ENSOLUM

October 2, 2024

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

Re: **Remediation Report and Closure Request**
Pipkin Gas Com A #1E
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NAPP2315954357

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Remediation Report and Closure Request* for the Pipkin Gas Com A #1E natural gas production well pad (Site). The Site is located on federal land managed by the United States Bureau of Land Management (BLM) in Unit C, Section 7, Township 27 North, Range 10 West in San Juan County, New Mexico (Figure 1).

SITE BACKGROUND

Historical petroleum hydrocarbon impacts related to a below-grade tank (BGT) were discovered during BGT closure and well pad reclamation activities on July 26, 2022. Analytical results collected on July 29, 2022, confirmed the presence of total petroleum hydrocarbon (TPH) concentrations in soil exceeding the applicable New Mexico Oil Conservation Division (NMOCD) Closure Criteria. Once delineation activities were completed at the Site on October 28, 2022, April 14, 2023, and May 17 and 18, 2023, Hilcorp estimated the release volume to be approximately 23 barrels based on laboratory analytical results obtained from soil samples and the approximate extent of soil impacts. The release was reported to the NMOCD on June 8, 2023, on a Form C-141, *Release Notification* and was assigned NMOCD Incident Number NAPP2315954357.

SITE CLOSURE CRITERIA

Based on the information presented in the *Site Investigation Report and Remediation Work Plan,* dated August 11, 2023, and in accordance with the *Table I, Closure Criteria for Soils Impacted by a Release* (19.15.29.12 of the New Mexico Administrative Code [NMAC]), the following Closure Criteria was applied to the Site constituents of concern (COCs):

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 100 mg/kg
- Chloride: 600 mg/kg

INITIAL SITE INVESTIGATION ACTIVITIES

In response to the discovery of soil impacts beneath the former BGT, Hilcorp performed initial delineation activities using a backhoe to pothole at the center of the former BGT location on October 28, 2022. Due to limitations of the equipment, samples were collected to a maximum depth of 14 feet below ground surface (bgs). During this event, samples were collected at depths of 8, 10, 12, and 14 feet bgs and were submitted to Hall Environmental Analysis Laboratory (Hall) 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. Laboratory analytical results indicated the presence of TPH at concentrations exceeding the NMOCD Table I Closure Criteria in all collected samples.

Based on the initial field screening and sampling results, additional vertical and horizontal delineation with a drill rig was required. Drilling activities took place on April 14, 2023, utilizing a Central Mining Equipment (CME) 75 hollow-stem auger drill rig operated by Enviro-Drill, Inc. with split-spoon sampling, to advance a total of three borings (BH01 to BH03) to depths up to 35 feet bgs (Figure 2). Based on the laboratory analytical results collected during the April 2023 drilling event, additional drilling was conducted on May 17 and 18, 2023, to further delineate lateral impacts west of boring BH01 and to advance a boring at the center of the former BGT location. Laboratory analytical results from the delineation efforts are included in Table 1 and depicted on Figure 2. Based on field screening during drilling, borings BH01 and BH04 were completed as soil vapor extraction (SVE) wells to be used for pilot testing and potential future remediation. SVE well locations are shown on Figure 3.

Additional details regarding the delineation are described in the *Site Investigation Report and Remediation Work Plan,* dated August 11, 2023.

SVE PILOT TEST ACTIVITIES AND FINDINGS

Based on the initial Site investigation results and prior to conducting additional delineation efforts, Ensolum conducted a pilot study on February 6, 2024, to assess the potential use of SVE to remediate subsurface soil impacts at the Site. As described by the EPA, SVE is an in-situ technique for the removal of volatile organic compounds (VOCs) and some semi-volatile organic compounds (SVOCs) from vadose zone soil through the application of vacuum to the subsurface. When air is removed from the soil, contaminants are volatilized and removed simultaneously. Depending on contaminant concentrations in the extracted air, the SVE system may emit exhaust directly to the atmosphere.

Results of the February 2024 pilot test indicated SVE was not a viable remediation technique at the Site using the current configuration of wells. Details describing the pilot test and results were submitted to the NMOCD in the *Soil Vapor Extraction Pilot Test Summary,* dated March 22, 2024.

MAY 2024 ADDITIONAL POTHOLE DELINEATION ACTIVITIES

To confirm the presence and extent of petroleum-impacted soil in the shallow subsurface, Hilcorp advanced potholes PH01 through PH06 at the Site on May 2, 2024, in the locations indicated on Figure 2. During the May 2024 delineation event, bedrock was encountered at a depth of approximately 3 to 5 feet bgs and the excavator met refusal on formation sandstone bedrock at depths between 6 and 9 feet bgs. In addition, pothole PH02 was advanced approximately 30 feet east of PH01 and met shallow refusal, therefore no samples were collected from this location. Soil from each pothole was field screened for VOCs using a photoionization detector (PID). In general, soil samples were collected from depth intervals indicating the greatest impacts based on field screening results and from the terminal depth of the borehole. Soil samples were collected directly into laboratory-provided jars and immediately placed on ice. Samples were submitted to Eurofins Environment Testing (Eurofins) for analysis of BTEX, TPH-GRO, TPH-DRO, TPH-MRO, and chloride by the same methods described above.

Soil samples collected from potholes PH01, PH04, and PH06A contained TPH concentrations exceeding the Table I Closure Criteria. All other soil samples analyzed during this delineation effort were in compliance with the applicable Closure Criteria for TPH, BTEX, and chloride. Laboratory analytical results from the May 2024 effort are summarized in Table 1 and Figure 2, with the complete laboratory analytical report attached in Appendix A. Notification to NMOCD was provided at least two business days prior to conducting remediation and sampling work, with correspondence attached in Appendix B.

EXCAVATION AND CONFIRMATION SOIL SAMPLING ACTIVITIES

Based on the delineation sampling activities described above, Hilcorp excavated soil surrounding the BGT to remove historical impacts discovered at the Site. Ensolum personnel conducted excavation oversight and sampling activities on July 16, 2024. To direct excavation activities, Ensolum personnel field screened soil for VOCs using a calibrated PID. Excavation work was performed using a track hoe and bulldozer with a soil-ripping implement in attempts to remove the impacted formation sandstone at the Site. Due to the presence of indurated sandstone at the Site, the heavy equipment was only able to remove bedrock to a maximum depth of 13.5 feet bgs.

Once visibly impacted material was removed and the excavation footprint encompassed the previously potholed locations that contained elevated TPH measurements, five-point composite soil samples were collected from the floor (FS-01 through FS-03) and sidewalls (SW-01 through SW-09) 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 collected directly into laboratory-provided jars and immediately placed on ice. Samples were submitted to Eurofins for analysis of BTEX, TPH-GRO, TPH-DRO, TPH-MRO, and chloride by the same methods described above. Sample locations are presented on Figure 3.

Analytical results from the excavation indicated concentrations of TPH exceeded the NMOCD Table I Closure Criteria in all floor samples and six of the nine sidewall samples collected at the Site, as indicated on Table 2. In total, 462 cubic yards of impacted soil was removed from the Site and transported to the Envirotech, Inc. landfarm located in San Juan County, New Mexico. Soil sample results are summarized in Table 2, with complete laboratory analytical reports attached as Appendix A. Photographs taken by Ensolum during the delineation and excavation work are included in Appendix C.

CONCLUSIONS

Based on the soil sample results described above, petroleum hydrocarbon impacts remain at the Site above the NMOCD Table I Closure Criteria. Although impacted soil was discovered during well pad reclamation activities in 2022, petroleum hydrocarbon contaminants are present due to historical impacts left in place during a pit closure conducted in 1996. Based on the *Pit Remediation and Closure Report* Form, dated October 14, 1994, and approved by the NMOCD December 13, 1996 (pages 9 through 12 of the attachment in Appendix D), a pit was located 90 feet south of the Site wellhead, which is the same location of the BGT removed during the 2022 reclamation activities. During pit closure activities conducted in 1994, impacted soil was removed until the contractor met refusal on bedrock at approximately 5 feet bgs. In total, approximately 50 cubic yards of impacted soil were removed from the pit during closure. One soil sample was collected from the north side of the pit excavation and TPH was detected at a concentration of 15,900 mg/kg. The NMOCD approved closure of the pit and leaving TPH-impacted soil in place due to refusal on bedrock. The location of the former pit relative to the BGT removed in 2022 indicates that petroleum impacts present at the Site originated from historical releases from the former pit operated at the Site.

