ENSOLUM

April 25, 2024

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

Re: **Remediation Report and Closure Request**
Canyon Largo Unit NP 188
Rio Arriba County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: nAPP2403157821

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Remediation Report and Closure Request* associated with a release of oil discovered at the Canyon Largo Unit NP 188 natural gas production well (Site). The Site is located on land managed by the United States Bureau of Land Management (BLM) in Unit N, Section 33, Township 25 North, Range 6 West in Rio Arriba County, New Mexico (Figure 1).

SITE BACKGROUND

Hilcorp operations discovered a release of oil at the Site on January 31, 2024. The release was due to the tank drain valve freezing and then failing (i.e. equipment failure). The volume of the release was determined to be 28.34 barrels (bbls) based on the operator tank gauging data. All released fluids stayed within the secondary containment berm surrounding the aboveground storage tank and impacted an area measuring approximately 30 feet by 12 feet. Upon discovery, the well was shut-in to stop production to the tank, the broken drain valve was replaced, and the operator retained a hydro-vac company to remove any recoverable fluids and impacted soil at the ground surface. In total, 50 bbls of fluid and soil was recovered on February 1, 2024 from the Site using the hydro-vac equipment. Hilcorp notified the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Notification of Release on January 31, 2024. The initial Form C-141 was submitted on February 14, 2024. NMOCD assigned the release incident number nAPP2403157821.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As part of the Site investigation, local geology/hydrogeology and nearby sensitive receptors were assessed in accordance with Title 19, Chapter 15, Part 29, Sections 11 and 12 (19.15.29.11 and 12) of the New Mexico Administrative Code (NMAC).

The Site is located in Tertiary (Eocene) age San Jose Formation and is underlain by the Nacimiento Geologic Formation. In the report titled "*Hydrogeology and Water Resources of San Juan Basin, New Mexico*" (Stone, et. al., 1983), the San Jose Formation is composed of interbedded sandstones and mudstones and varies in thickness from less than 200 feet to about 2,700 feet. The hydrogeologic

properties of the San Jose Formation are largely untested. Where sufficient yield is present, the primary use of water from this Formation is for domestic and/or livestock supply.

The closest significant watercourse is a dry wash located in Rockhouse Canyon, approximately 310 feet west-northwest of the Site. There are no known springs or fresh-water wells located within 500 feet of the Site. The nearest groundwater well with depth to groundwater information (SJ-00681) is located approximately 11,250 feet north of the Site. Depth to water information from this well indicates groundwater is approximately 80 feet below ground surface (bgs) at the location of the water well. Well SJ-00681 (well summary is attached as Appendix A) is situated at an elevation of approximately 6,320 feet above mean sea level (AMSL) and approximately 100 lower in elevation than the Site, therefore depth to water at the Site is assumed to be greater than 100 feet bgs. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and greater than 300 feet from any wetland. Surface land use surrounding the Site consists primarily of oil and gas development and livestock grazing. The Site is not within a 100-year floodplain, overlying a subsurface mine, or located within an area underlain by unstable geology (area designated as low potential karst by the BLM). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site. Sensitive receptors near the Site are depicted on Figure 1.

SITE CLOSURE CRITERIA

Based on the information presented above and in accordance with the *Table I, Closure Criteria for Soils Impacted by a Release* (19.15.29.12 NMAC), the following Closure Criteria for constituents of concern (COCs) should be applied to the Site:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 2,500 mg/kg
- GRO+DRO: 1,000 mg/kg
- Chloride: 20,000 mg/kg

EXCAVATION SOIL SAMPLING ACTIVITIES

On March 20, 2024, Ensolum personnel conducted excavation oversight and sampling activities at the Site. Notification to NMOCD was provided prior to conducting remediation and sampling work, with correspondence attached in Appendix B. To direct activities during excavation, Ensolum personnel field screened soil for volatile organic compounds (VOCs) using a calibrated photoionization detector (PID). Once field screening indicated impacted soil had been removed, five-point composite soil samples were collected from the floor (FS01 through FS05) and sidewalls (SW01 through SW03) of the excavation at a frequency of one sample per 200 square feet. The excavation was advanced up to a depth of 6 feet bgs and measured approximately 20 feet wide by 30 feet long. Confirmation sample locations are presented on Figure 2.

The five-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The soil samples were collected into laboratory provided jars and transported under proper chain of custody procedures to Eurofins Environment Testing (Eurofins) in Albuquerque, New Mexico for laboratory analysis of TPH following Environmental Protection Agency (EPA) Method 8015M/D, BTEX following EPA Method 8021B, and chloride following EPA Method 300.0. Analytical results from the excavation indicated concentrations of all COCs were compliant with NMOCD Table I Closure Criteria and the

reclamation requirement (where applicable) in all confirmation samples with the exception of floor sample FS02@4'.

Because of this exceedance, Hilcorp removed additional soil in the vicinity of area FS02 on April 15, 2024. Again, notification was provided to the NMOCD at least two business days prior to conducting remediation and sampling work (Appendix B). Based on field screening, additional soil was removed to depths up to 8 feet bgs, predominantly in the center of area FS02. Once field screening indicated impacted soil was removed, a five-point composite sample FS2@8' was collected in the same method described above from depths between 4 feet bgs (depth at the sidewalls) and 8 feet bgs (depth in the center of area FS02). This sample was also submitted to Eurofins and analyzed for TPH, BTEX, and chloride following the methods described above. Analytical results from this sample indicated all COCs were compliant with NMOCD Table I Closure Criteria.

In total, approximately 378 cubic yards of impacted soil was removed and transported to the Envirotech, Inc. landfarm located in San Juan County, New Mexico. Soil sample results are summarized in Table 1, with complete laboratory analytical reports attached as Appendix C. Photographs taken by Ensolum during the excavation work are included in Appendix D.

CLOSURE REQUEST

Site excavation and sampling activities were conducted at the Site to address the release discovered on January 31, 2024. Laboratory analytical results for the excavation confirmation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and no further remediation is required. Excavation of impacted soil has mitigated impacts at this Site and these remedial actions have been protective of human health, the environment, and groundwater. As such, Hilcorp respectfully requests closure for Incident Number nAPP2403157821.

REFERENCES

Stone, W.; Lyford, F.; Frenzel, P.; Mizell, N.; and Padgett, E. (1983). *Hydrogeology and Water Resources of San Juan Basin, New Mexico.* Socorro: New Mexico Bureau of Mines and Mineral Resources.

