REVIEWED

By NVelez at 3:37 pm, Apr 16, 2025

- 1. Continue with O & M schedule.
- 2. Submit next quarterly report by July 15, 2025.

April 15, 2025

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: First Quarter 2025 – Remediation System Quarterly Report

Federal 18 #1T
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS2103335776

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *First Quarter 2025 – Remediation System Quarterly Report* summarizing first quarter 2025 activities at the former Federal 18 #1T coalbed methane gas well (Site), located in Unit M, Section 18, Township 30 North, Range 12 West in the City of Farmington, New Mexico. The casing of the original gas well has been modified to vent gas and purge water from the Ojo Alamo and Nacimiento Formations. Since initiation of the remediation system in 2010, quarterly reports have been submitted to the New Mexico Oil Conservation Division (NMOCD) to record activities performed at the Site, as well as document well-casing pressures from nearby domestic water well SJ-01737, the volume of gas vented from the Site's well, and groundwater analytical results collected from the Site's well.

SITE BACKGROUND

As part of an ongoing effort between the NMOCD and Hilcorp (Site originally owned and operated by XTO Energy, Inc. [XTO]), the agreed upon remedial option for the Site was to install a vacuum system at the Site to vent gas from the Nacimiento formation, which overlies the Ojo Alamo Formation. Gas found in the Nacimiento formation could have originated from several contributing sources in the area including existing and/or abandoned gas wells near the Site. In agreement with the NMOCD, XTO modified the Site's production well to vent gas and recover contaminated groundwater by setting a plug at a depth of approximately 513 feet below ground surface (bgs). Perforations were made in the casing at 437 feet to 452 feet bgs and 457 feet to 473 feet bgs in order to monitor groundwater and vent gas from the Nacimiento Formation. Based on initial groundwater sampling results, XTO recommended pumping the aquifer until groundwater results were below the New Mexico Water Quality Control Commission (NMWQCC) standards for applicable chemicals of concern (COCs).

A submersible water pump was installed in the Site's well in November 2010 at a depth of approximately 485 feet bgs in order to recover impacted groundwater. Based on aquifer tests performed by XTO, the water pump was set to maintain a static water level of approximately 473 feet bgs. The water pump is plumbed into the existing water lines and stored in the on-Site 210-barrel (bbl) water tank, which is regularly emptied for off-Site disposal. A vacuum pump was

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subsequently installed at the Site's well to also remove gas entrained in the formation. A portable generator was originally placed at the Site to power both the vacuum and water pumps. Generator maintenance issues led to the system being electrified on February 3, 2011.

Operation and maintenance (O&M) inspections are conducted by Hilcorp personnel regularly to check the system and verify proper water and vacuum pump operation, record water meter volumes, and verify no other Site conditions dictate system maintenance and/or adjustment. Possible pressure variations in the subsurface due to the vacuum pump are monitored using nearby water well SJ-01737. Casing pressure measurements from the SJ-01737 well are included in Table 1.

FIRST QUARTER 2025 SITE ACTIVITIES AND RESULTS

Approximately 28,502 gallons (679 bbls) of water were removed from the Site's well between the fourth quarter of 2024 and first quarter of 2025 sampling events. To date, approximately 1,397,222 gallons (33,267 bbls) of impacted water have been removed from the Site. A water sample from the well was collected on January 16, 2025 and submitted to Eurofins Environment Testing for laboratory analysis. Specifically, the water sample was analyzed for the following COCs: volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX), following Environmental Protection Agency (EPA) Method 8260B, specific conductance (or electrical conductivity) following Standard Method (SM) 2510B, pH following Method SM4500-H+B, and total dissolved solids (TDS) following Method SM2540C.

Based on results from the January 2025 sampling event, benzene and TDS remain at concentrations exceeding the applicable NMWQCC standards and appear to be similar to historical results. Analytical results are summarized in Table 2, with complete laboratory reports attached as Appendix A.

The Site vacuum pump has been operating based on a setting of 690 minutes on and 30 minutes off (totaling 23 hours runtime per day). During the first quarter of 2025, the pump operated at an average flow rate of 4.1 actual cubic feet per minute (ACFM). Approximately 36,192 thousand cubic feet (MCF) of gas/air have been emitted from the Site's well since the system began operating in 2010. There were no deviations from the regular operation and maintenance activities for the system during the first quarter of 2025. Gas/air volumes vented by the system are summarized in Table 3.

RECOMMENDATIONS

O&M visits will continue to be performed by Hilcorp personnel to verify the system is operating as designed. Deviations from regular operations will be noted on field logs and included in the following quarterly report. Hilcorp will continue to remove and monitor water from the Site until benzene and TDS concentrations are compliant with NMWQCC standards for eight consecutive quarters.



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We appreciate the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this proposal, please contact the undersigned.