The Site characterization presented in the *Site Investigation Report and Remediation Work Plan* dated August 11, 2023, indicates that potential nearby receptors are not located within the radii presented in 19.15.29.11 and 12 NMAC, with the exception of a significant watercourse located within 300 feet of the

Site. This significant watercourse is a dry wash located 240 feet northeast from the Site impacts and based on regional depth to water data, is a losing stream. The nearest permitted water well is over 1 mile from the Site and has a recorded depth to water of 170 feet bgs. The Site is located on top of a mesa approximately 130 feet higher in elevation than Kutz Wash, which is the closest potential source of shallow groundwater present within the alluvial aquifer. Due to depth of impacts remaining at the Site, surface water runoff and potential sheet flow into nearby significant watercourses would likely not be impacted by TPH concentrations present in soil at depth. Additionally, since the water course is a losing stream, the potential for petroleum hydrocarbons to enter the water course from depth is low.

Site lithology indicates indurated formation sandstone is present at depths of 3 to 5 feet bgs. The vertical transport of the petroleum hydrocarbons through the sandstone would be dependent on applying sufficient head or flowing pressure to overcome the existing adsorption of the petroleum hydrocarbons to the soil. As the release is no longer occurring, the only driving mechanism that could increase vertical transport would be water infiltration. With little rainfall historically recorded in San Juan County (approximately 10 inches per year) and depth to groundwater greater than 100 feet bgs at the Site, the potential of surface water infiltrating and transporting the petroleum hydrocarbon impacts to groundwater is unlikely. Additionally, further migration is unlikely to occur due to the age of the impacts present at the Site (over 30 years) and the lack of vertical or lateral migration based on the recent drilling and pothole delineation results.

Lastly, petroleum hydrocarbons are organic matter which are conducive to natural attenuation through adsorption, biodegradation, and volatilization in the unsaturated zone of the soil column. Over time, microbes will consume the adsorbed hydrocarbons, thereby reducing TPH concentrations, and is demonstrated through analytical results collected between 1994 and 2024. TPH concentrations have already attenuated through natural degradation processes from a concentration of 15,900 mg/kg in 1994 to a maximum concentration of 2,258 mg/kg detected from the excavation samples collected in July 2024. Considering the limited volume and low TPH concentrations present at the Site, natural attenuation is likely to continue reducing concentrations to below NMOCD Table I Closure Criteria.

VARIANCE REQUEST

The Site characterization and findings described above demonstrate that there are currently not any identifiable complete pathways for human or environmental exposure to COCs at the Site. COC concentrations remaining at the Site do not pose a significant risk to fresh water, human health, or the environment and leaving the residual impacted soil in place is equally protective of public health and environment. Natural attenuation through adsorption, biodegradation, and volatilization will reduce TPH concentrations over time and still achieve the objectives identified in 19.15.29 NMAC. As such, Hilcorp and Ensolum recommend leaving the impacted soil at the Site in place to naturally attenuate. This approach, although protective, would result in leaving impacted media in place exceeding NMOCD remediation action levels and, as such, require a variance in accordance with 19.15.29.14 NMAC.

The variance requirements also require a justification for a variance and a demonstration of how the variance will provide better or equal protection of public health, safety, and the environment. Equal or better protection of public health and the environment through natural attenuation is documented in the evaluation of potential exposure pathways and nearby sensitive receptors presented above that concludes there is no complete pathway for human or environmental exposure to the COCs. Conversely, those exposure pathways are significantly altered and effectually opened if alternative remediation techniques are applied at the Site (i.e., additional excavation). Further excavation activities pose an unnecessary risk to workers in order to remove indurated formation sandstone using heavy equipment and special implements capable of removing the impacted bedrock. If left in place, contaminants will be degraded *in situ* by biological processes that will reduce the petroleum hydrocarbons to carbon dioxide and water.

Lastly, although the NMOCD previously approved closure of the original pit containing elevated TPH concentrations, Hilcorp has voluntarily removed 462 cubic yards of additional impacted material from the Site in attempts to appropriately remediate the Site. By removing the bulk of remaining impacted material, the remaining TPH concentrations will be able to be reduced in a shorter timeframe through natural attenuation.

CLOSURE REQUEST

Based on the delineation and remediation activities performed at the Site, as well as the risk assessment to evaluate human or environmental exposures to the identified COCs, Hilcorp requests approval to leave the impacted material in place and close Incident Number NAPP2315954357 with no further action required. Upon approval of this closure request, Hilcorp will continue to reclaim the Site.

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

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Attachments:

Figure 1: Site Location Map
Figure 2: Soil Sample Analytical Results
Figure 3: Excavation Sample Locations

Table 1: Delineation Soil Sample Analytical Results
Table 2: Excavation Soil Sample Analytical Results

Appendix A: Laboratory Analytical Reports
Appendix B: Agency Correspondence
Appendix C: Photographic Log
Appendix D: Pit Remediation and Closure Report Form

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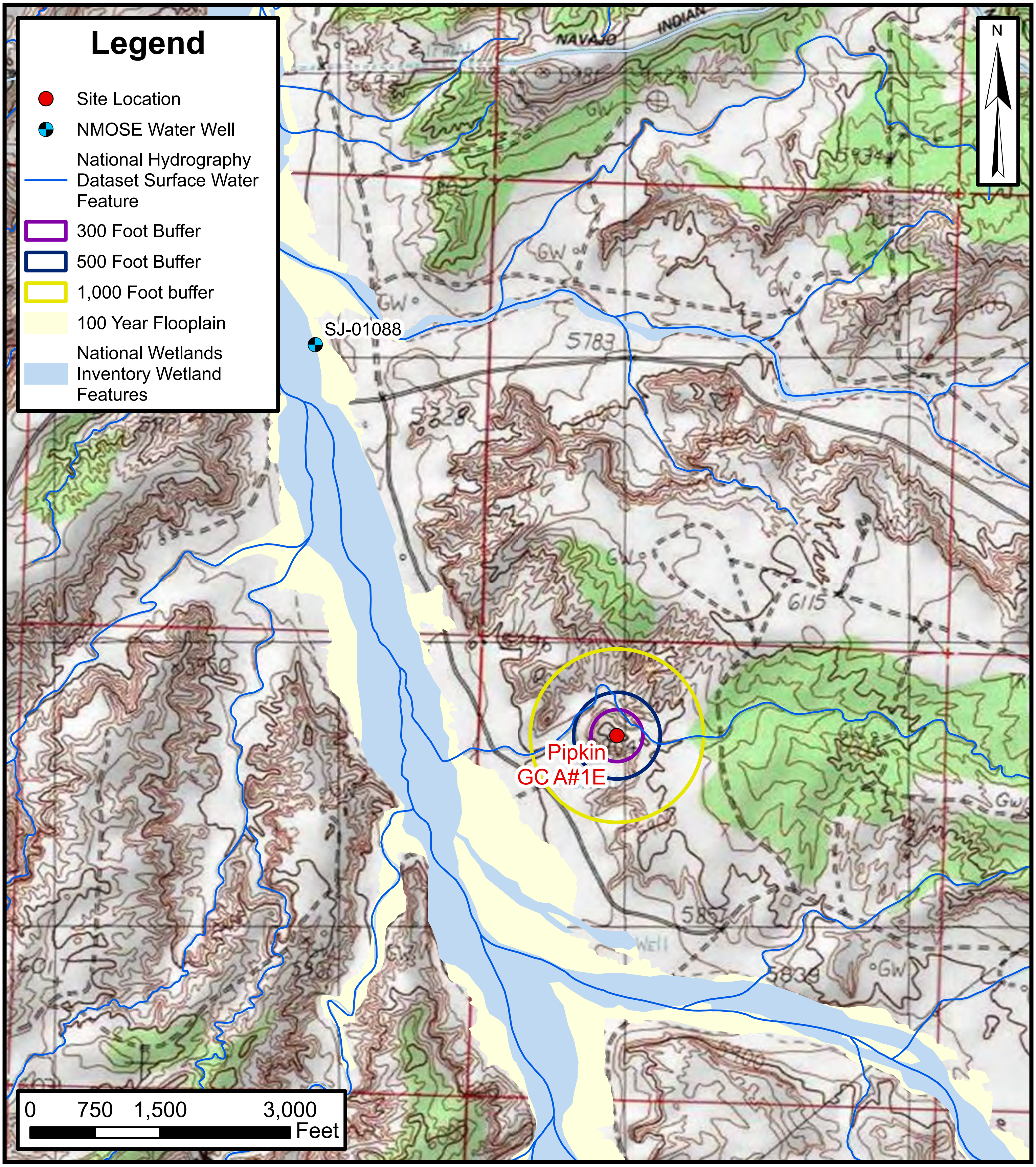
FIGURES