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

Sincerely,
Ensolum, LLC

Stuart Hyde
Senior Managing Geologist
(970) 903-1607
shyde@ensolum.com

Daniel R. Moir
Senior Managing Geologist
(303) 887-2946
dmoir@ensolum.com

Attachments:

Figure 1: Site Receptor Map
Figure 2: Excavation Soil Sample Locations

Table 1: Soil Sample Analytical Results

Appendix A: NMOSE Point of Diversion Summary
Appendix B: Agency Correspondence
Appendix C: Laboratory Analytical Reports
Appendix D: Project Photographs

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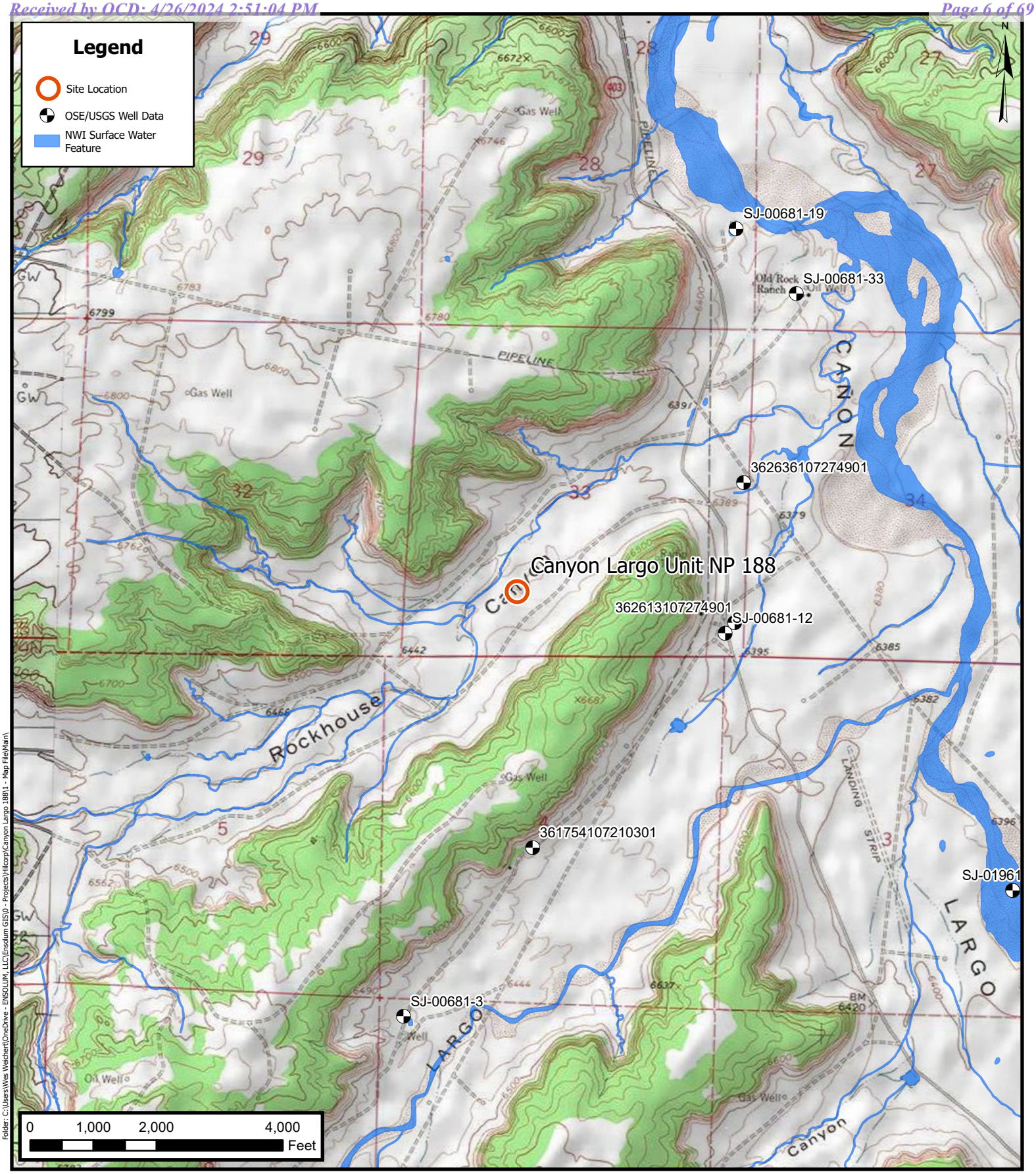
FIGURES



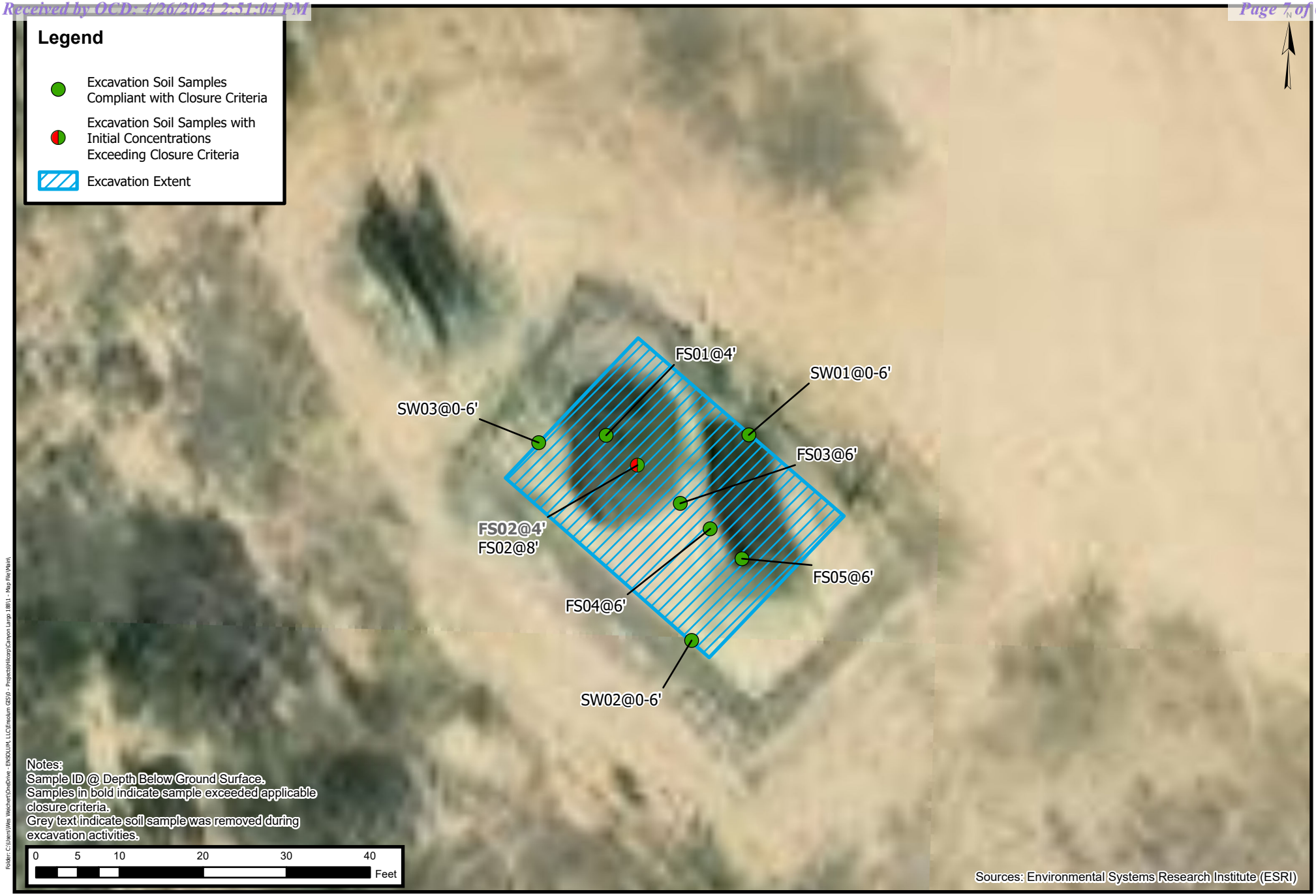
Folder: C:\Users\Wes Welchert\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\Hilcorp\Canyon Largo 188\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Hilcorp Energy Company
Canyon Largo Unit NP 188
Incident Number: nAPP2403157821
36.3523979,-107.475807
Rio Arriba County, New Mexico, United States