Ensolum, LLC

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Stuart Hyde, PG (licensed in TX, WY, & WA) Senior Managing Geologist (970) 903-1607 shyde@ensolum.com Daniel R. Moir, PG (licensed in WY & TX) Senior Managing Geologist (303) 887-2946 dmoir@ensolum.com

Attachments:

Table 1 Well SJ-01737 Casing Pressure Readings

Table 2 Water Analytical Results
Table 3 Gas and Air Vented

Appendix A Laboratory Analytical Reports



TABLES



TABLE 1 WELL SJ-01737 CASING PRESSURE READINGS Federal 18 #1T Hilcorp Energy Company

Hilcorp Energy Company San Juan County, New Mexico

Sample Date	Casing Pressure (ounces)	Average
4/6/2023	0	0.000
4/18/2023	0	0.000
4/28/2023	0	0.000
5/4/2023	0	0.000
5/10/2023	0	0.000
5/19/2023	0	0.000
6/6/2023	0	0.000
6/23/2023	0	0.000
7/7/2023	0	0.000
7/13/2023	0	0.000
7/24/2023	0	0.000
8/4/2023	0	0.000
8/10/2023	0	0.000
8/21/2023	0	0.000
9/7/2023	0	0.000
9/27/2023	0	0.000
10/14/2023	0	0.000
10/27/2023	0	0.000
11/9/2023	0	0.000
12/11/2023	0	0.000
12/27/2023	0	0.000
1/9/2024	0	0.000
1/18/2024	0	0.000
1/25/2024	0	0.000
1/31/2024	0	0.000
2/22/2024	0	0.000
3/7/2024	0	0.000
3/26/2024	0	0.000
6/10/2024	0	0.000
9/18/2024	0	0.000
10/10/2024	0	0.000
10/23/2024	0	0.000
11/11/2024	0	0.000
12/4/2024	0	0.000
12/19/2024	0	0.000
1/11/2025	0	0.000
1/16/2025	0	0.000
2/7/2025	0	0.000
2/20/2025	0	0.000
3/10/2025	0	0.000
3/29/2025	0	0.000