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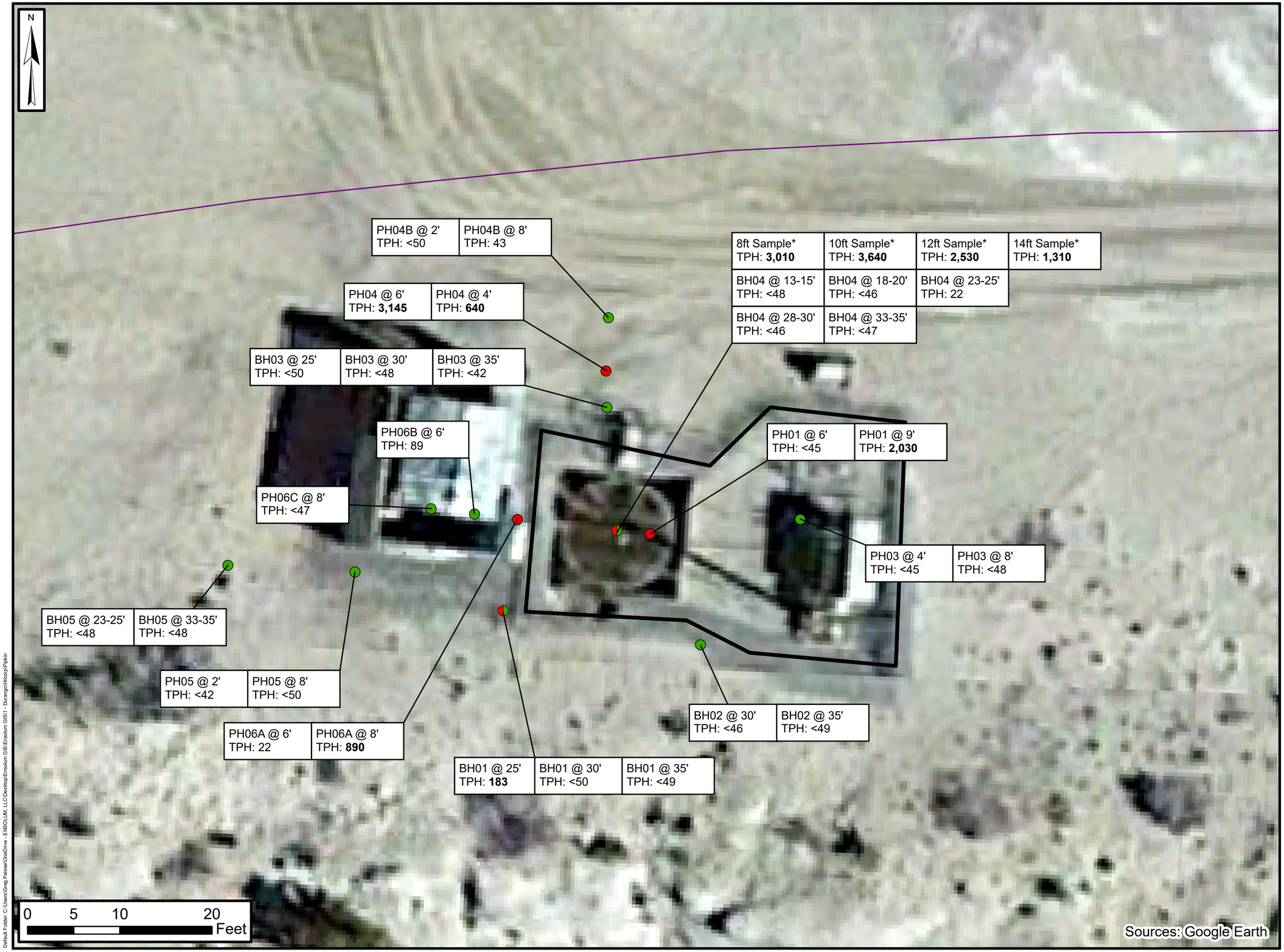
Environmental, Engineering and Hydrogeologic Consultants

Site Location Map

Pipkin Gas Com A #1E
Hilcorp Energy Company
Unit C, Sec 7, T27N, R10W
36.59396, -107.94056
San Juan County, New Mexico

FIGURE
1

Sources: Environmental Systems Research Institute (ESRI), National Geographic Society, i-cubed, United States Geologic Survey (USGS), United States Fish and Wildlife Service (USFWS), New Mexico Office of the State Engineer (NMOSE)



Legend

- Delineation Soil Sample in Compliance with NMOCD Closure Criteria
- Delineation Soil Sample Exceeding NMOCD Closure Criteria
- Delineation Soil Sample with Terminus in Compliance with NMOCD Closure Criteria
- Berm
- Gas Line

Notes:
TPH: Total Petroleum Hydrocarbons in Milligrams per Kilogram (mg/kg)
Bold: Indicates Result Exceed NMOCD Closure Criteria
< : Indicates Result is Below Laboratory Reporting Limit
* : Sample Collected From Pothole in Same Location as BH04
NMOCD: New Mexico Oil Conservation Division
** All Site Features and Utilities have been Removed

Soil Sample Analytical Results

Pipkin Gas Com A #1E
Hilcorp Energy Company

Unit C, Sec 7, T27N, R10W
36.59396, -107.94056
San Juan County, New Mexico

Figure 2

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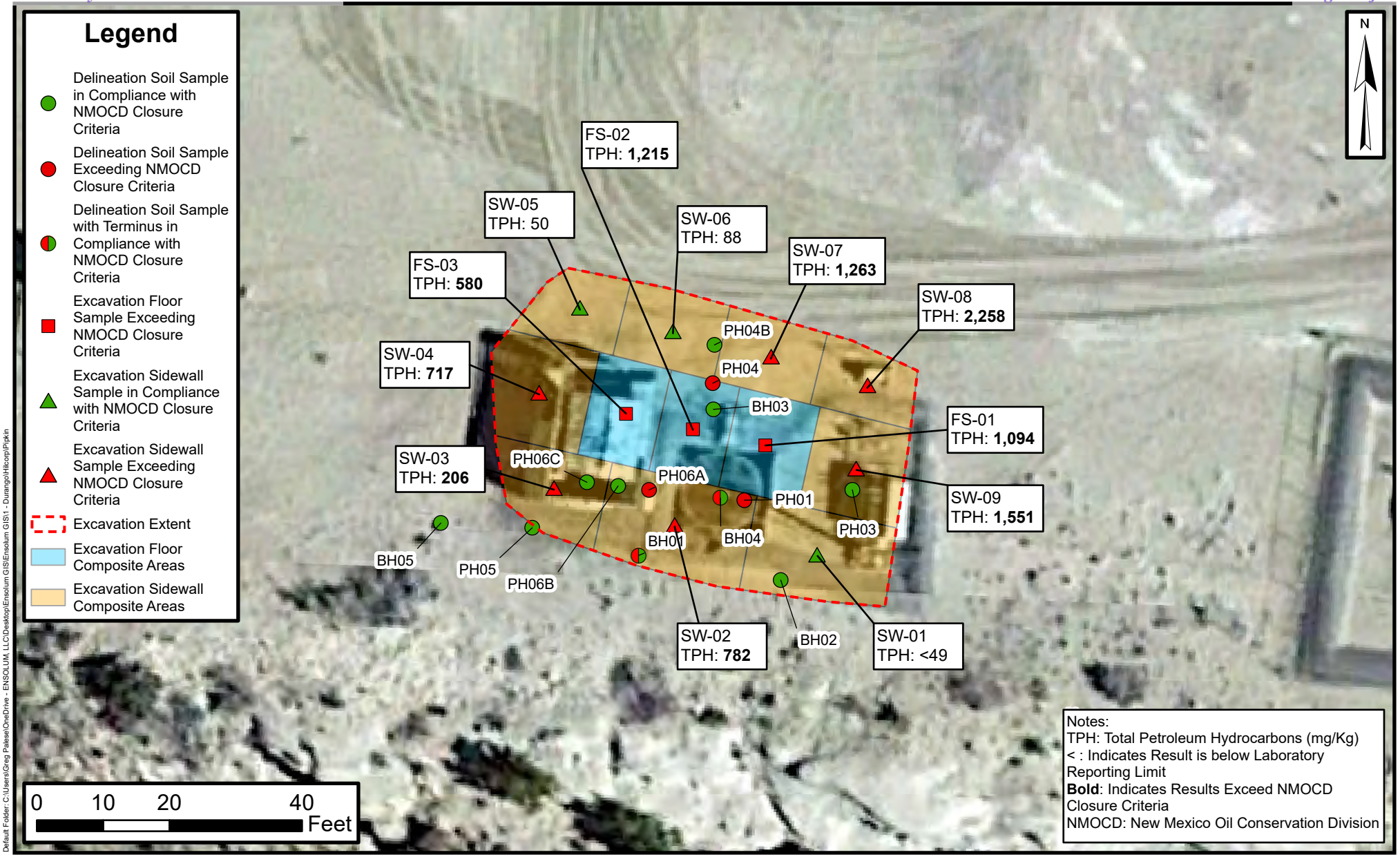