FIGURE 1



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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

Hilcorp Energy Company
Canyon Largo Unit NP 188
Incident Number: nAPP2403157821
36.3523979,-107.475807
Rio Arriba County, New Mexico, United States

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Canyon Largo Unit NP 188
Hilcorp Energy Company
Rio Arriba County, New Mexico

Sample Identification	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Excavation Floor Samples													
FS01 @ 4'	3/20/2024	4	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<50	<50	<50	<50	<50	200
FS02 @ 4' (1)	3/20/2024	4	0.026	0.68	0.15	7.3	8.156	140	880	<50	**1,020**	1,020	300
FS2 @ 8'	4/15/2024	4-8	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.2	<46	<9.2	<46	100
FS03 @ 6'	3/20/2024	6	0.0034	0.0095	<0.0020	0.041	0.0539	<50	<50	<50	<50	<50	230
FS04 @ 6'	3/20/2024	6	<0.0020	0.0025	<0.0020	0.013	0.0155	<50	<50	<50	<50	<50	130
FS05 @ 6'	3/20/2024	6	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<50	<50	<50	<50	<50	610
Excavation Sidewall Samples													
SW01	3/20/2024	0-6	<0.0020	<0.0020	<0.0020	0.0051	0.0051	<50	<50	<50	<50	<50	81
SW02	3/20/2024	0-6	<0.0020	<0.0020	<0.0020	0.0078	0.0078	<50	<50	<50	<50	<50	75
SW03	3/20/2024	0-6	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<50	<50	<50	<50	<50	410

Notes:

(1): Additional soil from area FS02 was removed and resampled on 4/15/2024
bgs: Below Ground Surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: Milligrams per kilogram
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
': feet
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil Range Organics
TPH: Total Petroleum Hydrocarbon
< : indicates result less than the stated laboratory reporting limit (RL)
*Concentrations in **bold** exceed the New Mexico Oil Conservation Division Table I Closure Criteria for Soils Impacted by a Release*

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APPENDIX A

NMOSE Point of Diversion Summary

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	SJ 00681	4	1	4	21	25N	06W	278527	4029227*

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)
(NAD83 UTM in meters)

Driller License: **Driller Company:**

Driller Name: E.C. BARRY

Drill Start Date: **Drill Finish Date:** 05/04/1977 **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:**

Pump Type: WINDMI **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** **Depth Water:** 80 feet

***UTM location was derived from PLSS - see Help**

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APPENDIX B

Agency Correspondence

From: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 322938
Date: Wednesday, March 13, 2024 10:57:38 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Stuart Hyde for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2403157821.

The sampling event is expected to take place:

When: 03/19/2024 @ 09:00
Where: N-33-25N-06W 990 FSL 1650 FWL (36.3523979,-107.4758072)

Additional Information: Stuart Hyde 970-903-1607

Additional Instructions: Canyon Largo Unit NP 188 (API: 30-039-20498) in Rio Arriba County (36.3523979,-107.475807)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

From: Velez, Nelson, EMNRD
To: Stuart Hyde
Cc: Devin Hencmann; Wes Weichert
Subject: Re: [EXTERNAL] NAPP2403157821 - Hilcorp Canyon Largo Unit NP #188 Sampling Notification Question
Date: Friday, April 19, 2024 10:54:33 AM
Attachments: image001.png
image002.png
image003.png
image004.png
Outlook-0f2twrvt.png

[**EXTERNAL EMAIL**]
Stuart,

Your request to substitute the date collected is approved.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

Regards,

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Stuart Hyde <shyde@ensolum.com>
Sent: Friday, April 19, 2024 9:46 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Devin Hencmann <dhencmann@ensolum.com>; Wes Weichert <wweichert@ensolum.com>
Subject: [EXTERNAL] NAPP2403157821 - Hilcorp Canyon Largo Unit NP #188 Sampling Notification Question

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Nelson,

As discussed on the phone, Ensolum submitted a sampling notification for the Canyon Largo Unit NP #188 site to commence sampling on March 19, 2024 (see attached). Leading up to that date,

adverse weather and poor road conditions caused a last minute delay in the final excavation and confirmation soil samples were actually collected on March 20, 2024. As such, we are requesting approval to use data from samples collected on March 20, 2024 for the upcoming report and closure request that we are currently preparing.

Please reach out with any questions regarding the site. Thanks and talk to you soon.

Stuart Hyde, PG
(Licensed in WA/TX)
Senior Managing Geologist
970-903-1607
Ensolum, LLC

"If you want to go fast, go alone. If you want to go far, go together." – African Proverb

From: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 332837
Date: Friday, April 12, 2024 8:50:40 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Stuart Hyde for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2403157821.

The sampling event is expected to take place:

When: 04/15/2024 @ 09:00
Where: N-33-25N-06W 990 FSL 1650 FWL (36.3523979,-107.4758072)

Additional Information: Contact PM Stuart Hyde; 970-903-1607, excavation confirmation sampling

Additional Instructions: Canyon Largo Unit NP 188 (API: 30-039-20498) in Rio Arriba County (36.3523979,-107.475807)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

ENSOLUM

APPENDIX C

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Samantha Grabert
Hilcorp Energy
PO BOX 4700
Farmington, New Mexico 87499

Generated 3/26/2024 10:13:00 AM

JOB DESCRIPTION

Hilcorp Energy/Ensolum

JOB NUMBER

885-1538-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

my EOL

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

Generated
3/26/2024 10:13:00 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Laboratory Job ID: 885-1538-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

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)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
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
Project: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Job ID: 885-1538-1 Eurofins Albuquerque

Job Narrative
885-1538-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 samples were received on 3/21/2024 6:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C.

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: FS02@4' (885-1538-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-76266 and analytical batch 880-76263 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS02@4' (885-1538-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-76284 and analytical batch 880-76378 was outside the upper control limits.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-76340 and analytical batch 880-76386 was outside the upper control limits.

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

HPLC/IC
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
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: FS01@4'

Date Collected: 03/20/24 12:26
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 16:28	1
Toluene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 16:28	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 16:28	1
Xylenes, Total	ND		0.0040		mg/Kg		03/22/24 09:04	03/22/24 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*03/22/24 09:04*	*03/22/24 16:28*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/22/24 09:04*	*03/22/24 16:28*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50		mg/Kg		03/22/24 10:57	03/24/24 00:14	1
Diesel Range Organics (Over C10-C28)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 00:14	1
Oil Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*03/22/24 10:57*	*03/24/24 00:14*	*1*
o-Terphenyl	*92*		*70 - 130*	*03/22/24 10:57*	*03/24/24 00:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**200**		5.0		mg/Kg			03/23/24 07:26	1

Client Sample ID: FS02@4'