Ensolum 1 of 1

ENSOLUM

TABLE 2 WATER ANALYTICAL RESULTS Federal 18 #1T Hilcorp Energy Company San Juan County, New Mexico										
Sample Date	Benzene (µg/L)	Toluene (μg/L)	Ethylbenzene (µg/L)	Xylene (μg/L)	TDS (mg/L)	Electrical Conductivity (umhos/cm)	рН	Purge Wate Volume (gallons)		
IMWQCC Standards	5.0	1,000	700	620	1,000		6 thru 9	-		
11/5/2010	ND	5.2	ND	ND	1,400	2,600	7.2	NM		
9/24/2010	150	ND	76	670	-	-	-	NM		
9/24/2010	190	170	24	210	13,000	18,000	6.1	NM		
9/24/2010	143	221	63.6	950	-		-	NM		
9/24/2010	320	377	31.8	568	11,100	16,000	5.84	NM		
12/10/2011				-	7,610	8,900	6.36	3,033		
1/5/2011	67	93	7.9	25	_			7,798		
1/5/2011	73	99	10	39	4,800	6,000	6.6	7,798		
1/29/2011	60	93	10	33		4,900	6.4	10,791		
2/28/2011	42	60	6.1	20	3,400	4,000	6.7	14,795		
4/1/2011	23	27	1.8	6.8	2,700	3,100	6.8	31,238		
4/29/2011	29	28	2.4	7.3	2,600	2,900	6.9	50,217		
5/31/2011	14	19	1.4	4.9	2,500	2,800				
6/14/2011	14 55	81	2.8	4.9 15	2,500	2,700	6.7	76,513 88,120		
6/30/2011	52	67	2.6	12	2,500	2,700	6.9	101,209		
8/15/2011	21	25	1.2	5.8	2,500	2,600	6.8	140,267		
9/2/2011	10	12	0.64	3.2	2,500	2,600	7.2	155,801		
9/16/2011	9.6	11	0.64	3	2,400	2,500	7.2	168,040		
9/30/2011	7.2	8.7	0.64	2.5	2,500	2,600	7	180,393		
10/28/2011	5.1	ND	1.8	2.7	2,300	2,600	6.9	205,220		
11/30/2011	4	ND	3.9	2	2,500	2,600	7.1	233,488		
12/30/2011	3.4	ND	ND	2.9	2,500	2,500	7.5	261,391		
4/3/2012	6	ND	ND	1.6	-			351,300		
4/9/2012	-				2,400	2,400	7.4	NM		
7/3/2012	5.3	ND	ND	ND	2,300	2,400	7.4	NM		
7/6/2012								441,053		
9/19/2012			-	-	-			521,271		
9/27/2012	6.2	ND	ND	ND	2,300	2,500	7.1	NM		
12/14/2012	-	-	_	-	_	_	_	598,540		
12/31/2012	13.9	1.1	ND	3.3	2,690	2,440	7.05	604,689		
1/23/2013	160	190	ND	26	2,400	2,500	8	NM		
2/22/2013	7.1	77	ND	1.8	2,100	2,500	7.1	605,860		
5/2/2013	9	6.9	ND ND	ND	2,400	2,600	7.5	612,601		
8/19/2013	20	11	ND ND	2.3	2,200	2,600	7.2	NM		
					· ·			_		
9/23/2013	13 4.6	11	ND ND	2.2 ND	2,300	2,500	7.1	621,744		
11/25/2013		5.2			2,200	2,700		631,430		
2/4/2014	15 54.2	17	0.72	3.1	2,200	2,500	7.3 6.98	636,120		
10/1/2015		57	1.37	9.77	2,260	2,640		639,410		
10/20/2015	42.3	39.9	0.964	7.06	2,330	1,460	7.09	642,650		
3/28/2016	38	34.1	0.835	4.82	2,230	2,570	6.86	650,850		
6/14/2016	78.3	58.4	1.16	7.22	2,890	2,600	6.89	704,371		
8/29/2016	19	ND	ND	2.18	2,410	2,590	7.02	763,261		
11/18/2016	13.2	5.61	ND	2.33	2,470	2,580	7.03	842,610		
3/31/2017	9.61	7.87	ND	ND	2,300	2,570	7.28	858,190		
6/16/2017	64.6	29.2	0.781	5.4	2,360	2,570	7.05	927,854		
9/7/2017	4.61	1.73	ND	ND	2,030	2,450	7.14	997,330		
12/5/2017	138	51.5	1.65	9.378	2,230	2,590	7.2	1,080,550		
3/6/2018	19.9	14.8	0.543	2.71	2,290	2,620	7.13	1,080,840		
8/7/2018	7.9	8.06	<0.5	<1.5	2,200	2,300	7.19	1,082,751		
1/3/2019	7.07	3.29	0.177	1.08	2,080	6,750	6.35	1,120,220		
2/22/2019	19.8	11.1	< 0.5	3.97	2,270	2,710	7.46	1,120,366		
5/24/2019	11.9	10.8	ND	ND	2,380	2,760	7.15	1,123,853		
9/10/2019	23.2	18.8	ND	ND	2,260	2,600	7.37	1,125,478		
10/29/2019	5.41	5.68	ND	ND	2,300	2,530	7.09	1,127,076		
2/27/2020	20.7	19.3	ND	ND	2,280	2,580	7.06	1,128,506		
5/15/2020	10.3	8.91	ND	ND	2,460	2,570	7.27	1,131,033		
8/25/2020	3.9	3.5	ND	ND ND	2,190	2,640	7.62	1,131,100		
10/27/2020	31.1	24.4	ND ND	ND ND	2,240	2,530	7.43	1,131,119		
2/17/2021	73	<1	<1	<1.5	2,200	2,400	7.42	1,131,123		
6/29/2021 (2)		-				2,400		1,131,123		
9/30/2021	130	87	<5.0	8.1	2,300	2,500	7.20	1,134,031		
12/6/2021	33	20	<1.0	6.0	2,300	2,500	7.20	1,134,167		
			<1.0				7.15			
2/17/2022	25	3.1		2.7	2,380	2,600		1,156,355		
4/12/2022	27	4.3	<1.0	2.0	2,360	2,500	7.13	1,169,456		
7/15/2022	33	4.3	<1.0	1.3	2,480	2,600	7.13	1,191,754		
10/11/2022	47	4.6	<1.0	2.0	2,320	2,600	7.24	1,210,479		
1/12/2023	40	1.7	<1.0	<1.5	2,330	2,600	7.17	1,229,525		
5/10/2023	32	1.7	<1.0	<1.5	2,320	2,600	6.73	1,253,497		
7/24/2023	34	1.3	<1.0	<1.5	2,360	2,600	7.18	1,269,880		
10/27/2023	31	<1.0	<1.0	<1.5	2,360	2,600	7.17	1,288,677		
1/18/2024	47	<1.0	<1.0	<1.5	2,330	2,600	7.19	1,304,447		
4/11/2024	42	<1.0	<1.0	<1.5	2,300	2,600	7.20	1,316,350		
7/15/2024	46	1.1	<1.0	<1.5	2,400	2,500	7.40	1,331,838		
10/24/2024	22	7.5	<1.0	<1.5	2,400	2,600	7.30	1,368,720		
10/27/2024	12	1.2	<1.0	<1.5	2,400	2,500	7.30	1,306,720		