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Excavation Sample Locations

Pipkin GC A#1E
Hilcorp Energy Company
Unit C, Sec 7, T27N, R10W
36.59396, -107.94056
San Juan County, New Mexico

FIGURE
3

Sources: Google Earth

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TABLES

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TABLE 1
DELINEATION SOIL SAMPLE ANALYTICAL RESULTS
Pipkin Gas Com A #1E
Hilcorp Energy Company
San Juan County, New Mexico

Sample ID	Date	Depth (feet bgs)	PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release			NE	**10**	NE	NE	NE	**50**	NE	NE	NE	**100**	**600**
8ft Sample (1)	10/28/2022	8	--	<0.021	<0.042	<0.042	2.9	2.9	110	1,900	1,000	**3,010**	<60
10ft Sample (1)	10/28/2022	10	--	<0.018	<0.037	0.49	7.9	8.4	260	2,400	980	**3,640**	<60
12ft Sample (1)	10/28/2022	12	--	<0.020	<0.039	<0.039	3.6	3.6	200	1,700	630	**2,530**	120
14ft Sample (1)	10/28/2022	14	--	<0.017	<0.035	<0.035	1.4	1.4	110	1,200	<500	**1,310**	63
BH01 @ 25'	4/14/2023	25	38.1	<0.12	<0.23	<0.23	<0.047	<0.47	<23	120	63	**183**	<60
BH01 @ 30'	4/14/2023	30	44.2	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<10	<50	<50	<60
BH01 @ 35'	4/14/2023	35	0.8	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<49	<49	<60
BH02 @ 30'	4/14/2023	30	8.7	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.2	<46	<46	<60
BH02 @ 35'	4/14/2023	35	0.1	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.7	<49	<49	<60
BH03 @ 25'	4/14/2023	25	7.8	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.8	<50	<50	<60
BH03 @ 30'	4/14/2023	30	2.1	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.6	<48	<48	<60
BH03 @ 35'	4/14/2023	35	0.1	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<8.4	<42	<42	<60
BH-04 (13-15ft)	5/17/2023	13-15	2.7	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.6	<48	<48	<60
BH-04 (18-20ft)	5/17/2023	18-20	7.2	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.3	<46	<46	<59
BH-04 (23-25ft)	5/17/2023	23-25	559.2	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	22	<47	22	140
BH-04 (28-30ft)	5/17/2023	28-30	10.4	<0.025	0.14	0.059	0.3	0.499	<4.9	<9.3	<46	<46	<60
BH-04 (33-35ft)	5/17/2023	33-35	9.9	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.4	<47	<47	<60
BH05 23-25'	5/18/2023	23-25	0.4	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.7	<48	<48	<60
BH05 33-35'	5/18/2023	33-35	--	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.7	<48	<48	<60
PH01@6	5/2/2024	6	4.8	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.1	<45	<45	<5.0
PH01@9	5/2/2024	9	447	<0.024	<0.048	<0.048	0.21	0.21	40	1,500	490	**2,030**	67
PH03@4	5/2/2024	4	3.6	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.1	<45	<45	<5.1
PH03@8	5/2/2024	8	2.1	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.7	<48	<48	10
PH04@4	5/2/2024	4	25.3	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	230	410	**640**	8.2
PH04@6	5/2/2024	6	466	<0.024	<0.048	<0.048	<0.095	<0.095	15	2,300	1,100	**3,415**	35.0
PH04B@2	5/2/2024	2	2.8	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<10	<50	<50	<5.0
PH04B@8	5/2/2024	8	0.0	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<8.6	<43	<43	<5.0
PH05@2	5/2/2024	2	0.8	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<8.4	<42	<42	20
PH05@8	5/2/2024	8	0.2	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<10	<50	<50	<5.0
PH06A@6	5/2/2024	6	42.0	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	22	<45	22	7.6
PH06A@8	5/2/2024	8	255	<0.024	<0.048	<0.048	<0.096	<0.096	9.7	640	240	**890**	9.1
PH06B@6	5/2/2024	6	96.9	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	89	<45	89	6.3
PH06C@8	5/2/2024	8	1.2	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.4	<47	<47	<60

Notes:

(1): Sample collected from pothole in same location as BH-04
bgs: Below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: Milligrams per kilogram
NE: Not Established
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** and shaded exceed the New Mexico Oil Conservation Division Table I Closure Criteria for Soils Impacted by a Release*

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TABLE 2
EXCAVATION SOIL SAMPLE ANALYTICAL RESULTS
Pipkin Gas Com A #1E
Hilcorp Energy Company
San Juan County, New Mexico

Sample ID	Date	Depth (feet bgs)	PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release			NE	**10**	NE	NE	NE	**50**	NE	NE	NE	**100**	**600**
Excavation Floor Samples													
FS-01	7/16/2024	13.5	201.0	<0.025	<0.050	<0.050	0.11	0.11	14	720	360	**1,094**	<60
FS-02	7/16/2024	13.5	288.3	<0.025	<0.050	<0.050	<0.10	<0.10	15	830	370	**1,215**	<60
FS-03	7/16/2024	13.5	114.1	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	350	230	**580**	<60
Excavation Sidewall Samples													
SW-01	7/16/2024	0 - 13.5	11.0	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.8	<49	<49	<60
SW-02	7/16/2024	0 - 13.5	231.1	<0.024	<0.049	<0.049	<0.098	<0.098	12	520	250	**782**	<60
SW-03	7/16/2024	0 - 13.5	33.3	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	130	76	**206**	<60
SW-04	7/16/2024	0 - 13.5	213.1	<0.024	<0.049	<0.049	<0.098	<0.098	6.8	450	260	**717**	<60
SW-05	7/16/2024	0 - 13.5	13.5	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	50	<47	50	<60
SW-06	7/16/2024	0 - 13.5	39.5	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	88	<49	88	<60
SW-07	7/16/2024	0 - 13.5	477.3	<0.024	<0.048	<0.048	0.32	0.32	23	830	410	**1,263**	<60
SW-08	7/16/2024	0 - 13.5	384.4	<0.024	<0.048	<0.048	0.32	0.32	38	1,600	620	**2,258**	<61
SW-09	7/16/2024	0 - 13.5	213.2	<0.025	<0.049	<0.049	<0.099	<0.099	21	1,100	430	**1,551**	<60

Notes:

bgs: Below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: Milligrams per kilogram
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
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** and shaded exceed the New Mexico Oil Conservation Division Table I Closure Criteria for Soils Impacted by a Release*

ENSOLUM

APPENDIX A

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/28/2024 3:28:21 PM

JOB DESCRIPTION

Pipkin Gas Com A1E

JOB NUMBER

885-3904-1

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
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Authorized for release by
Andy Freeman, Business Unit Manager
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(505)345-3975

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Laboratory Job ID: 885-3904-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy Job ID: 885-3904-1
Project/Site: Pipkin Gas Com A1E

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low 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: Pipkin Gas Com A1E

Job ID: 885-3904-1

Job ID: 885-3904-1 Eurofins Albuquerque

Job Narrative
885-3904-1

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 5/4/2024 6:40 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 2.8°C.

Gasoline Range Organics
Method 8015D_GRO: Internal standard responses were outside of acceptance limits for the following sample: PH01@9 (885-3904-2). The sample(s) shows evidence of matrix interference.

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 following samples were diluted due to the nature of the sample matrix: PH01@9 (885-3904-2), PH04@4 (885-3904-7) and PH04@6 (885-3904-8). Elevated reporting limits (RLs) are provided.