Date Collected: 03/20/24 12:30
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.026**		0.0020		mg/Kg		03/22/24 09:04	03/22/24 16:49	1
Toluene	**0.68**		0.050		mg/Kg		03/25/24 10:58	03/25/24 14:05	25
Ethylbenzene	**0.15**		0.0020		mg/Kg		03/22/24 09:04	03/22/24 16:49	1
Xylenes, Total	**7.3**		0.10		mg/Kg		03/25/24 10:58	03/25/24 14:05	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*245*	*S1+*	*70 - 130*	*03/22/24 09:04*	*03/22/24 16:49*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*03/22/24 09:04*	*03/22/24 16:49*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**140**		50		mg/Kg		03/22/24 10:57	03/24/24 00:35	1
Diesel Range Organics (Over C10-C28)	**880**		50		mg/Kg		03/22/24 10:57	03/24/24 00:35	1
Oil Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*03/22/24 10:57*	*03/24/24 00:35*	*1*
o-Terphenyl	*96*		*70 - 130*	*03/22/24 10:57*	*03/24/24 00:35*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: FS02@4'
Date Collected: 03/20/24 12:30
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-2
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		5.0		mg/Kg			03/23/24 07:48	1

Client Sample ID: FS03@6'
Date Collected: 03/20/24 13:10
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-3
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0034**		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:09	1
Toluene	**0.0095**		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:09	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:09	1
Xylenes, Total	**0.041**		0.0040		mg/Kg		03/22/24 09:04	03/22/24 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*03/22/24 09:04*	*03/22/24 17:09*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*03/22/24 09:04*	*03/22/24 17:09*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:17	1
Diesel Range Organics (Over C10-C28)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:17	1
Oil Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*03/22/24 10:57*	*03/24/24 01:17*	*1*
o-Terphenyl	*87*		*70 - 130*	*03/22/24 10:57*	*03/24/24 01:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**230**		5.0		mg/Kg			03/23/24 07:56	1

Client Sample ID: FS04@6'
Date Collected: 03/20/24 12:37
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:30	1
Toluene	**0.0025**		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:30	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:30	1
Xylenes, Total	**0.013**		0.0040		mg/Kg		03/22/24 09:04	03/22/24 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*03/22/24 09:04*	*03/22/24 17:30*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/22/24 09:04*	*03/22/24 17:30*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:38	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: FS04@6'

Lab Sample ID: 885-1538-4
Matrix: Solid
Date Collected: 03/20/24 12:37
Date Received: 03/21/24 06:45

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:38	1
Oll Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*03/22/24 10:57*	*03/24/24 01:38*	*1*
o-Terphenyl	*91*		*70 - 130*	*03/22/24 10:57*	*03/24/24 01:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**130**		5.0		mg/Kg			03/23/24 11:46	1

Client Sample ID: FS05@6'

Lab Sample ID: 885-1538-5
Matrix: Solid
Date Collected: 03/20/24 12:41
Date Received: 03/21/24 06:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:50	1
Toluene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:50	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 17:50	1
Xylenes, Total	ND		0.0040		mg/Kg		03/22/24 09:04	03/22/24 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*03/22/24 09:04*	*03/22/24 17:50*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/22/24 09:04*	*03/22/24 17:50*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:59	1
Diesel Range Organics (Over C10-C28)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:59	1
Oll Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 10:57	03/24/24 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*03/22/24 10:57*	*03/24/24 01:59*	*1*
o-Terphenyl	*91*		*70 - 130*	*03/22/24 10:57*	*03/24/24 01:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**610**		25		mg/Kg			03/23/24 12:09	5

Client Sample ID: SW01

Lab Sample ID: 885-1538-6
Matrix: Solid
Date Collected: 03/20/24 12:15
Date Received: 03/21/24 06:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 18:11	1
Toluene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 18:11	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 18:11	1
Xylenes, Total	**0.0051**		0.0040		mg/Kg		03/22/24 09:04	03/22/24 18:11	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: SW01

Date Collected: 03/20/24 12:15
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-6
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*03/22/24 09:04*	*03/22/24 18:11*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/22/24 09:04*	*03/22/24 18:11*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/22/24 10:57	03/24/24 02:20	1
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/22/24 10:57	03/24/24 02:20	1
Oll Range Organics (Over C28-C36)	ND		50	mg/Kg		03/22/24 10:57	03/24/24 02:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*109*		*70 - 130*	*03/22/24 10:57*	*03/24/24 02:20*	*1*
o-Terphenyl	*97*		*70 - 130*	*03/22/24 10:57*	*03/24/24 02:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81**		5.0	mg/Kg			03/23/24 12:16	1

Client Sample ID: SW02

Date Collected: 03/20/24 12:20
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020	mg/Kg		03/22/24 09:04	03/22/24 18:31	1
Toluene	ND		0.0020	mg/Kg		03/22/24 09:04	03/22/24 18:31	1
Ethylbenzene	ND		0.0020	mg/Kg		03/22/24 09:04	03/22/24 18:31	1
Xylenes, Total	**0.0078**		0.0040	mg/Kg		03/22/24 09:04	03/22/24 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*03/22/24 09:04*	*03/22/24 18:31*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*03/22/24 09:04*	*03/22/24 18:31*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/22/24 10:57	03/24/24 02:41	1
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/22/24 10:57	03/24/24 02:41	1
Oll Range Organics (Over C28-C36)	ND		50	mg/Kg		03/22/24 10:57	03/24/24 02:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*107*		*70 - 130*	*03/22/24 10:57*	*03/24/24 02:41*	*1*
o-Terphenyl	*95*		*70 - 130*	*03/22/24 10:57*	*03/24/24 02:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75**		5.0	mg/Kg			03/23/24 12:23	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: SW03

Date Collected: 03/20/24 12:23
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-8

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 18:52	1
Toluene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 18:52	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 18:52	1
Xylenes, Total	ND		0.0040		mg/Kg		03/22/24 09:04	03/22/24 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*03/22/24 09:04*	*03/22/24 18:52*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*03/22/24 09:04*	*03/22/24 18:52*	*1*

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50		mg/Kg		03/22/24 17:00	03/24/24 17:12	1
Diesel Range Organics (Over C10-C28)	ND		50		mg/Kg		03/22/24 17:00	03/24/24 17:12	1
OII Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 17:00	03/24/24 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*03/22/24 17:00*	*03/24/24 17:12*	*1*
o-Terphenyl	*88*		*70 - 130*	*03/22/24 17:00*	*03/24/24 17:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**410**		25		mg/Kg			03/23/24 12:31	5

QC Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-76266/5-A
Matrix: Solid
Analysis Batch: 76263

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76266

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 11:39	1
Toluene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 11:39	1
Ethylbenzene	ND		0.0020		mg/Kg		03/22/24 09:04	03/22/24 11:39	1
Xylenes, Total	ND		0.0040		mg/Kg		03/22/24 09:04	03/22/24 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*03/22/24 09:04*	*03/22/24 11:39*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/22/24 09:04*	*03/22/24 11:39*	*1*

Lab Sample ID: LCS 880-76266/1-A
Matrix: Solid
Analysis Batch: 76263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76266

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.0917		mg/Kg		92	70 - 130		
Toluene			0.100	0.0974		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.109		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.224		mg/Kg		112	70 - 130		
o-Xylene			0.100	0.109		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-76266/2-A
Matrix: Solid
Analysis Batch: 76263

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 76266

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.0899		mg/Kg		90	70 - 130	2	35
Toluene			0.100	0.0918		mg/Kg		92	70 - 130	6	35
Ethylbenzene			0.100	0.101		mg/Kg		101	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.206		mg/Kg		103	70 - 130	9	35
o-Xylene			0.100	0.100		mg/Kg		100	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: MB 880-76470/5-A
Matrix: Solid
Analysis Batch: 76416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76470

