ENSOLUM

May 29, 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: Site Remediation Report and Closure Request
Witt 1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nAPP2403723976

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Site Remediation Report and Closure Request* associated with a historical release of produced water and condensate discovered at the Witt 1 natural gas production well (Site). The Site is located on private land in Unit N, Section 33, Township 29 North, Range 11 West, San Juan County, New Mexico (Figure 1).

SITE BACKGROUND

During the removal of a below grade tank (BGT) storage vessel at the Site, a historical release of condensate and produced was discovered by Hilcorp operations. Upon initial discovery on December 18, 2023, a 5-point composite sample was collected from the area underneath the BGT and laboratory analysis indicated elevated concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and total petroleum hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO). Based on soil delineation data and concentrations of BTEX and total TPH, an estimated volume of 15.3 barrels (bbls) of condensate and produced water were released at the Site.

Hilcorp informed the New Mexico Oil Conservation Division (NMOCD) on February 6, 2024, with a Notification of Release (NOR), following assessment activities confirming the presence of impacts and estimated volume calculation. NMOCD assigned the release incident number nAPP2403723976.

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).

GEOLOGY AND HYDROGEOLOGY

The Site is located within the Nacimiento Geologic Formation. In the report titled *Hydrogeology and Water Resources of San Juan Basin, New Mexico* (Stone, et. al., 1983), the Nacimiento Formation is characterized by interbedded black carbonaceous mudstones and white, coarse-grained sandstones, which ranges in thickness from 418 feet to 2,232 feet. The hydrogeologic properties of the Nacimiento

Formation display variable hydrogeologic properties dependent on location. Where sufficient yield is present, the primary use of water from this formation is for domestic and/or livestock supply. The Nacimiento Formation is underlain by the Ojo Alamo sandstone (Stone et. al., 1983).

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 closest significant watercourse is an intermittent stream located 220 feet northwest of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and is greater than 300 feet from a wetland (Figure 1). The nearest fresh-water well with depth-to-groundwater information is NMOSE permitted well SJ-04027 (Appendix A), located approximately 3,120 feet west of the Site. The recorded depth to water on the NMOSE database is 4 feet below ground surface (bgs). Well SJ-04027 is located at an elevation of approximately 5,434 feet above mean sea level (AMSL), which is approximately 46 feet lower in elevation than the Site. As such, depth to groundwater beneath the Site is estimated to be approximately 50 feet bgs. No wellhead protection areas, springs, or domestic/stock wells are located within a ½-mile radius from the Site. 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. Nearby sensitive receptors are presented 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)
- BTEX: 50 mg/kg
- TPH: 100 mg/kg
- Chloride: 600 mg/kg

2024 SITE ASSESSMENT AND REMEDIATION ACTIVITIES

To assess soil impacts and delineate the release, Hilcorp and Ensolum advanced eight potholes (PH01 through PH08) using a backhoe on January 17, 2024. Pothole PH01 was advanced in the center of the release under the BGT storage vessel to assess chloride concentrations and petroleum impacts at the release source. Potholes PH02 through PH08 were advanced laterally away from the source area to assess the lateral and vertical extent of the release. Sampling notification was provided to the NMOCD prior to the start of work, with correspondence attached in Appendix B. During potholing activities, an Ensolum geologist assessed and field screened the soil for petroleum hydrocarbon staining, odors, and chloride crusting. Soil samples were field screened for the presence of volatile organic compounds (VOCs) using a calibrated photoionization detector (PID, see Table 1) and chloride using Hach® QuanTab® test strips. Moderate to strong hydrocarbon odors and bluish staining were observed in soil from potholes PH01, PH03, PH04, and PH07. Blue stained material was removed until field screening observations indicated that all impacted soil had been removed. The underlying sandstone was gray-brown in color with low PID readings. All potholes were advanced until either refusal with the backhoe

or field screening indicated the soil was presumed unimpacted by chloride and/or petroleum hydrocarbons (Figure 2).

Two soil samples were collected from potholes PH01 through PH07 at depth intervals corresponding to the greatest potential for impacts based on field screening measurements, as well as the terminal depth of the pothole. One soil sample was collected from the terminal depth at PH08 due to lack of petroleum hydrocarbon indicators and low PID readings in shallow sampling intervals. Soil samples were collected directly into laboratory-provided jars, immediately placed on ice, and submitted to Eurofins Environment Testing (Eurofins) following strict chain of custody procedures for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B, TPH following EPA Method 8015M/D, and chloride following EPA Method 300.0. Soil sample analytical results are summarized in Table 1, with complete laboratory analytical reports attached as Appendix C.

Based on the initial delineation results, Hilcorp began excavation activities to remove impacted soil on March 29, 2024. Ensolum personnel conducted excavation oversight and sampling activities during this work. Sampling notification was provided to the NMOCD prior to the start of work, with correspondence attached in Appendix B. To direct excavation activities, Ensolum personnel field screened soil for chloride and VOCs. Once field screening indicated impacted soil had likely been removed, 5-point composite soil samples were collected from the floor (FS01 though FS18) and sidewalls (WS01 through WS06) of the excavation at a frequency not exceeding one sample per 200 square feet. The 5-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 placed into laboratory provided containers and transported to Eurofins for laboratory analysis of BTEX, TPH, and chloride following the same methods stated above.

Laboratory analytical results from the excavation sampling completed on April 1, 2024, indicated several floor samples exceeded the NMOCD Closure Criteria for chloride and TPH. As such, Hilcorp and Ensolum returned to the Site on April 24, 2024, to remove additional impacted soil. The excavation was extended to a depth of 6 feet bgs in floor sampling areas FS02, FS10, FS11, FS12, FS13, FS14, and FS15. New floor samples were collected from these areas and submitted to Eurofins for analysis of BTEX, TPH, and chloride. Soil exposed in shallow sidewalls in these areas was included in the 5-point composite samples.

Analytical results indicated concentrations of BTEX, TPH, and chloride were compliant with the NMOCD Table I Closure Criteria and the reclamation requirement in all confirmation soil samples collected on April 24, 2024, from the final excavation extents. Soil analytical results collected during delineation and confirmation sampling events are summarized in Table 1, with complete laboratory reports included in Appendix C. Sampling locations are presented on Figure 2. Photographs taken during the sampling events are attached in Appendix D.

CONCLUSIONS AND CLOSURE REQUEST

Based on the analytical results described above, petroleum hydrocarbon and/or chloride contaminants were not detected above the NMOCD Table I Closure Criteria or reclamation requirement in any of the confirmation samples collected on April 1 and/or April 24, 2024, from the final excavation extent. The Site appears to be absent of soil impacts and waste-containing soil. As such, Site conditions appear to be protective of human health, the environment, and groundwater and Hilcorp respectfully requests closure for Incident Number nAPP2403723976.

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

Sincerely,
Ensolum, LLC

Wes Weichert
Project Geologist
(816) 266-8732
wweichert@ensolum.com

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

Attachments:

Figure 1:	Site Receptor Map
Figure 2:	Soil Sample Locations
Table 1:	Soil Sample Analytical Results
Appendix A:	NMOSE Point of Diversion Summary
Appendix B:	Agency Sampling Notification
Appendix C:	Laboratory Analytical Reports
Appendix D:	Photographic Log

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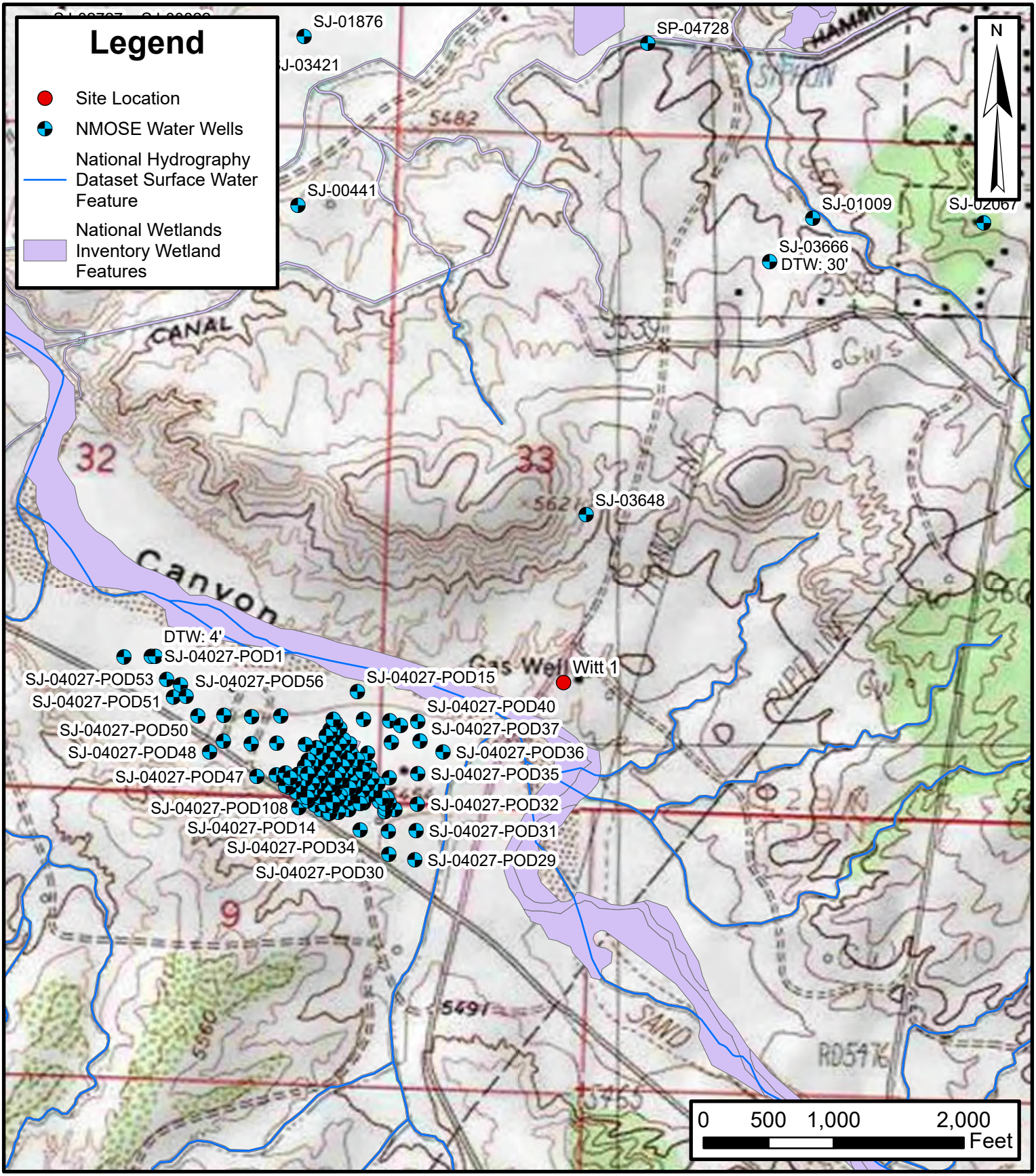
FIGURES



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Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Witt 1
Hilcorp Energy Company

36.678101°,-108.001072°
San Juan County, New Mexico

FIGURE
1

Default Folder: C:\Users\Greg Pelesel\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\Ensolum GIS1 - Durango\Hilcorp\Witt 1

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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations Map

Witt 1
Hilcorp Energy Company

36.678101°,-108.001072°
San Juan County, New Mexico

FIGURE
2

Sources: Google Earth (2019)

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Witt 1
Hilcorp Energy Company
San Juan County, New Mexico

Sample Identification	Date	Depth (feet bgs)	PID (ppm)	Chloride (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (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)
NMOCD Closure Criteria for Soils Impacted by a Release			NE	**600**	**10**	NE	NE	NE	**50**	NE	NE	NE	**100**
Delineation Soil Sample Results													
BGT 5-Point	12/18/2023	---	NM	410	<0.12	3.8	1.1	110	**115**	1,400	970	270	**2,640**
PH01 @ 1	1/17/2024	1.0	3,340	160	<1.2	32	35	340	**407**	4,000	530	<50	**4,530**
PH01 @ 3.75	1/17/2024	3.75	17.3	<60	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<48	<48
PH02 @ 3	1/17/2024	3.0	16.0	<60	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<49	<49
PH02 @ 5	1/17/2024	5.0	2.5	<60	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.4	<47	<47
PH03 @ 3	1/17/2024	3.0	3,160	<60	<0.048	0.99	<0.096	15	16	350	200	<49	**550**
PH03 @ 4.5	1/17/2024	4.5	117	<60	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.7	<48	<48
PH04 @ 3	1/17/2024	3.0	797	<60	<0.023	0.069	<0.045	0.33	0.399	26	140	<46	**166**
PH04 @ 4.5	1/17/2024	4.5	15.0	<61	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.2	<46	<46
PH05 @ 3	1/17/2024	3.0	17.3	<60	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.5	<48	<48
PH05 @ 4.5	1/17/2024	4.5	13.0	<60	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.5	<48	<48
PH06 @ 4	1/17/2024	4.0	5.0	76	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.0	<45	<45
PH06 @ 5	1/17/2024	5.0	7.9	<60	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.2	<46	<46
PH07 @ 4	1/17/2024	4.0	320	<60	<0.024	0.90	<0.048	4.3	5.2	150	740	100	**990**
PH07 @ 5	1/17/2024	5.0	1,414	<60	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<9.2	<46	<46
PH08 @ 5	1/17/2024	5.0	15.0	79	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<8.8	<44	<44
Excavation Sidewall Confirmation Soil Sample Results													
WS01	4/1/2024	0 - 3	4.3	49	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<9.6	<48	<48
WS02	4/1/2024	0 - 4	7.8	90	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.5	<47	<47
WS03	4/1/2024	0 - 3	6.20	130	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.5	<48	<48
WS04	4/1/2024	0 - 4	9.1	250	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.9	<49	<49
WS05	4/1/2024	0 - 4	2.2	260	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.1	<46	<46
WS06	4/1/2024	0 - 4	3.6	260	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.5	<48	<48

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Witt 1
Hilcorp Energy Company
San Juan County, New Mexico

Sample Identification	Date	Depth (feet bgs)	PID (ppm)	Chloride (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (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)
NMOCD Closure Criteria for Soils Impacted by a Release			NE	**600**	**10**	NE	NE	NE	**50**	NE	NE	NE	**100**
Excavation Floor Confirmation Soil Sample Results													
FS01	4/1/2024	4.0	8.2	32	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.4	<47	<47
~~FS02~~	~~4/1/2024~~	~~4.0~~	~~6.1~~	~~46~~	~~<0.024~~	~~<0.048~~	~~<0.048~~	~~<0.096~~	~~<0.096~~	~~<4.8~~	~~76~~	~~75~~	~~**151**~~
FS02A@6'	4/24/2024	6.0	18.5	22	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.7	<48	<48
FS03	4/1/2024	4.0	10.2	17	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.9	<49	<49
FS04	4/1/2024	4.0	9.8	29	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.3	<47	<47
FS05	4/1/2024	4.0	7.2	260	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	9.5	<45	9.5
FS06	4/1/2024	4.0	13.6	29	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	13	<47	13
FS07	4/1/2024	4.0	11.0	32	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	13	<50	13
FS08	4/1/2024	4.0	20.3	28	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	10	<49	10
FS09	4/1/2024	4.0	15.6	28	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	16	<47	16
~~FS10~~	~~4/1/2024~~	~~4.0~~	~~5.6~~	~~**680**~~	~~<0.024~~	~~<0.048~~	~~<0.048~~	~~<0.097~~	~~<0.097~~	~~<4.8~~	~~110~~	~~51~~	~~**161**~~
FS10A@6'	4/24/2024	6.0	6.5	14	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.4	<47	<47
~~FS11~~	~~4/1/2024~~	~~4.0~~	~~7.8~~	~~**740**~~	~~<0.024~~	~~<0.048~~	~~<0.048~~	~~<0.096~~	~~<0.096~~	~~<4.8~~	~~500~~	~~340~~	~~**840**~~
FS11A@6'	4/24/2024	6.0	17.3	26	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.6	<48	<48
~~FS12~~	~~4/1/2024~~	~~4.0~~	~~3.1~~	~~**850**~~	~~<0.024~~	~~<0.048~~	~~<0.048~~	~~<0.096~~	~~<0.096~~	~~<4.8~~	~~760~~	~~500~~	~~**1,260**~~
FS12A@6'	4/24/2024	6.0	11.8	67	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.5	<47	<47
~~FS13~~	~~4/1/2024~~	~~4.0~~	~~4.8~~	~~**890**~~	~~<0.023~~	~~<0.047~~	~~<0.047~~	~~<0.093~~	~~<0.093~~	~~<4.7~~	~~880~~	~~720~~	~~**1,600**~~
FS13A@6'	4/24/2024	6.0	7.5	45	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.6	<48	<48
~~FS14~~	~~4/1/2024~~	~~4.0~~	~~19.2~~	~~**860**~~	~~<0.023~~	~~<0.046~~	~~<0.046~~	~~<0.092~~	~~<0.092~~	~~<4.6~~	~~800~~	~~540~~	~~**1,340**~~
FS14A@6'	4/24/2024	6.0	18.3	37	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.7	<49	<49
~~FS15~~	~~4/1/2024~~	~~4.0~~	~~16.3~~	~~**690**~~	~~<0.025~~	~~<0.050~~	~~<0.050~~	~~<0.099~~	~~<0.099~~	~~<5.0~~	~~900~~	~~690~~	~~**1,590**~~
FS15A@6'	4/24/2024	6.0	18.3	25	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<8.5	<42	<42
FS16	4/1/2024	4.0	18.7	180	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.6	<48	<48
FS17	4/1/2024	4.0	29.6	130	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.7	<48	<48
FS18	4/1/2024	4.0	20.3	140	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<8.7	<43	<43

Notes:

bgs: Below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: Milligrams per kilogram
NE: Not Established
NM: Not Measured
NMOCD: New Mexico Oil Conservation Division
PID: Photoionization detector
ppm: Parts per million
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil/Lube Oil Range Organics
TPH: Total Petroleum Hydrocarbon
': Feet
<: 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*
~~Grey~~ text indicates soil sample removed during excavation activities

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APPENDIX A

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	SJ 04027 POD1	2	3	4	32	29N	11W	230855	4063409

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

Driller License:	1643	**Driller Company:**	BIOTECH REMEDIATION INC.		
Driller Name:	BEAUPARLANT, MICHAEL				
Drill Start Date:		**Drill Finish Date:**		**Plug Date:**	
Log File Date:	10/23/2012	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	1 GPM
Casing Size:	2.00	**Depth Well:**	7 feet	**Depth Water:**	4 feet

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APPENDIX B

From: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 325901
Date: Friday, March 22, 2024 11:02:32 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#) nAPP2403723976.