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: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH01@6

Date Collected: 05/02/24 10:00
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-1

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		4.9		mg/Kg		05/06/24 16:05	05/09/24 06:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/06/24 16:05*	*05/09/24 06:05*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/06/24 16:05	05/09/24 06:05	1
Ethylbenzene	ND		0.049		mg/Kg		05/06/24 16:05	05/09/24 06:05	1
Toluene	ND		0.049		mg/Kg		05/06/24 16:05	05/09/24 06:05	1
Xylenes, Total	ND		0.098		mg/Kg		05/06/24 16:05	05/09/24 06:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*39 - 146*	*05/06/24 16:05*	*05/09/24 06:05*	*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		05/07/24 15:42	05/09/24 12:27	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		05/07/24 15:42	05/09/24 12:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*86*		*62 - 134*	*05/07/24 15:42*	*05/09/24 12:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			05/09/24 22:36	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH01@9

Date Collected: 05/02/24 10:30
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-2

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]	40		4.8		mg/Kg		05/06/24 16:05	05/09/24 06:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*455*	*S1+*	*15 - 244*	*05/06/24 16:05*	*05/09/24 06:29*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/06/24 16:05	05/09/24 06:29	1
Ethylbenzene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 06:29	1
Toluene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 06:29	1
Xylenes, Total	0.21		0.096		mg/Kg		05/06/24 16:05	05/09/24 06:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*39 - 146*	*05/06/24 16:05*	*05/09/24 06:29*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1500		95		mg/Kg		05/07/24 15:42	05/09/24 15:19	10
Motor Oil Range Organics [C28-C40]	490		480		mg/Kg		05/07/24 15:42	05/09/24 15:19	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1-*	*62 - 134*	*05/07/24 15:42*	*05/09/24 15:19*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67		5.0		mg/Kg			05/09/24 22:52	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH03@4

Date Collected: 05/02/24 11:50
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-5

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		05/06/24 16:05	05/09/24 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*05/06/24 16:05*	*05/09/24 07:15*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/06/24 16:05	05/09/24 07:15	1
Ethylbenzene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 07:15	1
Toluene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 07:15	1
Xylenes, Total	ND		0.096		mg/Kg		05/06/24 16:05	05/09/24 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*	*05/06/24 16:05*	*05/09/24 07:15*	*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		05/07/24 15:42	05/09/24 12:51	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		05/07/24 15:42	05/09/24 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*05/07/24 15:42*	*05/09/24 12:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.1		mg/Kg			05/09/24 22:58	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH03@8

Date Collected: 05/02/24 12:20
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-6

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		4.9		mg/Kg		05/06/24 16:05	05/09/24 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*05/06/24 16:05*	*05/09/24 07:39*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/06/24 16:05	05/09/24 07:39	1
Ethylbenzene	ND		0.049		mg/Kg		05/06/24 16:05	05/09/24 07:39	1
Toluene	ND		0.049		mg/Kg		05/06/24 16:05	05/09/24 07:39	1
Xylenes, Total	ND		0.098		mg/Kg		05/06/24 16:05	05/09/24 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/06/24 16:05*	*05/09/24 07:39*	*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		9.7		mg/Kg		05/07/24 15:42	05/09/24 13:03	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		05/07/24 15:42	05/09/24 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*05/07/24 15:42*	*05/09/24 13:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10**		5.0		mg/Kg			05/09/24 23:03	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH04@4

Date Collected: 05/02/24 12:40
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-7

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		05/06/24 16:05	05/09/24 08:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*05/06/24 16:05*	*05/09/24 08:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/06/24 16:05	05/09/24 08:03	1
Ethylbenzene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 08:03	1
Toluene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 08:03	1
Xylenes, Total	ND		0.095		mg/Kg		05/06/24 16:05	05/09/24 08:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*39 - 146*	*05/06/24 16:05*	*05/09/24 08:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**230**		46		mg/Kg		05/07/24 15:42	05/09/24 15:32	5
Motor Oil Range Organics [C28-C40]	**410**		230		mg/Kg		05/07/24 15:42	05/09/24 15:32	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*	*05/07/24 15:42*	*05/09/24 15:32*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.2**		5.0		mg/Kg			05/09/24 23:08	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH04@6

Date Collected: 05/02/24 13:00
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-8

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]	15		4.8		mg/Kg		05/06/24 16:05	05/09/24 08:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*15 - 244*	*05/06/24 16:05*	*05/09/24 08:26*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/06/24 16:05	05/09/24 08:26	1
Ethylbenzene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 08:26	1
Toluene	ND		0.048		mg/Kg		05/06/24 16:05	05/09/24 08:26	1
Xylenes, Total	ND		0.095		mg/Kg		05/06/24 16:05	05/09/24 08:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*	*05/06/24 16:05*	*05/09/24 08:26*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2300		90		mg/Kg		05/07/24 15:42	05/09/24 13:40	10
Motor Oil Range Organics [C28-C40]	1100		450		mg/Kg		05/07/24 15:42	05/09/24 13:40	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1-*	*62 - 134*	*05/07/24 15:42*	*05/09/24 13:40*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		5.0		mg/Kg			05/09/24 23:25	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH04B@2

Date Collected: 05/02/24 13:20
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-10

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		4.7		mg/Kg		05/06/24 16:05	05/09/24 08:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*15 - 244*	*05/06/24 16:05*	*05/09/24 08:49*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/06/24 16:05	05/09/24 08:49	1
Ethylbenzene	ND		0.047		mg/Kg		05/06/24 16:05	05/09/24 08:49	1
Toluene	ND		0.047		mg/Kg		05/06/24 16:05	05/09/24 08:49	1
Xylenes, Total	ND		0.095		mg/Kg		05/06/24 16:05	05/09/24 08:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*39 - 146*	*05/06/24 16:05*	*05/09/24 08:49*	*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		10		mg/Kg		05/07/24 15:42	05/09/24 14:05	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/07/24 15:42	05/09/24 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*05/07/24 15:42*	*05/09/24 14:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			05/09/24 23:30	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH04B@8

Date Collected: 05/02/24 13:50
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-11

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		4.8		mg/Kg		05/08/24 12:36	05/09/24 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*05/08/24 12:36*	*05/09/24 21:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/08/24 12:36	05/09/24 21:14	1
Ethylbenzene	ND		0.048		mg/Kg		05/08/24 12:36	05/09/24 21:14	1
Toluene	ND		0.048		mg/Kg		05/08/24 12:36	05/09/24 21:14	1
Xylenes, Total	ND		0.097		mg/Kg		05/08/24 12:36	05/09/24 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/08/24 12:36*	*05/09/24 21:14*	*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		8.6		mg/Kg		05/08/24 12:55	05/08/24 16:35	1
Motor Oil Range Organics [C28-C40]	ND		43		mg/Kg		05/08/24 12:55	05/08/24 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*05/08/24 12:55*	*05/08/24 16:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			05/09/24 23:36	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH05@2

Date Collected: 05/02/24 14:00
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-12

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		4.9		mg/Kg		05/08/24 12:36	05/09/24 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/08/24 12:36*	*05/09/24 22:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/08/24 12:36	05/09/24 22:24	1
Ethylbenzene	ND		0.049		mg/Kg		05/08/24 12:36	05/09/24 22:24	1
Toluene	ND		0.049		mg/Kg		05/08/24 12:36	05/09/24 22:24	1
Xylenes, Total	ND		0.097		mg/Kg		05/08/24 12:36	05/09/24 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/08/24 12:36*	*05/09/24 22:24*	*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		8.4		mg/Kg		05/08/24 12:55	05/08/24 16:59	1
Motor Oil Range Organics [C28-C40]	ND		42		mg/Kg		05/08/24 12:55	05/08/24 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*05/08/24 12:55*	*05/08/24 16:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		5.0		mg/Kg			05/09/24 23:41	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH05@8

Date Collected: 05/02/24 14:30
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-13

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		4.9		mg/Kg		05/08/24 12:36	05/09/24 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*05/08/24 12:36*	*05/09/24 23:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/08/24 12:36	05/09/24 23:58	1
Ethylbenzene	ND		0.049		mg/Kg		05/08/24 12:36	05/09/24 23:58	1
Toluene	ND		0.049		mg/Kg		05/08/24 12:36	05/09/24 23:58	1
Xylenes, Total	ND		0.097		mg/Kg		05/08/24 12:36	05/09/24 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/08/24 12:36*	*05/09/24 23:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/08/24 12:55	05/08/24 17:23	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/08/24 12:55	05/08/24 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*05/08/24 12:55*	*05/08/24 17:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			05/09/24 23:46	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH06A@6

Date Collected: 05/02/24 15:30
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-16

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		4.9		mg/Kg		05/08/24 12:36	05/10/24 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/08/24 12:36*	*05/10/24 00:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/08/24 12:36	05/10/24 00:21	1
Ethylbenzene	ND		0.049		mg/Kg		05/08/24 12:36	05/10/24 00:21	1
Toluene	ND		0.049		mg/Kg		05/08/24 12:36	05/10/24 00:21	1
Xylenes, Total	ND		0.099		mg/Kg		05/08/24 12:36	05/10/24 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/08/24 12:36*	*05/10/24 00:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**22**		8.9		mg/Kg		05/08/24 12:55	05/08/24 17:47	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		05/08/24 12:55	05/08/24 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*05/08/24 12:55*	*05/08/24 17:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.6**		5.0		mg/Kg			05/09/24 23:52	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH06A@8