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020		mg/Kg		03/25/24 10:58	03/25/24 11:34	1
Toluene	ND		0.0020		mg/Kg		03/25/24 10:58	03/25/24 11:34	1
Ethylbenzene	ND		0.0020		mg/Kg		03/25/24 10:58	03/25/24 11:34	1
Xylenes, Total	ND		0.0040		mg/Kg		03/25/24 10:58	03/25/24 11:34	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*03/25/24 10:58*	*03/25/24 11:34*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/25/24 10:58*	*03/25/24 11:34*	*1*

Lab Sample ID: LCS 880-76470/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 76416 — **Prep Batch: 76470**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.104		mg/Kg		104	70 - 130
Toluene	0.100	0.0871		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.0812		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.159		mg/Kg		80	70 - 130
o-Xylene	0.100	0.0784		mg/Kg		78	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-76470/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 76416 — **Prep Batch: 76470**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.0980		mg/Kg		98	70 - 130	6	35
Toluene	0.100	0.0872		mg/Kg		87	70 - 130	0	35
Ethylbenzene	0.100	0.0821		mg/Kg		82	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.163		mg/Kg		81	70 - 130	2	35
o-Xylene	0.100	0.0806		mg/Kg		81	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-76284/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 76378 — **Prep Batch: 76284**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/22/24 10:57	03/23/24 19:37	1
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/22/24 10:57	03/23/24 19:37	1
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/22/24 10:57	03/23/24 19:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*152*	*S1+*	*70 - 130*	*03/22/24 10:57*	*03/23/24 19:37*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*03/22/24 10:57*	*03/23/24 19:37*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-76284/2-A
Matrix: Solid
Analysis Batch: 76378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76284

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1060		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	937		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: LCSD 880-76284/3-A
Matrix: Solid
Analysis Batch: 76378

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 76284

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1090		mg/Kg		109	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	992		mg/Kg		99	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: MB 880-76340/1-A
Matrix: Solid
Analysis Batch: 76386

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76340

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50		mg/Kg		03/22/24 17:00	03/24/24 08:32	1
Diesel Range Organics (Over C10-C28)	ND		50		mg/Kg		03/22/24 17:00	03/24/24 08:32	1
Oil Range Organics (Over C28-C36)	ND		50		mg/Kg		03/22/24 17:00	03/24/24 08:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*195*	*S1+*	*70 - 130*	*03/22/24 17:00*	*03/24/24 08:32*	*1*
o-Terphenyl	*184*	*S1+*	*70 - 130*	*03/22/24 17:00*	*03/24/24 08:32*	*1*

Lab Sample ID: LCS 880-76340/2-A
Matrix: Solid
Analysis Batch: 76386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76340

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1090		mg/Kg		109	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	890		mg/Kg		89	70 - 130		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-76340/2-A
Matrix: Solid
Analysis Batch: 76386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76340

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: LCSD 880-76340/3-A
Matrix: Solid
Analysis Batch: 76386

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 76340

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1090		mg/Kg		109	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	965		mg/Kg		97	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	94		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-76285/1-A
Matrix: Solid
Analysis Batch: 76344

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			03/23/24 07:04	1

Lab Sample ID: LCS 880-76285/2-A
Matrix: Solid
Analysis Batch: 76344

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-76285/3-A
Matrix: Solid
Analysis Batch: 76344

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	265		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 885-1538-1 MS
Matrix: Solid
Analysis Batch: 76344

Client Sample ID: FS01@4'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	200		250	461		mg/Kg		104	90 - 110		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 885-1538-1 MSD
Matrix: Solid
Analysis Batch: 76344

Client Sample ID: FS01@4'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	200		250	463		mg/Kg		105	90 - 110	0	20

Lab Sample ID: MB 880-76286/1-A
Matrix: Solid
Analysis Batch: 76351

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			03/23/24 11:24	1

Lab Sample ID: LCS 880-76286/2-A
Matrix: Solid
Analysis Batch: 76351

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	266		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-76286/3-A
Matrix: Solid
Analysis Batch: 76351

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	265		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 885-1538-4 MS
Matrix: Solid
Analysis Batch: 76351

Client Sample ID: FS04@6'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	130		249	381		mg/Kg		100	90 - 110		

Lab Sample ID: 885-1538-4 MSD
Matrix: Solid
Analysis Batch: 76351

Client Sample ID: FS04@6'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	130		249	381		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

GC VOA

Analysis Batch: 76263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-1	FS01@4'	Total/NA	Solid	8021B	76266
885-1538-2	FS02@4'	Total/NA	Solid	8021B	76266
885-1538-3	FS03@6'	Total/NA	Solid	8021B	76266
885-1538-4	FS04@6'	Total/NA	Solid	8021B	76266
885-1538-5	FS05@6'	Total/NA	Solid	8021B	76266
885-1538-6	SW01	Total/NA	Solid	8021B	76266
885-1538-7	SW02	Total/NA	Solid	8021B	76266
885-1538-8	SW03	Total/NA	Solid	8021B	76266
MB 880-76266/5-A	Method Blank	Total/NA	Solid	8021B	76266
LCS 880-76266/1-A	Lab Control Sample	Total/NA	Solid	8021B	76266
LCSD 880-76266/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	76266

Prep Batch: 76266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-1	FS01@4'	Total/NA	Solid	5035	
885-1538-2	FS02@4'	Total/NA	Solid	5035	
885-1538-3	FS03@6'	Total/NA	Solid	5035	
885-1538-4	FS04@6'	Total/NA	Solid	5035	
885-1538-5	FS05@6'	Total/NA	Solid	5035	
885-1538-6	SW01	Total/NA	Solid	5035	
885-1538-7	SW02	Total/NA	Solid	5035	
885-1538-8	SW03	Total/NA	Solid	5035	
MB 880-76266/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-76266/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-76266/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 76416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-2	FS02@4'	Total/NA	Solid	8021B	76470
MB 880-76470/5-A	Method Blank	Total/NA	Solid	8021B	76470
LCS 880-76470/1-A	Lab Control Sample	Total/NA	Solid	8021B	76470
LCSD 880-76470/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	76470

Prep Batch: 76470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-2	FS02@4'	Total/NA	Solid	5035	
MB 880-76470/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-76470/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-76470/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 76284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-1	FS01@4'	Total/NA	Solid	8015NM Prep	
885-1538-2	FS02@4'	Total/NA	Solid	8015NM Prep	
885-1538-3	FS03@6'	Total/NA	Solid	8015NM Prep	
885-1538-4	FS04@6'	Total/NA	Solid	8015NM Prep	
885-1538-5	FS05@6'	Total/NA	Solid	8015NM Prep	
885-1538-6	SW01	Total/NA	Solid	8015NM Prep	
885-1538-7	SW02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

GC Semi VOA (Continued)

Prep Batch: 76284 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-76284/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-76284/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-76284/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 76340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-8	SW03	Total/NA	Solid	8015NM Prep	
MB 880-76340/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-76340/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-76340/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 76378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-1	FS01@4'	Total/NA	Solid	8015B NM	76284
885-1538-2	FS02@4'	Total/NA	Solid	8015B NM	76284
885-1538-3	FS03@6'	Total/NA	Solid	8015B NM	76284
885-1538-4	FS04@6'	Total/NA	Solid	8015B NM	76284
885-1538-5	FS05@6'	Total/NA	Solid	8015B NM	76284
885-1538-6	SW01	Total/NA	Solid	8015B NM	76284
885-1538-7	SW02	Total/NA	Solid	8015B NM	76284
MB 880-76284/1-A	Method Blank	Total/NA	Solid	8015B NM	76284
LCS 880-76284/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	76284
LCSD 880-76284/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	76284

