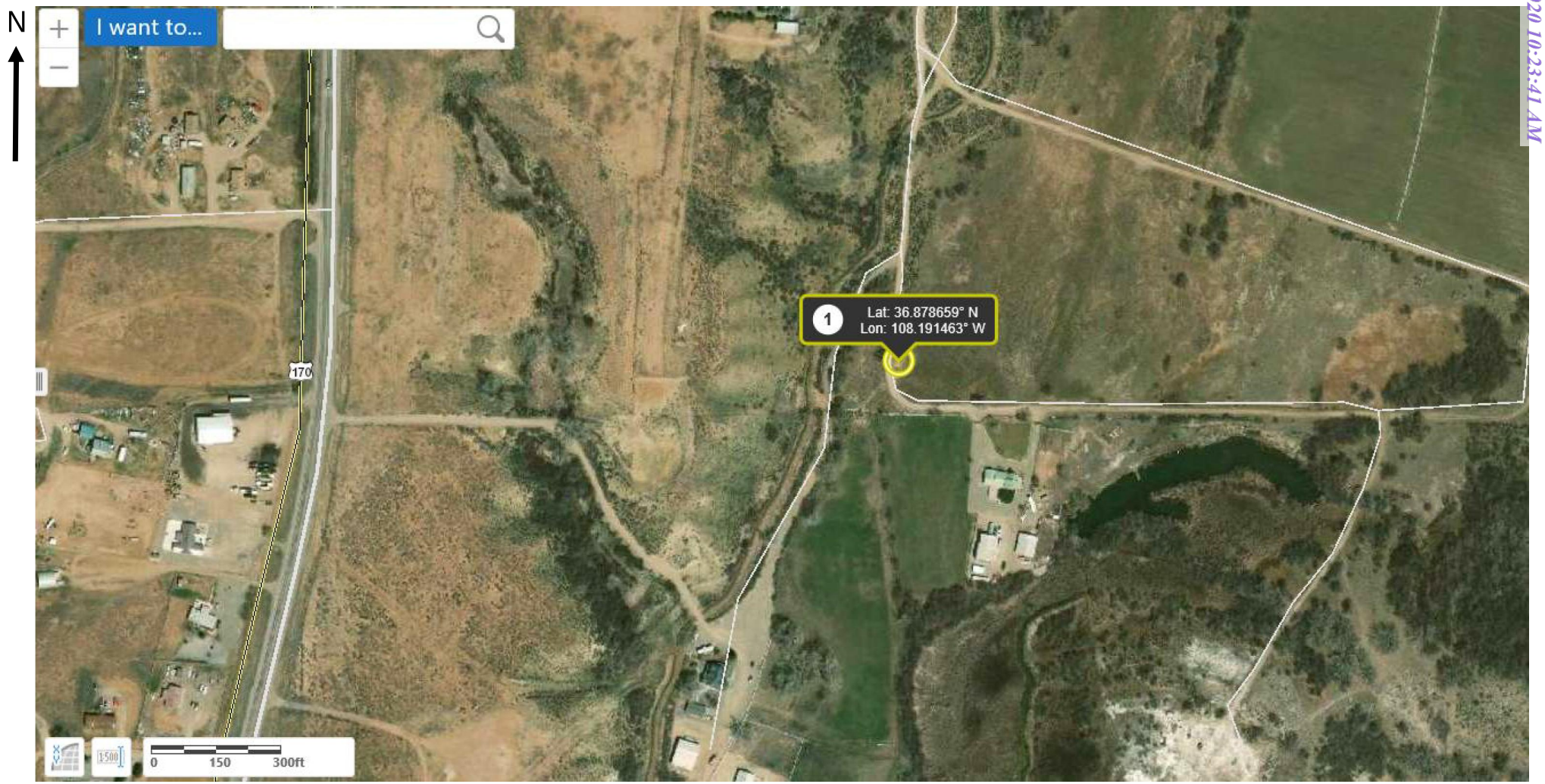
South of Excavation

South Soil Pile

Photographs – 2/5/2020 Background Sample

Photographs – After Backfill

Topographic/Aerial Maps



Summary of events

- Pipeline was excavated and repaired
- Confirmation sampling occurred on Tuesday, January 28 at 2pm
  - OCD was notified on January 24 at 2:33pm
  - Kurt completed the sampling
- Background sample was taken on February 5th
- OCD approved background sample results as new closure standard 2/18/20 (see attached email)
- The stock piles that were above closure standards were hauled and disposed at IEI (see attached C-138)
  - ~40 yards of contaminated soil was hauled off
  - ~40 yards of clean soil was brought in for backfill
- Backfill completed around 2/25/20

