ENSOLUM

March 27, 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 Work Plan
Sammons #2
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nAPP2336429577

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Remediation Work Plan* (Work Plan) for a release at the Sammons #2 natural gas production well (Site). The Site is located on private land in Unit G, Section 32, Township 30 North, Range 12 West, San Juan County, New Mexico (Figure 1). This proposed Work Plan includes a summary of delineation activities performed at the Site and the proposed remediation of impacted soil originating from the release of condensate.

SITE BACKGROUND

On December 29, 2023, during Audio, Visual, or Olfactory (AVO) inspections, a lease operator from Hilcorp identified an actively leaking condensate release caused by a cracked hammer union on the oil fill line. The fill line was plumbed into the bottom of the tank with no isolation valve to stop the leak. Upon discovery of the leak, a water truck was immediately dispatched to the Site. The water truck extracted condensate pooled in the containment while a new, 2-inch valve was installed to address the problem. After the installation of the new valve, the condensate was returned to the tank without generating a hauling ticket to document the recovered amount. Initially, the release volume was estimated to be 31 barrels (bbls), but due to an accounting error, the actual volume was revised to 6 bbls. Since no hauling ticket was generated, the exact amount of condensate recovered remains unknown and is assumed to be 0 bbls. Although the condensate was contained within the secondary lined berm, holes were observed in the liner and Hilcorp requested Ensolum conduct pothole delineation in the area surrounding the containment. Hilcorp reported the release to the New Mexico Oil Conservation Division (NMOCD) on a *Release Notification Form C-141* on 12/30/2023, 2023. The NMOCD has assigned the Site Incident Number nAPP2336429577.

SITE CHARACTERIZATION

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). This information is further discussed below.

GEOLOGY AND HYDROGEOLOGY

The Site is located in Quaternary age alluvial deposits associated with the Animas River drainage. The alluvial sediment is likely 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 alluvial deposits vary greatly across the basin in both hydrogeologic properties and water quality. Wells installed in the alluvium are used for livestock, irrigation, and domestic purposes where there is an adequate quantity and high enough quality water available. The Nacimiento Formation is characterized by interbedded black carbonaceous mudstones and white, coarse-grained sandstones, which range in thickness from 418 feet to 2,232 feet. The hydrogeologic properties of the Nacimiento Formation vary dependent on location. Where sufficient yield is present, the primary use of water from this formation is for domestic and/or livestock supply.

POTENTIAL SENSITIVE RECEPTORS

Potential nearby receptors were assessed through desktop reviews of United States Geological Survey (USGS) topographic maps, National Wetland Inventory (NWI), National Hydrography Dataset (NHD) Geographic Information System (GIS) maps, New Mexico Office of the State Engineer (NMOSE) database, aerial photographs, and Site-specific observations.

The nearest significant watercourse to the Site is a freshwater pond approximately 165 feet northwest of the wellhead. The Site is located 330 feet from the Animas River and is within a 100-year flood. The Site is also located 60 feet from the nearest wetland. The nearest data point for depth to groundwater to the Site is a domestic water well (NMOSE permit SJ-03206), located approximately 435 feet north of the Site. This well indicates that the shallowest groundwater is approximately 30 feet below ground surface (bgs) in this area (Appendix A); however, during advancement of hand auger boreholes during the Site investigation activities (further described below), groundwater was encountered at a depth of approximately 5 feet bgs.

The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake. The Site is not overlying a subsurface mine or located within an area underlain by unstable geology (area not designated as high potential karst by the Bureau of Land Management). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site. A Site receptor map is shown 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): 100 mg/kg
- Chloride: 600 mg/kg

DELINEATION AND SOIL SAMPLING ACTIVITIES

Ensolum personnel conducted initial delineation potholing activities with a backhoe on January 26, 2024. Sampling location PH01 was advanced within the north side of secondary containment berm. Sampling locations PH02 through PH05 were advanced in all cardinal directions surrounding the berm (Figure 2). During delineation activities, Ensolum personnel

logged soil lithology and field screened for the presence of volatile organic compounds (VOCs) using a calibrated photoionization detector (PID). Soil descriptions were noted in the field book. Two soil samples were collected from each pothole in order to delineate the lateral and vertical impacts at the Site. One sample was collected from the depth interval indicating the greatest potential TPH concentration based on PID field screening, and a second soil sample collected at the terminus of each pothole. Samples were submitted to Eurofins Environment Testing (Eurofins) in Albuquerque, New Mexico for analysis of TPH following United States Environmental Protection Agency (EPA) Method 8015M/D, BTEX following EPA Method 8021B, and chloride following EPA Method 300.0. Analytical results indicated concentrations of TPH in soil exceeded the applicable NMOCD Closure Criteria at depths of 4 to 5 feet bgs in sampling locations PH01 and PH04.

Based on the initial laboratory analytical results, Ensolum conducted additional hand auger delineation activities on February 21, 2024. Three hand auger delineation boreholes (HA01 through HA03) were advanced at the Site. A hand auger was selected due to soft unconsolidated soil, shallow depth to water, heavy vegetation east of the pad, and a drainage ditch that would prevent the use of a backhoe. During delineation activities, Ensolum personnel logged lithology and field screened soil in the same manner described above. Two soil samples were collected from each boring directly into laboratory-provided jars and immediately placed on ice. Samples were submitted to Eurofins for analysis of BTEX, TPH, and chloride by the same methods described above. Photographs taken during delineation activities are also provided in Appendix B. Hand auger borehole locations are presented on Figure 2.

BTEX and TPH concentrations were either not detected above laboratory reporting limits or were not detected above the applicable Closure Criteria in any of hand auger boreholes. At borehole HA01, chloride was detected in soil at a concentration exceeding the NMOCD Closure Criteria at a depth of 2 feet bgs. Chloride was not detected above Closure Criteria in any other samples collected during Site delineation efforts. Analytical results are summarized in Table 1 and presented on Figure 2. Complete laboratory reports are attached as Appendix C.