Analysis Batch: 76386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-8	SW03	Total/NA	Solid	8015B NM	76340
MB 880-76340/1-A	Method Blank	Total/NA	Solid	8015B NM	76340
LCS 880-76340/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	76340
LCSD 880-76340/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	76340

HPLC/IC

Leach Batch: 76285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-1	FS01@4'	Soluble	Solid	DI Leach	
885-1538-2	FS02@4'	Soluble	Solid	DI Leach	
885-1538-3	FS03@6'	Soluble	Solid	DI Leach	
MB 880-76285/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-76285/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-76285/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-1538-1 MS	FS01@4'	Soluble	Solid	DI Leach	
885-1538-1 MSD	FS01@4'	Soluble	Solid	DI Leach	

Leach Batch: 76286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-4	FS04@6'	Soluble	Solid	DI Leach	
885-1538-5	FS05@6'	Soluble	Solid	DI Leach	
885-1538-6	SW01	Soluble	Solid	DI Leach	
885-1538-7	SW02	Soluble	Solid	DI Leach	
885-1538-8	SW03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

HPLC/IC (Continued)

Leach Batch: 76286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-76286/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-76286/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-76286/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-1538-4 MS	FS04@6'	Soluble	Solid	DI Leach	
885-1538-4 MSD	FS04@6'	Soluble	Solid	DI Leach	

Analysis Batch: 76344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-1	FS01@4'	Soluble	Solid	300.0	76285
885-1538-2	FS02@4'	Soluble	Solid	300.0	76285
885-1538-3	FS03@6'	Soluble	Solid	300.0	76285
MB 880-76285/1-A	Method Blank	Soluble	Solid	300.0	76285
LCS 880-76285/2-A	Lab Control Sample	Soluble	Solid	300.0	76285
LCSD 880-76285/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	76285
885-1538-1 MS	FS01@4'	Soluble	Solid	300.0	76285
885-1538-1 MSD	FS01@4'	Soluble	Solid	300.0	76285

Analysis Batch: 76351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1538-4	FS04@6'	Soluble	Solid	300.0	76286
885-1538-5	FS05@6'	Soluble	Solid	300.0	76286
885-1538-6	SW01	Soluble	Solid	300.0	76286
885-1538-7	SW02	Soluble	Solid	300.0	76286
885-1538-8	SW03	Soluble	Solid	300.0	76286
MB 880-76286/1-A	Method Blank	Soluble	Solid	300.0	76286
LCS 880-76286/2-A	Lab Control Sample	Soluble	Solid	300.0	76286
LCSD 880-76286/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	76286
885-1538-4 MS	FS04@6'	Soluble	Solid	300.0	76286
885-1538-4 MSD	FS04@6'	Soluble	Solid	300.0	76286

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: FS01@4'
Date Collected: 03/20/24 12:26
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 16:28
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 00:14
Soluble	Leach	DI Leach			76285	SA	EET MID	03/22/24 11:25
Soluble	Analysis	300.0		1	76344	SMC	EET MID	03/23/24 07:26

Client Sample ID: FS02@4'
Date Collected: 03/20/24 12:30
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76470	MNR	EET MID	03/25/24 10:58
Total/NA	Analysis	8021B		25	76416	MNR	EET MID	03/25/24 14:05
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 16:49
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 00:35
Soluble	Leach	DI Leach			76285	SA	EET MID	03/22/24 11:25
Soluble	Analysis	300.0		1	76344	SMC	EET MID	03/23/24 07:48

Client Sample ID: FS03@6'
Date Collected: 03/20/24 13:10
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 17:09
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 01:17
Soluble	Leach	DI Leach			76285	SA	EET MID	03/22/24 11:25
Soluble	Analysis	300.0		1	76344	SMC	EET MID	03/23/24 07:56

Client Sample ID: FS04@6'
Date Collected: 03/20/24 12:37
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 17:30
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 01:38
Soluble	Leach	DI Leach			76286	SA	EET MID	03/22/24 11:26
Soluble	Analysis	300.0		1	76351	SMC	EET MID	03/23/24 11:46

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Client Sample ID: FS05@6'
Date Collected: 03/20/24 12:41
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 17:50
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 01:59
Soluble	Leach	DI Leach			76286	SA	EET MID	03/22/24 11:26
Soluble	Analysis	300.0		5	76351	SMC	EET MID	03/23/24 12:09

Client Sample ID: SW01
Date Collected: 03/20/24 12:15
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 18:11
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 02:20
Soluble	Leach	DI Leach			76286	SA	EET MID	03/22/24 11:26
Soluble	Analysis	300.0		1	76351	SMC	EET MID	03/23/24 12:16

Client Sample ID: SW02
Date Collected: 03/20/24 12:20
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 18:31
Total/NA	Prep	8015NM Prep			76284	EL	EET MID	03/22/24 10:57
Total/NA	Analysis	8015B NM		1	76378	SM	EET MID	03/24/24 02:41
Soluble	Leach	DI Leach			76286	SA	EET MID	03/22/24 11:26
Soluble	Analysis	300.0		1	76351	SMC	EET MID	03/23/24 12:23

Client Sample ID: SW03
Date Collected: 03/20/24 12:23
Date Received: 03/21/24 06:45

Lab Sample ID: 885-1538-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76266	MNR	EET MID	03/22/24 09:04
Total/NA	Analysis	8021B		1	76263	MNR	EET MID	03/22/24 18:52
Total/NA	Prep	8015NM Prep			76340	EL	EET MID	03/22/24 17:00
Total/NA	Analysis	8015B NM		1	76386	SM	EET MID	03/24/24 17:12
Soluble	Leach	DI Leach			76286	SA	EET MID	03/22/24 11:26
Soluble	Analysis	300.0		5	76351	SMC	EET MID	03/23/24 12:31

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Hilcorp Energy
Job ID: 885-1538-1
Project/Site: Hilcorp Energy/Ensolum

Laboratory: Eurofins Midland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

Method Summary

Client: Hilcorp Energy
Project/Site: Hilcorp Energy/Ensolum

Job ID: 885-1538-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Chain-of-Custody Record

Client: Hilcorp ~~Att~~

Attn: Samantha Grabert

Mailing Address:

Phone #:

email or Fax#: Samantha.Grabert@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:

5-day

☒ Standard ☐ Rush

Project Name: Canyon Largo NP 188

Project #:

Project Manager: Wes

Sampler: Grey P.

On Ice: ☒ Yes ☐ No Morty

# of Coolers: 1

Cooler Temp (Including CF): 0.9 - 0.1 = 0.8 (°C)

HALL ENVIRONME
ANALYSIS LABOR
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8710
Tel. 505-345-3975 Fax 505-345-4107

885-1538 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3-20	1226	Soil	FS01 @ 4'	1, 4oz	Cool	1										
	1230		FS02 @ 4'			2										
	1310		FS03 @ 6'			3										
	1237		FS04 @ 6'			4										
	1241		FS05 @ 6'			5										
	1215		SW01			6										
	1220		SW02			7										
↓	1223	↓	SW03	↓	↓	8	↓	↓					↓			

Date:	Time.	Relinquished by:	Received by	Via:	Date	Time
3/20/24	1512	Grey Pahn	Cht Watt		3/20/24	1512
Date	Time.	Relinquished by:	Received by	Via: courier	Date	Time
3/20/24	1740				3/21/24	6:45

Remarks:

cc: gpalese@ensolum.com
Shyde@ensolum
wweichert@ensolum

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report.