Notes: (1): initial water sample

(1): initial water sample
(2): water pump not functioning

µg/L: micrograms per liter

µmhos/cm: micromhos per centimeter

mg/L: milligrams per liter
ND: not detected, practical quantitation limit unknown

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

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--: Incu analyzed
<: indicates result less than the stated laboratory reporting limit (RL)

Concentrations in bold and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code

E N S O L U M

TABLE 3

	GAS AND AIR VENTED Federal 18 #1T Hilcorp Energy Company San Juan County, New Mexico									
Date	SCFM	ACFM	Total Vented Gas and Air							
9/17/2019	3	6	(MCF) 26,677							
10/7/2019	3	6	26,849							
10/21/2019	3	6	26,969							
10/28/2019	3	6	27,030							
12/5/2019	3	6	27,356							
12/19/2019	3	6	27,477							
1/7/2020	3	6	27,954							
1/17/2020	3	6	28,040							
1/30/2020	3	6	28,153							
2/12/2020	3	6	28,265							
2/25/2020	3	6	28,377							
4/3/2020	3	6	28,705							
4/9/2020	3	6	28,756							
4/15/2020	3	6	28,808							
4/23/2020	3	6	28,877							
4/30/2020	3	6	28,937							
5/15/2020	3	6	29,067							
5/21/2020	3	6	29,118							
5/29/2020	3	6	29,179							
6/5/2020	3	6	29,239							
6/29/2020	0	0	Hot, not running							
7/8/2020	0	0	Unit Down							
8/11/2020	0	0	Unit Down							
8/25/2020	0	0	Unit Down							
9/16/2020	0	0	Unit Down							
9/22/2020	0	0	Unit Down							
10/26/2020	0	0	Unit Down							
11/9/2020	0	0	Unit Down							
12/8/2020	0	0	Unit Down							
1/5/2021	0	0	Unit Down							
1/20/2021	0	0	Unit Down							
2/11/2021	0	0	Unit Down							
2/17/2021	0	0	Unit Down							
3/22/2021	0	0	Unit Down							
*3/31/2021	5.6	7	29,241							
6/29/2021	5.6	7	29,262							
9/30/2021	5.6	7	29,281							
12/31/2021	5.6	7	29,320							
1/19/2022	5.6	7	29,328							
1/24/2022	5.6	7	29,353							
3/31/2022	5.6	7	29,991							
6/14/2022	5.6	7	30,715							
9/30/2022	5.6	7	31,759							
12/31/2022	5.6	7	32,647							
3/31/2023	3.1	3.9	33,132							
6/30/2023	2.5	3.1	33,527							
9/27/2023	2.25	2.8	33,874							
12/27/2023	2.05	2.6	34,198							
3/26/2024	2.75	3.5	34,628							
6/10/2024	2.5	3.1	34,958							
9/18/2024	2.25	2.8	35,348							
12/19/2024	1.75	2.2	35,628							
3/29/2025	3.25	4.1	36,192							

Notes

ACFM - flow rate in actual cubic feet per minute

MCF - thousand cubic feet

SCFM - flow rate in standard cubic feet per minute

* - Pump operated from 3/23 - 3/31/2021.

SCFM per day based on manufacture specifications.

ACFM is estimated based on site elevation and/or observed vacuum

Ensolum 1 of 1



APPENDIX A

Laboratory Analytical Reports

Attn: Mitch Killough Hilcorp Energy PO BOX 4700 Farmington, New Mexico 87499

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JOB DESCRIPTION

Federal 18 1T

JOB NUMBER

885-18566-1

Eurofins Albuquerque 4901 Hawkins NE Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

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Authorized for release by Michelle Garcia, Project Manager michelle.garcia@et.eurofinsus.com (505)345-3975

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Client: Hilcorp Energy

Laboratory Job ID: 885-18566-1

Project/Site: Federal 18 1T

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Definitions/Glossary

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

10000 1

Qualifiers

General Chemistry

Qualifier Description

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit

ML Minimum Level (Dioxin)

ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

Client: Hilcorp Energy Job ID: 885-18566-1 Project: Federal 18 1T

Job ID: 885-18566-1 **Eurofins Albuquerque**

> Job Narrative 885-18566-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/17/2025 7:05 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.9°C.

Receipt Exceptions

No sample name on COC or sample label.

Federal 18 1T (885-18566-1)

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 885-19562 recovered above the upper control limit for 1-Methylnaphthalene and 2-Methylnaphthalene. Non-detections of the affected analytes are reported. Any detections are considered estimated and will be re-analyzed.