Date Collected: 05/02/24 15:50
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-17

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]	9.7		4.8		mg/Kg		05/08/24 12:36	05/10/24 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*182*		*15 - 244*	*05/08/24 12:36*	*05/10/24 00:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/08/24 12:36	05/10/24 00:44	1
Ethylbenzene	ND		0.048		mg/Kg		05/08/24 12:36	05/10/24 00:44	1
Toluene	ND		0.048		mg/Kg		05/08/24 12:36	05/10/24 00:44	1
Xylenes, Total	ND		0.096		mg/Kg		05/08/24 12:36	05/10/24 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*48 - 145*	*05/08/24 12:36*	*05/10/24 00:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	640		8.7		mg/Kg		05/08/24 12:55	05/08/24 18:10	1
Motor Oil Range Organics [C28-C40]	240		43		mg/Kg		05/08/24 12:55	05/08/24 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*05/08/24 12:55*	*05/08/24 18:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.1		5.1		mg/Kg			05/10/24 00:08	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH06B@6

Date Collected: 05/02/24 16:20
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-18

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		4.9		mg/Kg		05/08/24 12:36	05/10/24 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*05/08/24 12:36*	*05/10/24 01:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/08/24 12:36	05/10/24 01:08	1
Ethylbenzene	ND		0.049		mg/Kg		05/08/24 12:36	05/10/24 01:08	1
Toluene	ND		0.049		mg/Kg		05/08/24 12:36	05/10/24 01:08	1
Xylenes, Total	ND		0.098		mg/Kg		05/08/24 12:36	05/10/24 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*39 - 146*	*05/08/24 12:36*	*05/10/24 01:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**89**		8.9		mg/Kg		05/08/24 12:55	05/08/24 18:34	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		05/08/24 12:55	05/08/24 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*05/08/24 12:55*	*05/08/24 18:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.3**		5.0		mg/Kg			05/10/24 00:14	1

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH06C@8

Date Collected: 05/02/24 16:50
Date Received: 05/04/24 06:40

Lab Sample ID: 885-3904-20

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		4.9		mg/Kg		05/14/24 14:16	05/16/24 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*35 - 166*	*05/14/24 14:16*	*05/16/24 13:02*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/14/24 14:16	05/16/24 13:02	1
Ethylbenzene	ND		0.049		mg/Kg		05/14/24 14:16	05/16/24 13:02	1
Toluene	ND		0.049		mg/Kg		05/14/24 14:16	05/16/24 13:02	1
Xylenes, Total	ND		0.099		mg/Kg		05/14/24 14:16	05/16/24 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*05/14/24 14:16*	*05/16/24 13:02*	*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		9.4		mg/Kg		05/15/24 11:48	05/15/24 16:17	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		05/15/24 11:48	05/15/24 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*05/15/24 11:48*	*05/15/24 16:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		05/15/24 14:26	05/15/24 23:22	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

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

Lab Sample ID: MB 885-4448/1-A
Matrix: Solid
Analysis Batch: 4672

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4448

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/06/24 16:05	05/08/24 16:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*05/06/24 16:05*	*05/08/24 16:01*	*1*

Lab Sample ID: LCS 885-4448/3-A
Matrix: Solid
Analysis Batch: 4672

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4448

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*205*		*15 - 244*

Lab Sample ID: MB 885-4592/1-A
Matrix: Solid
Analysis Batch: 4743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4592

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/08/24 12:36	05/09/24 20:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/08/24 12:36*	*05/09/24 20:50*	*1*

Lab Sample ID: LCS 885-4592/2-A
Matrix: Solid
Analysis Batch: 4743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4592

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	27.1		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*215*		*15 - 244*

Lab Sample ID: 885-3904-11 MS
Matrix: Solid
Analysis Batch: 4743

Client Sample ID: PH04B@8
Prep Type: Total/NA
Prep Batch: 4592

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.1	25.2		mg/Kg		105	70 - 130		

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

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

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

Lab Sample ID: 885-3904-11 MSD
Matrix: Solid
Analysis Batch: 4743

Client Sample ID: PH04B@8
Prep Type: Total/NA
Prep Batch: 4592

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		24.3	25.9		mg/Kg		106	70 - 130	3	20

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

Lab Sample ID: MB 885-4964/1-A
Matrix: Solid
Analysis Batch: 5136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4964

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/14/24 14:16	05/16/24 11:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*35 - 166*	*05/14/24 14:16*	*05/16/24 11:04*	*1*

Lab Sample ID: LCS 885-4964/2-A
Matrix: Solid
Analysis Batch: 5136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4964

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	24.0		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*189*	*S1+*	*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-4448/1-A
Matrix: Solid
Analysis Batch: 4673

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4448

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/06/24 16:05	05/08/24 16:01	1
Ethylbenzene	ND		0.050		mg/Kg		05/06/24 16:05	05/08/24 16:01	1
Toluene	ND		0.050		mg/Kg		05/06/24 16:05	05/08/24 16:01	1
Xylenes, Total	ND		0.10		mg/Kg		05/06/24 16:05	05/08/24 16:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*	*05/06/24 16:05*	*05/08/24 16:01*	*1*

Lab Sample ID: LCS 885-4448/4-A
Matrix: Solid
Analysis Batch: 4673

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4448

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.986		mg/Kg		99	70 - 130		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

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

Lab Sample ID: LCS 885-4448/4-A
Matrix: Solid
Analysis Batch: 4673

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4448

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethylbenzene			1.00	0.938		mg/Kg		94	70 - 130		
m&p-Xylene			2.00	1.90		mg/Kg		95	70 - 130		
o-Xylene			1.00	0.923		mg/Kg		92	70 - 130		
Toluene			1.00	0.938		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*39 - 146*

Lab Sample ID: MB 885-4592/1-A
Matrix: Solid
Analysis Batch: 4744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4592

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/08/24 12:36	05/09/24 20:50	1
Ethylbenzene	ND		0.050		mg/Kg		05/08/24 12:36	05/09/24 20:50	1
Toluene	ND		0.050		mg/Kg		05/08/24 12:36	05/09/24 20:50	1
Xylenes, Total	ND		0.10		mg/Kg		05/08/24 12:36	05/09/24 20:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*05/08/24 12:36*	*05/09/24 20:50*	*1*

Lab Sample ID: LCS 885-4592/3-A
Matrix: Solid
Analysis Batch: 4744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4592

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.02		mg/Kg		102	70 - 130		
Ethylbenzene			1.00	0.970		mg/Kg		97	70 - 130		
m&p-Xylene			2.00	1.95		mg/Kg		97	70 - 130		
o-Xylene			1.00	0.960		mg/Kg		96	70 - 130		
Toluene			1.00	0.961		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*39 - 146*

Lab Sample ID: 885-3904-12 MS
Matrix: Solid
Analysis Batch: 4744

Client Sample ID: PH05@2
Prep Type: Total/NA
Prep Batch: 4592

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.966	0.985		mg/Kg		102	70 - 130		
Ethylbenzene	ND		0.966	0.956		mg/Kg		99	70 - 130		
m&p-Xylene	ND		1.93	1.92		mg/Kg		98	70 - 130		
o-Xylene	ND		0.966	0.947		mg/Kg		98	70 - 130		
Toluene	ND		0.966	0.940		mg/Kg		96	70 - 130		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

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

Lab Sample ID: 885-3904-12 MS
Matrix: Solid
Analysis Batch: 4744

Client Sample ID: PH05@2
Prep Type: Total/NA
Prep Batch: 4592

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*39 - 146*

Lab Sample ID: 885-3904-12 MSD
Matrix: Solid
Analysis Batch: 4744

Client Sample ID: PH05@2
Prep Type: Total/NA
Prep Batch: 4592

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.974	1.02		mg/Kg		105	70 - 130	4	20
Ethylbenzene	ND		0.974	0.989		mg/Kg		102	70 - 130	3	20
m&p-Xylene	ND		1.95	1.98		mg/Kg		100	70 - 130	3	20
o-Xylene	ND		0.974	0.976		mg/Kg		100	70 - 130	3	20
Toluene	ND		0.974	0.967		mg/Kg		98	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*

Lab Sample ID: MB 885-4964/1-A
Matrix: Solid
Analysis Batch: 5137

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4964

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/14/24 14:16	05/16/24 11:04	1
Ethylbenzene	ND		0.050		mg/Kg		05/14/24 14:16	05/16/24 11:04	1
Toluene	ND		0.050		mg/Kg		05/14/24 14:16	05/16/24 11:04	1
Xylenes, Total	ND		0.10		mg/Kg		05/14/24 14:16	05/16/24 11:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*05/14/24 14:16*	*05/16/24 11:04*	*1*