CONCLUSIONS AND REMEDIATION WORK PLAN

Based on soil sampling results described above, it is estimated impacted soil is present at the Site between the ground surface to a depth of approximately 4 to 5 feet bgs. Analytical results also indicate TPH impacted soil is likely limited to areas within the immediate vicinity of the secondary containment berm with an approximate areal extent of 850 square feet. An anomalous chloride detection of 650 mg/kg was observed at HA01, which is located 20 feet from the north corner of the secondary containment berm and along a fence at the edge of the well pad. Given the Site's proximity to the Animas River and the absence of petroleum hydrocarbons, the elevated chloride in HA01 is likely attributed to natural factors such as alkali soil resulting from run off or historical flooding and evaporation events, and not the December 2023 condensate release.

Hilcorp proposes to excavate TPH impacted soil at the Site to achieve NMOCD Closure Criteria. Additionally, Hilcorp will excavate shallow soil in the vicinity of HA01 to remove elevated chloride concentrations detected in this area. Based on the lateral and vertical extent of impacts, approximately 175 cubic yards of impacted soil are present at the Site to a depth of approximately 5 feet bgs. Soil will be excavated and transported off-Site for disposal at the Envirotech Landfarm located in San Juan County, New Mexico. Following removal of the impacted soil, 5-point composite soil samples will be collected at least every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Based on previous analytical results and no prior Closure Criteria exceedances of BTEX, Hilcorp is requesting soil samples only be analyzed for TPH following EPA Method 8015M/D and chloride following EPA Method 300.0 during confirmation sampling.

Hilcorp will complete the excavation and soil sampling activities within 90 days of the date of approval of this Work Plan by the NMOCD. A *Closure Request* will be submitted within 30 days of receipt of final laboratory analytical results.

REFERENCES

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

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

Sincerely,
Ensolum, LLC

Wesley Weichert, PG
Project Geologist
(816) 266-8732
wweichert@ensolum.com

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

Attachments:

Figure 1: Site Receptor Map
Figure 2: Delineation Soil Sample Results

Table 1: Delineation Soil Sample Analytical Results

Appendix A: NMOSE Point of Diversion Summary
Appendix B: Photographic Log
Appendix C: Laboratory Analytical Reports

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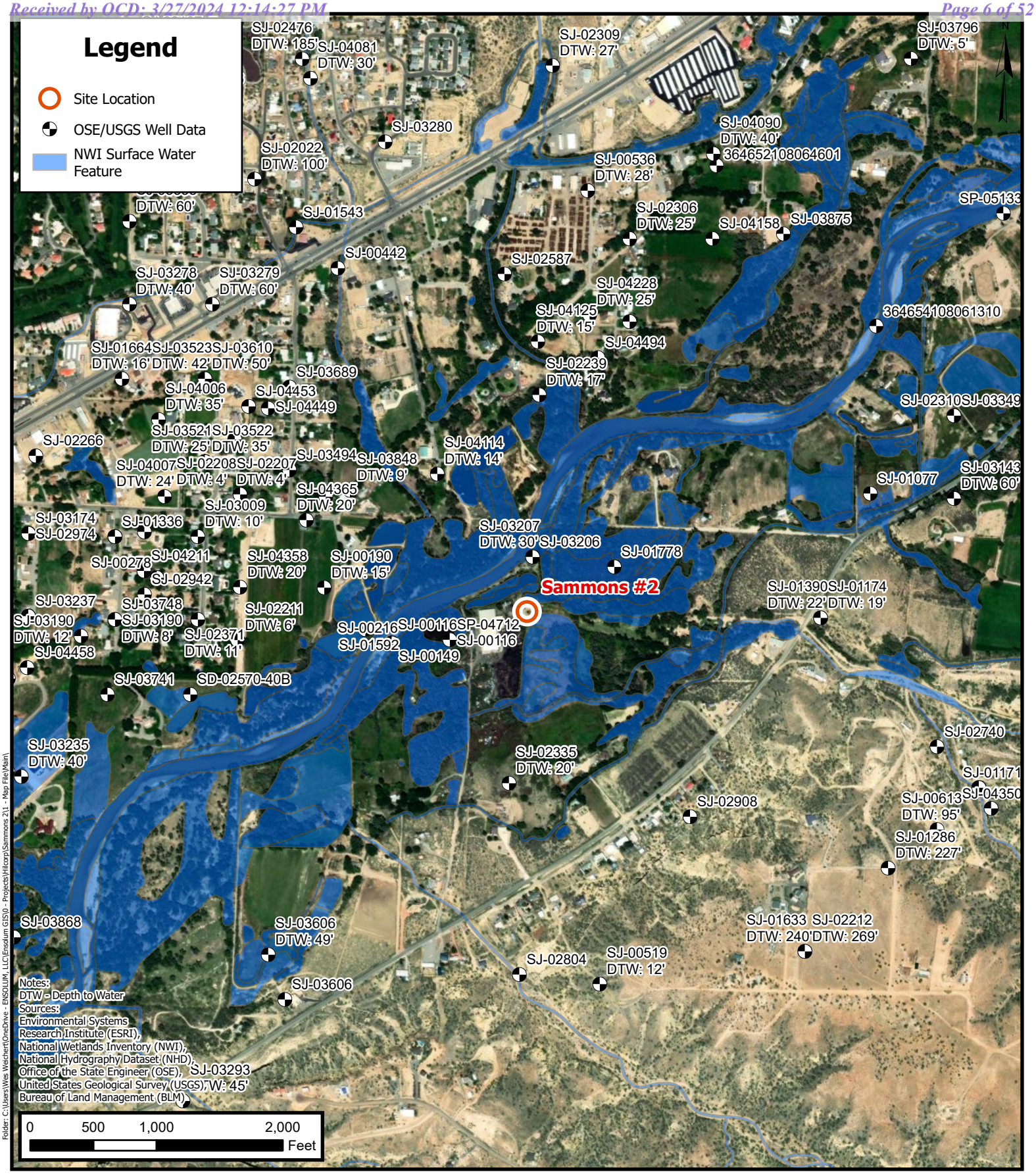
FIGURES