Method 8260B: The continuing calibration verification (CCV) associated with batch 885-19562 recovered outside acceptance criteria, low biased, for Bromomethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Hilcorp Energy Job ID: 885-18566-1

RL

1.0

1.0

Unit

ug/L

ug/L

D

Prepared

Project/Site: Federal 18 1T

1,1,1,2-Tetrachloroethane

1,1,1-Trichloroethane

Client Sample ID: Federal 18 1T

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Result Qualifier

ND

ND

12

ND

Date Collected: 01/16/25 12:00 Date Received: 01/17/25 07:05 Lab Sample ID: 885-18566-1

01/20/25 20:21 01/20/25 20:21

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Matrix: Water

Analyzed	Dil Fac	5

1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	01/20/25 20:21	1
1,1,2-Trichloroethane	ND	1.0	ug/L	01/20/25 20:21	1
1,1-Dichloroethane	ND	1.0	ug/L	01/20/25 20:21	1
1,1-Dichloroethene	ND	1.0	ug/L	01/20/25 20:21	1
1,1-Dichloropropene	ND	1.0	ug/L	01/20/25 20:21	1
1,2,3-Trichlorobenzene	ND	1.0	ug/L	01/20/25 20:21	1
1,2,3-Trichloropropane	ND	2.0	ug/L	01/20/25 20:21	1
1,2,4-Trichlorobenzene	ND	1.0	ug/L	01/20/25 20:21	1
1,2,4-Trimethylbenzene	ND	1.0	ug/L	01/20/25 20:21	1
1,2-Dibromo-3-Chloropropane	ND	2.0	ug/L	01/20/25 20:21	1
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	01/20/25 20:21	1
1,2-Dichlorobenzene	ND	1.0	ug/L	01/20/25 20:21	1
1,2-Dichloroethane (EDC)	ND	1.0	ug/L	01/20/25 20:21	1
1,2-Dichloropropane	ND	1.0	ug/L	01/20/25 20:21	1
1,3,5-Trimethylbenzene	ND	1.0	ug/L	01/20/25 20:21	1
1,3-Dichlorobenzene	ND	1.0	ug/L	01/20/25 20:21	1
1,3-Dichloropropane	ND	1.0	ug/L	01/20/25 20:21	1
1,4-Dichlorobenzene	ND	1.0	ug/L	01/20/25 20:21	1
1-Methylnaphthalene	ND	4.0	ug/L	01/20/25 20:21	1
2,2-Dichloropropane	ND	2.0	ug/L	01/20/25 20:21	1
2-Butanone	ND	10	ug/L	01/20/25 20:21	1
2-Chlorotoluene	ND	1.0	ug/L	01/20/25 20:21	1
2-Hexanone	ND	10	ug/L	01/20/25 20:21	1
2-Methylnaphthalene	ND	4.0	ug/L	01/20/25 20:21	1
4-Chlorotoluene	ND	1.0	ug/L	01/20/25 20:21	1
4-Isopropyltoluene	ND	1.0	ug/L	01/20/25 20:21	1
4-Methyl-2-pentanone	ND	10	ug/L	01/20/25 20:21	1
Acetone	ND	10	ug/L	01/20/25 20:21	1

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ug/L

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Benzene

Bromoform

Bromomethane

Carbon disulfide

Chlorobenzene

Chloromethane

Dibromomethane

Ethylbenzene

cis-1,2-Dichloroethene

cis-1,3-Dichloropropene

Dichlorodifluoromethane

Hexachlorobutadiene

Isopropylbenzene

Chloroethane

Chloroform

Carbon tetrachloride

Bromobenzene

Bromodichloromethane

Dibromochloromethane

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Job ID: 885-18566-1

Client: Hilcorp Energy Project/Site: Federal 18 1T

Client Sample ID: Federal 18 1T

Date Collected: 01/16/25 12:00 Date Received: 01/17/25 07:05 Lab Sample ID: 885-18566-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		1.0	ug/L			01/20/25 20:21	1
Methylene Chloride	ND		2.5	ug/L			01/20/25 20:21	1
n-Butylbenzene	ND		3.0	ug/L			01/20/25 20:21	1
N-Propylbenzene	ND		1.0	ug/L			01/20/25 20:21	1
Naphthalene	ND		2.0	ug/L			01/20/25 20:21	1
sec-Butylbenzene	ND		1.0	ug/L			01/20/25 20:21	1
Styrene	ND		1.0	ug/L			01/20/25 20:21	1
tert-Butylbenzene	ND		1.0	ug/L			01/20/25 20:21	1
Tetrachloroethene (PCE)	ND		1.0	ug/L			01/20/25 20:21	1
Toluene	1.2		1.0	ug/L			01/20/25 20:21	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			01/20/25 20:21	1
trans-1,3-Dichloropropene	ND		1.0	ug/L			01/20/25 20:21	1
Trichloroethene (TCE)	ND		1.0	ug/L			01/20/25 20:21	1
Trichlorofluoromethane	ND		1.0	ug/L			01/20/25 20:21	1
Vinyl chloride	ND		1.0	ug/L			01/20/25 20:21	1
Xylenes, Total	ND		1.5	ug/L			01/20/25 20:21	1
Surrogate	%Recovery	Qualifier	Limits		_	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				01/20/25 20:21	1
Toluene-d8 (Surr)	96		70 - 130				01/20/25 20:21	1
4-Bromofluorobenzene (Surr)	97		70 - 130				01/20/25 20:21	1
Dibromofluoromethane (Surr)	102		70 - 130				01/20/25 20:21	1