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

Oil Conservation Division

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Hilcorp Energy Company
382 Rd 3100
Aztec, NM 87410

2. **Originating Site:**
RIO BRAVO 5 SWD (Other) API# 3004533583 Area:02

Billing Information: Requested by: Jennifer Deal

3. **Location of Material (Street Address, City, State or ULSTR):**
Unit E, Section 27, T031N, R013W
SAN JUAN, NM

4. **Source and Description of Waste:**
Impacted Soil From condensed fluids spill (produced water/condensate)
Estimated Volume 40 yd3 Known Volume (to be entered by the operator at the end of the haul) 48 yd3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Jennifer Deal (Generator Signature), representative or authorized agent for **Hilcorp Energy Company** do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

[X] RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** [X] ***Monthly*** [ ] ***Weekly*** [ ] ***Per Load***

[ ] RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

[ ] MSDS Information [ ] RCRA Hazardous Waste Analysis [ ] Process Knowledge [ ] Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Jennifer Deal (Generator Signature), representative for Hilcorp Energy Company authorize JFJ/IEI to complete the required testing/sign the Generator Waste Testing Certification.

I, Betty Rhodes (Representative / Agent Signature), representative for Industrial Ecosystems, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. **Transporter:** Baileys

OCD Permitted Surface Waste Management Facility

CL-248
PH-7

Name and Facility Permit #: **JFJ Landfarm / Industrial Ecosystems, Inc. * Permit #: NM 01-0010B**

Address of Facility: **# 49 CR 3150 Aztec, NM 87410**

Method of Treatment and/or Disposal:

[ ] Evaporation [ ] Injection [ ] Treating Plant [X] Landfarm [ ] Landfill [ ] Other

Waste Acceptance Status: [X] **APPROVED** [ ] DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Regina Ingram TITLE: Trans Coord DATE: 2/25/20 2/20

SIGNATURE: Regina Ingram TELEPHONE NO.: 505-632-1782

Surface Waste Management Facility Authorized Agent

Jennifer Deal

From:	Jennifer Deal
Sent:	Friday, January 24, 2020 2:33 PM
To:	cory.smith@state.nm.us
Cc:	Kurt Hoekstra; Brett Jones; Joey Becker
Subject:	Confirmation Sampling - Rio Bravo Pipeline Release

Good afternoon Cory,

Hilcorp Energy is providing 48 hour notice of confirmation sampling to occur on Tuesday, January 28 at 2:00pm. 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, February 18, 2020 8:58 AM
To: Jennifer Deal
Subject: RE: [EXTERNAL] RE: Rio Bravo Pipeline Release

Follow Up Flag: Follow up
Flag Status: Flagged

Jennifer,

OCD agrees with the background sample of 785 mg/kg Chlorides. All results above that limit need to meet the requirements of 19.15.29 NMAC.

Please include this approval in your Final Closure report.

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, February 18, 2020 8:53 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Subject: [EXT] RE: [EXTERNAL] RE: Rio Bravo Pipeline Release

NCE2003651156. Sorry, I don't think I had one when I submitted the first request.

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: Tuesday, February 18, 2020 8:52 AM
To: Jennifer Deal <jdeal@hilcorp.com>
Subject: [EXTERNAL] RE: Rio Bravo Pipeline Release

Jennifer,

What is the incident# associated with the release.

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, February 18, 2020 8:21 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
Subject: [EXT] FW: Rio Bravo Pipeline Release
Importance: High

Good morning Cory,

I know you are super busy these days but just wanted to know what the status is of the request below so that we know what our path forward is. Let me know if you have any questions.