The sampling event is expected to take place:

When: 03/29/2024 @ 09:00
Where: N-33-29N-11W 1120 FSL 1510 FWL (36.6785202,-108.0009537)

Additional Information: Please contact PM Stuart Hyde, 970-903-1607

Additional Instructions: Witt 1 Well Pad, site coordinates: 36.678303, -108.000211

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: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 327091
Date: Wednesday, March 27, 2024 6:57:09 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#) nAPP2403723976.

The sampling event is expected to take place:

When: 04/01/2024 @ 09:00
Where: N-33-29N-11W 1120 FSL 1510 FWL (36.6785202,-108.0009537)

Additional Information: Please contact PM Stuart Hyde, 970-903-1607

Additional Instructions: Witt 1 Well Pad, site coordinates: 36.678303, -108.000211

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: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 335364
Date: Friday, April 19, 2024 1:10:54 PM

[**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#) nAPP2403723976.

The sampling event is expected to take place:

When: 04/24/2024 @ 09:00
Where: N-33-29N-11W 1120 FSL 1510 FWL (36.6785202,-108.0009537)

Additional Information: Contact PM Stuart Hyde, 970-903-1607

Additional Instructions: Witt 1 Well Pad, site coordinates: 36.678303, -108.000211

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- **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: Mitch Killough
Subject: Re: [EXTERNAL] nAPP2403723976 - Hilcorp Witt 1 Reporting Extension Request
Date: Wednesday, May 1, 2024 10:16:31 AM
Attachments: image001.png
image002.png
image003.png
Outlook-0zpuvc4v.png

[**EXTERNAL EMAIL**]
Good morning Stuart,

Your 60-day time extension request is approved. Remediation Due date has been updated to July 1, 2024.

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: Monday, April 29, 2024 10:29 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>
Subject: [EXTERNAL] nAPP2403723976 - Hilcorp Witt 1 Reporting Extension Request

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

Nelson,

On behalf of Hilcorp Energy Company, Ensolum is requesting an extension to the May 2, 2024 reporting deadline for the Witt 1 site located in San Juan County (coordinates 36.678303,

-108.000211). To date, a majority of impacted soil was excavated from the Site on April 1, 2024. Based on sampling results from this event, several confirmation floor samples contained exceedances of TPH and/or chloride above the applicable Table I Closure Criteria. As such, additional soil was removed from these areas on April 24, 2024 and the floor areas were resampled. At this time, we are awaiting analytical results and therefore would like to request a 60-day extension to the reporting deadline in order to receive analytical results and complete the final report. If approved, the new reporting deadline would be Monday July 1, 2024.

Please reach out with any questions regarding the site or work that has been performed. Thanks.

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

ENSOLUM

APPENDIX C

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/3/2024 3:43:53 PM

JOB DESCRIPTION

Witt 1

JOB NUMBER

885-3385-1

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
5/3/2024 3:43:53 PM

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

Client: Hilcorp Energy
Project/Site: Witt 1

Laboratory Job ID: 885-3385-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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: Witt 1

Job ID: 885-3385-1

Job ID: 885-3385-1 Eurofins Albuquerque

Job Narrative
885-3385-1

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 4/25/2024 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 4.5°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
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D - Soluble: The Chloride matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-79679 and analytical batch 880-79688 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

FS02A@6' (885-3385-1), FS10A@6' (885-3385-2), FS11A@6' (885-3385-3) and FS12A@6' (885-3385-4)

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: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS02A@6'

Date Collected: 04/24/24 10:00
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-1

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		4.8		mg/Kg		04/25/24 12:10	04/27/24 07:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*15 - 244*	*04/25/24 12:10*	*04/27/24 07:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/25/24 12:10	04/27/24 07:28	1
Ethylbenzene	ND		0.048		mg/Kg		04/25/24 12:10	04/27/24 07:28	1
Toluene	ND		0.048		mg/Kg		04/25/24 12:10	04/27/24 07:28	1
Xylenes, Total	ND		0.097		mg/Kg		04/25/24 12:10	04/27/24 07:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*39 - 146*	*04/25/24 12:10*	*04/27/24 07:28*	*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		9.7		mg/Kg		04/26/24 12:53	04/29/24 20:08	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/26/24 12:53	04/29/24 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*107*		*62 - 134*	*04/26/24 12:53*	*04/29/24 20:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		5.0		mg/Kg			05/01/24 12:10	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS10A@6'

Date Collected: 04/24/24 12:40
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-2

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		4.9		mg/Kg		04/25/24 12:10	04/27/24 07:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/25/24 12:10*	*04/27/24 07:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/25/24 12:10	04/27/24 07:50	1
Ethylbenzene	ND		0.049		mg/Kg		04/25/24 12:10	04/27/24 07:50	1
Toluene	ND		0.049		mg/Kg		04/25/24 12:10	04/27/24 07:50	1
Xylenes, Total	ND		0.098		mg/Kg		04/25/24 12:10	04/27/24 07:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*39 - 146*	*04/25/24 12:10*	*04/27/24 07:50*	*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		9.4		mg/Kg		04/26/24 12:53	04/29/24 20:22	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/26/24 12:53	04/29/24 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*104*		*62 - 134*	*04/26/24 12:53*	*04/29/24 20:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		5.0		mg/Kg			05/01/24 12:16	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS11A@6'

Date Collected: 04/24/24 14:30
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-3

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		4.8		mg/Kg		04/26/24 11:43	04/30/24 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*04/26/24 11:43*	*04/30/24 01:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/26/24 11:43	04/30/24 01:17	1
Ethylbenzene	ND		0.048		mg/Kg		04/26/24 11:43	04/30/24 01:17	1
Toluene	ND		0.048		mg/Kg		04/26/24 11:43	04/30/24 01:17	1
Xylenes, Total	ND		0.097		mg/Kg		04/26/24 11:43	04/30/24 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/26/24 11:43*	*04/30/24 01:17*	*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		9.6		mg/Kg		05/01/24 15:58	05/02/24 15:29	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		05/01/24 15:58	05/02/24 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*107*		*62 - 134*	*05/01/24 15:58*	*05/02/24 15:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26**		5.0		mg/Kg			05/01/24 12:23	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS12A@6'

Date Collected: 04/24/24 14:20
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-4

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		4.8		mg/Kg		04/26/24 11:43	04/30/24 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*15 - 244*	*04/26/24 11:43*	*04/30/24 02:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/26/24 11:43	04/30/24 02:23	1
Ethylbenzene	ND		0.048		mg/Kg		04/26/24 11:43	04/30/24 02:23	1
Toluene	ND		0.048		mg/Kg		04/26/24 11:43	04/30/24 02:23	1
Xylenes, Total	ND		0.097		mg/Kg		04/26/24 11:43	04/30/24 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/26/24 11:43*	*04/30/24 02:23*	*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		9.5		mg/Kg		05/01/24 15:58	05/02/24 15:42	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		05/01/24 15:58	05/02/24 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*05/01/24 15:58*	*05/02/24 15:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67**		5.0		mg/Kg			05/01/24 12:29	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS13A@6'

Date Collected: 04/24/24 14:00
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-5

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		4.9		mg/Kg		04/26/24 11:43	04/30/24 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*04/26/24 11:43*	*04/30/24 03:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/26/24 11:43	04/30/24 03:28	1
Ethylbenzene	ND		0.049		mg/Kg		04/26/24 11:43	04/30/24 03:28	1
Toluene	ND		0.049		mg/Kg		04/26/24 11:43	04/30/24 03:28	1
Xylenes, Total	ND		0.098		mg/Kg		04/26/24 11:43	04/30/24 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/26/24 11:43*	*04/30/24 03:28*	*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		9.6		mg/Kg		05/01/24 15:58	05/02/24 15:54	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		05/01/24 15:58	05/02/24 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*105*		*62 - 134*	*05/01/24 15:58*	*05/02/24 15:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45**		5.0		mg/Kg			04/30/24 17:45	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS14A@6'

Date Collected: 04/24/24 13:10
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-6

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		5.0		mg/Kg		04/26/24 11:43	04/30/24 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*04/26/24 11:43*	*04/30/24 03:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/26/24 11:43	04/30/24 03:50	1
Ethylbenzene	ND		0.050		mg/Kg		04/26/24 11:43	04/30/24 03:50	1
Toluene	ND		0.050		mg/Kg		04/26/24 11:43	04/30/24 03:50	1
Xylenes, Total	ND		0.10		mg/Kg		04/26/24 11:43	04/30/24 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*	*04/26/24 11:43*	*04/30/24 03:50*	*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		9.7		mg/Kg		05/01/24 15:58	05/02/24 16:06	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		05/01/24 15:58	05/02/24 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*122*		*62 - 134*	*05/01/24 15:58*	*05/02/24 16:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37**		5.0		mg/Kg			04/30/24 18:03	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS15A@6'

Date Collected: 04/24/24 13:30
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-7

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		4.8		mg/Kg		04/26/24 11:43	04/30/24 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*04/26/24 11:43*	*04/30/24 04:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/26/24 11:43	04/30/24 04:11	1
Ethylbenzene	ND		0.048		mg/Kg		04/26/24 11:43	04/30/24 04:11	1
Toluene	ND		0.048		mg/Kg		04/26/24 11:43	04/30/24 04:11	1
Xylenes, Total	ND		0.096		mg/Kg		04/26/24 11:43	04/30/24 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/26/24 11:43*	*04/30/24 04:11*	*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		8.5		mg/Kg		05/01/24 15:58	05/02/24 16:19	1
Motor Oil Range Organics [C28-C40]	ND		42		mg/Kg		05/01/24 15:58	05/02/24 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*103*		*62 - 134*	*05/01/24 15:58*	*05/02/24 16:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**		5.0		mg/Kg			04/30/24 18:10	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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

Lab Sample ID: MB 885-3834/1-A
Matrix: Solid
Analysis Batch: 4029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3834

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/24/24 13:52	04/26/24 11:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*04/24/24 13:52*	*04/26/24 11:50*	*1*

Lab Sample ID: MB 885-3888/1-A
Matrix: Solid
Analysis Batch: 4029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3888

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/25/24 12:10	04/26/24 22:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/25/24 12:10*	*04/26/24 22:44*	*1*

Lab Sample ID: LCS 885-3888/2-A
Matrix: Solid
Analysis Batch: 4029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3888

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	25.1		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*224*		*15 - 244*

Lab Sample ID: MB 885-3926/1-A
Matrix: Solid
Analysis Batch: 4120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3926

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/25/24 17:33	04/29/24 14:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*15 - 244*	*04/25/24 17:33*	*04/29/24 14:03*	*1*

Lab Sample ID: MB 885-3956/1-A
Matrix: Solid
Analysis Batch: 4120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3956

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/26/24 11:43	04/30/24 00:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*15 - 244*	*04/26/24 11:43*	*04/30/24 00:56*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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

Lab Sample ID: LCS 885-3956/2-A
Matrix: Solid
Analysis Batch: 4120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3956

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	23.7		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*207*		*15 - 244*

Lab Sample ID: 885-3385-3 MS
Matrix: Solid
Analysis Batch: 4120

Client Sample ID: FS11A@6'
Prep Type: Total/NA
Prep Batch: 3956

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		23.9	24.4		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*210*		*15 - 244*

Lab Sample ID: 885-3385-3 MSD
Matrix: Solid
Analysis Batch: 4120

Client Sample ID: FS11A@6'
Prep Type: Total/NA
Prep Batch: 3956

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		24.2	23.0		mg/Kg		95	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*214*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-3834/1-A
Matrix: Solid
Analysis Batch: 4030

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3834

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/24/24 13:52	04/26/24 11:50	1
Ethylbenzene	ND		0.050		mg/Kg		04/24/24 13:52	04/26/24 11:50	1
Toluene	ND		0.050		mg/Kg		04/24/24 13:52	04/26/24 11:50	1
Xylenes, Total	ND		0.10		mg/Kg		04/24/24 13:52	04/26/24 11:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/24/24 13:52*	*04/26/24 11:50*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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

Lab Sample ID: MB 885-3888/1-A
Matrix: Solid
Analysis Batch: 4030

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3888

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/25/24 12:10	04/26/24 22:44	1
Ethylbenzene	ND		0.050		mg/Kg		04/25/24 12:10	04/26/24 22:44	1
Toluene	ND		0.050		mg/Kg		04/25/24 12:10	04/26/24 22:44	1
Xylenes, Total	ND		0.10		mg/Kg		04/25/24 12:10	04/26/24 22:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*	*04/25/24 12:10*	*04/26/24 22:44*	*1*

Lab Sample ID: LCS 885-3888/3-A
Matrix: Solid
Analysis Batch: 4030

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3888

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.910		mg/Kg		91	70 - 130
Ethylbenzene	1.00	0.927		mg/Kg		93	70 - 130
m&p-Xylene	2.00	1.85		mg/Kg		92	70 - 130
o-Xylene	1.00	0.925		mg/Kg		92	70 - 130
Toluene	1.00	0.919		mg/Kg		92	70 - 130
Xylenes, Total	3.00	2.77		mg/Kg		92	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*

Lab Sample ID: MB 885-3926/1-A
Matrix: Solid
Analysis Batch: 4121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3926

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/25/24 17:33	04/29/24 14:03	1
Ethylbenzene	ND		0.050		mg/Kg		04/25/24 17:33	04/29/24 14:03	1
Toluene	ND		0.050		mg/Kg		04/25/24 17:33	04/29/24 14:03	1
Xylenes, Total	ND		0.10		mg/Kg		04/25/24 17:33	04/29/24 14:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/25/24 17:33*	*04/29/24 14:03*	*1*

Lab Sample ID: MB 885-3956/1-A
Matrix: Solid
Analysis Batch: 4121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3956

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/26/24 11:43	04/30/24 00:56	1
Ethylbenzene	ND		0.050		mg/Kg		04/26/24 11:43	04/30/24 00:56	1
Toluene	ND		0.050		mg/Kg		04/26/24 11:43	04/30/24 00:56	1
Xylenes, Total	ND		0.10		mg/Kg		04/26/24 11:43	04/30/24 00:56	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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