General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2400		100	mg/L			01/21/25 12:49	1
Specific Conductance (SM 2510B)	2500		10	umhos/cm			01/22/25 16:38	1
pH (SM 4500 H+ B)	7.3	HF	0.1	SU			01/22/25 16:38	1

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Released to Imaging: 4/16/2025 3:42:23 PM

QC Sample Results

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

Method: 8260B - Volatile Organic Compounds (GC/MS)

MB MB

Lab Sample ID: MB 885-19562/5 **Matrix: Water**

Analysis Batch: 19562

Client Sample ID: Method Blank

Prep Type: Total/NA

A I	D:: F	
Analyzed	Dil Fac	
01/20/25 12:36	1	6
01/20/25 12:36	1	
01/20/25 12:36	1	
01/20/25 12:36	1	
01/20/25 12:36	1	Я
01/20/25 12:36	1	U
01/20/25 12:36	1	0
01/20/25 12:36	1	J
01/20/25 12:36	1	
01/20/25 12:36	1	
01/20/25 12:36	1	

Result Qualifier	RL	Unit	D Prepare	d Analyzed	Dil Fac
ND ND	1.0	 ug/L		01/20/25 12:36	1
ND	1.0			01/20/25 12:36	1
ND	2.0	ug/L		01/20/25 12:36	1
ND	1.0	ug/L		01/20/25 12:36	1
ND	1.0	ug/L		01/20/25 12:36	1
ND	1.0	ug/L		01/20/25 12:36	1
ND	1.0			01/20/25 12:36	1
ND	1.0	ug/L		01/20/25 12:36	1
ND	2.0	ug/L		01/20/25 12:36	1
ND	1.0			01/20/25 12:36	1
ND	1.0			01/20/25 12:36	1
ND	2.0	=		01/20/25 12:36	1
ND	1.0			01/20/25 12:36	1
ND	1.0	=			1
ND	1.0			01/20/25 12:36	1
ND					1
					1
		=			1
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ND ND	1.0	ug/L ug/L		01/20/25 12:36	1
	ND N	ND 1.0 ND 2.0 ND 1.0 ND 1.0 <td< td=""><td> ND</td><td> ND</td><td>ND 1.0 ug/L 01/20/25 12:36 ND 2.0 ug/L 01/20/25 12:36 ND 1.0 ug/L 01/20/25</td></td<>	ND	ND	ND 1.0 ug/L 01/20/25 12:36 ND 2.0 ug/L 01/20/25 12:36 ND 1.0 ug/L 01/20/25

Lab Sample ID: MB 885-19562/5

QC Sample Results

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Matrix: Water

Analysis Batch: 19562

Client Sample ID: Method Blank

Prep Type: Total/NA

MB	MB						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		2.5	ug/L			01/20/25 12:36	1
ND		3.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		2.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.0	ug/L			01/20/25 12:36	1
ND		1.5	ug/L			01/20/25 12:36	1
	Result ND ND ND ND ND ND ND ND ND N	ND N	Result Qualifier RL ND 1.0 ND 1.0 ND 3.0 ND 1.0 ND 1.0	Result Qualifier RL Unit ND 1.0 ug/L ND 1.0 ug/L ND 3.0 ug/L ND 1.0 ug/L	Result Qualifier RL Unit D ND 1.0 ug/L ug/L ND 1.0 ug/L ND 3.0 ug/L ND 1.0 ug/L	Result Qualifier RL Unit D Prepared ND 1.0 ug/L ug/L <td< td=""><td>Result Qualifier RL Unit D Prepared Analyzed ND 1.0 ug/L 01/20/25 12:36 ND 1.0 ug/L 01/20/25 12:36 ND 2.5 ug/L 01/20/25 12:36 ND 3.0 ug/L 01/20/25 12:36 ND 1.0 ug/L 01/20/25 12:36 ND</td></td<>	Result Qualifier RL Unit D Prepared Analyzed ND 1.0 ug/L 01/20/25 12:36 ND 1.0 ug/L 01/20/25 12:36 ND 2.5 ug/L 01/20/25 12:36 ND 3.0 ug/L 01/20/25 12:36 ND 1.0 ug/L 01/20/25 12:36 ND