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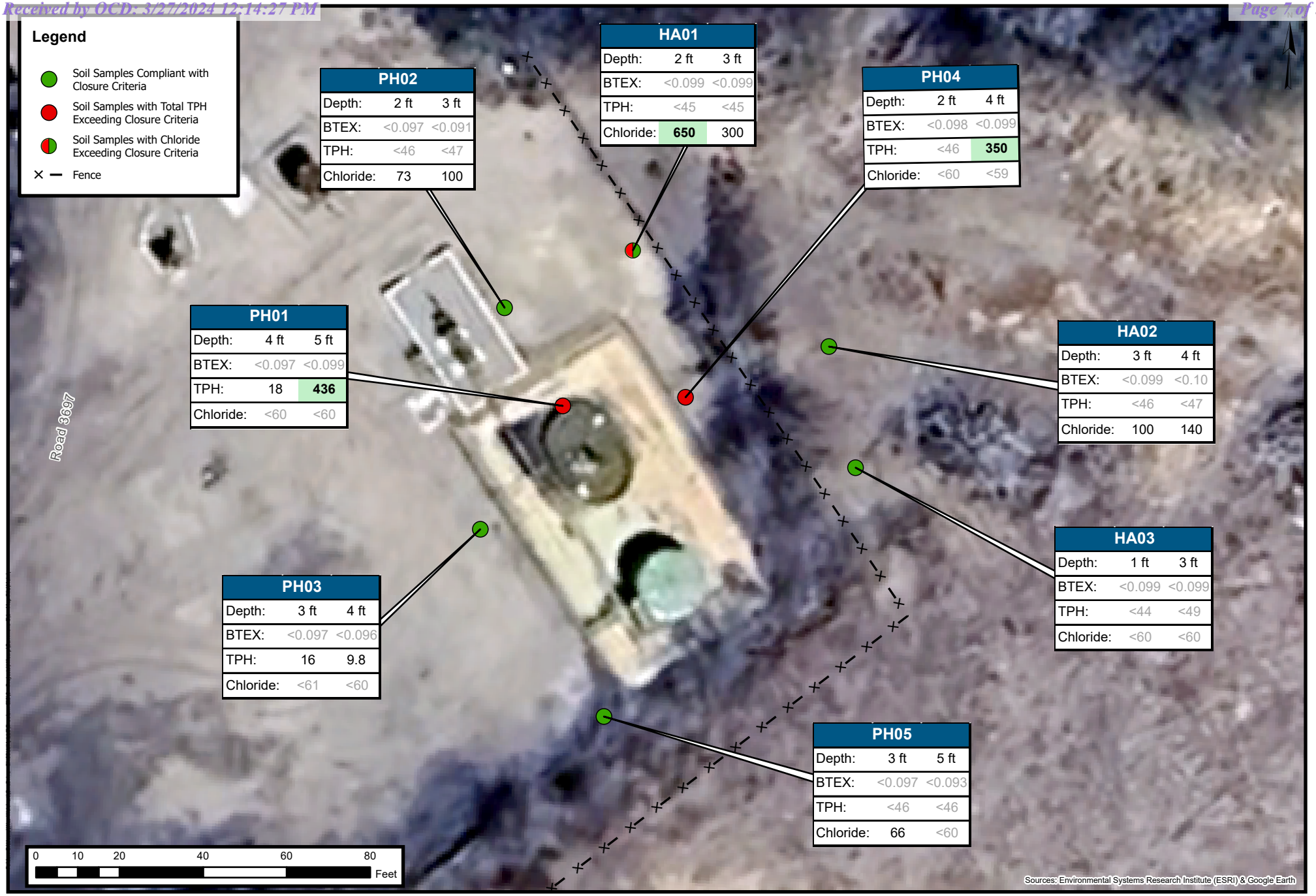
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

HILCORP ENERGY COMPANY
SAMMONS #2
Incident Number: NAPP2336429577
Unit G, Sec 32, T30N, R12W
San Juan County, New Mexico,

FIGURE 1



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Delineation Soil Sample Results

HILCORP ENERGY COMPANY
SAMMONS #2
Incident Number: NAPP2336429577
Unit G, Sec 32, T30N, R12W
San Juan County, New Mexico,

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Sammons #2
Hilcorp Energy Company
San Juan 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)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release			**10**	NE	NE	NE	**50**	NE	NE	NE	**100**	**600**
PH01@4	1/26/2024	4	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	18	<46	18	<60
PH01@5	1/26/2024	5	<0.025	<0.050	<0.050	<0.099	<0.099	16	310	110	**436**	<60
PH02@2	1/26/2024	2	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.1	<46	<46	73
PH02@3	1/26/2024	3	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<9.4	<47	<47	100
PH03@3	1/26/2024	3	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	16	<47	16	<61
PH03@4	1/26/2024	4	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	9.8	<49	9.8	<60
PH04@2	1/26/2024	2	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.3	<46	<46	<60
PH04@4	1/26/2024	4	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	130	220	**350**	<59
PH05@3	1/26/2024	3	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.2	<46	<46	66
PH05@5	1/26/2024	5	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<9.2	<46	<46	<60
HA01@2	2/21/2024	2	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.1	<45	<45	**650**
HA01@3	2/21/2024	3	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<8.9	<45	<45	300
HA02@3	2/21/2024	3	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.3	<46	<46	100
HA02@4	2/21/2024	4	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.4	<47	<47	140
HA03@1	2/21/2024	1	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<8.9	<44	<44	<60
HA03@3	2/21/2024	3	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.7	<49	<49	<60

Notes:

bgs: below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: milligrams per kilogram
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil/Lube Oil Range Organics
TPH: Total Petroleum Hydrocarbon
<: indicates result less than the stated laboratory reporting limit (RL)
*Concentrations in **bold** and shaded exceed the New Mexico Oil Conservation Division Table 1 Closure Criteria for Soils Impacted by a Release*

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APPENDIX A

New Mexico Office of the State Engineer

Water Right Summary

get image list

WR File Number: SJ 03206 **Subbasin:** SJAR **Cross Reference:** -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: CHERYL WESTMORELAND

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	233930	72121	2002-06-10	PMT	APR	SJ 03206	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
SJ 03206			2	3	2	32	30N	12W	221707	4074169*	RURAL ADDRESS IS 68 ROAD 3665