Lab Sample ID: MB 885-3956/1-A
Matrix: Solid
Analysis Batch: 4121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3956

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		39 - 146	04/26/24 11:43	04/30/24 00:56	1

Lab Sample ID: LCS 885-3956/3-A
Matrix: Solid
Analysis Batch: 4121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3956

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.933		mg/Kg		93	70 - 130
Ethylbenzene	1.00	0.927		mg/Kg		93	70 - 130
m&p-Xylene	2.00	1.85		mg/Kg		93	70 - 130
o-Xylene	1.00	0.923		mg/Kg		92	70 - 130
Toluene	1.00	0.925		mg/Kg		93	70 - 130
Xylenes, Total	3.00	2.78		mg/Kg		93	70 - 130

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

Lab Sample ID: 885-3385-4 MS
Matrix: Solid
Analysis Batch: 4121

Client Sample ID: FS12A@6'
Prep Type: Total/NA
Prep Batch: 3956

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.963	0.895		mg/Kg		93	70 - 130
Ethylbenzene	ND		0.963	0.895		mg/Kg		93	70 - 130
m&p-Xylene	ND		1.93	1.79		mg/Kg		93	70 - 130
o-Xylene	ND		0.963	0.890		mg/Kg		92	70 - 130
Toluene	ND		0.963	0.889		mg/Kg		92	70 - 130
Xylenes, Total	ND		2.89	2.68		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		39 - 146

Lab Sample ID: 885-3385-4 MSD
Matrix: Solid
Analysis Batch: 4121

Client Sample ID: FS12A@6'
Prep Type: Total/NA
Prep Batch: 3956

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.970	0.916		mg/Kg		94	70 - 130	2	20
Ethylbenzene	ND		0.970	0.921		mg/Kg		95	70 - 130	3	20
m&p-Xylene	ND		1.94	1.85		mg/Kg		95	70 - 130	3	20
o-Xylene	ND		0.970	0.929		mg/Kg		96	70 - 130	4	20
Toluene	ND		0.970	0.913		mg/Kg		94	70 - 130	3	20
Xylenes, Total	ND		2.91	2.78		mg/Kg		96	70 - 130	4	20

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

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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

Lab Sample ID: MB 885-3963/1-A
Matrix: Solid
Analysis Batch: 4042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3963

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/26/24 12:53	04/29/24 17:29	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/26/24 12:53	04/29/24 17:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*04/26/24 12:53*	*04/29/24 17:29*	*1*

Lab Sample ID: LCS 885-3963/2-A
Matrix: Solid
Analysis Batch: 4042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3963

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	41.8		mg/Kg		84	60 - 135		

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

Lab Sample ID: MB 885-4215/1-A
Matrix: Solid
Analysis Batch: 4310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4215

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/01/24 15:58	05/02/24 13:13	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/01/24 15:58	05/02/24 13:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*104*		*62 - 134*	*05/01/24 15:58*	*05/02/24 13:13*	*1*

Lab Sample ID: LCS 885-4215/2-A
Matrix: Solid
Analysis Batch: 4310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4215

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	47.8		mg/Kg		96	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*111*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-79680/1-A
Matrix: Solid
Analysis Batch: 79687

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			04/30/24 17:26	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-79680/2-A
Matrix: Solid
Analysis Batch: 79687

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-79680/3-A
Matrix: Solid
Analysis Batch: 79687

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	253		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 885-3385-5 MS
Matrix: Solid
Analysis Batch: 79687

Client Sample ID: FS13A@6'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	45		252	309		mg/Kg		105	90 - 110		

Lab Sample ID: 885-3385-5 MSD
Matrix: Solid
Analysis Batch: 79687

Client Sample ID: FS13A@6'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	45		252	310		mg/Kg		105	90 - 110	0	20

Lab Sample ID: MB 880-79679/1-A
Matrix: Solid
Analysis Batch: 79688

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			05/01/24 09:20	1

Lab Sample ID: LCS 880-79679/2-A
Matrix: Solid
Analysis Batch: 79688

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	235		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-79679/3-A
Matrix: Solid
Analysis Batch: 79688

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	238		mg/Kg		95	90 - 110	1	20

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

GC VOA

Prep Batch: 3834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-3834/1-A	Method Blank	Total/NA	Solid	5030C	

Prep Batch: 3888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Total/NA	Solid	5030C	
885-3385-2	FS10A@6'	Total/NA	Solid	5030C	
MB 885-3888/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-3888/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-3888/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 3926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-3926/1-A	Method Blank	Total/NA	Solid	5030C	

Prep Batch: 3956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-3	FS11A@6'	Total/NA	Solid	5030C	
885-3385-4	FS12A@6'	Total/NA	Solid	5030C	
885-3385-5	FS13A@6'	Total/NA	Solid	5030C	
885-3385-6	FS14A@6'	Total/NA	Solid	5030C	
885-3385-7	FS15A@6'	Total/NA	Solid	5030C	
MB 885-3956/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-3956/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-3956/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-3385-3 MS	FS11A@6'	Total/NA	Solid	5030C	
885-3385-3 MSD	FS11A@6'	Total/NA	Solid	5030C	
885-3385-4 MS	FS12A@6'	Total/NA	Solid	5030C	
885-3385-4 MSD	FS12A@6'	Total/NA	Solid	5030C	

Analysis Batch: 4029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Total/NA	Solid	8015D	3888
885-3385-2	FS10A@6'	Total/NA	Solid	8015D	3888
MB 885-3834/1-A	Method Blank	Total/NA	Solid	8015D	3834
MB 885-3888/1-A	Method Blank	Total/NA	Solid	8015D	3888
LCS 885-3888/2-A	Lab Control Sample	Total/NA	Solid	8015D	3888

Analysis Batch: 4030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Total/NA	Solid	8021B	3888
885-3385-2	FS10A@6'	Total/NA	Solid	8021B	3888
MB 885-3834/1-A	Method Blank	Total/NA	Solid	8021B	3834
MB 885-3888/1-A	Method Blank	Total/NA	Solid	8021B	3888
LCS 885-3888/3-A	Lab Control Sample	Total/NA	Solid	8021B	3888

Analysis Batch: 4120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-3	FS11A@6'	Total/NA	Solid	8015D	3956
885-3385-4	FS12A@6'	Total/NA	Solid	8015D	3956
885-3385-5	FS13A@6'	Total/NA	Solid	8015D	3956
885-3385-6	FS14A@6'	Total/NA	Solid	8015D	3956

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

GC VOA (Continued)

Analysis Batch: 4120 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-7	FS15A@6'	Total/NA	Solid	8015D	3956
MB 885-3926/1-A	Method Blank	Total/NA	Solid	8015D	3926
MB 885-3956/1-A	Method Blank	Total/NA	Solid	8015D	3956
LCS 885-3956/2-A	Lab Control Sample	Total/NA	Solid	8015D	3956
885-3385-3 MS	FS11A@6'	Total/NA	Solid	8015D	3956
885-3385-3 MSD	FS11A@6'	Total/NA	Solid	8015D	3956

Analysis Batch: 4121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-3	FS11A@6'	Total/NA	Solid	8021B	3956
885-3385-4	FS12A@6'	Total/NA	Solid	8021B	3956
885-3385-5	FS13A@6'	Total/NA	Solid	8021B	3956
885-3385-6	FS14A@6'	Total/NA	Solid	8021B	3956
885-3385-7	FS15A@6'	Total/NA	Solid	8021B	3956
MB 885-3926/1-A	Method Blank	Total/NA	Solid	8021B	3926
MB 885-3956/1-A	Method Blank	Total/NA	Solid	8021B	3956
LCS 885-3956/3-A	Lab Control Sample	Total/NA	Solid	8021B	3956
885-3385-4 MS	FS12A@6'	Total/NA	Solid	8021B	3956
885-3385-4 MSD	FS12A@6'	Total/NA	Solid	8021B	3956

GC Semi VOA

Prep Batch: 3963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Total/NA	Solid	SHAKE	
885-3385-2	FS10A@6'	Total/NA	Solid	SHAKE	
MB 885-3963/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-3963/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 4042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Total/NA	Solid	8015D	3963
885-3385-2	FS10A@6'	Total/NA	Solid	8015D	3963
MB 885-3963/1-A	Method Blank	Total/NA	Solid	8015D	3963
LCS 885-3963/2-A	Lab Control Sample	Total/NA	Solid	8015D	3963

Prep Batch: 4215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-3	FS11A@6'	Total/NA	Solid	SHAKE	
885-3385-4	FS12A@6'	Total/NA	Solid	SHAKE	
885-3385-5	FS13A@6'	Total/NA	Solid	SHAKE	
885-3385-6	FS14A@6'	Total/NA	Solid	SHAKE	
885-3385-7	FS15A@6'	Total/NA	Solid	SHAKE	
MB 885-4215/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-4215/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 4310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-3	FS11A@6'	Total/NA	Solid	8015D	4215
885-3385-4	FS12A@6'	Total/NA	Solid	8015D	4215
885-3385-5	FS13A@6'	Total/NA	Solid	8015D	4215

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

GC Semi VOA (Continued)

Analysis Batch: 4310 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-6	FS14A@6'	Total/NA	Solid	8015D	4215
885-3385-7	FS15A@6'	Total/NA	Solid	8015D	4215
MB 885-4215/1-A	Method Blank	Total/NA	Solid	8015D	4215
LCS 885-4215/2-A	Lab Control Sample	Total/NA	Solid	8015D	4215

HPLC/IC

Leach Batch: 79679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Soluble	Solid	DI Leach	
885-3385-2	FS10A@6'	Soluble	Solid	DI Leach	
885-3385-3	FS11A@6'	Soluble	Solid	DI Leach	
885-3385-4	FS12A@6'	Soluble	Solid	DI Leach	
MB 880-79679/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-79679/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-79679/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 79680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-5	FS13A@6'	Soluble	Solid	DI Leach	
885-3385-6	FS14A@6'	Soluble	Solid	DI Leach	
885-3385-7	FS15A@6'	Soluble	Solid	DI Leach	
MB 880-79680/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-79680/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-79680/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-3385-5 MS	FS13A@6'	Soluble	Solid	DI Leach	
885-3385-5 MSD	FS13A@6'	Soluble	Solid	DI Leach	

Analysis Batch: 79687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-5	FS13A@6'	Soluble	Solid	300.0	79680
885-3385-6	FS14A@6'	Soluble	Solid	300.0	79680
885-3385-7	FS15A@6'	Soluble	Solid	300.0	79680
MB 880-79680/1-A	Method Blank	Soluble	Solid	300.0	79680
LCS 880-79680/2-A	Lab Control Sample	Soluble	Solid	300.0	79680
LCSD 880-79680/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	79680
885-3385-5 MS	FS13A@6'	Soluble	Solid	300.0	79680
885-3385-5 MSD	FS13A@6'	Soluble	Solid	300.0	79680

Analysis Batch: 79688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3385-1	FS02A@6'	Soluble	Solid	300.0	79679
885-3385-2	FS10A@6'	Soluble	Solid	300.0	79679
885-3385-3	FS11A@6'	Soluble	Solid	300.0	79679
885-3385-4	FS12A@6'	Soluble	Solid	300.0	79679
MB 880-79679/1-A	Method Blank	Soluble	Solid	300.0	79679
LCS 880-79679/2-A	Lab Control Sample	Soluble	Solid	300.0	79679
LCSD 880-79679/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	79679

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS02A@6'
Date Collected: 04/24/24 10:00
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3888	JP	EET ALB	04/25/24 12:10
Total/NA	Analysis	8015D		1	4029	RA	EET ALB	04/27/24 07:28
Total/NA	Prep	5030C			3888	JP	EET ALB	04/25/24 12:10
Total/NA	Analysis	8021B		1	4030	RA	EET ALB	04/27/24 07:28
Total/NA	Prep	SHAKE			3963	DH	EET ALB	04/26/24 12:53
Total/NA	Analysis	8015D		1	4042	JU	EET ALB	04/29/24 20:08
Soluble	Leach	DI Leach			79679	SA	EET MID	04/30/24 15:02
Soluble	Analysis	300.0		1	79688	SMC	EET MID	05/01/24 12:10

Client Sample ID: FS10A@6'
Date Collected: 04/24/24 12:40
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3888	JP	EET ALB	04/25/24 12:10
Total/NA	Analysis	8015D		1	4029	RA	EET ALB	04/27/24 07:50
Total/NA	Prep	5030C			3888	JP	EET ALB	04/25/24 12:10
Total/NA	Analysis	8021B		1	4030	RA	EET ALB	04/27/24 07:50
Total/NA	Prep	SHAKE			3963	DH	EET ALB	04/26/24 12:53
Total/NA	Analysis	8015D		1	4042	JU	EET ALB	04/29/24 20:22
Soluble	Leach	DI Leach			79679	SA	EET MID	04/30/24 15:02
Soluble	Analysis	300.0		1	79688	SMC	EET MID	05/01/24 12:16

Client Sample ID: FS11A@6'
Date Collected: 04/24/24 14:30
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8015D		1	4120	RA	EET ALB	04/30/24 01:17
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8021B		1	4121	RA	EET ALB	04/30/24 01:17
Total/NA	Prep	SHAKE			4215	JU	EET ALB	05/01/24 15:58
Total/NA	Analysis	8015D		1	4310	JU	EET ALB	05/02/24 15:29
Soluble	Leach	DI Leach			79679	SA	EET MID	04/30/24 15:02
Soluble	Analysis	300.0		1	79688	SMC	EET MID	05/01/24 12:23

Client Sample ID: FS12A@6'
Date Collected: 04/24/24 14:20
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8015D		1	4120	RA	EET ALB	04/30/24 02:23

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS12A@6'
Date Collected: 04/24/24 14:20
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8021B		1	4121	RA	EET ALB	04/30/24 02:23
Total/NA	Prep	SHAKE			4215	JU	EET ALB	05/01/24 15:58
Total/NA	Analysis	8015D		1	4310	JU	EET ALB	05/02/24 15:42
Soluble	Leach	DI Leach			79679	SA	EET MID	04/30/24 15:02
Soluble	Analysis	300.0		1	79688	SMC	EET MID	05/01/24 12:29

Client Sample ID: FS13A@6'
Date Collected: 04/24/24 14:00
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8015D		1	4120	RA	EET ALB	04/30/24 03:28
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8021B		1	4121	RA	EET ALB	04/30/24 03:28
Total/NA	Prep	SHAKE			4215	JU	EET ALB	05/01/24 15:58
Total/NA	Analysis	8015D		1	4310	JU	EET ALB	05/02/24 15:54
Soluble	Leach	DI Leach			79680	SA	EET MID	04/30/24 15:04
Soluble	Analysis	300.0		1	79687	SMC	EET MID	04/30/24 17:45

Client Sample ID: FS14A@6'
Date Collected: 04/24/24 13:10
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8015D		1	4120	RA	EET ALB	04/30/24 03:50
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8021B		1	4121	RA	EET ALB	04/30/24 03:50
Total/NA	Prep	SHAKE			4215	JU	EET ALB	05/01/24 15:58
Total/NA	Analysis	8015D		1	4310	JU	EET ALB	05/02/24 16:06
Soluble	Leach	DI Leach			79680	SA	EET MID	04/30/24 15:04
Soluble	Analysis	300.0		1	79687	SMC	EET MID	04/30/24 18:03

Client Sample ID: FS15A@6'
Date Collected: 04/24/24 13:30
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8015D		1	4120	RA	EET ALB	04/30/24 04:11
Total/NA	Prep	5030C			3956	JP	EET ALB	04/26/24 11:43
Total/NA	Analysis	8021B		1	4121	RA	EET ALB	04/30/24 04:11

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

Client Sample ID: FS15A@6'

Date Collected: 04/24/24 13:30
Date Received: 04/25/24 06:45

Lab Sample ID: 885-3385-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			4215	JU	EET ALB	05/01/24 15:58
Total/NA	Analysis	8015D		1	4310	JU	EET ALB	05/02/24 16:19
Soluble	Leach	DI Leach			79680	SA	EET MID	04/30/24 15:04
Soluble	Analysis	300.0		1	79687	SMC	EET MID	04/30/24 18:10

Laboratory References:

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

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-3385-1

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
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

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

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: Witt 1
Project #:
Project Manager: S. Hyde
Sampler: Al Thomson
On Ice: ☒ Yes ☐ No 40g
# of Coolers: 1
Cooler Temp(Including CF): 4.6-0.1=4.5 (°C)

HALL ENVIRONMENTAL ANALYSIS LABO
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87
Tel. 505-345-3975 Fax 505-345-4107
885-3385 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)
4-24	1000	Soil	FS02A@6'	1x4oz	Cool		X	X					X			
	1240		FS10A@6'	1x4oz												
	1430		FS11A@6'													
	1420		FS12A@6'													
	1400		FS13A@6'													
	1310		FS14A@6'													
↓	1330	↓	FS15A@6'	↓	↓		↓	↓					↓			

Date	Time	Relinquished by	Received by:	Via.	Date	Time
4-24	17:07	Al Thomson			4/24/24	1707
4/24/24	1800			Courier	4/25/24	6:45

Remarks: Please CC:
shyde@ensolvm.com
athomson@ensolvm.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: 885-3385-1

Login Number: 3385 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: McQuiston, Steven

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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Hilcorp Energy

Job Number: 885-3385-1

Login Number: 3385
List Number: 2
Creator: Vasquez, Julisa

List Source: Eurofins Midland
List Creation: 04/30/24 10:54 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/10/2024 5:31:37 PM

JOB DESCRIPTION

Witt 1

JOB NUMBER

885-2136-1

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
4/10/2024 5:31:37 PM

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

Client: Hilcorp Energy
Project/Site: Witt 1

Laboratory Job ID: 885-2136-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
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: Witt 1

Job ID: 885-2136-1

Job ID: 885-2136-1 Eurofins Albuquerque

Job Narrative
885-2136-1

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 4/2/2024 7:15 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.