Thank you,

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

From: Jennifer Deal
Sent: Thursday, February 6, 2020 1:59 PM
To: 'Smith, Cory, EMNRD' <Cory.Smith@state.nm.us>
Subject: Rio Bravo Pipeline Release

Cory,

Prior to beginning delineation yesterday at the Rio Bravo pipeline release, Kurt grabbed a background sample approximately 75' Northeast of the excavation. As you can see in the attached lab analysis, chlorides came back at 785 mg/kg which is about 31 mg/kg higher than the sample taken in the excavation. Hilcorp would like to use this information to request NFA for this site and backfill.

Please let me know if you have any questions.

Thank you,

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 30, 2020

HilCorp-Farmington, NM

Sample Delivery Group:	L1184097
Samples Received:	01/30/2020
Project Number:	Rio Bravo #5 Pipelin
Description:	Rio Bravo #5 Pipeline
Site:	RIO BRAVO #5 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

N. OF EXCAVATION L1184097-01 Solid

Collected by: K Hoekstra | Collected date/time: 01/28/20 14:18 | Received date/time: 01/30/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1419618	1	01/30/20 10:55	01/30/20 12:55	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1419630	1	01/30/20 09:28	01/30/20 12:25	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1419570	1	01/30/20 14:05	01/30/20 16:57	TJD	Mt. Juliet, TN

S. OF EXCAVATION L1184097-02 Solid

Collected by: K Hoekstra | Collected date/time: 01/28/20 14:26 | Received date/time: 01/30/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1419618	1	01/30/20 10:55	01/30/20 13:04	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1419630	1	01/30/20 09:28	01/30/20 12:48	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1419570	1	01/30/20 14:05	01/30/20 15:56	TJD	Mt. Juliet, TN

EXCAVATION L1184097-03 Solid

Collected by: K Hoekstra | Collected date/time: 01/28/20 14:35 | Received date/time: 01/30/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1419618	1	01/30/20 10:55	01/30/20 13:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1419630	1	01/30/20 09:28	01/30/20 13:10	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1419570	1	01/30/20 14:05	01/30/20 16:12	TJD	Mt. Juliet, TN

S. STOCK PILE L1184097-04 Solid

Collected by: K Hoekstra | Collected date/time: 01/28/20 14:46 | Received date/time: 01/30/20 08:30

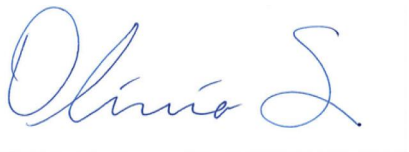
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1419618	1	01/30/20 10:55	01/30/20 13:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1419630	1	01/30/20 09:28	01/30/20 13:33	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1419570	1	01/30/20 14:05	01/30/20 16:27	TJD	Mt. Juliet, TN

N. STOCK PILE L1184097-05 Solid

Collected by: K Hoekstra | Collected date/time: 01/28/20 14:55 | Received date/time: 01/30/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1419618	5	01/30/20 10:55	01/30/20 13:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1419630	1	01/30/20 09:28	01/30/20 13:55	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1419570	1	01/30/20 14:05	01/30/20 16:43	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	130		10.0	1	01/30/2020 12:55	WG1419618

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	01/30/2020 12:25	WG1419630
Toluene	ND		0.00500	1	01/30/2020 12:25	WG1419630
Ethylbenzene	ND		0.000500	1	01/30/2020 12:25	WG1419630
Total Xylene	ND		0.00150	1	01/30/2020 12:25	WG1419630
TPH (GC/FID) Low Fraction	ND		0.100	1	01/30/2020 12:25	WG1419630
(S) a,a,a-Trifluorotoluene(FID)	*106*		*77.0-120*		*01/30/2020 12:25*	WG1419630
(S) a,a,a-Trifluorotoluene(PID)	*103*		*72.0-128*		*01/30/2020 12:25*	WG1419630

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	01/30/2020 16:57	WG1419570
C28-C40 Oil Range	5.19	B	4.00	1	01/30/2020 16:57	WG1419570
(S) o-Terphenyl	*64.0*		*18.0-148*		*01/30/2020 16:57*	WG1419570