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109
Phone 505-345-3975 Fax 505-345-4107

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Caldwell John	Carrier Tracking No(s)	COC No: 885-179 1
Client Contact: Shipping/Receiving	Phone	E-Mail: john caldwell@et eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Oregon		Job #: 885-1538-1
Address: 1211 W Florida Ave,	Due Date Requested: 3/27/2024			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Canyon Largo NP 188	Project #: 88500011			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B/5035A_M_Calc BTEX	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FS01@4' (885-1538-1)	3/20/24	12 26 Mountain		Solid			X	X	X	1	
FS02@4' (885-1538-2)	3/20/24	12 30 Mountain		Solid			X	X	X	1	
FS03@6' (885-1538-3)	3/20/24	13 10 Mountain		Solid			X	X	X	1	
FS04@6' (885-1538-4)	3/20/24	12 37 Mountain		Solid			X	X	X	1	
FS05@6' (885-1538-5)	3/20/24	12 41 Mountain		Solid			X	X	X	1	
SW01 (885-1538-6)	3/20/24	12 15 Mountain		Solid			X	X	X	1	
SW02 (885-1538-7)	3/20/24	12 20 Mountain		Solid			X	X	X	1	
SW03 (885-1538-8)	3/20/24	12 23 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested I, II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		3/21/24 14:15			3/22/24 1037	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 1.6/15

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-1538-1

Login Number: 1538 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
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.	True	
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").	N/A	

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-1538-1

Login Number: 1538
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 03/22/24 10:45 AM

Question	Answer	Comment
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	True	
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.	True	
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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Samantha Grabert
Hilcorp Energy
PO BOX 4700
Farmington, New Mexico 87499

Generated 4/18/2024 4:44:16 PM

JOB DESCRIPTION

Canyon Largo Unit NP 188

JOB NUMBER

885-2890-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

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

Generated
4/18/2024 4:44:16 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Laboratory Job ID: 885-2890-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

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)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
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
Project: Canyon Largo Unit NP 188

Job ID: 885-2890-1

Job ID: 885-2890-1 Eurofins Albuquerque

Job Narrative
885-2890-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 4/16/2024 7:25 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 1.0°C.

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

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

Diesel Range Organics
Method 8015D_DRO: Surrogate recovery for the following sample is outside the upper control limit: (CCV 885-3344/6). Samples without analyte detections are still being reported.

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

HPLC/IC
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
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

Client Sample ID: FS2@8'
Date Collected: 04/15/24 10:30
Date Received: 04/16/24 07:25

Lab Sample ID: 885-2890-1
Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.1		mg/Kg		04/16/24 10:06	04/16/24 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/16/24 10:06*	*04/16/24 14:04*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.021		mg/Kg		04/16/24 10:06	04/16/24 14:04	1
Ethylbenzene	ND		0.041		mg/Kg		04/16/24 10:06	04/16/24 14:04	1
Toluene	ND		0.041		mg/Kg		04/16/24 10:06	04/16/24 14:04	1
Xylenes, Total	ND		0.082		mg/Kg		04/16/24 10:06	04/16/24 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*39 - 146*	*04/16/24 10:06*	*04/16/24 14:04*	*1*

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2		mg/Kg		04/16/24 10:32	04/16/24 12:14	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/16/24 10:32	04/16/24 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*108*		*62 - 134*	*04/16/24 10:32*	*04/16/24 12:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		60		mg/Kg		04/16/24 12:04	04/16/24 15:01	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-3334/1-A
Matrix: Solid
Analysis Batch: 3374

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3334

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/16/24 10:06	04/16/24 13:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/16/24 10:06*	*04/16/24 13:40*	*1*

Lab Sample ID: LCS 885-3334/2-A
Matrix: Solid
Analysis Batch: 3374

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3334

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	26.0		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*211*		*15 - 244*

Lab Sample ID: 885-2890-1 MS
Matrix: Solid
Analysis Batch: 3374

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3334

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		20.5	20.9		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*211*		*15 - 244*

Lab Sample ID: 885-2890-1 MSD
Matrix: Solid
Analysis Batch: 3374

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3334

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		20.5	21.0		mg/Kg		102	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-3334/1-A
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3334

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/16/24 10:06	04/16/24 13:40	1
Ethylbenzene	ND		0.050		mg/Kg		04/16/24 10:06	04/16/24 13:40	1
Toluene	ND		0.050		mg/Kg		04/16/24 10:06	04/16/24 13:40	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 885-3334/1-A
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3334

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		0.10		mg/Kg		04/16/24 10:06	04/16/24 13:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*39 - 146*	*04/16/24 10:06*	*04/16/24 13:40*	*1*

Lab Sample ID: LCS 885-3334/3-A
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3334

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.807		mg/Kg		81	70 - 130		
Ethylbenzene			1.00	0.824		mg/Kg		82	70 - 130		
m,p-Xylene			2.00	1.67		mg/Kg		84	70 - 130		
o-Xylene			1.00	0.811		mg/Kg		81	70 - 130		
Toluene			1.00	0.807		mg/Kg		81	70 - 130		
Xylenes, Total			3.00	2.48		mg/Kg		83	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*39 - 146*

Lab Sample ID: 885-2890-1 MS
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3334

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.822	0.654		mg/Kg		80	70 - 130		
Ethylbenzene	ND		0.822	0.669		mg/Kg		81	70 - 130		
m,p-Xylene	ND		1.64	1.36		mg/Kg		83	70 - 130		
o-Xylene	ND		0.822	0.659		mg/Kg		80	70 - 130		
Toluene	ND		0.822	0.664		mg/Kg		81	70 - 130		
Xylenes, Total	ND		2.47	2.02		mg/Kg		82	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*

Lab Sample ID: 885-2890-1 MSD
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3334

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.822	0.650		mg/Kg		79	70 - 130	1	20
Ethylbenzene	ND		0.822	0.667		mg/Kg		81	70 - 130	0	20
m,p-Xylene	ND		1.64	1.36		mg/Kg		83	70 - 130	0	20
o-Xylene	ND		0.822	0.666		mg/Kg		81	70 - 130	1	20
Toluene	ND		0.822	0.655		mg/Kg		80	70 - 130	1	20
Xylenes, Total	ND		2.47	2.03		mg/Kg		82	70 - 130	1	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 885-2890-1 MSD
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3334

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		39 - 146

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-3337/1-A
Matrix: Solid
Analysis Batch: 3344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3337

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/16/24 10:32	04/16/24 11:53	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/16/24 10:32	04/16/24 11:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	91		62 - 134	04/16/24 10:32	04/16/24 11:53	1

Lab Sample ID: LCS 885-3337/2-A
Matrix: Solid
Analysis Batch: 3344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3337

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	47.1		mg/Kg		94	60 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	90		62 - 134

Lab Sample ID: 885-2890-1 MS
Matrix: Solid
Analysis Batch: 3344

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3337

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		45.0	45.3		mg/Kg		101	44 - 136		

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	100		62 - 134

Lab Sample ID: 885-2890-1 MSD
Matrix: Solid
Analysis Batch: 3344

Client Sample ID: FS2@8'
Prep Type: Total/NA
Prep Batch: 3337

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		45.9	52.4		mg/Kg		114	44 - 136	14	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	113		62 - 134