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: The continuing calibration verification (CCV) associated with batch 885-2812 recovered above the upper control limit for Di-n-octyl phthalate (Surr). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8015D_DRO: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 885-2786 and analytical batch 885-2915 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015D_DRO: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 885-2786 and analytical batch 885-2941 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015D_DRO: Surrogate recovery for the following sample was outside the upper control limit: FS16 (885-2136-22). This sample did not contain any target analytes; 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.

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: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS01
Date Collected: 04/01/24 09:10
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-1
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		4.8		mg/Kg		04/02/24 12:37	04/03/24 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/02/24 12:37*	*04/03/24 21:18*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/03/24 21:18	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/03/24 21:18	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/03/24 21:18	1
Xylenes, Total	ND		0.095		mg/Kg		04/02/24 12:37	04/03/24 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/02/24 12:37*	*04/03/24 21:18*	*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		9.6		mg/Kg		04/04/24 13:06	04/05/24 12:23	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/04/24 13:06	04/05/24 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*105*		*62 - 134*	*04/04/24 13:06*	*04/05/24 12:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49**		5.0		mg/Kg			04/08/24 19:29	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS02
Date Collected: 04/01/24 09:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-2
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		4.8		mg/Kg		04/02/24 12:37	04/03/24 22:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/02/24 12:37*	*04/03/24 22:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/03/24 22:28	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/03/24 22:28	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/03/24 22:28	1
Xylenes, Total	ND		0.097		mg/Kg		04/02/24 12:37	04/03/24 22:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/02/24 12:37*	*04/03/24 22:28*	*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		9.5		mg/Kg		04/04/24 13:06	04/05/24 12:48	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/04/24 13:06	04/05/24 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*	*04/04/24 13:06*	*04/05/24 12:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90**		5.0		mg/Kg			04/08/24 19:35	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS03
Date Collected: 04/01/24 09:20
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-3
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		4.9		mg/Kg		04/02/24 12:37	04/03/24 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*04/02/24 12:37*	*04/03/24 23:39*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/03/24 23:39	1
Ethylbenzene	ND		0.049		mg/Kg		04/02/24 12:37	04/03/24 23:39	1
Toluene	ND		0.049		mg/Kg		04/02/24 12:37	04/03/24 23:39	1
Xylenes, Total	ND		0.098		mg/Kg		04/02/24 12:37	04/03/24 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/02/24 12:37*	*04/03/24 23:39*	*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		9.5		mg/Kg		04/04/24 13:06	04/05/24 13:12	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/04/24 13:06	04/05/24 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*124*		*62 - 134*	*04/04/24 13:06*	*04/05/24 13:12*	*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			04/08/24 19:41	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS04
Date Collected: 04/01/24 09:25
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-4
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*04/02/24 12:37*	*04/04/24 00:02*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 00:02	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 00:02	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 00:02	1
Xylenes, Total	ND		0.096		mg/Kg		04/02/24 12:37	04/04/24 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 00:02*	*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		9.9		mg/Kg		04/04/24 13:06	04/05/24 18:25	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/04/24 13:06	04/05/24 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*103*		*62 - 134*	*04/04/24 13:06*	*04/05/24 18:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**250**		5.0		mg/Kg			04/08/24 19:47	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS05
Date Collected: 04/01/24 09:30
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-5
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 00:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*04/02/24 12:37*	*04/04/24 00:26*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 00:26	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 00:26	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 00:26	1
Xylenes, Total	ND		0.096		mg/Kg		04/02/24 12:37	04/04/24 00:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 00:26*	*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		9.1		mg/Kg		04/04/24 13:06	04/05/24 18:49	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/04/24 13:06	04/05/24 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*103*		*62 - 134*	*04/04/24 13:06*	*04/05/24 18:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**260**		5.0		mg/Kg			04/08/24 20:06	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS06
Date Collected: 04/01/24 09:35
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-6
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		4.6		mg/Kg		04/02/24 12:37	04/04/24 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/02/24 12:37*	*04/04/24 00:49*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 12:37	04/04/24 00:49	1
Ethylbenzene	ND		0.046		mg/Kg		04/02/24 12:37	04/04/24 00:49	1
Toluene	ND		0.046		mg/Kg		04/02/24 12:37	04/04/24 00:49	1
Xylenes, Total	ND		0.092		mg/Kg		04/02/24 12:37	04/04/24 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/02/24 12:37*	*04/04/24 00:49*	*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		9.5		mg/Kg		04/04/24 13:06	04/05/24 19:13	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/04/24 13:06	04/05/24 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*04/04/24 13:06*	*04/05/24 19:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**260**		5.0		mg/Kg			04/08/24 22:44	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS01
Date Collected: 04/01/24 10:00
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-7
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		5.0		mg/Kg		04/02/24 12:37	04/04/24 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*04/02/24 12:37*	*04/04/24 01:13*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/02/24 12:37	04/04/24 01:13	1
Ethylbenzene	ND		0.050		mg/Kg		04/02/24 12:37	04/04/24 01:13	1
Toluene	ND		0.050		mg/Kg		04/02/24 12:37	04/04/24 01:13	1
Xylenes, Total	ND		0.10		mg/Kg		04/02/24 12:37	04/04/24 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*39 - 146*	*04/02/24 12:37*	*04/04/24 01:13*	*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		9.4		mg/Kg		04/04/24 13:06	04/05/24 19:38	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/04/24 13:06	04/05/24 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*107*		*62 - 134*	*04/04/24 13:06*	*04/05/24 19:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32**		5.0		mg/Kg			04/08/24 22:59	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS02
Date Collected: 04/01/24 10:05
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-8
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/02/24 12:37*	*04/04/24 01:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 01:37	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 01:37	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 01:37	1
Xylenes, Total	ND		0.096		mg/Kg		04/02/24 12:37	04/04/24 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 01:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**76**		9.8		mg/Kg		04/04/24 13:06	04/05/24 20:02	1
Motor Oil Range Organics [C28-C40]	**75**		49		mg/Kg		04/04/24 13:06	04/05/24 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*107*		*62 - 134*	*04/04/24 13:06*	*04/05/24 20:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46**		5.0		mg/Kg			04/08/24 23:04	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS03
Date Collected: 04/01/24 10:10
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-9
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/02/24 12:37*	*04/04/24 02:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 02:00	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 02:00	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 02:00	1
Xylenes, Total	ND		0.097		mg/Kg		04/02/24 12:37	04/04/24 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 02:00*	*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		9.9		mg/Kg		04/04/24 13:06	04/05/24 20:26	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/04/24 13:06	04/05/24 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*105*		*62 - 134*	*04/04/24 13:06*	*04/05/24 20:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17**		5.0		mg/Kg			04/08/24 23:08	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS04
Date Collected: 04/01/24 10:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-10
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*04/02/24 12:37*	*04/04/24 02:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 02:24	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 02:24	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 02:24	1
Xylenes, Total	ND		0.096		mg/Kg		04/02/24 12:37	04/04/24 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/02/24 12:37*	*04/04/24 02:24*	*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		9.3		mg/Kg		04/04/24 13:06	04/05/24 20:50	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/04/24 13:06	04/05/24 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*04/04/24 13:06*	*04/05/24 20:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29**		5.0		mg/Kg			04/08/24 23:42	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS05
Date Collected: 04/01/24 10:20
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-11
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		4.7		mg/Kg		04/02/24 12:37	04/04/24 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/02/24 12:37*	*04/04/24 03:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 12:37	04/04/24 03:11	1
Ethylbenzene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 03:11	1
Toluene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 03:11	1
Xylenes, Total	ND		0.094		mg/Kg		04/02/24 12:37	04/04/24 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 03:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**9.5**		9.0		mg/Kg		04/04/24 13:06	04/05/24 21:14	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		04/04/24 13:06	04/05/24 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*04/04/24 13:06*	*04/05/24 21:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**260**		5.0		mg/Kg			04/08/24 23:13	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS06
Date Collected: 04/01/24 10:25
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-12
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		4.7		mg/Kg		04/02/24 12:37	04/04/24 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/02/24 12:37*	*04/04/24 03:34*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 03:34	1
Ethylbenzene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 03:34	1
Toluene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 03:34	1
Xylenes, Total	ND		0.095		mg/Kg		04/02/24 12:37	04/04/24 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/02/24 12:37*	*04/04/24 03:34*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**13**		9.3		mg/Kg		04/04/24 13:06	04/05/24 21:38	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/04/24 13:06	04/05/24 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*109*		*62 - 134*	*04/04/24 13:06*	*04/05/24 21:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29**		5.0		mg/Kg			04/08/24 23:28	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS07
Date Collected: 04/01/24 10:30
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-13
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		4.6		mg/Kg		04/02/24 12:37	04/04/24 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/02/24 12:37*	*04/04/24 03:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 12:37	04/04/24 03:58	1
Ethylbenzene	ND		0.046		mg/Kg		04/02/24 12:37	04/04/24 03:58	1
Toluene	ND		0.046		mg/Kg		04/02/24 12:37	04/04/24 03:58	1
Xylenes, Total	ND		0.092		mg/Kg		04/02/24 12:37	04/04/24 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 03:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**13**		10		mg/Kg		04/04/24 13:06	04/08/24 15:51	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/04/24 13:06	04/08/24 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*125*		*62 - 134*	*04/04/24 13:06*	*04/08/24 15:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32**		5.0		mg/Kg			04/08/24 23:32	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS08
Date Collected: 04/01/24 10:35
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-14
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		4.7		mg/Kg		04/02/24 12:37	04/04/24 04:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/02/24 12:37*	*04/04/24 04:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 12:37	04/04/24 04:21	1
Ethylbenzene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 04:21	1
Toluene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 04:21	1
Xylenes, Total	ND		0.094		mg/Kg		04/02/24 12:37	04/04/24 04:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 04:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**10**		9.8		mg/Kg		04/04/24 13:06	04/08/24 16:02	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/04/24 13:06	04/08/24 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*127*		*62 - 134*	*04/04/24 13:06*	*04/08/24 16:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28**		5.0		mg/Kg			04/08/24 23:37	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS09
Date Collected: 04/01/24 10:40
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-15
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		4.9		mg/Kg		04/02/24 12:37	04/04/24 04:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*15 - 244*	*04/02/24 12:37*	*04/04/24 04:45*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/02/24 12:37	04/04/24 04:45	1
Ethylbenzene	ND		0.049		mg/Kg		04/02/24 12:37	04/04/24 04:45	1
Toluene	ND		0.049		mg/Kg		04/02/24 12:37	04/04/24 04:45	1
Xylenes, Total	ND		0.099		mg/Kg		04/02/24 12:37	04/04/24 04:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*	*04/02/24 12:37*	*04/04/24 04:45*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**16**		9.4		mg/Kg		04/04/24 13:06	04/08/24 16:12	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/04/24 13:06	04/08/24 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*119*		*62 - 134*	*04/04/24 13:06*	*04/08/24 16:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28**		5.0		mg/Kg			04/08/24 23:47	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS10

Date Collected: 04/01/24 11:00
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-16

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		4.8		mg/Kg		04/02/24 12:37	04/04/24 05:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/02/24 12:37*	*04/04/24 05:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 05:08	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 05:08	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 05:08	1
Xylenes, Total	ND		0.097		mg/Kg		04/02/24 12:37	04/04/24 05:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 12:37*	*04/04/24 05:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**110**		9.5		mg/Kg		04/04/24 13:06	04/08/24 16:23	1
Motor Oil Range Organics [C28-C40]	**51**		48		mg/Kg		04/04/24 13:06	04/08/24 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*120*		*62 - 134*	*04/04/24 13:06*	*04/08/24 16:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**680**		25		mg/Kg			04/08/24 23:52	5

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS11
Date Collected: 04/01/24 11:03
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-17
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 05:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*04/02/24 12:37*	*04/04/24 05:32*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 05:32	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 05:32	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 05:32	1
Xylenes, Total	ND		0.096		mg/Kg		04/02/24 12:37	04/04/24 05:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*39 - 146*	*04/02/24 12:37*	*04/04/24 05:32*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**500**		9.5		mg/Kg		04/04/24 13:06	04/05/24 18:01	1
Motor Oil Range Organics [C28-C40]	**340**		48		mg/Kg		04/04/24 13:06	04/05/24 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*04/04/24 13:06*	*04/05/24 18:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**740**		25		mg/Kg			04/09/24 00:06	5

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS12
Date Collected: 04/01/24 11:06
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-18
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		4.8		mg/Kg		04/02/24 12:37	04/04/24 05:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*04/02/24 12:37*	*04/04/24 05:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 12:37	04/04/24 05:55	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 05:55	1
Toluene	ND		0.048		mg/Kg		04/02/24 12:37	04/04/24 05:55	1
Xylenes, Total	ND		0.096		mg/Kg		04/02/24 12:37	04/04/24 05:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*39 - 146*	*04/02/24 12:37*	*04/04/24 05:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**760**		9.9		mg/Kg		04/04/24 13:06	04/05/24 13:36	1
Motor Oil Range Organics [C28-C40]	**500**		49		mg/Kg		04/04/24 13:06	04/05/24 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*78*		*62 - 134*	*04/04/24 13:06*	*04/05/24 13:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**850**		25		mg/Kg			04/09/24 00:11	5

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS13
Date Collected: 04/01/24 11:09
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-19
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		4.7		mg/Kg		04/02/24 12:37	04/04/24 06:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*15 - 244*	*04/02/24 12:37*	*04/04/24 06:18*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 12:37	04/04/24 06:18	1
Ethylbenzene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 06:18	1
Toluene	ND		0.047		mg/Kg		04/02/24 12:37	04/04/24 06:18	1
Xylenes, Total	ND		0.093		mg/Kg		04/02/24 12:37	04/04/24 06:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/02/24 12:37*	*04/04/24 06:18*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**880**		9.1		mg/Kg		04/04/24 13:06	04/05/24 14:24	1
Motor Oil Range Organics [C28-C40]	**720**		46		mg/Kg		04/04/24 13:06	04/05/24 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*81*		*62 - 134*	*04/04/24 13:06*	*04/05/24 14:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**890**		25		mg/Kg			04/09/24 00:26	5

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS14
Date Collected: 04/01/24 11:12
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-20
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		4.6		mg/Kg		04/02/24 12:37	04/04/24 06:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/02/24 12:37*	*04/04/24 06:42*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 12:37	04/04/24 06:42	1
Ethylbenzene	ND		0.046		mg/Kg		04/02/24 12:37	04/04/24 06:42	1
Toluene	ND		0.046		mg/Kg		04/02/24 12:37	04/04/24 06:42	1
Xylenes, Total	ND		0.092		mg/Kg		04/02/24 12:37	04/04/24 06:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/02/24 12:37*	*04/04/24 06:42*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**800**	**F2**	9.4		mg/Kg		04/04/24 13:06	04/05/24 15:12	1
Motor Oil Range Organics [C28-C40]	**540**		47		mg/Kg		04/04/24 13:06	04/05/24 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*79*		*62 - 134*	*04/04/24 13:06*	*04/05/24 15:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**860**		25		mg/Kg			04/09/24 00:30	5