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	206		10.0	1	01/30/2020 13:04	WG1419618

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	01/30/2020 12:48	WG1419630
Toluene	ND		0.00500	1	01/30/2020 12:48	WG1419630
Ethylbenzene	0.000695		0.000500	1	01/30/2020 12:48	WG1419630
Total Xylene	0.00210		0.00150	1	01/30/2020 12:48	WG1419630
TPH (GC/FID) Low Fraction	ND		0.100	1	01/30/2020 12:48	WG1419630
(S) a,a,a-Trifluorotoluene(FID)	*107*		*77.0-120*		*01/30/2020 12:48*	WG1419630
(S) a,a,a-Trifluorotoluene(PID)	*104*		*72.0-128*		*01/30/2020 12:48*	WG1419630

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	01/30/2020 15:56	WG1419570
C28-C40 Oil Range	ND		4.00	1	01/30/2020 15:56	WG1419570
(S) o-Terphenyl	*78.3*		*18.0-148*		*01/30/2020 15:56*	WG1419570

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	754		10.0	1	01/30/2020 13:14	WG1419618

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000670		0.000500	1	01/30/2020 13:10	WG1419630
Toluene	ND		0.00500	1	01/30/2020 13:10	WG1419630
Ethylbenzene	ND		0.000500	1	01/30/2020 13:10	WG1419630
Total Xylene	ND		0.00150	1	01/30/2020 13:10	WG1419630
TPH (GC/FID) Low Fraction	ND		0.100	1	01/30/2020 13:10	WG1419630
(S) a,a,a-Trifluorotoluene(FID)	*107*		*77.0-120*		*01/30/2020 13:10*	WG1419630
(S) a,a,a-Trifluorotoluene(PID)	*103*		*72.0-128*		*01/30/2020 13:10*	WG1419630

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	01/30/2020 16:12	WG1419570
C28-C40 Oil Range	ND		4.00	1	01/30/2020 16:12	WG1419570
(S) o-Terphenyl	*68.8*		*18.0-148*		*01/30/2020 16:12*	WG1419570

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	843		10.0	1	01/30/2020 13:23	WG1419618

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000799		0.000500	1	01/30/2020 13:33	WG1419630
Toluene	ND		0.00500	1	01/30/2020 13:33	WG1419630
Ethylbenzene	ND		0.000500	1	01/30/2020 13:33	WG1419630
Total Xylene	ND		0.00150	1	01/30/2020 13:33	WG1419630
TPH (GC/FID) Low Fraction	ND		0.100	1	01/30/2020 13:33	WG1419630
(S) a,a,a-Trifluorotoluene(FID)	*107*		*77.0-120*		*01/30/2020 13:33*	WG1419630
(S) a,a,a-Trifluorotoluene(PID)	*101*		*72.0-128*		*01/30/2020 13:33*	WG1419630

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	01/30/2020 16:27	WG1419570
C28-C40 Oil Range	ND		4.00	1	01/30/2020 16:27	WG1419570
(S) o-Terphenyl	*74.2*		*18.0-148*		*01/30/2020 16:27*	WG1419570

Wet Chemistry by Method 300.0

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	1250		50.0	5	01/30/2020 13:33	WG1419618

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000597		0.000500	1	01/30/2020 13:55	WG1419630
Toluene	ND		0.00500	1	01/30/2020 13:55	WG1419630
Ethylbenzene	ND		0.000500	1	01/30/2020 13:55	WG1419630
Total Xylene	ND		0.00150	1	01/30/2020 13:55	WG1419630
TPH (GC/FID) Low Fraction	ND		0.100	1	01/30/2020 13:55	WG1419630
(S) a,a,a-Trifluorotoluene(FID)	*107*		*77.0-120*		*01/30/2020 13:55*	WG1419630
(S) a,a,a-Trifluorotoluene(PID)	*100*		*72.0-128*		*01/30/2020 13:55*	WG1419630

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	01/30/2020 16:43	WG1419570
C28-C40 Oil Range	ND		4.00	1	01/30/2020 16:43	WG1419570
(S) o-Terphenyl	*67.1*		*18.0-148*		*01/30/2020 16:43*	WG1419570