Lab Sample ID: LCS 885-4964/3-A
Matrix: Solid
Analysis Batch: 5137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4964

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.917		mg/Kg		92	70 - 130		
Ethylbenzene			1.00	0.878		mg/Kg		88	70 - 130		
m&p-Xylene			2.00	1.76		mg/Kg		88	70 - 130		
o-Xylene			1.00	0.862		mg/Kg		86	70 - 130		
Toluene			1.00	0.864		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

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

Lab Sample ID: MB 885-4591/1-A
Matrix: Solid
Analysis Batch: 4658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4591

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/08/24 12:33	05/08/24 15:24	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/08/24 12:33	05/08/24 15:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*	*05/08/24 12:33*	*05/08/24 15:24*	*1*

Lab Sample ID: LCS 885-4591/2-A
Matrix: Solid
Analysis Batch: 4658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4591

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	48.9		mg/Kg		98	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*107*		*62 - 134*

Lab Sample ID: MB 885-5028/1-A
Matrix: Solid
Analysis Batch: 5077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5028

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/15/24 11:48	05/15/24 13:49	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/15/24 11:48	05/15/24 13:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*05/15/24 11:48*	*05/15/24 13:49*	*1*

Lab Sample ID: LCS 885-5028/2-A
Matrix: Solid
Analysis Batch: 5077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5028

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	48.0		mg/Kg		96	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-4995/1-A
Matrix: Solid
Analysis Batch: 5082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4995

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		05/15/24 07:57	05/15/24 10:03	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 885-4995/3-A
Matrix: Solid
Analysis Batch: 5082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4995

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			1.50	1.57		mg/L		105	50 - 150		

Lab Sample ID: MB 885-5043/1-A
Matrix: Solid
Analysis Batch: 5082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5043

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		05/15/24 14:26	05/15/24 20:29	1

Lab Sample ID: LCS 885-5043/2-A
Matrix: Solid
Analysis Batch: 5082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5043

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			15.0	14.0		mg/Kg		93	90 - 110		

Lab Sample ID: MB 880-80373/1-A
Matrix: Solid
Analysis Batch: 80380

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			05/09/24 22:20	1

Lab Sample ID: LCS 880-80373/2-A
Matrix: Solid
Analysis Batch: 80380

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-80373/3-A
Matrix: Solid
Analysis Batch: 80380

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	254		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 885-3904-1 MS
Matrix: Solid
Analysis Batch: 80380

Client Sample ID: PH01@6
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	ND		252	263		mg/Kg		103	90 - 110		

Lab Sample ID: 885-3904-1 MSD
Matrix: Solid
Analysis Batch: 80380

Client Sample ID: PH01@6
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		252	263		mg/Kg		103	90 - 110	0	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 885-3904-16 MS
Matrix: Solid
Analysis Batch: 80380

Client Sample ID: PH06A@6
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	7.6		252	265		mg/Kg		102	90 - 110		

Lab Sample ID: 885-3904-16 MSD
Matrix: Solid
Analysis Batch: 80380

Client Sample ID: PH06A@6
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7.6		252	265		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Hilcorp Energy
Job ID: 885-3904-1
Project/Site: Pipkin Gas Com A1E

GC VOA

Prep Batch: 4448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Total/NA	Solid	5030C	
885-3904-2	PH01@9	Total/NA	Solid	5030C	
885-3904-5	PH03@4	Total/NA	Solid	5030C	
885-3904-6	PH03@8	Total/NA	Solid	5030C	
885-3904-7	PH04@4	Total/NA	Solid	5030C	
885-3904-8	PH04@6	Total/NA	Solid	5030C	
885-3904-10	PH04B@2	Total/NA	Solid	5030C	
MB 885-4448/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4448/3-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4448/4-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 4592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-11	PH04B@8	Total/NA	Solid	5030C	
885-3904-12	PH05@2	Total/NA	Solid	5030C	
885-3904-13	PH05@8	Total/NA	Solid	5030C	
885-3904-16	PH06A@6	Total/NA	Solid	5030C	
885-3904-17	PH06A@8	Total/NA	Solid	5030C	
885-3904-18	PH06B@6	Total/NA	Solid	5030C	
MB 885-4592/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4592/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4592/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-3904-11 MS	PH04B@8	Total/NA	Solid	5030C	
885-3904-11 MSD	PH04B@8	Total/NA	Solid	5030C	
885-3904-12 MS	PH05@2	Total/NA	Solid	5030C	
885-3904-12 MSD	PH05@2	Total/NA	Solid	5030C	

Analysis Batch: 4672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Total/NA	Solid	8015D	4448
885-3904-2	PH01@9	Total/NA	Solid	8015D	4448
885-3904-5	PH03@4	Total/NA	Solid	8015D	4448
885-3904-6	PH03@8	Total/NA	Solid	8015D	4448
885-3904-7	PH04@4	Total/NA	Solid	8015D	4448
885-3904-8	PH04@6	Total/NA	Solid	8015D	4448
885-3904-10	PH04B@2	Total/NA	Solid	8015D	4448
MB 885-4448/1-A	Method Blank	Total/NA	Solid	8015D	4448
LCS 885-4448/3-A	Lab Control Sample	Total/NA	Solid	8015D	4448

Analysis Batch: 4673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Total/NA	Solid	8021B	4448
885-3904-2	PH01@9	Total/NA	Solid	8021B	4448
885-3904-5	PH03@4	Total/NA	Solid	8021B	4448
885-3904-6	PH03@8	Total/NA	Solid	8021B	4448
885-3904-7	PH04@4	Total/NA	Solid	8021B	4448
885-3904-8	PH04@6	Total/NA	Solid	8021B	4448
885-3904-10	PH04B@2	Total/NA	Solid	8021B	4448
MB 885-4448/1-A	Method Blank	Total/NA	Solid	8021B	4448
LCS 885-4448/4-A	Lab Control Sample	Total/NA	Solid	8021B	4448

QC Association Summary

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

GC VOA

Analysis Batch: 4743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-11	PH04B@8	Total/NA	Solid	8015D	4592
885-3904-12	PH05@2	Total/NA	Solid	8015D	4592
885-3904-13	PH05@8	Total/NA	Solid	8015D	4592
885-3904-16	PH06A@6	Total/NA	Solid	8015D	4592
885-3904-17	PH06A@8	Total/NA	Solid	8015D	4592
885-3904-18	PH06B@6	Total/NA	Solid	8015D	4592
MB 885-4592/1-A	Method Blank	Total/NA	Solid	8015D	4592
LCS 885-4592/2-A	Lab Control Sample	Total/NA	Solid	8015D	4592
885-3904-11 MS	PH04B@8	Total/NA	Solid	8015D	4592
885-3904-11 MSD	PH04B@8	Total/NA	Solid	8015D	4592

Analysis Batch: 4744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-11	PH04B@8	Total/NA	Solid	8021B	4592
885-3904-12	PH05@2	Total/NA	Solid	8021B	4592
885-3904-13	PH05@8	Total/NA	Solid	8021B	4592
885-3904-16	PH06A@6	Total/NA	Solid	8021B	4592
885-3904-17	PH06A@8	Total/NA	Solid	8021B	4592
885-3904-18	PH06B@6	Total/NA	Solid	8021B	4592
MB 885-4592/1-A	Method Blank	Total/NA	Solid	8021B	4592
LCS 885-4592/3-A	Lab Control Sample	Total/NA	Solid	8021B	4592
885-3904-12 MS	PH05@2	Total/NA	Solid	8021B	4592
885-3904-12 MSD	PH05@2	Total/NA	Solid	8021B	4592

Prep Batch: 4964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	5030C	
MB 885-4964/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4964/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4964/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 5136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	8015D	4964
MB 885-4964/1-A	Method Blank	Total/NA	Solid	8015D	4964
LCS 885-4964/2-A	Lab Control Sample	Total/NA	Solid	8015D	4964

Analysis Batch: 5137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	8021B	4964
MB 885-4964/1-A	Method Blank	Total/NA	Solid	8021B	4964
LCS 885-4964/3-A	Lab Control Sample	Total/NA	Solid	8021B	4964

GC Semi VOA

Prep Batch: 4532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Total/NA	Solid	SHAKE	
885-3904-2	PH01@9	Total/NA	Solid	SHAKE	
885-3904-5	PH03@4	Total/NA	Solid	SHAKE	
885-3904-6	PH03@8	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