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS15

Date Collected: 04/01/24 11:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-21

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		5.0		mg/Kg		04/02/24 13:30	04/04/24 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*15 - 244*	*04/02/24 13:30*	*04/04/24 16:13*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/02/24 13:30	04/04/24 16:13	1
Ethylbenzene	ND		0.050		mg/Kg		04/02/24 13:30	04/04/24 16:13	1
Toluene	ND		0.050		mg/Kg		04/02/24 13:30	04/04/24 16:13	1
Xylenes, Total	ND		0.099		mg/Kg		04/02/24 13:30	04/04/24 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*	*04/02/24 13:30*	*04/04/24 16:13*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**900**		9.3		mg/Kg		04/03/24 13:15	04/04/24 16:24	1
Motor Oil Range Organics [C28-C40]	**690**		46		mg/Kg		04/03/24 13:15	04/04/24 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*104*		*62 - 134*	*04/03/24 13:15*	*04/04/24 16:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**690**		5.0		mg/Kg			04/09/24 00:35	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS16
Date Collected: 04/01/24 11:18
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-22
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		4.7		mg/Kg		04/02/24 13:30	04/04/24 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*15 - 244*	*04/02/24 13:30*	*04/04/24 17:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/02/24 13:30	04/04/24 17:24	1
Ethylbenzene	ND		0.047		mg/Kg		04/02/24 13:30	04/04/24 17:24	1
Toluene	ND		0.047		mg/Kg		04/02/24 13:30	04/04/24 17:24	1
Xylenes, Total	ND		0.093		mg/Kg		04/02/24 13:30	04/04/24 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/02/24 13:30*	*04/04/24 17:24*	*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		9.6		mg/Kg		04/03/24 13:15	04/09/24 10:36	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/03/24 13:15	04/09/24 10:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*148*	*S1+*	*62 - 134*	*04/03/24 13:15*	*04/09/24 10:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**180**		5.1		mg/Kg			04/09/24 00:40	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS17
Date Collected: 04/01/24 11:21
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-23
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		4.8		mg/Kg		04/02/24 13:30	04/04/24 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*15 - 244*	*04/02/24 13:30*	*04/04/24 18:34*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 13:30	04/04/24 18:34	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 13:30	04/04/24 18:34	1
Toluene	ND		0.048		mg/Kg		04/02/24 13:30	04/04/24 18:34	1
Xylenes, Total	ND		0.097		mg/Kg		04/02/24 13:30	04/04/24 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/02/24 13:30*	*04/04/24 18:34*	*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		9.7		mg/Kg		04/03/24 13:15	04/04/24 16:49	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/03/24 13:15	04/04/24 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*04/03/24 13:15*	*04/04/24 16:49*	*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			04/09/24 00:45	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS18
Date Collected: 04/01/24 11:24
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-24
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		4.8		mg/Kg		04/02/24 13:30	04/04/24 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*15 - 244*	*04/02/24 13:30*	*04/04/24 18:57*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/02/24 13:30	04/04/24 18:57	1
Ethylbenzene	ND		0.048		mg/Kg		04/02/24 13:30	04/04/24 18:57	1
Toluene	ND		0.048		mg/Kg		04/02/24 13:30	04/04/24 18:57	1
Xylenes, Total	ND		0.097		mg/Kg		04/02/24 13:30	04/04/24 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*39 - 146*	*04/02/24 13:30*	*04/04/24 18:57*	*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		8.7		mg/Kg		04/03/24 13:15	04/04/24 17:01	1
Motor Oil Range Organics [C28-C40]	ND		43		mg/Kg		04/03/24 13:15	04/04/24 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*104*		*62 - 134*	*04/03/24 13:15*	*04/04/24 17:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		5.0		mg/Kg			04/09/24 00:50	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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

Lab Sample ID: MB 885-2652/1-A
Matrix: Solid
Analysis Batch: 2770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/02/24 12:37	04/03/24 20:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*04/02/24 12:37*	*04/03/24 20:54*	*1*

Lab Sample ID: LCS 885-2652/2-A
Matrix: Solid
Analysis Batch: 2770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	25.9		mg/Kg		104	70 - 130		

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

Lab Sample ID: 885-2136-1 MS
Matrix: Solid
Analysis Batch: 2770

Client Sample ID: WS01
Prep Type: Total/NA
Prep Batch: 2652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		23.6	26.3		mg/Kg		112	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*222*		*15 - 244*

Lab Sample ID: 885-2136-1 MSD
Matrix: Solid
Analysis Batch: 2770

Client Sample ID: WS01
Prep Type: Total/NA
Prep Batch: 2652

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		23.7	26.2		mg/Kg		110	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*221*		*15 - 244*

Lab Sample ID: MB 885-2659/1-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/02/24 13:30	04/04/24 15:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*04/02/24 13:30*	*04/04/24 15:50*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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

Lab Sample ID: LCS 885-2659/2-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	28.5		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*219*		*15 - 244*

Lab Sample ID: 885-2136-21 MS
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 2659

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.7	30.3		mg/Kg		108	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*234*		*15 - 244*

Lab Sample ID: 885-2136-21 MSD
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 2659

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		24.8	30.3		mg/Kg		108	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*235*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-2652/1-A
Matrix: Solid
Analysis Batch: 2771

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/02/24 12:37	04/03/24 20:54	1
Ethylbenzene	ND		0.050		mg/Kg		04/02/24 12:37	04/03/24 20:54	1
Toluene	ND		0.050		mg/Kg		04/02/24 12:37	04/03/24 20:54	1
Xylenes, Total	ND		0.10		mg/Kg		04/02/24 12:37	04/03/24 20:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*39 - 146*	*04/02/24 12:37*	*04/03/24 20:54*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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

Lab Sample ID: LCS 885-2652/3-A
Matrix: Solid
Analysis Batch: 2771

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.846		mg/Kg		85	70 - 130		
Ethylbenzene			1.00	0.856		mg/Kg		86	70 - 130		
m&p-Xylene			2.00	1.75		mg/Kg		88	70 - 130		
o-Xylene			1.00	0.854		mg/Kg		85	70 - 130		
Toluene			1.00	0.856		mg/Kg		86	70 - 130		

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

Lab Sample ID: 885-2136-2 MS
Matrix: Solid
Analysis Batch: 2771

Client Sample ID: WS02
Prep Type: Total/NA
Prep Batch: 2652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.969	0.850		mg/Kg		88	70 - 130		
Ethylbenzene	ND		0.969	0.878		mg/Kg		91	70 - 130		
m&p-Xylene	ND		1.94	1.81		mg/Kg		92	70 - 130		
o-Xylene	ND		0.969	0.875		mg/Kg		90	70 - 130		
Toluene	ND		0.969	0.869		mg/Kg		90	70 - 130		

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

Lab Sample ID: 885-2136-2 MSD
Matrix: Solid
Analysis Batch: 2771

Client Sample ID: WS02
Prep Type: Total/NA
Prep Batch: 2652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.970	0.854		mg/Kg		88	70 - 130	0	20
Ethylbenzene	ND		0.970	0.893		mg/Kg		92	70 - 130	2	20
m&p-Xylene	ND		1.94	1.80		mg/Kg		92	70 - 130	0	20
o-Xylene	ND		0.970	0.883		mg/Kg		91	70 - 130	1	20
Toluene	ND		0.970	0.876		mg/Kg		90	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*

Lab Sample ID: MB 885-2659/1-A
Matrix: Solid
Analysis Batch: 2821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/02/24 13:30	04/04/24 15:50	1
Ethylbenzene	ND		0.050		mg/Kg		04/02/24 13:30	04/04/24 15:50	1
Toluene	ND		0.050		mg/Kg		04/02/24 13:30	04/04/24 15:50	1
Xylenes, Total	ND		0.10		mg/Kg		04/02/24 13:30	04/04/24 15:50	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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

Lab Sample ID: MB 885-2659/1-A
Matrix: Solid
Analysis Batch: 2821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2659

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		39 - 146	04/02/24 13:30	04/04/24 15:50	1

Lab Sample ID: LCS 885-2659/3-A
Matrix: Solid
Analysis Batch: 2821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.834		mg/Kg		83	70 - 130
Ethylbenzene	1.00	0.861		mg/Kg		86	70 - 130
m&p-Xylene	2.00	1.76		mg/Kg		88	70 - 130
o-Xylene	1.00	0.861		mg/Kg		86	70 - 130
Toluene	1.00	0.850		mg/Kg		85	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		39 - 146

Lab Sample ID: 885-2136-22 MS
Matrix: Solid
Analysis Batch: 2821

Client Sample ID: FS16
Prep Type: Total/NA
Prep Batch: 2659

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.930	0.777		mg/Kg		84	70 - 130
Ethylbenzene	ND		0.930	0.818		mg/Kg		87	70 - 130
m&p-Xylene	ND		1.86	1.68		mg/Kg		89	70 - 130
o-Xylene	ND		0.930	0.805		mg/Kg		86	70 - 130
Toluene	ND		0.930	0.788		mg/Kg		85	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		39 - 146

Lab Sample ID: 885-2136-22 MSD
Matrix: Solid
Analysis Batch: 2821

Client Sample ID: FS16
Prep Type: Total/NA
Prep Batch: 2659

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.930	0.805		mg/Kg		87	70 - 130	4	20
Ethylbenzene	ND		0.930	0.832		mg/Kg		88	70 - 130	2	20
m&p-Xylene	ND		1.86	1.69		mg/Kg		90	70 - 130	1	20
o-Xylene	ND		0.930	0.821		mg/Kg		88	70 - 130	2	20
Toluene	ND		0.930	0.818		mg/Kg		88	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		39 - 146

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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

Lab Sample ID: MB 885-2723/1-A
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2723

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/03/24 13:15	04/04/24 12:41	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/03/24 13:15	04/04/24 12:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*124*		*62 - 134*	*04/03/24 13:15*	*04/04/24 12:41*	*1*

Lab Sample ID: LCS 885-2723/2-A
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2723

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	50.7		mg/Kg		101	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*110*		*62 - 134*

Lab Sample ID: 885-2136-24 MS
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: FS18
Prep Type: Total/NA
Prep Batch: 2723

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		49.0	44.8		mg/Kg		91	44 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*104*		*62 - 134*

Lab Sample ID: 885-2136-24 MSD
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: FS18
Prep Type: Total/NA
Prep Batch: 2723

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		45.8	42.8		mg/Kg		93	44 - 136	5	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*

Lab Sample ID: MB 885-2786/1-A
Matrix: Solid
Analysis Batch: 2915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2786

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/04/24 13:06	04/05/24 11:12	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/04/24 13:06	04/05/24 11:12	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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

Lab Sample ID: MB 885-2786/1-A
Matrix: Solid
Analysis Batch: 2915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2786

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	128		62 - 134	04/04/24 13:06	04/05/24 11:12	1

Lab Sample ID: LCS 885-2786/2-A
Matrix: Solid
Analysis Batch: 2915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2786

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	55.0		mg/Kg		110	60 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	109		62 - 134

Lab Sample ID: 885-2136-20 MS
Matrix: Solid
Analysis Batch: 2915

Client Sample ID: FS14
Prep Type: Total/NA
Prep Batch: 2786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	800	F2	47.3	735	4	mg/Kg		-146	44 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	75		62 - 134

Lab Sample ID: 885-2136-20 MSD
Matrix: Solid
Analysis Batch: 2915

Client Sample ID: FS14
Prep Type: Total/NA
Prep Batch: 2786

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	800	F2	46.9	1140	4 F2	mg/Kg		716	44 - 136	43	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	64		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-77648/1-A
Matrix: Solid
Analysis Batch: 77664

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			04/08/24 18:03	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-77648/2-A
Matrix: Solid
Analysis Batch: 77664

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-77648/3-A
Matrix: Solid
Analysis Batch: 77664

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	251		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 885-2136-4 MS
Matrix: Solid
Analysis Batch: 77664

Client Sample ID: WS04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	250		251	506		mg/Kg		101	90 - 110		

Lab Sample ID: 885-2136-4 MSD
Matrix: Solid
Analysis Batch: 77664

Client Sample ID: WS04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250		251	504		mg/Kg		100	90 - 110	0	20

Lab Sample ID: MB 880-77428/1-A
Matrix: Solid
Analysis Batch: 77665

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			04/08/24 22:30	1

Lab Sample ID: LCS 880-77428/2-A
Matrix: Solid
Analysis Batch: 77665

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-77428/3-A
Matrix: Solid
Analysis Batch: 77665

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	260		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 885-2136-6 MS
Matrix: Solid
Analysis Batch: 77665

Client Sample ID: WS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	260		250	525		mg/Kg		106	90 - 110		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 885-2136-6 MSD
Matrix: Solid
Analysis Batch: 77665

Client Sample ID: WS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	260		250	525		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 885-2136-16 MS
Matrix: Solid
Analysis Batch: 77665

Client Sample ID: FS10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	680		1250	2070		mg/Kg		110	90 - 110

Lab Sample ID: 885-2136-16 MSD
Matrix: Solid
Analysis Batch: 77665

Client Sample ID: FS10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	680		1250	2060		mg/Kg		110	90 - 110	0	20

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

GC VOA

Prep Batch: 2652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Total/NA	Solid	5030C	
885-2136-2	WS02	Total/NA	Solid	5030C	
885-2136-3	WS03	Total/NA	Solid	5030C	
885-2136-4	WS04	Total/NA	Solid	5030C	
885-2136-5	WS05	Total/NA	Solid	5030C	
885-2136-6	WS06	Total/NA	Solid	5030C	
885-2136-7	FS01	Total/NA	Solid	5030C	
885-2136-8	FS02	Total/NA	Solid	5030C	
885-2136-9	FS03	Total/NA	Solid	5030C	
885-2136-10	FS04	Total/NA	Solid	5030C	
885-2136-11	FS05	Total/NA	Solid	5030C	
885-2136-12	FS06	Total/NA	Solid	5030C	
885-2136-13	FS07	Total/NA	Solid	5030C	
885-2136-14	FS08	Total/NA	Solid	5030C	
885-2136-15	FS09	Total/NA	Solid	5030C	
885-2136-16	FS10	Total/NA	Solid	5030C	
885-2136-17	FS11	Total/NA	Solid	5030C	
885-2136-18	FS12	Total/NA	Solid	5030C	
885-2136-19	FS13	Total/NA	Solid	5030C	
885-2136-20	FS14	Total/NA	Solid	5030C	
MB 885-2652/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-2652/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-2652/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-2136-1 MS	WS01	Total/NA	Solid	5030C	
885-2136-1 MSD	WS01	Total/NA	Solid	5030C	
885-2136-2 MS	WS02	Total/NA	Solid	5030C	
885-2136-2 MSD	WS02	Total/NA	Solid	5030C	

Prep Batch: 2659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-21	FS15	Total/NA	Solid	5030C	
885-2136-22	FS16	Total/NA	Solid	5030C	
885-2136-23	FS17	Total/NA	Solid	5030C	
885-2136-24	FS18	Total/NA	Solid	5030C	
MB 885-2659/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-2659/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-2659/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-2136-21 MS	FS15	Total/NA	Solid	5030C	
885-2136-21 MSD	FS15	Total/NA	Solid	5030C	
885-2136-22 MS	FS16	Total/NA	Solid	5030C	
885-2136-22 MSD	FS16	Total/NA	Solid	5030C	

Analysis Batch: 2770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Total/NA	Solid	8015D	2652
885-2136-2	WS02	Total/NA	Solid	8015D	2652
885-2136-3	WS03	Total/NA	Solid	8015D	2652
885-2136-4	WS04	Total/NA	Solid	8015D	2652
885-2136-5	WS05	Total/NA	Solid	8015D	2652
885-2136-6	WS06	Total/NA	Solid	8015D	2652
885-2136-7	FS01	Total/NA	Solid	8015D	2652

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

GC VOA (Continued)