MB MB

Surrogate	%Recovery Qualifie	er Limits	Pr	repared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97	70 - 130			01/20/25 12:36	1
Toluene-d8 (Surr)	97	70 - 130			01/20/25 12:36	1
4-Bromofluorobenzene (Surr)	100	70 - 130			01/20/25 12:36	1
Dibromofluoromethane (Surr)	98	70 - 130			01/20/25 12:36	1

Lab Sample ID: LCS 885-19562/4

Matrix: Water

Analysis Batch: 19562

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	20.1	19.9	-	ug/L		99	70 - 130	
Benzene	20.1	26.0		ug/L		129	70 - 130	
Chlorobenzene	20.1	21.8		ug/L		109	70 - 130	
Toluene	20.2	21.6		ug/L		107	70 - 130	
Trichloroethene (TCE)	20.2	20.5		ug/L		102	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		70 - 130
Toluene-d8 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	95		70 - 130

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

Method: 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 885-19615/1 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 19615

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		50	mg/L			01/21/25 12:49	1

Lab Sample ID: LCS 885-19615/2 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 19615

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Dissolved Solids	1000	995		mg/L		100	80 - 120	

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: LCS 885-19739/4 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 19739

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Specific Conductance 99.3 104 umhos/cm 105

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 885-19739/3 **Matrix: Water**

Analysis Batch: 19739

Spike MRL MRL

%Rec Analyte Added Result Qualifier Unit %Rec Limits Specific Conductance 9.83 ND 50 - 150 umhos/cm

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Prep Type: Total/NA

QC Association Summary

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

GC/MS VOA

Ana	lysis	Batc	h: '	19562
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18566-1	Federal 18 1T	Total/NA	Water	8260B	
MB 885-19562/5	Method Blank	Total/NA	Water	8260B	
LCS 885-19562/4	Lab Control Sample	Total/NA	Water	8260B	

General Chemistry

Analysis Batch: 19615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18566-1	Federal 18 1T	Total/NA	Water	2540C	
MB 885-19615/1	Method Blank	Total/NA	Water	2540C	
LCS 885-19615/2	Lab Control Sample	Total/NA	Water	2540C	

Analysis Batch: 19739

Lab Sample ID 885-18566-1	Client Sample ID Federal 18 1T	Prep Type Total/NA	Matrix Water	Method SM 2510B	Prep Batch
LCS 885-19739/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MRL 885-19739/3	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 19740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18566-1	Federal 18 1T	Total/NA	Water	SM 4500 H+ B	

Lab Chronicle

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

Client Sample ID: Federal 18 1T

Released to Imaging: 4/16/2025 3:42:23 PM

Date Collected: 01/16/25 12:00 Matrix: Water Date Received: 01/17/25 07:05

Lab Sample ID: 885-18566-1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260B		1	19562	JR	EET ALB	01/20/25 20:21
Total/NA	Analysis	2540C		1	19615	KS	EET ALB	01/21/25 12:49
Total/NA	Analysis	SM 2510B		1	19739	KB	EET ALB	01/22/25 16:38
Total/NA	Analysis	SM 4500 H+ B		1	19740	KB	EET ALB	01/22/25 16:38

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		ram	Identification Number	Expiration Date
New Mexico	State		NM9425, NM0901	02-26-25
			,	
- ·	are included in this report, b es not offer certification.	ut the laboratory is not certi	fied by the governing authority. This lis	t may include analytes
Analysis Method	Prep Method	Matrix	Analyte	
2540C		Water	Total Dissolved Solids	
8260B		Water	1,1,1,2-Tetrachloroethane	
8260B		Water	1,1,1-Trichloroethane	
8260B		Water	1,1,2,2-Tetrachloroethane	
8260B		Water	1,1,2-Trichloroethane	
8260B		Water	1,1-Dichloroethane	
8260B		Water	1,1-Dichloroethene	
8260B		Water	1,1-Dichloropropene	
8260B		Water	1,2,3-Trichlorobenzene	
8260B		Water	1,2,3-Trichloropropane	
8260B		Water	1,2,4-Trichlorobenzene	
8260B		Water	1,2,4-Trimethylbenzene	
8260B		Water	1,2-Dibromo-3-Chloroprop	ane
8260B		Water	1,2-Dibromoethane (EDB)	
8260B		Water	1,2-Dichlorobenzene	
8260B		Water	1,2-Dichloroethane (EDC)	
8260B		Water	1,2-Dichloropropane	
8260B		Water	1,3,5-Trimethylbenzene	
8260B		Water	1,3-Dichlorobenzene	
8260B		Water	1,3-Dichloropropane	
8260B		Water	1,4-Dichlorobenzene	
8260B		Water	1-Methylnaphthalene	
8260B		Water	2,2-Dichloropropane	
8260B		Water	2-Butanone	
8260B		Water	2-Chlorotoluene	
8260B		Water	2-Hexanone	
8260B		Water	2-Methylnaphthalene	
8260B		Water	4-Chlorotoluene	
8260B		Water	4-Isopropyltoluene	
8260B		Water	4-Methyl-2-pentanone	
8260B		Water	Acetone	
8260B		Water	Benzene	
8260B		Water	Bromobenzene	
8260B		Water	Bromodichloromethane	
8260B		Water	Bromoform	
8260B		Water	Bromomethane	
8260B		Water	Carbon disulfide	
8260B		Water	Carbon tetrachloride	
8260B		Water	Chlorobenzene	
8260B		Water	Chloroethane	
8260B		Water	Chloroform	
8260B		Water	Chloromethane	
8260B		Water	cis-1,2-Dichloroethene	
8260B		Water	cis-1,3-Dichloropropene	
8260B		Water	Dibromochloromethane	
52552			2.2.300110101101101101	