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

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APPENDIX B

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Photographic Log
Hilcorp Energy Company
Sammons #2

Photograph: 1 Date: 1/30/2024
Description: Release source, valve.
View: Northeast

Photograph: 2 Date: 1/30/2024
Description: Damaged liner.
View: Northeast

Photograph: 3 Date: 2/21/2024
Description: Drainage Ditch near location of HA01
View: West

Photograph: 4 Date: 1/30/2024
Description: Pothole PH05.
View:

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APPENDIX C

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 13, 2024

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Sammons 2 OrderNo.: 2401B08

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 10 sample(s) on 1/27/2024 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH05@5
Project: Sammons 2
Collection Date: 1/26/2024 10:35:00 AM
Lab ID: 2401B08-001 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/2/2024 12:03:40 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/2/2024 12:03:40 PM
Surr: DNOP	94.7	61.2-134		%Rec	1	2/2/2024 12:03:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/2/2024 7:32:41 PM
Surr: BFB	101	15-244		%Rec	1	2/2/2024 7:32:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	2/2/2024 7:32:41 PM
Toluene	ND	0.046		mg/Kg	1	2/2/2024 7:32:41 PM
Ethylbenzene	ND	0.046		mg/Kg	1	2/2/2024 7:32:41 PM
Xylenes, Total	ND	0.093		mg/Kg	1	2/2/2024 7:32:41 PM
Surr: 4-Bromofluorobenzene	86.7	39.1-146		%Rec	1	2/2/2024 7:32:41 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	2/2/2024 12:42:37 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH05@3
Project: Sammons 2
Collection Date: 1/26/2024 10:30:00 AM
Lab ID: 2401B08-002 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/2/2024 12:15:43 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/2/2024 12:15:43 PM
Surr: DNOP	97.2	61.2-134		%Rec	1	2/2/2024 12:15:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/2/2024 8:43:21 PM
Surr: BFB	103	15-244		%Rec	1	2/2/2024 8:43:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/2/2024 8:43:21 PM
Toluene	ND	0.048		mg/Kg	1	2/2/2024 8:43:21 PM
Ethylbenzene	ND	0.048		mg/Kg	1	2/2/2024 8:43:21 PM
Xylenes, Total	ND	0.097		mg/Kg	1	2/2/2024 8:43:21 PM
Surr: 4-Bromofluorobenzene	89.4	39.1-146		%Rec	1	2/2/2024 8:43:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	66	61		mg/Kg	20	2/2/2024 12:57:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH04@4
Project: Sammons 2
Collection Date: 1/26/2024 10:00:00 AM
Lab ID: 2401B08-003 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	130	9.6		mg/Kg	1	2/2/2024 4:06:29 PM
Motor Oil Range Organics (MRO)	220	48		mg/Kg	1	2/2/2024 4:06:29 PM
Surr: DNOP	106	61.2-134		%Rec	1	2/2/2024 4:06:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/2/2024 9:07:00 PM
Surr: BFB	99.3	15-244		%Rec	1	2/2/2024 9:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	2/2/2024 9:07:00 PM
Toluene	ND	0.050		mg/Kg	1	2/2/2024 9:07:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/2/2024 9:07:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/2/2024 9:07:00 PM
Surr: 4-Bromofluorobenzene	85.3	39.1-146		%Rec	1	2/2/2024 9:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	59		mg/Kg	20	2/2/2024 1:12:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH04@2
Project: Sammons 2
Collection Date: 1/26/2024 9:55:00 AM
Lab ID: 2401B08-004 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/2/2024 12:39:55 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/2/2024 12:39:55 PM
Surr: DNOP	90.5	61.2-134		%Rec	1	2/2/2024 12:39:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/2/2024 9:30:31 PM
Surr: BFB	98.6	15-244		%Rec	1	2/2/2024 9:30:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	2/2/2024 9:30:31 PM
Toluene	ND	0.049		mg/Kg	1	2/2/2024 9:30:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/2/2024 9:30:31 PM
Xylenes, Total	ND	0.098		mg/Kg	1	2/2/2024 9:30:31 PM
Surr: 4-Bromofluorobenzene	85.8	39.1-146		%Rec	1	2/2/2024 9:30:31 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	2/2/2024 1:58:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH03@4
Project: Sammons 2
Collection Date: 1/26/2024 9:35:00 AM
Lab ID: 2401B08-005 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	9.8	9.8		mg/Kg	1	2/2/2024 12:52:09 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/2/2024 12:52:09 PM
Surr: DNOP	90.0	61.2-134		%Rec	1	2/2/2024 12:52:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/2/2024 9:54:01 PM
Surr: BFB	103	15-244		%Rec	1	2/2/2024 9:54:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/2/2024 9:54:01 PM
Toluene	ND	0.048		mg/Kg	1	2/2/2024 9:54:01 PM
Ethylbenzene	ND	0.048		mg/Kg	1	2/2/2024 9:54:01 PM
Xylenes, Total	ND	0.096		mg/Kg	1	2/2/2024 9:54:01 PM
Surr: 4-Bromofluorobenzene	87.0	39.1-146		%Rec	1	2/2/2024 9:54:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	2/2/2024 2:13:33 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH03@3
Project: Sammons 2
Collection Date: 1/26/2024 9:30:00 AM
Lab ID: 2401B08-006 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	16	9.5		mg/Kg	1	2/2/2024 1:16:25 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/2/2024 1:16:25 PM
Surr: DNOP	93.0	61.2-134		%Rec	1	2/2/2024 1:16:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/2/2024 10:17:28 PM
Surr: BFB	100	15-244		%Rec	1	2/2/2024 10:17:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/2/2024 10:17:28 PM
Toluene	ND	0.048		mg/Kg	1	2/2/2024 10:17:28 PM
Ethylbenzene	ND	0.048		mg/Kg	1	2/2/2024 10:17:28 PM
Xylenes, Total	ND	0.097		mg/Kg	1	2/2/2024 10:17:28 PM
Surr: 4-Bromofluorobenzene	85.6	39.1-146		%Rec	1	2/2/2024 10:17:28 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	61		mg/Kg	20	2/2/2024 2:28:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH02@3
Project: Sammons 2
Collection Date: 1/26/2024 9:05:00 AM
Lab ID: 2401B08-007 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/2/2024 1:28:45 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/2/2024 1:28:45 PM
Surr: DNOP	90.5	61.2-134		%Rec	1	2/2/2024 1:28:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/2/2024 10:40:53 PM
Surr: BFB	98.8	15-244		%Rec	1	2/2/2024 10:40:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	2/2/2024 10:40:53 PM
Toluene	ND	0.046		mg/Kg	1	2/2/2024 10:40:53 PM
Ethylbenzene	ND	0.046		mg/Kg	1	2/2/2024 10:40:53 PM
Xylenes, Total	ND	0.091		mg/Kg	1	2/2/2024 10:40:53 PM
Surr: 4-Bromofluorobenzene	85.9	39.1-146		%Rec	1	2/2/2024 10:40:53 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	100	59		mg/Kg	20	2/2/2024 2:43:51 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH02@2
Project: Sammons 2
Collection Date: 1/26/2024 9:00:00 AM
Lab ID: 2401B08-008 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/2/2024 1:40:54 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/2/2024 1:40:54 PM
Surr: DNOP	90.7	61.2-134		%Rec	1	2/2/2024 1:40:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/2/2024 11:04:14 PM
Surr: BFB	98.8	15-244		%Rec	1	2/2/2024 11:04:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/2/2024 11:04:14 PM
Toluene	ND	0.048		mg/Kg	1	2/2/2024 11:04:14 PM
Ethylbenzene	ND	0.048		mg/Kg	1	2/2/2024 11:04:14 PM
Xylenes, Total	ND	0.097		mg/Kg	1	2/2/2024 11:04:14 PM
Surr: 4-Bromofluorobenzene	86.0	39.1-146		%Rec	1	2/2/2024 11:04:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	73	60		mg/Kg	20	2/2/2024 3:00:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH01@5
Project: Sammons 2
Collection Date: 1/26/2024 8:40:00 AM
Lab ID: 2401B08-009 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	310	9.6		mg/Kg	1	2/2/2024 1:53:02 PM
Motor Oil Range Organics (MRO)	110	48		mg/Kg	1	2/2/2024 1:53:02 PM
Surr: DNOP	91.1	61.2-134		%Rec	1	2/2/2024 1:53:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	16	5.0		mg/Kg	1	2/2/2024 11:27:38 PM
Surr: BFB	123	15-244		%Rec	1	2/2/2024 11:27:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	2/2/2024 11:27:38 PM
Toluene	ND	0.050		mg/Kg	1	2/2/2024 11:27:38 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/2/2024 11:27:38 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/2/2024 11:27:38 PM
Surr: 4-Bromofluorobenzene	87.1	39.1-146		%Rec	1	2/2/2024 11:27:38 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	2/2/2024 3:15:16 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2401B08**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH01@4
Project: Sammons 2
Collection Date: 1/26/2024 8:35:00 AM
Lab ID: 2401B08-010 **Matrix:**
Received Date: 1/27/2024 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	18	9.2		mg/Kg	1	2/2/2024 2:17:33 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/2/2024 2:17:33 PM
Surr: DNOP	92.8	61.2-134		%Rec	1	2/2/2024 2:17:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/3/2024 12:14:12 AM
Surr: BFB	95.6	15-244		%Rec	1	2/3/2024 12:14:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/3/2024 12:14:12 AM
Toluene	ND	0.049		mg/Kg	1	2/3/2024 12:14:12 AM
Ethylbenzene	ND	0.049		mg/Kg	1	2/3/2024 12:14:12 AM
Xylenes, Total	ND	0.097		mg/Kg	1	2/3/2024 12:14:12 AM
Surr: 4-Bromofluorobenzene	82.7	39.1-146		%Rec	1	2/3/2024 12:14:12 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	2/2/2024 3:30:25 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401B08**