Analysis Batch: 2770 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-8	FS02	Total/NA	Solid	8015D	2652
885-2136-9	FS03	Total/NA	Solid	8015D	2652
885-2136-10	FS04	Total/NA	Solid	8015D	2652
885-2136-11	FS05	Total/NA	Solid	8015D	2652
885-2136-12	FS06	Total/NA	Solid	8015D	2652
885-2136-13	FS07	Total/NA	Solid	8015D	2652
885-2136-14	FS08	Total/NA	Solid	8015D	2652
885-2136-15	FS09	Total/NA	Solid	8015D	2652
885-2136-16	FS10	Total/NA	Solid	8015D	2652
885-2136-17	FS11	Total/NA	Solid	8015D	2652
885-2136-18	FS12	Total/NA	Solid	8015D	2652
885-2136-19	FS13	Total/NA	Solid	8015D	2652
885-2136-20	FS14	Total/NA	Solid	8015D	2652
MB 885-2652/1-A	Method Blank	Total/NA	Solid	8015D	2652
LCS 885-2652/2-A	Lab Control Sample	Total/NA	Solid	8015D	2652
885-2136-1 MS	WS01	Total/NA	Solid	8015D	2652
885-2136-1 MSD	WS01	Total/NA	Solid	8015D	2652

Analysis Batch: 2771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Total/NA	Solid	8021B	2652
885-2136-2	WS02	Total/NA	Solid	8021B	2652
885-2136-3	WS03	Total/NA	Solid	8021B	2652
885-2136-4	WS04	Total/NA	Solid	8021B	2652
885-2136-5	WS05	Total/NA	Solid	8021B	2652
885-2136-6	WS06	Total/NA	Solid	8021B	2652
885-2136-7	FS01	Total/NA	Solid	8021B	2652
885-2136-8	FS02	Total/NA	Solid	8021B	2652
885-2136-9	FS03	Total/NA	Solid	8021B	2652
885-2136-10	FS04	Total/NA	Solid	8021B	2652
885-2136-11	FS05	Total/NA	Solid	8021B	2652
885-2136-12	FS06	Total/NA	Solid	8021B	2652
885-2136-13	FS07	Total/NA	Solid	8021B	2652
885-2136-14	FS08	Total/NA	Solid	8021B	2652
885-2136-15	FS09	Total/NA	Solid	8021B	2652
885-2136-16	FS10	Total/NA	Solid	8021B	2652
885-2136-17	FS11	Total/NA	Solid	8021B	2652
885-2136-18	FS12	Total/NA	Solid	8021B	2652
885-2136-19	FS13	Total/NA	Solid	8021B	2652
885-2136-20	FS14	Total/NA	Solid	8021B	2652
MB 885-2652/1-A	Method Blank	Total/NA	Solid	8021B	2652
LCS 885-2652/3-A	Lab Control Sample	Total/NA	Solid	8021B	2652
885-2136-2 MS	WS02	Total/NA	Solid	8021B	2652
885-2136-2 MSD	WS02	Total/NA	Solid	8021B	2652

Analysis Batch: 2819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-21	FS15	Total/NA	Solid	8015D	2659
885-2136-22	FS16	Total/NA	Solid	8015D	2659
885-2136-23	FS17	Total/NA	Solid	8015D	2659
885-2136-24	FS18	Total/NA	Solid	8015D	2659

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

GC VOA (Continued)

Analysis Batch: 2819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-2659/1-A	Method Blank	Total/NA	Solid	8015D	2659
LCS 885-2659/2-A	Lab Control Sample	Total/NA	Solid	8015D	2659
885-2136-21 MS	FS15	Total/NA	Solid	8015D	2659
885-2136-21 MSD	FS15	Total/NA	Solid	8015D	2659

Analysis Batch: 2821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-21	FS15	Total/NA	Solid	8021B	2659
885-2136-22	FS16	Total/NA	Solid	8021B	2659
885-2136-23	FS17	Total/NA	Solid	8021B	2659
885-2136-24	FS18	Total/NA	Solid	8021B	2659
MB 885-2659/1-A	Method Blank	Total/NA	Solid	8021B	2659
LCS 885-2659/3-A	Lab Control Sample	Total/NA	Solid	8021B	2659
885-2136-22 MS	FS16	Total/NA	Solid	8021B	2659
885-2136-22 MSD	FS16	Total/NA	Solid	8021B	2659

GC Semi VOA

Prep Batch: 2723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-21	FS15	Total/NA	Solid	SHAKE	
885-2136-22	FS16	Total/NA	Solid	SHAKE	
885-2136-23	FS17	Total/NA	Solid	SHAKE	
885-2136-24	FS18	Total/NA	Solid	SHAKE	
MB 885-2723/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-2723/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-2136-24 MS	FS18	Total/NA	Solid	SHAKE	
885-2136-24 MSD	FS18	Total/NA	Solid	SHAKE	

Prep Batch: 2786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Total/NA	Solid	SHAKE	
885-2136-2	WS02	Total/NA	Solid	SHAKE	
885-2136-3	WS03	Total/NA	Solid	SHAKE	
885-2136-4	WS04	Total/NA	Solid	SHAKE	
885-2136-5	WS05	Total/NA	Solid	SHAKE	
885-2136-6	WS06	Total/NA	Solid	SHAKE	
885-2136-7	FS01	Total/NA	Solid	SHAKE	
885-2136-8	FS02	Total/NA	Solid	SHAKE	
885-2136-9	FS03	Total/NA	Solid	SHAKE	
885-2136-10	FS04	Total/NA	Solid	SHAKE	
885-2136-11	FS05	Total/NA	Solid	SHAKE	
885-2136-12	FS06	Total/NA	Solid	SHAKE	
885-2136-13	FS07	Total/NA	Solid	SHAKE	
885-2136-14	FS08	Total/NA	Solid	SHAKE	
885-2136-15	FS09	Total/NA	Solid	SHAKE	
885-2136-16	FS10	Total/NA	Solid	SHAKE	
885-2136-17	FS11	Total/NA	Solid	SHAKE	
885-2136-18	FS12	Total/NA	Solid	SHAKE	
885-2136-19	FS13	Total/NA	Solid	SHAKE	
885-2136-20	FS14	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

GC Semi VOA (Continued)

Prep Batch: 2786 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-2786/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-2786/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-2136-20 MS	FS14	Total/NA	Solid	SHAKE	
885-2136-20 MSD	FS14	Total/NA	Solid	SHAKE	

Analysis Batch: 2812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-21	FS15	Total/NA	Solid	8015D	2723
885-2136-23	FS17	Total/NA	Solid	8015D	2723
885-2136-24	FS18	Total/NA	Solid	8015D	2723
MB 885-2723/1-A	Method Blank	Total/NA	Solid	8015D	2723
LCS 885-2723/2-A	Lab Control Sample	Total/NA	Solid	8015D	2723
885-2136-24 MS	FS18	Total/NA	Solid	8015D	2723
885-2136-24 MSD	FS18	Total/NA	Solid	8015D	2723

Analysis Batch: 2915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Total/NA	Solid	8015D	2786
885-2136-2	WS02	Total/NA	Solid	8015D	2786
885-2136-3	WS03	Total/NA	Solid	8015D	2786
885-2136-4	WS04	Total/NA	Solid	8015D	2786
885-2136-5	WS05	Total/NA	Solid	8015D	2786
885-2136-6	WS06	Total/NA	Solid	8015D	2786
885-2136-7	FS01	Total/NA	Solid	8015D	2786
885-2136-8	FS02	Total/NA	Solid	8015D	2786
885-2136-9	FS03	Total/NA	Solid	8015D	2786
885-2136-10	FS04	Total/NA	Solid	8015D	2786
885-2136-11	FS05	Total/NA	Solid	8015D	2786
885-2136-12	FS06	Total/NA	Solid	8015D	2786
885-2136-17	FS11	Total/NA	Solid	8015D	2786
885-2136-18	FS12	Total/NA	Solid	8015D	2786
885-2136-19	FS13	Total/NA	Solid	8015D	2786
885-2136-20	FS14	Total/NA	Solid	8015D	2786
MB 885-2786/1-A	Method Blank	Total/NA	Solid	8015D	2786
LCS 885-2786/2-A	Lab Control Sample	Total/NA	Solid	8015D	2786
885-2136-20 MS	FS14	Total/NA	Solid	8015D	2786
885-2136-20 MSD	FS14	Total/NA	Solid	8015D	2786

Analysis Batch: 2941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-13	FS07	Total/NA	Solid	8015D	2786
885-2136-14	FS08	Total/NA	Solid	8015D	2786
885-2136-15	FS09	Total/NA	Solid	8015D	2786
885-2136-16	FS10	Total/NA	Solid	8015D	2786

Analysis Batch: 2992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-22	FS16	Total/NA	Solid	8015D	2723

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

HPLC/IC

Leach Batch: 77428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-6	WS06	Soluble	Solid	DI Leach	
885-2136-7	FS01	Soluble	Solid	DI Leach	
885-2136-8	FS02	Soluble	Solid	DI Leach	
885-2136-9	FS03	Soluble	Solid	DI Leach	
885-2136-10	FS04	Soluble	Solid	DI Leach	
885-2136-11	FS05	Soluble	Solid	DI Leach	
885-2136-12	FS06	Soluble	Solid	DI Leach	
885-2136-13	FS07	Soluble	Solid	DI Leach	
885-2136-14	FS08	Soluble	Solid	DI Leach	
885-2136-15	FS09	Soluble	Solid	DI Leach	
885-2136-16	FS10	Soluble	Solid	DI Leach	
885-2136-17	FS11	Soluble	Solid	DI Leach	
885-2136-18	FS12	Soluble	Solid	DI Leach	
885-2136-19	FS13	Soluble	Solid	DI Leach	
885-2136-20	FS14	Soluble	Solid	DI Leach	
885-2136-21	FS15	Soluble	Solid	DI Leach	
885-2136-22	FS16	Soluble	Solid	DI Leach	
885-2136-23	FS17	Soluble	Solid	DI Leach	
885-2136-24	FS18	Soluble	Solid	DI Leach	
MB 880-77428/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-77428/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-77428/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-2136-6 MS	WS06	Soluble	Solid	DI Leach	
885-2136-6 MSD	WS06	Soluble	Solid	DI Leach	
885-2136-16 MS	FS10	Soluble	Solid	DI Leach	
885-2136-16 MSD	FS10	Soluble	Solid	DI Leach	

Leach Batch: 77648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Soluble	Solid	DI Leach	
885-2136-2	WS02	Soluble	Solid	DI Leach	
885-2136-3	WS03	Soluble	Solid	DI Leach	
885-2136-4	WS04	Soluble	Solid	DI Leach	
885-2136-5	WS05	Soluble	Solid	DI Leach	
MB 880-77648/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-77648/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-77648/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-2136-4 MS	WS04	Soluble	Solid	DI Leach	
885-2136-4 MSD	WS04	Soluble	Solid	DI Leach	

Analysis Batch: 77664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-1	WS01	Soluble	Solid	300.0	77648
885-2136-2	WS02	Soluble	Solid	300.0	77648
885-2136-3	WS03	Soluble	Solid	300.0	77648
885-2136-4	WS04	Soluble	Solid	300.0	77648
885-2136-5	WS05	Soluble	Solid	300.0	77648
MB 880-77648/1-A	Method Blank	Soluble	Solid	300.0	77648
LCS 880-77648/2-A	Lab Control Sample	Soluble	Solid	300.0	77648
LCSD 880-77648/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	77648
885-2136-4 MS	WS04	Soluble	Solid	300.0	77648

QC Association Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

HPLC/IC (Continued)

Analysis Batch: 77664 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-4 MSD	WS04	Soluble	Solid	300.0	77648

Analysis Batch: 77665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2136-6	WS06	Soluble	Solid	300.0	77428
885-2136-7	FS01	Soluble	Solid	300.0	77428
885-2136-8	FS02	Soluble	Solid	300.0	77428
885-2136-9	FS03	Soluble	Solid	300.0	77428
885-2136-10	FS04	Soluble	Solid	300.0	77428
885-2136-11	FS05	Soluble	Solid	300.0	77428
885-2136-12	FS06	Soluble	Solid	300.0	77428
885-2136-13	FS07	Soluble	Solid	300.0	77428
885-2136-14	FS08	Soluble	Solid	300.0	77428
885-2136-15	FS09	Soluble	Solid	300.0	77428
885-2136-16	FS10	Soluble	Solid	300.0	77428
885-2136-17	FS11	Soluble	Solid	300.0	77428
885-2136-18	FS12	Soluble	Solid	300.0	77428
885-2136-19	FS13	Soluble	Solid	300.0	77428
885-2136-20	FS14	Soluble	Solid	300.0	77428
885-2136-21	FS15	Soluble	Solid	300.0	77428
885-2136-22	FS16	Soluble	Solid	300.0	77428
885-2136-23	FS17	Soluble	Solid	300.0	77428
885-2136-24	FS18	Soluble	Solid	300.0	77428
MB 880-77428/1-A	Method Blank	Soluble	Solid	300.0	77428
LCS 880-77428/2-A	Lab Control Sample	Soluble	Solid	300.0	77428
LCSD 880-77428/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	77428
885-2136-6 MS	WS06	Soluble	Solid	300.0	77428
885-2136-6 MSD	WS06	Soluble	Solid	300.0	77428
885-2136-16 MS	FS10	Soluble	Solid	300.0	77428
885-2136-16 MSD	FS10	Soluble	Solid	300.0	77428

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS01
Date Collected: 04/01/24 09:10
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/03/24 21:18
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/03/24 21:18
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 12:23
Soluble	Leach	DI Leach			77648	SA	EET MID	04/08/24 15:40
Soluble	Analysis	300.0		1	77664	SMC	EET MID	04/08/24 19:29

Client Sample ID: WS02
Date Collected: 04/01/24 09:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/03/24 22:28
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/03/24 22:28
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 12:48
Soluble	Leach	DI Leach			77648	SA	EET MID	04/08/24 15:40
Soluble	Analysis	300.0		1	77664	SMC	EET MID	04/08/24 19:35

Client Sample ID: WS03
Date Collected: 04/01/24 09:20
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/03/24 23:39
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/03/24 23:39
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 13:12
Soluble	Leach	DI Leach			77648	SA	EET MID	04/08/24 15:40
Soluble	Analysis	300.0		1	77664	SMC	EET MID	04/08/24 19:41

Client Sample ID: WS04
Date Collected: 04/01/24 09:25
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 00:02

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: WS04
Date Collected: 04/01/24 09:25
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 00:02
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 18:25
Soluble	Leach	DI Leach			77648	SA	EET MID	04/08/24 15:40
Soluble	Analysis	300.0		1	77664	SMC	EET MID	04/08/24 19:47

Client Sample ID: WS05
Date Collected: 04/01/24 09:30
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 00:26
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 00:26
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 18:49
Soluble	Leach	DI Leach			77648	SA	EET MID	04/08/24 15:40
Soluble	Analysis	300.0		1	77664	SMC	EET MID	04/08/24 20:06

Client Sample ID: WS06
Date Collected: 04/01/24 09:35
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 00:49
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 00:49
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 19:13
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 22:44

Client Sample ID: FS01
Date Collected: 04/01/24 10:00
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 01:13
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 01:13

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS01
Date Collected: 04/01/24 10:00
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 19:38
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 22:59

Client Sample ID: FS02
Date Collected: 04/01/24 10:05
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 01:37
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 01:37
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 20:02
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:04

Client Sample ID: FS03
Date Collected: 04/01/24 10:10
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 02:00
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 02:00
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 20:26
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:08

Client Sample ID: FS04
Date Collected: 04/01/24 10:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 02:24
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 02:24
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 20:50

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS04
Date Collected: 04/01/24 10:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:42

Client Sample ID: FS05
Date Collected: 04/01/24 10:20
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 03:11
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 03:11
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 21:14
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:13

Client Sample ID: FS06
Date Collected: 04/01/24 10:25
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 03:34
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 03:34
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 21:38
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:28

Client Sample ID: FS07
Date Collected: 04/01/24 10:30
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 03:58
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 03:58
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2941	PD	EET ALB	04/08/24 15:51
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:32

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS08
Date Collected: 04/01/24 10:35
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 04:21
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 04:21
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2941	PD	EET ALB	04/08/24 16:02
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:37

Client Sample ID: FS09
Date Collected: 04/01/24 10:40
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 04:45
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 04:45
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2941	PD	EET ALB	04/08/24 16:12
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/08/24 23:47

Client Sample ID: FS10
Date Collected: 04/01/24 11:00
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 05:08
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 05:08
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2941	PD	EET ALB	04/08/24 16:23
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		5	77665	SMC	EET MID	04/08/24 23:52

Client Sample ID: FS11
Date Collected: 04/01/24 11:03
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 05:32