Method Blank (MB)

(MB) R3495514-1 01/30/20 12:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	3.35	J	0.795	10.0

Laboratory Control Sample (LCS)

(LCS) R3495514-2 01/30/20 12:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	189	94.4	90.0-110	

Method Blank (MB)

(MB) R3495513-3 01/30/20 11:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0555	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*103*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3495513-1 01/30/20 10:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0540	108	76.0-121	
Toluene	0.0500	0.0524	105	80.0-120	
Ethylbenzene	0.0500	0.0518	104	80.0-124	
Total Xylene	0.150	0.150	100	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*104*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3495513-2 01/30/20 11:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.64	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*111*	*72.0-128*	

Method Blank (MB)

(MB) R3495604-1 01/30/20 15:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	0.875	J	0.274	4.00
(S) o-Terphenyl	*70.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3495604-2 01/30/20 15:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	42.9	85.8	50.0-150	
(S) o-Terphenyl			*81.1*	*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.
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
B	The same analyte is found in the associated blank.
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

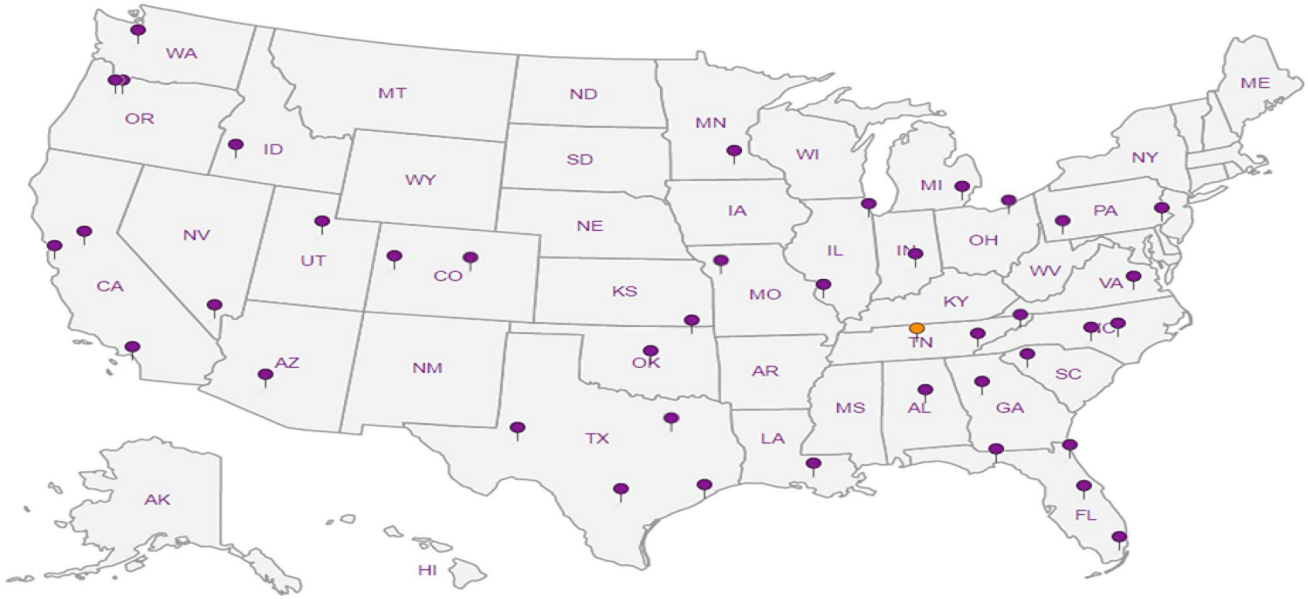
Third Party Federal Accreditations

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.