13-Feb-24

Client: HILCORP ENERGY

Project: Sammons 2

Sample ID: **MB-80226**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **80226**	RunNo: **102851**
Prep Date: **2/2/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800318** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-80226**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **80226**	RunNo: **102851**
Prep Date: **2/2/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800319** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401B08**

13-Feb-24

Client: HILCORP ENERGY

Project: Sammons 2

Sample ID: **MB-80224**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80224**	RunNo: **102843**
Prep Date: **2/1/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800103** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		123	61.2	134			

Sample ID: **LCS-80224**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80224**	RunNo: **102843**
Prep Date: **2/1/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800104** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.4		5.000		127	69	147			

Sample ID: **MB-80223**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80223**	RunNo: **102856**
Prep Date: **2/1/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800484** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	61.2	134			

Sample ID: **LCS-80223**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80223**	RunNo: **102856**
Prep Date: **2/1/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800485** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.3	59.7	135			
Surr: DNOP	5.1		5.000		102	61.2	134			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401B08**

13-Feb-24

Client: HILCORP ENERGY

Project: Sammons 2

Sample ID: **lcs-80192**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80192**	RunNo: **102837**
Prep Date: **1/31/2024**	Analysis Date: **2/2/2024**	SeqNo: **3799767** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	115	70	130			
Surr: BFB	2200		1000		222	15	244			

Sample ID: **mb-80192**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80192**	RunNo: **102837**
Prep Date: **1/31/2024**	Analysis Date: **2/2/2024**	SeqNo: **3799768** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401B08**

13-Feb-24

Client: HILCORP ENERGY

Project: Sammons 2

Sample ID: **LCS-80192**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80192**	RunNo: **102837**
Prep Date: **1/31/2024**	Analysis Date: **2/2/2024**	SeqNo: **3799772** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.0	70	130			
Toluene	0.89	0.050	1.000	0	88.8	70	130			
Ethylbenzene	0.89	0.050	1.000	0	88.8	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.2	70	130			
Surr: 4-Bromofluorobenzene	0.93		1.000		92.6	39.1	146			

Sample ID: **mb-80192**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80192**	RunNo: **102837**
Prep Date: **1/31/2024**	Analysis Date: **2/2/2024**	SeqNo: **3799773** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		88.0	39.1	146			