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS11
Date Collected: 04/01/24 11:03
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 05:32
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 18:01
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		5	77665	SMC	EET MID	04/09/24 00:06

Client Sample ID: FS12
Date Collected: 04/01/24 11:06
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 05:55
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 05:55
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 13:36
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		5	77665	SMC	EET MID	04/09/24 00:11

Client Sample ID: FS13
Date Collected: 04/01/24 11:09
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 06:18
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 06:18
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 14:24
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		5	77665	SMC	EET MID	04/09/24 00:26

Client Sample ID: FS14
Date Collected: 04/01/24 11:12
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8015D		1	2770	JP	EET ALB	04/04/24 06:42
Total/NA	Prep	5030C			2652	JP	EET ALB	04/02/24 12:37
Total/NA	Analysis	8021B		1	2771	JP	EET ALB	04/04/24 06:42

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS14
Date Collected: 04/01/24 11:12
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			2786	SB	EET ALB	04/04/24 13:06
Total/NA	Analysis	8015D		1	2915	PD	EET ALB	04/05/24 15:12
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		5	77665	SMC	EET MID	04/09/24 00:30

Client Sample ID: FS15
Date Collected: 04/01/24 11:15
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-21
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8015D		1	2819	JP	EET ALB	04/04/24 16:13
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8021B		1	2821	JP	EET ALB	04/04/24 16:13
Total/NA	Prep	SHAKE			2723	SB	EET ALB	04/03/24 13:15
Total/NA	Analysis	8015D		1	2812	JU	EET ALB	04/04/24 16:24
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/09/24 00:35

Client Sample ID: FS16
Date Collected: 04/01/24 11:18
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8015D		1	2819	JP	EET ALB	04/04/24 17:24
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8021B		1	2821	JP	EET ALB	04/04/24 17:24
Total/NA	Prep	SHAKE			2723	SB	EET ALB	04/03/24 13:15
Total/NA	Analysis	8015D		1	2992	JU	EET ALB	04/09/24 10:36
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/09/24 00:40

Client Sample ID: FS17
Date Collected: 04/01/24 11:21
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8015D		1	2819	JP	EET ALB	04/04/24 18:34
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8021B		1	2821	JP	EET ALB	04/04/24 18:34
Total/NA	Prep	SHAKE			2723	SB	EET ALB	04/03/24 13:15
Total/NA	Analysis	8015D		1	2812	JU	EET ALB	04/04/24 16:49

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

Client Sample ID: FS17
Date Collected: 04/01/24 11:21
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/09/24 00:45

Client Sample ID: FS18
Date Collected: 04/01/24 11:24
Date Received: 04/02/24 07:15

Lab Sample ID: 885-2136-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8015D		1	2819	JP	EET ALB	04/04/24 18:57
Total/NA	Prep	5030C			2659	JR	EET ALB	04/02/24 13:30
Total/NA	Analysis	8021B		1	2821	JP	EET ALB	04/04/24 18:57
Total/NA	Prep	SHAKE			2723	SB	EET ALB	04/03/24 13:15
Total/NA	Analysis	8015D		1	2812	JU	EET ALB	04/04/24 17:01
Soluble	Leach	DI Leach			77428	SA	EET MID	04/05/24 07:50
Soluble	Analysis	300.0		1	77665	SMC	EET MID	04/09/24 00:50

Laboratory References:

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

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Witt 1

Job ID: 885-2136-1

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
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	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
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

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

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

885-2136 COC

Client: Hilcorp

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) xCl

Turn-Around Time: 5day

☒ Standard ☐ Rush

Project Name: Witt 1

Project #:

Project Manager: Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ☑ Yes ☐ No 4oz

# of Coolers: 1

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

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)	Chloride
4-1	910	Soil	WS01	1 4oz	cool	1	X	X									X
	915		WS02			2											
	920		WS03			3											
	925		WS04			4											
	930		WS05			5											
	935		WS06			6											
	1000		FS01			7											
	1005		FS02			8											
	1010		FS03			9											
	1015		FS04			10											
	1020		FS05			11											
	1025		FS06			12											

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4-1	1309				4/1/24	1309
4/1/24	1800			courier	4/2/24	7:15

Remarks:

CC: ecarroll@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.

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: Hilcorp

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) xcl

Turn-Around Time: 5da

☒ Standard ☐ Rush

Project Name: Witt 1

Project #:

Project Manager: Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ☑ Yes ☐ No 409

# of Coolers: 1

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

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)	Chloride
4-1	1030	Soil	FS07	1 4oz	Cool	13	X	X									X
	1035		FS08			14											
	1040		FS09			15											
	1100		FS10			16											
	1103		FS11			17											
	1106		FS12			18											
	1109		FS13			19											
	1112		FS14			20											
	1115		FS15			21											
	1118		FS16			22											
	1121		FS17			23											
↓	1124	↓	FS18	↓	↓	24	↓	↓									↓

Date	Time	Relinquished by:	Received by:	Via	Date	Time
4-1	1309				4/1/24	1309
4/1/24	1800			Courier	4/2/24	7:15

Remarks:

cc: ecarroll@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: 885-2136-1

Login Number: 2136 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	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.	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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-2136-1

Login Number: 2136
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/08/24 12:12 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	

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

January 08, 2024

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

RE: Witt 1 OrderNo.: 2312B48

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 12/20/2023 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 **2312B48**
Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: BGT 5-Point
Project: Witt 1
Collection Date: 12/18/2023 9:06:00 AM
Lab ID: 2312B48-001 **Matrix:** SOIL **Received Date:** 12/20/2023 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	970	9.8		mg/Kg	1	1/2/2024 10:56:50 AM
Motor Oil Range Organics (MRO)	270	49		mg/Kg	1	1/2/2024 10:56:50 AM
Surr: DNOP	74.9	69-147		%Rec	1	1/2/2024 10:56:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	1400	23		mg/Kg	5	12/28/2023 6:40:37 AM
Surr: BFB	1130	15-244	S	%Rec	5	12/28/2023 6:40:37 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.12		mg/Kg	5	12/28/2023 6:40:37 AM
Toluene	1.1	0.23		mg/Kg	5	12/28/2023 6:40:37 AM
Ethylbenzene	3.8	0.23		mg/Kg	5	12/28/2023 6:40:37 AM
Xylenes, Total	110	4.6		mg/Kg	50	12/28/2023 11:30:29 AM
Surr: 4-Bromofluorobenzene	143	39.1-146		%Rec	5	12/28/2023 6:40:37 AM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	410	60		mg/Kg	20	1/3/2024 4:05:11 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2312B48**

08-Jan-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **MB-79720**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **79720**	RunNo: **102238**
Prep Date: **1/3/2024**	Analysis Date: **1/3/2024**	SeqNo: **3774164** Units: **mg/Kg**

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

Sample ID: **LCS-79720**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **79720**	RunNo: **102238**
Prep Date: **1/3/2024**	Analysis Date: **1/3/2024**	SeqNo: **3774165** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	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#: **2312B48**

08-Jan-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **LCS-79665**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79665**	RunNo: **102162**
Prep Date: **12/29/2023**	Analysis Date: **1/1/2024**	SeqNo: **3771004** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	61.9	130			
Surr: DNOP	5.0		5.000		99.8	69	147			

Sample ID: **MB-79665**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79665**	RunNo: **102162**
Prep Date: **12/29/2023**	Analysis Date: **1/1/2024**	SeqNo: **3771007** 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	8.5		10.00		84.7	69	147			

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#: **2312B48**

08-Jan-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **lcs-79594**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **79594**	RunNo: **102084**
Prep Date: **12/24/2023**	Analysis Date: **12/27/2023**	SeqNo: **3768473** 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	95.6	70	130			
Surr: BFB	2100		1000		205	15	244			

Sample ID: **mb-79594**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **79594**	RunNo: **102084**
Prep Date: **12/24/2023**	Analysis Date: **12/27/2023**	SeqNo: **3768474** 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	950		1000		94.9	15	244			

Sample ID: **lcs-79553**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **79553**	RunNo: **102112**
Prep Date: **12/21/2023**	Analysis Date: **12/28/2023**	SeqNo: **3769854** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		204	15	244			

Sample ID: **mb-79553**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **79553**	RunNo: **102112**
Prep Date: **12/21/2023**	Analysis Date: **12/28/2023**	SeqNo: **3769855** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		96.7	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#: **2312B48**

08-Jan-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **LCS-79594**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **79594**	RunNo: **102084**
Prep Date: **12/24/2023**	Analysis Date: **12/27/2023**	SeqNo: **3768506** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	70	130			
Toluene	1.0	0.050	1.000	0	101	70	130			
Ethylbenzene	1.0	0.050	1.000	0	102	70	130			
Xylenes, Total	3.1	0.10	3.000	0	102	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	39.1	146			

Sample ID: **mb-79594**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **79594**	RunNo: **102084**
Prep Date: **12/24/2023**	Analysis Date: **12/27/2023**	SeqNo: **3768507** 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	0.92		1.000		92.0	39.1	146			

Sample ID: **LCS-79553**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **79553**	RunNo: **102112**
Prep Date: **12/21/2023**	Analysis Date: **12/28/2023**	SeqNo: **3769868** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	39.1	146			

Sample ID: **mb-79553**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **79553**	RunNo: **102112**
Prep Date: **12/21/2023**	Analysis Date: **12/28/2023**	SeqNo: **3769869** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	39.1	146			

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: 2312B48 RcptNo: 1

Received By: Tracy Casarrubias 12/20/2023 6:50:00 AM

Completed By: Tracy Casarrubias 12/20/2023 11:36:55 AM

Reviewed By: JR 12/20/23

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: TME 12/20/23

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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes	Morty		

Chain-of-Custody Record

Client: Hilcorp Energy

Mailing Address: 382 CR 3100 Aztec NM 87410

Phone #: 505-599-3400

email or Fax#: mkillough@hilcorp.com

QA/QC Package: rlucero@hilcorp.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 day

■ Standard ☐ Rush

Project Name: Witt 1

Project #:

Project Manager: Mitch Killough

Sampler: C Cardoza

On Ice: ☑ Yes ☐ No marty

# of Coolers: 1

Cooler Temp(including CF): 0.8+0=0.8°

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. 2312B48	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, NO3, NO2, PO4, SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI	pH/Corrosivity	Electric Conductivity	SAR		
12/18/23	9:06	soil	BGT 5-Point	4oz glass/1	Cold	001	■	■					■									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/19/23	1520				12/19/23	1520
12/19/23	1740			courier	12/20/23	0:50

Remarks:

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

February 02, 2024

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

RE: Witt 1 OrderNo.: 2401799

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 15 sample(s) on 1/19/2024 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH01 @1
Project: Witt 1
Collection Date: 1/17/2024 12:40:00 PM
Lab ID: 2401799-001 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	530	9.9		mg/Kg	1	1/22/2024 4:58:11 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/22/2024 4:58:11 PM
Surr: DNOP	80.8	69-147		%Rec	1	1/22/2024 4:58:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	4000	230		mg/Kg	50	1/23/2024 3:36:02 AM
Surr: BFB	347	15-244	S	%Rec	50	1/23/2024 3:36:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.2		mg/Kg	50	1/23/2024 3:36:02 AM
Toluene	35	2.3		mg/Kg	50	1/23/2024 3:36:02 AM
Ethylbenzene	32	2.3		mg/Kg	50	1/23/2024 3:36:02 AM
Xylenes, Total	340	4.7		mg/Kg	50	1/23/2024 3:36:02 AM
Surr: 4-Bromofluorobenzene	100	39.1-146		%Rec	50	1/23/2024 3:36:02 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	160	60		mg/Kg	20	1/19/2024 5:35:14 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH01 @ 3.75
Project: Witt 1
Collection Date: 1/17/2024 12:43:00 PM
Lab ID: 2401799-002 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/22/2024 5:10:12 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/22/2024 5:10:12 PM
Surr: DNOP	86.9	69-147		%Rec	1	1/22/2024 5:10:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/23/2024 3:59:45 AM
Surr: BFB	98.1	15-244		%Rec	1	1/23/2024 3:59:45 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/23/2024 3:59:45 AM
Toluene	ND	0.048		mg/Kg	1	1/23/2024 3:59:45 AM
Ethylbenzene	ND	0.048		mg/Kg	1	1/23/2024 3:59:45 AM
Xylenes, Total	ND	0.096		mg/Kg	1	1/23/2024 3:59:45 AM
Surr: 4-Bromofluorobenzene	83.4	39.1-146		%Rec	1	1/23/2024 3:59:45 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 6:20:44 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH02 @ 3
Project: Witt 1
Collection Date: 1/17/2024 12:45:00 PM
Lab ID: 2401799-003 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/22/2024 5:22:12 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2024 5:22:12 PM
Surr: DNOP	84.8	69-147		%Rec	1	1/22/2024 5:22:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/23/2024 4:23:49 AM
Surr: BFB	98.8	15-244		%Rec	1	1/23/2024 4:23:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/23/2024 4:23:49 AM
Toluene	ND	0.047		mg/Kg	1	1/23/2024 4:23:49 AM
Ethylbenzene	ND	0.047		mg/Kg	1	1/23/2024 4:23:49 AM
Xylenes, Total	ND	0.094		mg/Kg	1	1/23/2024 4:23:49 AM
Surr: 4-Bromofluorobenzene	86.6	39.1-146		%Rec	1	1/23/2024 4:23:49 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 7:39:23 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH02 @ 5
Project: Witt 1
Collection Date: 1/17/2024 1:33:00 PM
Lab ID: 2401799-004 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 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	1/22/2024 5:34:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/22/2024 5:34:12 PM
Surr: DNOP	87.8	69-147		%Rec	1	1/22/2024 5:34:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/23/2024 4:47:50 AM
Surr: BFB	97.0	15-244		%Rec	1	1/23/2024 4:47:50 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/23/2024 4:47:50 AM
Toluene	ND	0.048		mg/Kg	1	1/23/2024 4:47:50 AM
Ethylbenzene	ND	0.048		mg/Kg	1	1/23/2024 4:47:50 AM
Xylenes, Total	ND	0.096		mg/Kg	1	1/23/2024 4:47:50 AM
Surr: 4-Bromofluorobenzene	85.2	39.1-146		%Rec	1	1/23/2024 4:47:50 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 7:56:17 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH03 @ 3
Project: Witt 1
Collection Date: 1/17/2024 12:48:00 PM
Lab ID: 2401799-005 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	200	9.7		mg/Kg	1	1/22/2024 5:46:09 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2024 5:46:09 PM
Surr: DNOP	85.2	69-147		%Rec	1	1/22/2024 5:46:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	350	9.6		mg/Kg	2	1/24/2024 10:15:11 PM
Surr: BFB	1260	15-244	S	%Rec	2	1/24/2024 10:15:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.048		mg/Kg	2	1/24/2024 10:15:11 PM
Toluene	ND	0.096		mg/Kg	2	1/24/2024 10:15:11 PM
Ethylbenzene	0.99	0.096		mg/Kg	2	1/24/2024 10:15:11 PM
Xylenes, Total	15	1.9		mg/Kg	20	1/23/2024 5:11:50 AM
Surr: 4-Bromofluorobenzene	90.7	39.1-146		%Rec	20	1/23/2024 5:11:50 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 8:11:23 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH03 @ 4.5
Project: Witt 1
Collection Date: 1/17/2024 1:30:00 PM
Lab ID: 2401799-006 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/22/2024 5:58:01 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/22/2024 5:58:01 PM
Surr: DNOP	86.5	69-147		%Rec	1	1/22/2024 5:58:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/23/2024 5:35:47 AM
Surr: BFB	103	15-244		%Rec	1	1/23/2024 5:35:47 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/23/2024 5:35:47 AM
Toluene	ND	0.047		mg/Kg	1	1/23/2024 5:35:47 AM
Ethylbenzene	ND	0.047		mg/Kg	1	1/23/2024 5:35:47 AM
Xylenes, Total	ND	0.093		mg/Kg	1	1/23/2024 5:35:47 AM
Surr: 4-Bromofluorobenzene	87.8	39.1-146		%Rec	1	1/23/2024 5:35:47 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 8:26:32 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH04 @ 3
Project: Witt 1
Collection Date: 1/17/2024 12:52:00 PM
Lab ID: 2401799-007 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	140	9.2		mg/Kg	1	1/22/2024 6:09:54 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/22/2024 6:09:54 PM
Surr: DNOP	86.0	69-147		%Rec	1	1/22/2024 6:09:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	26	4.5		mg/Kg	1	1/24/2024 9:51:32 PM
Surr: BFB	410	15-244	S	%Rec	1	1/24/2024 9:51:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/24/2024 9:51:32 PM
Toluene	ND	0.045		mg/Kg	1	1/24/2024 9:51:32 PM
Ethylbenzene	0.069	0.045		mg/Kg	1	1/24/2024 9:51:32 PM
Xylenes, Total	0.33	0.091		mg/Kg	1	1/24/2024 9:51:32 PM
Surr: 4-Bromofluorobenzene	95.7	39.1-146		%Rec	1	1/24/2024 9:51:32 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 8:44:08 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH04 @ 4.5
Project: Witt 1
Collection Date: 1/17/2024 12:55:00 PM
Lab ID: 2401799-008 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 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	1/22/2024 6:21:46 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/22/2024 6:21:46 PM
Surr: DNOP	87.0	69-147		%Rec	1	1/22/2024 6:21:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/23/2024 6:23:59 AM
Surr: BFB	96.8	15-244		%Rec	1	1/23/2024 6:23:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/23/2024 6:23:59 AM
Toluene	ND	0.047		mg/Kg	1	1/23/2024 6:23:59 AM
Ethylbenzene	ND	0.047		mg/Kg	1	1/23/2024 6:23:59 AM
Xylenes, Total	ND	0.093		mg/Kg	1	1/23/2024 6:23:59 AM
Surr: 4-Bromofluorobenzene	85.2	39.1-146		%Rec	1	1/23/2024 6:23:59 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	61		mg/Kg	20	1/19/2024 8:59:17 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH05 @ 3
Project: Witt 1
Collection Date: 1/17/2024 1:00:00 PM
Lab ID: 2401799-009 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/22/2024 6:33:39 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/22/2024 6:33:39 PM
Surr: DNOP	87.8	69-147		%Rec	1	1/22/2024 6:33:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/23/2024 6:47:55 AM
Surr: BFB	94.7	15-244		%Rec	1	1/23/2024 6:47:55 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/23/2024 6:47:55 AM
Toluene	ND	0.048		mg/Kg	1	1/23/2024 6:47:55 AM
Ethylbenzene	ND	0.048		mg/Kg	1	1/23/2024 6:47:55 AM
Xylenes, Total	ND	0.096		mg/Kg	1	1/23/2024 6:47:55 AM
Surr: 4-Bromofluorobenzene	83.6	39.1-146		%Rec	1	1/23/2024 6:47:55 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 9:14:26 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH05 @ 4.5
Project: Witt 1
Collection Date: 1/17/2024 1:03:00 PM
Lab ID: 2401799-010 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/22/2024 6:45:32 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/22/2024 6:45:32 PM
Surr: DNOP	90.1	69-147		%Rec	1	1/22/2024 6:45:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/23/2024 7:11:49 AM
Surr: BFB	97.4	15-244		%Rec	1	1/23/2024 7:11:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/23/2024 7:11:49 AM
Toluene	ND	0.047		mg/Kg	1	1/23/2024 7:11:49 AM
Ethylbenzene	ND	0.047		mg/Kg	1	1/23/2024 7:11:49 AM
Xylenes, Total	ND	0.094		mg/Kg	1	1/23/2024 7:11:49 AM
Surr: 4-Bromofluorobenzene	85.5	39.1-146		%Rec	1	1/23/2024 7:11:49 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/19/2024 9:29:36 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH06 @ 4
Project: Witt 1
Collection Date: 1/17/2024 1:07:00 PM
Lab ID: 2401799-011 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/23/2024 1:06:12 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/23/2024 1:06:12 PM
Surr: DNOP	108	69-147		%Rec	1	1/23/2024 1:06:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/24/2024 1:45:16 AM
Surr: BFB	110	15-244		%Rec	1	1/24/2024 1:45:16 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/24/2024 1:45:16 AM
Toluene	ND	0.047		mg/Kg	1	1/24/2024 1:45:16 AM
Ethylbenzene	ND	0.047		mg/Kg	1	1/24/2024 1:45:16 AM
Xylenes, Total	ND	0.094		mg/Kg	1	1/24/2024 1:45:16 AM
Surr: 4-Bromofluorobenzene	85.4	39.1-146		%Rec	1	1/24/2024 1:45:16 AM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	76	60		mg/Kg	20	1/23/2024 3:49:09 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH06 @ 5
Project: Witt 1
Collection Date: 1/17/2024 1:18:00 PM
Lab ID: 2401799-012 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/23/2024 1:16:52 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/23/2024 1:16:52 PM
Surr: DNOP	102	69-147		%Rec	1	1/23/2024 1:16:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/24/2024 2:09:23 AM
Surr: BFB	103	15-244		%Rec	1	1/24/2024 2:09:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	1/24/2024 2:09:23 AM
Toluene	ND	0.049		mg/Kg	1	1/24/2024 2:09:23 AM
Ethylbenzene	ND	0.049		mg/Kg	1	1/24/2024 2:09:23 AM
Xylenes, Total	ND	0.098		mg/Kg	1	1/24/2024 2:09:23 AM
Surr: 4-Bromofluorobenzene	87.1	39.1-146		%Rec	1	1/24/2024 2:09:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	ND	60		mg/Kg	20	1/23/2024 4:04:17 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH07 @ 4
Project: Witt 1
Collection Date: 1/17/2024 1:10:00 PM
Lab ID: 2401799-013 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	740	8.9		mg/Kg	1	1/23/2024 1:38:05 PM
Motor Oil Range Organics (MRO)	100	45		mg/Kg	1	1/23/2024 1:38:05 PM
Surr: DNOP	106	69-147		%Rec	1	1/23/2024 1:38:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	150	4.8		mg/Kg	1	1/24/2024 2:32:59 AM
Surr: BFB	1700	15-244	S	%Rec	1	1/24/2024 2:32:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/24/2024 2:32:59 AM
Toluene	ND	0.048		mg/Kg	1	1/24/2024 2:32:59 AM
Ethylbenzene	0.90	0.048		mg/Kg	1	1/24/2024 2:32:59 AM
Xylenes, Total	4.3	0.096		mg/Kg	1	1/24/2024 2:32:59 AM
Surr: 4-Bromofluorobenzene	193	39.1-146	S	%Rec	1	1/24/2024 2:32:59 AM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	ND	60		mg/Kg	20	1/23/2024 4:19:27 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH07 @ 5
Project: Witt 1
Collection Date: 1/17/2024 1:13:00 PM
Lab ID: 2401799-014 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/23/2024 1:59:22 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/23/2024 1:59:22 PM
Surr: DNOP	105	69-147		%Rec	1	1/23/2024 1:59:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/24/2024 2:56:36 AM
Surr: BFB	143	15-244		%Rec	1	1/24/2024 2:56:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/24/2024 2:56:36 AM
Toluene	ND	0.046		mg/Kg	1	1/24/2024 2:56:36 AM
Ethylbenzene	ND	0.046		mg/Kg	1	1/24/2024 2:56:36 AM
Xylenes, Total	ND	0.091		mg/Kg	1	1/24/2024 2:56:36 AM
Surr: 4-Bromofluorobenzene	85.8	39.1-146		%Rec	1	1/24/2024 2:56:36 AM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	ND	60		mg/Kg	20	1/23/2024 4:34:36 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 **2401799**
Date Reported: **2/2/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: PH08 @ 5
Project: Witt 1
Collection Date: 1/17/2024 1:15:00 PM
Lab ID: 2401799-015 **Matrix:** SOIL **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	1/23/2024 2:10:18 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	1/23/2024 2:10:18 PM
Surr: DNOP	99.3	69-147		%Rec	1	1/23/2024 2:10:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/24/2024 3:44:09 AM
Surr: BFB	96.6	15-244		%Rec	1	1/24/2024 3:44:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	1/24/2024 3:44:09 AM
Toluene	ND	0.049		mg/Kg	1	1/24/2024 3:44:09 AM
Ethylbenzene	ND	0.049		mg/Kg	1	1/24/2024 3:44:09 AM
Xylenes, Total	ND	0.099		mg/Kg	1	1/24/2024 3:44:09 AM
Surr: 4-Bromofluorobenzene	82.6	39.1-146		%Rec	1	1/24/2024 3:44:09 AM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	79	60		mg/Kg	20	1/23/2024 4:49:45 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#: **2401799**

02-Feb-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **MB-80006**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **80006**	RunNo: **102562**							
Prep Date: **1/19/2024**	Analysis Date: **1/19/2024**	SeqNo: **3790312**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-80006**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **80006**	RunNo: **102562**							
Prep Date: **1/19/2024**	Analysis Date: **1/19/2024**	SeqNo: **3790313**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Sample ID: **MB-80050**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **80050**	RunNo: **102622**							
Prep Date: **1/23/2024**	Analysis Date: **1/23/2024**	SeqNo: **3792208**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-80050**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **80050**	RunNo: **102622**							
Prep Date: **1/23/2024**	Analysis Date: **1/23/2024**	SeqNo: **3792209**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	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#: **2401799**

02-Feb-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **LCS-80038**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80038**	RunNo: **102621**
Prep Date: **1/22/2024**	Analysis Date: **1/23/2024**	SeqNo: **3791172** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	61.9	130			
Surr: DNOP	5.6		5.000		111	69	147			

Sample ID: **MB-80038**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80038**	RunNo: **102621**
Prep Date: **1/22/2024**	Analysis Date: **1/23/2024**	SeqNo: **3791173** 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	12		10.00		115	69	147			

Sample ID: **MB-80003**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80003**	RunNo: **102589**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3791240** 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	8.5		10.00		85.1	69	147			

Sample ID: **LCS-80003**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80003**	RunNo: **102589**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3791241** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.6	61.9	130			
Surr: DNOP	4.2		5.000		83.0	69	147			

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#: **2401799**

02-Feb-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **lcs-80000**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790762** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: **mb-80000**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790763** 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	960		1000		96.3	15	244			

Sample ID: **LCS-80027**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80027**	RunNo: **102620**
Prep Date: **1/22/2024**	Analysis Date: **1/23/2024**	SeqNo: **3791789** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	70	130			
Surr: BFB	2100		1000		212	15	244			

Sample ID: **mb-80027**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80027**	RunNo: **102620**
Prep Date: **1/22/2024**	Analysis Date: **1/23/2024**	SeqNo: **3791790** 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	990		1000		99.1	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#: **2401799**

02-Feb-24

Client: HILCORP ENERGY

Project: Witt 1

Sample ID: **LCS-80000**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790786** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.025	1.000	0	79.0	70	130			
Toluene	0.81	0.050	1.000	0	80.8	70	130			
Ethylbenzene	0.81	0.050	1.000	0	81.4	70	130			
Xylenes, Total	2.5	0.10	3.000	0	81.7	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	39.1	146			

Sample ID: **mb-80000**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790787** 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	0.86		1.000		85.9	39.1	146			

Sample ID: **LCS-80027**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80027**	RunNo: **102620**
Prep Date: **1/22/2024**	Analysis Date: **1/23/2024**	SeqNo: **3791817** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.025	1.000	0	73.7	70	130			
Toluene	0.76	0.050	1.000	0	76.2	70	130			
Ethylbenzene	0.76	0.050	1.000	0	76.2	70	130			
Xylenes, Total	2.3	0.10	3.000	0	76.8	70	130			
Surr: 4-Bromofluorobenzene	0.87		1.000		87.4	39.1	146			

Sample ID: **mb-80027**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80027**	RunNo: **102620**
Prep Date: **1/22/2024**	Analysis Date: **1/23/2024**	SeqNo: **3791818** 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		87.9	39.1	146			

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: **2401799** RcptNo: **1**

Received By: **Cheyenne Cason** **1/19/2024 8:00:00 AM** Chel

Completed By: **Cheyenne Cason** **1/19/2024 9:13:28 AM** Chel

Reviewed By: 1/19/24

Chain of Custody

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

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: M 1/19/24

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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Not Present	Morty		

Chain-of-Custody Record

Client: Hilcorp

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:

☒ Standard 5-day ☐ Rush

Project Name: Wit 1

Project #:

Project Manager: Stuart Hyde

Sampler: Reece Hanson

On Ice: ☑ Yes ☐ No Mark

# of Coolers: 1

Cooler Temp(Including CF): 0.5-0.1=0.4 (°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. 2401799	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)
1/17/24	12:40	Soil	Pit01 @ 1	1,4oz	Cool	001	X	X					X			
	12:43		Pit01 @ 3.75			002										
	12:45		Pit02 @ 3			003										
	13:33		Pit02 @ 5			004										
	12:48		☆ Pit03 @ 3			005										
	13:30		☆ Pit03 @ 4.5			006										
	12:32		Pit04 @ 3			007										
	~~13:03~~ 12:55		Pit04 @ 4.5			008										
	13:00		Pit05 @ 3			009										
	13:03		Pit05 @ 4.5			010										
	13:07		Pit06 @ 3.4 pH			011										
	13:18		Pit06 @ 5 pH			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/18/24	1601				1/18/24	1661
1/18/24	1747				11/19/24	0800

Remarks:

cc: rhanson@ensolum
shyde@ensolum

☆ Hold Pit03 @ 3 & Pit03 4.5

Chain-of-Custody Record

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

5-day

☒ Standard ☐ Rush

Project Name: Witt 1

Project #:

Project Manager: Stuart Hyde

Sampler: Reece Hanson

On Ice: ☑ Yes ☐ No Mark

# of Coolers: 1

Cooler Temp(including CF): 0.5 - 0.1 = 0.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2401794
1/17/24	13:10	Soil	PH07@4	1 4oz	Cool	013
↓	13:13	↓	PH07@5	↓	↓	014
↓	13:15	↓	PH08@5	↓	↓	015

Analysis Request

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)
X	X					X			
X	X					X			
X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/18/24	1601				1/18/24	1601
1/18/24	1747				1/19/24	0800

Remarks:

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.

ENSOLUM

APPENDIX D

ENSOLUM

Photographic Log
Hilcorp Energy Company
Witt 1
nAPP2403723976

Photograph: 1 Date: 1/17/2024
Description: Pothole PH01
View: North

Photograph: 2 Date: 1/17/2024
Description: Pothole PH07
View: West

Photograph: 3 Date: 4/1/2024
Description: Excavation activities
View: Southwest

Photograph: 4 Date: 5/6/2024
Description: Final excavation extent
View: East

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District III
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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

Action 347787

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 347787
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2403723976**
Incident Name	**NAPP2403723976 WITT NO. 1 @ 30-045-13211**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-045-13211] WITT #001**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	WITT NO. 1
Date Release Discovered	02/02/2024
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water 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	Cause: Other | Tank (Any) | Produced Water | Released: 8 BBL | Recovered: 0 BBL | Lost: 8 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Cause: Other | Tank (Any) | Condensate | Released: 8 BBL | Recovered: 0 BBL | Lost: 8 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)	This is a historical release that was discovered during the removal of a BGT storage vessel. Upon initial removal on 12/18/2023, a 5-pt composite was collected, which indicated elevated Total BTEX and Total TPH. On 1/17/2024, a soil delineation was performed to determine a volume. Based on the lab report (dated 2/2/2024) and using an estimated release volume tool, the calculated volume release was determined to be 15.3 bbls (50% condensate, 50% produced water). Note that our entry was automatically estimated up to 16 bbls by the NMOCD.

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 347787
	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	**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	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	*Not answered.*
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: 05/29/2024

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 347787
	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 26 and 50 (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 200 and 300 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1000 (ft.) and ½ (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between ½ and 1 (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)	890
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	4530
GRO+DRO (EPA SW-846 Method 8015M)	4530
BTEX (EPA SW-846 Method 8021B or 8260B)	407
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	03/29/2024
On what date will (or did) the final sampling or liner inspection occur	04/29/2024
On what date will (or was) the remediation complete(d)	04/24/2024
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	3600
What is the estimated volume (in cubic yards) that will be remediated	926
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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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: 347787
	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: 05/29/2024
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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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
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QUESTIONS (continued)

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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)

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**335364**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**04/24/2024**
What was the (estimated) number of samples that were to be gathered	**7**
What was the sampling surface area in square feet	**1400**

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	3600
What was the total volume (cubic yards) remediated	926
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)	On-pad remediation only. No off-pad areas impacted.

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: 05/29/2024

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QUESTIONS (continued)

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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 347787

CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
nvelez	None	6/26/2024