QC Sample Results

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-3343/1-A
Matrix: Solid
Analysis Batch: 3405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3343

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		04/16/24 12:04	04/16/24 14:16	1

Lab Sample ID: LCS 885-3343/2-A
Matrix: Solid
Analysis Batch: 3405

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			15.0	13.7		mg/Kg		91	90 - 110		

Lab Sample ID: MB 885-3405/20
Matrix: Solid
Analysis Batch: 3405

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/Kg			04/16/24 18:34	1

Lab Sample ID: MRL 885-3405/19
Matrix: Solid
Analysis Batch: 3405

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			0.500	0.525		mg/L		105	50 - 150		

QC Association Summary

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

GC VOA

Prep Batch: 3334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	5035	
MB 885-3334/1-A	Method Blank	Total/NA	Solid	5035	
LCS 885-3334/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-3334/3-A	Lab Control Sample	Total/NA	Solid	5035	
885-2890-1 MS	FS2@8'	Total/NA	Solid	5035	
885-2890-1 MS	FS2@8'	Total/NA	Solid	5035	
885-2890-1 MSD	FS2@8'	Total/NA	Solid	5035	
885-2890-1 MSD	FS2@8'	Total/NA	Solid	5035	

Analysis Batch: 3374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	8015D	3334
MB 885-3334/1-A	Method Blank	Total/NA	Solid	8015D	3334
LCS 885-3334/2-A	Lab Control Sample	Total/NA	Solid	8015D	3334
885-2890-1 MS	FS2@8'	Total/NA	Solid	8015D	3334
885-2890-1 MSD	FS2@8'	Total/NA	Solid	8015D	3334

Analysis Batch: 3375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	8021B	3334
MB 885-3334/1-A	Method Blank	Total/NA	Solid	8021B	3334
LCS 885-3334/3-A	Lab Control Sample	Total/NA	Solid	8021B	3334
885-2890-1 MS	FS2@8'	Total/NA	Solid	8021B	3334
885-2890-1 MSD	FS2@8'	Total/NA	Solid	8021B	3334

GC Semi VOA

Prep Batch: 3337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	SHAKE	
MB 885-3337/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-3337/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-2890-1 MS	FS2@8'	Total/NA	Solid	SHAKE	
885-2890-1 MSD	FS2@8'	Total/NA	Solid	SHAKE	

Analysis Batch: 3344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	8015D	3337
MB 885-3337/1-A	Method Blank	Total/NA	Solid	8015D	3337
LCS 885-3337/2-A	Lab Control Sample	Total/NA	Solid	8015D	3337
885-2890-1 MS	FS2@8'	Total/NA	Solid	8015D	3337
885-2890-1 MSD	FS2@8'	Total/NA	Solid	8015D	3337

HPLC/IC

Prep Batch: 3343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	300_Prep	
MB 885-3343/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-3343/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Hilcorp Energy
Project/Site: Canyon Largo Unit NP 188

Job ID: 885-2890-1

HPLC/IC

Analysis Batch: 3405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2890-1	FS2@8'	Total/NA	Solid	300.0	3343
MB 885-3343/1-A	Method Blank	Total/NA	Solid	300.0	3343
MB 885-3405/20	Method Blank	Total/NA	Solid	300.0	
LCS 885-3343/2-A	Lab Control Sample	Total/NA	Solid	300.0	3343
MRL 885-3405/19	Lab Control Sample	Total/NA	Solid	300.0	

Lab Chronicle

Client: Hilcorp Energy
Job ID: 885-2890-1
Project/Site: Canyon Largo Unit NP 188

Client Sample ID: FS2@8'
Date Collected: 04/15/24 10:30
Date Received: 04/16/24 07:25

Lab Sample ID: 885-2890-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			3334	JP	EET ALB	04/16/24 10:06
Total/NA	Analysis	8015D		1	3374	JP	EET ALB	04/16/24 14:04
Total/NA	Prep	5035			3334	JP	EET ALB	04/16/24 10:06
Total/NA	Analysis	8021B		1	3375	JP	EET ALB	04/16/24 14:04
Total/NA	Prep	SHAKE			3337	JU	EET ALB	04/16/24 10:32
Total/NA	Analysis	8015D		1	3344	JU	EET ALB	04/16/24 12:14
Total/NA	Prep	300_Prep			3343	KB	EET ALB	04/16/24 12:04
Total/NA	Analysis	300.0		20	3405	SS	EET ALB	04/16/24 15:01

Laboratory References:

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Job ID: 885-2890-1
Project/Site: Canyon Largo Unit NP 188

Laboratory: Eurofins Albuquerque

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

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015D	5035	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5035	Solid	Benzene
8021B	5035	Solid	Ethylbenzene
8021B	5035	Solid	Toluene
8021B	5035	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

Chain-of-Custody Record

Client: Hilcorp Energy Company
Attn: Samantha Grabert
Mailing Address:

Phone #:
email or Fax#: samantha.grabert@hilcorp.com
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush Same Day
Project Name: Canyon Largo Unit NP 188
Project #:
Project Manager: S. Hyde
Sampler: Al Thomson
On Ice: ~~☐~~ Yes ☐ No
# of Coolers: 1 Yogi
Cooler Temp (including CF): 0.9+0.1=1.0 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORA
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107
885-2890 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4-15	1030	Soil	FS2@8'	1x 4oz	cool	-1	X	X					X			

Analysis Request

Relinquished by	Received by	Via	Date	Time
			4-15	1220
			4/15/24	1800

Remarks: Please cc:
Shyde@ensolum.com
wweichert@ensolum.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report.

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-2890-1

Login Number: 2890 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Proctor, Nancy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	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.	True	
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.	True	
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	

ENSOLUM

APPENDIX D

Project Photographs

PROJECT PHOTOGRAPHS
Canyon Largo Unit NP 188
Rio Arriba County, New Mexico
Hilcorp Energy Company

Photograph 1 View of excavation extent taken on March 20, 2024, looking northwest.	
Photograph 2 View of the final excavation extent taken on April 15, 2024, looking west.	

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

QUESTIONS

Action 326569

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2403157821**
Incident Name	**NAPP2403157821 CANYON LARGO UNIT NP 188 @ 30-039-20498**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-039-20498] CANYON LARGO UNIT NP #188**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Canyon Largo Unit NP 188
Date Release Discovered	01/31/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Dump Valve | Crude Oil | Released: 28 BBL | Recovered: 0 BBL | Lost: 28 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	N/A
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 04/26/2024

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 300 and 500 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	None
A 100-year floodplain	Between 300 and 500 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	610
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	1020
GRO+DRO (EPA SW-846 Method 8015M)	1020
BTEX (EPA SW-846 Method 8021B or 8260B)	8.2
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	03/20/2024
On what date will (or did) the final sampling or liner inspection occur	04/15/2024
On what date will (or was) the remediation complete(d)	04/15/2024
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	600
What is the estimated volume (in cubic yards) that will be remediated	378
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	ENVIROTECH LANDFARM #2 [fEEM0112336756]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 04/26/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**332837**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**04/15/2024**
What was the (estimated) number of samples that were to be gathered	**2**
What was the sampling surface area in square feet	**400**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	600
What was the total volume (cubic yards) remediated	378
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	NA

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 04/26/2024

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 326569

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 326569
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/15/2024