Sample ID: **2401b08-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PH05@5**	Batch ID: **80192**	RunNo: **102837**
Prep Date: **1/31/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800644** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.023	0.9259	0	79.7	70	130			
Toluene	0.77	0.046	0.9259	0	83.0	70	130			
Ethylbenzene	0.80	0.046	0.9259	0	86.2	70	130			
Xylenes, Total	2.4	0.093	2.778	0	85.8	70	130			
Surr: 4-Bromofluorobenzene	0.81		0.9259		88.0	39.1	146			

Sample ID: **2401b08-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PH05@5**	Batch ID: **80192**	RunNo: **102837**
Prep Date: **1/31/2024**	Analysis Date: **2/2/2024**	SeqNo: **3800645** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.023	0.9251	0	77.4	70	130	3.03	20	
Toluene	0.75	0.046	0.9251	0	81.6	70	130	1.83	20	
Ethylbenzene	0.77	0.046	0.9251	0	83.7	70	130	3.04	20	
Xylenes, Total	2.3	0.093	2.775	0	83.4	70	130	2.82	20	
Surr: 4-Bromofluorobenzene	0.85		0.9251		91.8	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Hilcorp Energy Work Order Number: 2401B08 RcptNo: 1

Received By: Tracy Casarrubias 1/27/2024 9:15:00 AM

Completed By: Tracy Casarrubias 1/27/2024 11:20:19 AM

Reviewed By: CM 1/29/24

Chain of Custody

1. Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐	
2. How was the sample delivered?	Courier			

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑ TMC 1/27/24	No ☑	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: TMC 1/27/24

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☑ TMC 1/30/24

Person Notified:	Mitch K.
By Whom:	Tracy Casarrubias
Regarding:	Name Discrepancy
Client Instructions:	Mailing address is missing on COC- TMC ~~1/24/24~~ 1/27/24

Via: ☑ eMail ☑ Phone ☐ Fax ☐ In Person

16. Additional remarks: Left V.M and Sent Email waiting on response - TMC 1/30/24
Moving forward with COC name "PH0505" per client - TMC 1/30/24

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes	~~Yogi~~ Moety		

MT 1/30/24

Chain-of-Custody Record

Client: Hilcorp Energy Company
Mitch Killough
Mailing Address:

Phone #: 713-757-5247
email or Fax#: MKillough@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: Sammons 2
Project #:
Project Manager: Stuart Hyde
Sampler: Grey Pulese
On Ice: ☒ Yes ☐ No marty
# of Coolers: 1
Cooler Temp(Including CF): 4.7 - 0.1 = 4.6 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2401B08	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)
~~1/27~~ 1/26	1035	Soil	PH05 @ 5	1, 4oz	Cool	001	X	X					X			
1/26	1030		PH05 @ 3			002	X	X					X			
	1000		PH04 @ 4			003	X	X					X			
	955		PH04 @ 2			004	X	X					X			
	935		PH03 @ 4			005	X	X					X			
	930		PH03 @ 3			006	X	X					X			
	905		PH02 @ 3			007	X	X					X			
	900		PH02 @ 2			008	X	X					X			
	840		PH01 @ 5			009	X	X					X			
↓	835	↓	PH01 @ 4	↓	↓	010	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/26/24	1206	Brandy Palmer	Chris Walls		1/26/24	1206
1/26/24	1724	Chris Walls		Courier	1/27/24	9:15

Remarks:
cc: SHyde@ensolum.com
wweichert@ensolum
gpulese@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 | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 06, 2024

Mitch Killough

Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX

RE: Sammons 2 OrderNo.: 2402A47

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 6 sample(s) on 2/22/2024 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: HA01@2
Project: Sammons 2
Collection Date: 2/21/2024 10:40:00 AM
Lab ID: 2402A47-001
Matrix: SOIL
Received Date: 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	700	60		mg/Kg	20	2/28/2024 11:47:29 AM	80683
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/27/2024 5:25:08 PM	80645
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/27/2024 5:25:08 PM	80645
Surr: DNOP	94.4	61.2-134		%Rec	1	2/27/2024 5:25:08 PM	80645
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/24/2024 2:37:03 PM	80580
Surr: BFB	101	15-244		%Rec	1	2/24/2024 2:37:03 PM	80580
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	2/24/2024 2:37:03 PM	80580
Toluene	ND	0.050		mg/Kg	1	2/24/2024 2:37:03 PM	80580
Ethylbenzene	ND	0.050		mg/Kg	1	2/24/2024 2:37:03 PM	80580
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2024 2:37:03 PM	80580
Surr: 4-Bromofluorobenzene	99.3	39.1-146		%Rec	1	2/24/2024 2:37:03 PM	80580

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: HA01@3
Project: Sammons 2
Collection Date: 2/21/2024 10:50:00 AM
Lab ID: 2402A47-002 **Matrix:** SOIL **Received Date:** 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	300	60		mg/Kg	20	2/28/2024 11:59:50 AM	80683
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	2/27/2024 6:01:34 PM	80645
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/27/2024 6:01:34 PM	80645
Surr: DNOP	94.7	61.2-134		%Rec	1	2/27/2024 6:01:34 PM	80645
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/24/2024 3:48:34 PM	80580
Surr: BFB	99.9	15-244		%Rec	1	2/24/2024 3:48:34 PM	80580
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	2/24/2024 3:48:34 PM	80580
Toluene	ND	0.049		mg/Kg	1	2/24/2024 3:48:34 PM	80580
Ethylbenzene	ND	0.049		mg/Kg	1	2/24/2024 3:48:34 PM	80580
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2024 3:48:34 PM	80580
Surr: 4-Bromofluorobenzene	97.8	39.1-146		%Rec	1	2/24/2024 3:48:34 PM	80580