RUSH
SAME DAY

Billing Information:
ATTN: Jennifer Deal

Pres Chk

Report to: **Jennifer Deal**

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

Project Description: **Rio Bravo # 5 Pipeline**

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

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

Client Project #

Lab Project #

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

Site/Facility ID # **Rio Bravo # 5 Pipeline**

P.O. #

Collected by (signature): Kurt Hoekstra

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day ___ 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)
N. of Excavation	Comp	SS		1-28	2:18	1	X	X	X		-01
S. of Excavation	Comp	SS		1-28	2:26	1	X	X	X		02
Excavation	Comp	SS		1-28	2:35	1	X	X	X		03
S. Stock Pile	Comp	SS		1-28	2:46	1	X	X	X		04
N. Stock Pile	Comp	SS		1-28	2:55	1	X	X	X		05

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 # 1184097

Ta E131

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

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4882 8626 3548

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
Kurt Hoekstra	1-29-20	8:15		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4 °C Bottles Received: 5
				0.2+.3=0.5
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/30/20 Time: 8:30

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Hilcorp Energy Co

Samples Received: 2/5/2020
Job Number: 17051-0002
Work Order: P002011
Project Name/Location: Rio Bravo #5 Pipeline

Report Reviewed By: _____ Date: 2/7/20

Walter Hinchman, Laboratory Director

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.

envirotech
Analytical Laboratory

Hilcorp Energy Co	Project Name:	Rio Bravo #5 Pipeline	
PO Box 61529	Project Number:	17051-0002	**Reported:**
Houston TX, 77208	Project Manager:	Jennifer Deal	02/07/20 12:35

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Background	P002011-01A	Soil	02/05/20	02/05/20	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

Hilcorp Energy Co	Project Name:	Rio Bravo #5 Pipeline	
PO Box 61529	Project Number:	17051-0002	**Reported:**
Houston TX, 77208	Project Manager:	Jennifer Deal	02/07/20 12:35

Background

P002011-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anions by 300.0/9056A									
Chloride	**785**	100	mg/kg	5	2006020	02/05/20	02/06/20	EPA 300.0/9056A	

envirotech
Analytical Laboratory

Hilcorp Energy Co	Project Name:	Rio Bravo #5 Pipeline	
PO Box 61529	Project Number:	17051-0002	**Reported:**
Houston TX, 77208	Project Manager:	Jennifer Deal	02/07/20 12:35

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2006020 - Anion Extraction EPA 300.0/9056A										
Blank (2006020-BLK1)				Prepared & Analyzed: 02/05/20 1						
Chloride	ND	20.0	mg/kg							
LCS (2006020-BS1)				Prepared & Analyzed: 02/05/20 1						
Chloride	250	20.0	mg/kg	250		100	90-110			
Matrix Spike (2006020-MS1)		**Source: P002011-01**		Prepared & Analyzed: 02/05/20 1						
Chloride	1110	100	mg/kg	250	785	132	80-120			M2
Matrix Spike Dup (2006020-MSD1)		**Source: P002011-01**		Prepared: 02/05/20 1 Analyzed: 02/05/20 2						
Chloride	933	100	mg/kg	250	785	59.0	80-120	17.7	20	M2

QC Summary Report
Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values my differ slightly.

envirotech
Analytical Laboratory

Hilcorp Energy Co	Project Name:	Rio Bravo #5 Pipeline	
PO Box 61529	Project Number:	17051-0002	**Reported:**
Houston TX, 77208	Project Manager:	Jennifer Deal	02/07/20 12:35

Notes and Definitions

M2	Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

Client:	Hilcorp Energy
Project:	Rio Blanco #5 Pipeline
Project Manager:	Jennifer Deal
Address:	
City, State, Zip	
Phone:	
Email:	Jdeal@hilcorp.com khoekstra@hilcorp.com

Report Attention

Report due by:	
Attention:	
Address:	
City, State, Zip	
Phone:	
Email:	

Lab Use Only

Lab WO#	Job Number
P002011	17051-0002

TAT

1D	3D
X	

EPA Program

RCRA	CWA	SDWA

State

NM	CO	UT	AZ
TX	OK		

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0							Remarks
2:05	2-5	Soil	1	BACKGROUND	1						X							

Additional Instructions: Results ASAP

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Kurt Hoekstra

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Kurt Hoekstra	2-5-20	4:20	Raina Lopez	2/5/20	16:20
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: Y / (N)

T1 10.7 T2 T3

AVG Temp °C 10.7

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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