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Accreditation/Certification Summary

Client: Hilcorp Energy Job ID: 885-18566-1

Project/Site: Federal 18 1T

Laboratory: Eurofins Albuquerque (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

thority	Progr	am	Identification Number	Expiration Date
• .	are included in this report, bu	ut the laboratory is not certif	ied by the governing authority. This lis	st may include analyte
Analysis Method	Prep Method	Matrix	Analyte	
8260B		Water	Dibromomethane	
8260B		Water	Dichlorodifluoromethane	
8260B		Water	Ethylbenzene	
8260B		Water	Hexachlorobutadiene	
8260B		Water	Isopropylbenzene	
8260B		Water	Methylene Chloride	
8260B		Water	Methyl-tert-butyl Ether (MTBE)	
8260B		Water	Naphthalene	
8260B		Water	n-Butylbenzene	
8260B		Water	N-Propylbenzene	
8260B		Water	sec-Butylbenzene	
8260B		Water	Styrene	
8260B		Water	tert-Butylbenzene	
8260B		Water	Tetrachloroethene (PCE)	
8260B		Water	Toluene	
8260B		Water	trans-1,2-Dichloroethene	
8260B		Water	trans-1,3-Dichloropropene	•
8260B		Water	Trichloroethene (TCE)	
8260B		Water	Trichlorofluoromethane	
8260B		Water	Vinyl chloride	
8260B		Water	Xylenes, Total	
SM 2510B		Water	Specific Conductance	
SM 4500 H+ B		Water	рН	
egon	NELA	P	NM100001	02-25-25

Eurofins Albuquerque

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	C707/C1/14
	8:42:00 AM

Chain-of-Custody Record	Turn-Around Time:	HALL ENVIRONMENTAL
Client: Hilcorp Farmington NM	X Standard Rush	HALL ENVIRONMENTAL
	Project Name:	ANALYSIS LABORATORY
Acilian Address 200 Deed 0400 Acts - NA CT		www.hallenvironmental.com
Mailing Address: 382 Road 3100 Aztec, NM 87410	Federal 18 1T	4901 Hawkins NE - Albuquerque, NM 87109
Billing Address: PO Box 61529 Houston, TX 77208	Project #:	Tel. 505-345-3975 Fax 505-345-4107
Phone #: 505-486-9543		Analysis Request
mail or Fax#: Brandon.Sinclair@hilcorp.com	Project Manager:	
A/QC Package:		
Standard	Mitch Killoyah	
ccreditation: Az Compliance	Sampler: Brandon Sinclair	
NELAC Other	On Ice: Yes 🗆 No	
EDD (Type)	# of Coolers: 1	ορ
	Cooler Temp(including cp.:).7-10.2 = 1-9	
	Container Type Preservativ HEAL No.	pH, Specific Conductance, TDS 8260 Full Suite
Date Time Matrix Sample Name	Container Type Preservativ HEAL No. e Type	
	(2) 40ml) (0A	
-16 1200 Water	(1) 500ml (Cool	
Water Water	Plastic	XX
		
ate: Time: Relinquished by:	Received by: Via: Date Time	Remarks: Special Pricing See Andy
lists 1654 yn Sml	(What /14/2 1/18	V
Date: Time: Relinquished by:	Received by: Via: Date Time	
11/25/ Thomas	100-No. 117/25	3.00-
Inecessary, samples submitted to Hall Environmental m	ay be subcontracted to other accredited laboratories. This serves as notice of	f this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-18566-1

Login Number: 18566 List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sante Fe Main Office Phone: (505) 476-3441

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Action 452037

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	452037
	Action Type:
	[REPORT] Alternative Remediation Report (C-141AR)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Continue with O & M schedule. 2. Submit next quarterly report by July 15, 2025.	4/16/2025