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: HA02@3
Project: Sammons 2
Collection Date: 2/21/2024 11:20:00 AM
Lab ID: 2402A47-003 **Matrix:** SOIL **Received Date:** 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	100	59		mg/Kg	20	2/28/2024 12:12:10 PM	80683
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/27/2024 6:13:41 PM	80645
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/27/2024 6:13:41 PM	80645
Surr: DNOP	106	61.2-134		%Rec	1	2/27/2024 6:13:41 PM	80645
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/24/2024 4:36:09 PM	80580
Surr: BFB	97.1	15-244		%Rec	1	2/24/2024 4:36:09 PM	80580
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	2/24/2024 4:36:09 PM	80580
Toluene	ND	0.050		mg/Kg	1	2/24/2024 4:36:09 PM	80580
Ethylbenzene	ND	0.050		mg/Kg	1	2/24/2024 4:36:09 PM	80580
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2024 4:36:09 PM	80580
Surr: 4-Bromofluorobenzene	94.8	39.1-146		%Rec	1	2/24/2024 4:36:09 PM	80580

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: HA02@4
Project: Sammons 2
Collection Date: 2/21/2024 11:30:00 AM
Lab ID: 2402A47-004
Matrix: SOIL
Received Date: 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	140	60		mg/Kg	20	2/28/2024 12:24:32 PM	80683
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/27/2024 6:25:47 PM	80645
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/27/2024 6:25:47 PM	80645
Surr: DNOP	89.6	61.2-134		%Rec	1	2/27/2024 6:25:47 PM	80645
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/24/2024 4:59:59 PM	80580
Surr: BFB	97.1	15-244		%Rec	1	2/24/2024 4:59:59 PM	80580
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	2/24/2024 4:59:59 PM	80580
Toluene	ND	0.050		mg/Kg	1	2/24/2024 4:59:59 PM	80580
Ethylbenzene	ND	0.050		mg/Kg	1	2/24/2024 4:59:59 PM	80580
Xylenes, Total	ND	0.10		mg/Kg	1	2/24/2024 4:59:59 PM	80580
Surr: 4-Bromofluorobenzene	94.8	39.1-146		%Rec	1	2/24/2024 4:59:59 PM	80580

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: HA03@1
Project: Sammons 2
Collection Date: 2/21/2024 12:00:00 PM
Lab ID: 2402A47-005 **Matrix:** SOIL **Received Date:** 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**SNS**
Chloride	ND	60		mg/Kg	20	2/28/2024 12:36:52 PM	80683
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**JKU**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	2/27/2024 6:37:58 PM	80645
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	2/27/2024 6:37:58 PM	80645
Surr: DNOP	87.2	61.2-134		%Rec	1	2/27/2024 6:37:58 PM	80645
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/24/2024 5:23:45 PM	80580
Surr: BFB	97.4	15-244		%Rec	1	2/24/2024 5:23:45 PM	80580
EPA METHOD 8021B: VOLATILES						Analyst:	**JJP**
Benzene	ND	0.025		mg/Kg	1	2/24/2024 5:23:45 PM	80580
Toluene	ND	0.049		mg/Kg	1	2/24/2024 5:23:45 PM	80580
Ethylbenzene	ND	0.049		mg/Kg	1	2/24/2024 5:23:45 PM	80580
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2024 5:23:45 PM	80580
Surr: 4-Bromofluorobenzene	96.2	39.1-146		%Rec	1	2/24/2024 5:23:45 PM	80580

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: HA03@3
Project: Sammons 2
Collection Date: 2/21/2024 12:20:00 PM
Lab ID: 2402A47-006 **Matrix:** SOIL **Received Date:** 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**SNS**
Chloride	ND	60		mg/Kg	20	2/28/2024 1:13:54 PM	80683
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**JKU**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/27/2024 6:50:02 PM	80645
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/27/2024 6:50:02 PM	80645
Surr: DNOP	87.5	61.2-134		%Rec	1	2/27/2024 6:50:02 PM	80645
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/24/2024 5:47:27 PM	80580
Surr: BFB	98.5	15-244		%Rec	1	2/24/2024 5:47:27 PM	80580
EPA METHOD 8021B: VOLATILES						Analyst:	**JJP**
Benzene	ND	0.025		mg/Kg	1	2/24/2024 5:47:27 PM	80580
Toluene	ND	0.050		mg/Kg	1	2/24/2024 5:47:27 PM	80580
Ethylbenzene	ND	0.050		mg/Kg	1	2/24/2024 5:47:27 PM	80580
Xylenes, Total	ND	0.099		mg/Kg	1	2/24/2024 5:47:27 PM	80580
Surr: 4-Bromofluorobenzene	96.4	39.1-146		%Rec	1	2/24/2024 5:47:27 PM	80580

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2402A47**
06-Mar-24

Client: Hilcorp Energy
Project: Sammons 2

Sample ID: **LCS-80683** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **80683** RunNo: **103398**
Prep Date: **2/28/2024** Analysis Date: **2/28/2024** SeqNo: **3825355** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402A47**

06-Mar-24

Client: Hilcorp Energy

Project: Sammons 2

Sample ID: **MB-80645**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80645**	RunNo: **103351**
Prep Date: **2/26/2024**	Analysis Date: **2/27/2024**	SeqNo: **3823708** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		89.9	61.2	134			

Sample ID: **LCS-80645**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80645**	RunNo: **103351**
Prep Date: **2/26/2024**	Analysis Date: **2/27/2024**	SeqNo: **3823709** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.1	59.7	135			
Surr: DNOP	4.6		5.000		91.8	61.2	134			

Sample ID: **2402A47-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **HA01@2**	Batch ID: **80645**	RunNo: **103351**
Prep Date: **2/26/2024**	Analysis Date: **2/27/2024**	SeqNo: **3823711** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	8.9	44.44	0	80.1	43.7	136			
Surr: DNOP	4.0		4.444		90.4	61.2	134			

Sample ID: **2402A47-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **HA01@2**	Batch ID: **80645**	RunNo: **103351**
Prep Date: **2/26/2024**	Analysis Date: **2/27/2024**	SeqNo: **3823712** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.3	46.47	0	78.6	43.7	136	2.55	31.3	
Surr: DNOP	4.1		4.647		87.9	61.2	134	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402A47**

06-Mar-24

Client: Hilcorp Energy

Project: Sammons 2

Sample ID: **lcs-80580**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820651** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.8	70	130			
Surr: BFB	2000		1000		201	15	244			

Sample ID: **lcs-80597**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80597**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/23/2024**	SeqNo: **3820653** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		213	15	244			

Sample ID: **mb-80580**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820655** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.2	15	244			

Sample ID: **mb-80597**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80597**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/23/2024**	SeqNo: **3820657** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		99.9	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402A47**

06-Mar-24

Client: Hilcorp Energy

Project: Sammons 2

Sample ID: **LCS-80580**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820890** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.8	70	130			
Toluene	0.96	0.050	1.000	0	96.4	70	130			
Ethylbenzene	0.98	0.050	1.000	0	97.9	70	130			
Xylenes, Total	3.0	0.10	3.000	0	98.4	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	39.1	146			

Sample ID: **LCS-80597**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80597**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/23/2024**	SeqNo: **3820891** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	39.1	146			

Sample ID: **mb-80580**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820892** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		95.8	39.1	146			

Sample ID: **mb-80597**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80597**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/23/2024**	SeqNo: **3820893** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	39.1	146			

Sample ID: **2402a47-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **HA01@2**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820940** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9862	0	106	70	130			
Toluene	1.1	0.049	0.9862	0	109	70	130			
Ethylbenzene	1.1	0.049	0.9862	0	113	70	130			
Xylenes, Total	3.4	0.099	2.959	0	114	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402A47**

06-Mar-24

Client: Hilcorp Energy

Project: Sammons 2

Sample ID: **2402a47-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **HA01@2**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820940** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		0.9862		97.7	39.1	146			

Sample ID: **2402a47-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **HA01@2**	Batch ID: **80580**	RunNo: **103284**
Prep Date: **2/22/2024**	Analysis Date: **2/24/2024**	SeqNo: **3820942** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.024	0.9747	0	102	70	130	4.94	20	
Toluene	1.0	0.049	0.9747	0	105	70	130	4.80	20	
Ethylbenzene	1.1	0.049	0.9747	0	109	70	130	5.26	20	
Xylenes, Total	3.2	0.097	2.924	0	110	70	130	4.82	20	
Surr: 4-Bromofluorobenzene	0.97		0.9747		99.3	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Hilcorp Energy** Work Order Number: **2402A47** RcptNo: **1**

Received By: **Tracy Casarrubias** **2/22/2024 7:00:00 AM**

Completed By: **Tracy Casarrubias** **2/22/2024 8:09:44 AM**

Reviewed By: TMC 2/22/24

Chain of Custody

1. Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐	
2. How was the sample delivered?	Courier			

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: TMC 2/22/24

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: Mailing address and phone number are missing ono COC- TMC 2/22/24

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.2	Good	Yes	Morty		

Chain-of-Custody Record

Client: Hilcorp Energy Company
Attn: Mitch Killough
Mailing Address:

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

Turn-Around Time: 5-day
☑ Standard ☐ Rush
Project Name: Summons #2
Project #:
Project Manager: S. Hyde
Sampler: Al Thomson
On Ice: ☑ Yes ☐ No marty
# of Coolers: 1
Cooler Temp(Including CF): 3.3 - 0.1 = 3.2 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2402A47	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)
2-21	1040	soil	HA01@2	1x 4oz	Cool	001	X	X					X			
	1050		HA01@3			002										
	1120		HA02@3			003										
	1130		HA02@4			004										
	1200		HA03@1			005										
	1220		HA03@3			006										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2-21	1420	Al Thomson	[illegible]	Walk	2/21/24	1420
2/21/24	1740	[illegible]	[illegible]	Courier	2/22/24	7:00

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.

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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 327276

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2336429577**
Incident Name	**NAPP2336429577 SAMMONS NO. 2 @ 30-045-09025**
Incident Type	**Oil Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-045-09025] SAMMONS #002**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Sammons No. 2
Date Release Discovered	12/29/2023
Surface Owner	Private

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	*Not answered.*
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	Cause: Equipment Failure | Production Tank | Condensate | Released: 6 BBL | Recovered: 0 BBL | Lost: 6 BBL.
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)	On 12/29/2023 at approximately 12:30 pm (MT), a Hilcorp operator discovered a 6-bbl condensate release at the Sammons 2 (API No. 30-045-09025) in San Juan County, NM (36.77139, -108.11789) while performing AVO surveys. Surface ownership at the site is fee surface/fee mineral (Parcel Owner: Andrea Corporation). Upon discovery, the operator observed fluids within secondary containment. Although none of the fluids migrated horizontally outside of secondary containment, approximately 6 bbls of fluid are assumed to have soaked into the underlying soils beneath the liner. It is believed that the spilled fluids were recovered with a water hauler truck on the day of the release, but a waste ticket was not generated by the hauler since it was placed back into the condensate tank after being recovered. At this time, the primary cause is determined to be a cracked hammer union on the oil fill line.

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

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	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
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	False
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	Although none of the fluids migrated horizontally outside of secondary containment, approximately 6 bbls of fluid are assumed to have soaked into the underlying soils beneath the liner. It is believed that the spilled fluids were recovered with a water hauler truck on the day of the release, but a waste ticket was not generated by the hauler since it was placed back into the condensate tank after being recovered.
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: 03/27/2024

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

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)	Less than or equal 25 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
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 100 and 200 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 100 (ft.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 300 and 500 (ft.)
Any other fresh water well or spring	Between 300 and 500 (ft.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 300 and 500 (ft.)
A wetland	Between 1 and 100 (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	Low
A 100-year floodplain	Between 1 and 100 (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)	650
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	436
GRO+DRO (EPA SW-846 Method 8015M)	326
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
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	05/01/2024
On what date will (or did) the final sampling or liner inspection occur	05/01/2024
On what date will (or was) the remediation complete(d)	06/01/2024
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	850
What is the estimated volume (in cubic yards) that will be remediated	175
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: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

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 [fSC00000000048]
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	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
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: 03/27/2024
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.	

District I
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Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

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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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**315236**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/21/2024**
What was the (estimated) number of samples that were to be gathered	**20**
What was the sampling surface area in square feet	**30000**

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	No

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CONDITIONS

Action 327276

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 327276
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan is approved as written. Hilcorp has 90-days (July 31, 2024) to submit to OCD its appropriate or final remediation closure report.	5/2/2024