GC Semi VOA (Continued)

Prep Batch: 4532 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-7	PH04@4	Total/NA	Solid	SHAKE	
885-3904-8	PH04@6	Total/NA	Solid	SHAKE	
885-3904-10	PH04B@2	Total/NA	Solid	SHAKE	

Prep Batch: 4591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-11	PH04B@8	Total/NA	Solid	SHAKE	
885-3904-12	PH05@2	Total/NA	Solid	SHAKE	
885-3904-13	PH05@8	Total/NA	Solid	SHAKE	
885-3904-16	PH06A@6	Total/NA	Solid	SHAKE	
885-3904-17	PH06A@8	Total/NA	Solid	SHAKE	
885-3904-18	PH06B@6	Total/NA	Solid	SHAKE	
MB 885-4591/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-4591/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 4658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-11	PH04B@8	Total/NA	Solid	8015D	4591
885-3904-12	PH05@2	Total/NA	Solid	8015D	4591
885-3904-13	PH05@8	Total/NA	Solid	8015D	4591
885-3904-16	PH06A@6	Total/NA	Solid	8015D	4591
885-3904-17	PH06A@8	Total/NA	Solid	8015D	4591
885-3904-18	PH06B@6	Total/NA	Solid	8015D	4591
MB 885-4591/1-A	Method Blank	Total/NA	Solid	8015D	4591
LCS 885-4591/2-A	Lab Control Sample	Total/NA	Solid	8015D	4591

Analysis Batch: 4691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Total/NA	Solid	8015D	4532
885-3904-2	PH01@9	Total/NA	Solid	8015D	4532
885-3904-5	PH03@4	Total/NA	Solid	8015D	4532
885-3904-6	PH03@8	Total/NA	Solid	8015D	4532
885-3904-7	PH04@4	Total/NA	Solid	8015D	4532
885-3904-8	PH04@6	Total/NA	Solid	8015D	4532
885-3904-10	PH04B@2	Total/NA	Solid	8015D	4532

Prep Batch: 5028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	SHAKE	
MB 885-5028/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-5028/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 5073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	8015D	5028

Analysis Batch: 5077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-5028/1-A	Method Blank	Total/NA	Solid	8015D	5028
LCS 885-5028/2-A	Lab Control Sample	Total/NA	Solid	8015D	5028

QC Association Summary

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

HPLC/IC

Prep Batch: 4995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-4995/1-A	Method Blank	Total/NA	Solid	300_Prep	
MRL 885-4995/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Prep Batch: 5043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	300_Prep	
MB 885-5043/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-5043/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 5082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-20	PH06C@8	Total/NA	Solid	300.0	5043
MB 885-4995/1-A	Method Blank	Total/NA	Solid	300.0	4995
MB 885-5043/1-A	Method Blank	Total/NA	Solid	300.0	5043
LCS 885-5043/2-A	Lab Control Sample	Total/NA	Solid	300.0	5043
MRL 885-4995/3-A	Lab Control Sample	Total/NA	Solid	300.0	4995

Leach Batch: 80373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Soluble	Solid	DI Leach	
885-3904-2	PH01@9	Soluble	Solid	DI Leach	
885-3904-5	PH03@4	Soluble	Solid	DI Leach	
885-3904-6	PH03@8	Soluble	Solid	DI Leach	
885-3904-7	PH04@4	Soluble	Solid	DI Leach	
885-3904-8	PH04@6	Soluble	Solid	DI Leach	
885-3904-10	PH04B@2	Soluble	Solid	DI Leach	
885-3904-11	PH04B@8	Soluble	Solid	DI Leach	
885-3904-12	PH05@2	Soluble	Solid	DI Leach	
885-3904-13	PH05@8	Soluble	Solid	DI Leach	
885-3904-16	PH06A@6	Soluble	Solid	DI Leach	
885-3904-17	PH06A@8	Soluble	Solid	DI Leach	
885-3904-18	PH06B@6	Soluble	Solid	DI Leach	
MB 880-80373/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-80373/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-80373/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-3904-1 MS	PH01@6	Soluble	Solid	DI Leach	
885-3904-1 MSD	PH01@6	Soluble	Solid	DI Leach	
885-3904-16 MS	PH06A@6	Soluble	Solid	DI Leach	
885-3904-16 MSD	PH06A@6	Soluble	Solid	DI Leach	

Analysis Batch: 80380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-1	PH01@6	Soluble	Solid	300.0	80373
885-3904-2	PH01@9	Soluble	Solid	300.0	80373
885-3904-5	PH03@4	Soluble	Solid	300.0	80373
885-3904-6	PH03@8	Soluble	Solid	300.0	80373
885-3904-7	PH04@4	Soluble	Solid	300.0	80373
885-3904-8	PH04@6	Soluble	Solid	300.0	80373
885-3904-10	PH04B@2	Soluble	Solid	300.0	80373
885-3904-11	PH04B@8	Soluble	Solid	300.0	80373
885-3904-12	PH05@2	Soluble	Solid	300.0	80373

QC Association Summary

Client: Hilcorp Energy
Job ID: 885-3904-1
Project/Site: Pipkin Gas Com A1E

HPLC/IC (Continued)

Analysis Batch: 80380 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3904-13	PH05@8	Soluble	Solid	300.0	80373
885-3904-16	PH06A@6	Soluble	Solid	300.0	80373
885-3904-17	PH06A@8	Soluble	Solid	300.0	80373
885-3904-18	PH06B@6	Soluble	Solid	300.0	80373
MB 880-80373/1-A	Method Blank	Soluble	Solid	300.0	80373
LCS 880-80373/2-A	Lab Control Sample	Soluble	Solid	300.0	80373
LCSD 880-80373/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	80373
885-3904-1 MS	PH01@6	Soluble	Solid	300.0	80373
885-3904-1 MSD	PH01@6	Soluble	Solid	300.0	80373
885-3904-16 MS	PH06A@6	Soluble	Solid	300.0	80373
885-3904-16 MSD	PH06A@6	Soluble	Solid	300.0	80373

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH01@6
Lab Sample ID: 885-3904-1
Date Collected: 05/02/24 10:00
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 06:05
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 06:05
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		1	4691	JU	EET ALB	05/09/24 12:27
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 22:36

Client Sample ID: PH01@9
Lab Sample ID: 885-3904-2
Date Collected: 05/02/24 10:30
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 06:29
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 06:29
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		10	4691	JU	EET ALB	05/09/24 15:19
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 22:52

Client Sample ID: PH03@4
Lab Sample ID: 885-3904-5
Date Collected: 05/02/24 11:50
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 07:15
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 07:15
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		1	4691	JU	EET ALB	05/09/24 12:51
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 22:58

Client Sample ID: PH03@8
Lab Sample ID: 885-3904-6
Date Collected: 05/02/24 12:20
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 07:39

Lab Chronicle

Client: Hilcorp Energy
Job ID: 885-3904-1
Project/Site: Pipkin Gas Com A1E

Client Sample ID: PH03@8
Lab Sample ID: 885-3904-6
Date Collected: 05/02/24 12:20
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 07:39
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		1	4691	JU	EET ALB	05/09/24 13:03
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:03

Client Sample ID: PH04@4
Lab Sample ID: 885-3904-7
Date Collected: 05/02/24 12:40
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 08:03
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 08:03
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		5	4691	JU	EET ALB	05/09/24 15:32
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:08

Client Sample ID: PH04@6
Lab Sample ID: 885-3904-8
Date Collected: 05/02/24 13:00
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 08:26
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 08:26
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		10	4691	JU	EET ALB	05/09/24 13:40
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:25

Client Sample ID: PH04B@2
Lab Sample ID: 885-3904-10
Date Collected: 05/02/24 13:20
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/09/24 08:49
Total/NA	Prep	5030C			4448	JP	EET ALB	05/06/24 16:05
Total/NA	Analysis	8021B		1	4673	JP	EET ALB	05/09/24 08:49

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH04B@2

Lab Sample ID: 885-3904-10
Matrix: Solid
Date Collected: 05/02/24 13:20
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			4532	SB	EET ALB	05/07/24 15:42
Total/NA	Analysis	8015D		1	4691	JU	EET ALB	05/09/24 14:05
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:30

Client Sample ID: PH04B@8

Lab Sample ID: 885-3904-11
Matrix: Solid
Date Collected: 05/02/24 13:50
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8015D		1	4743	JP	EET ALB	05/09/24 21:14
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8021B		1	4744	JP	EET ALB	05/09/24 21:14
Total/NA	Prep	SHAKE			4591	DH	EET ALB	05/08/24 12:55
Total/NA	Analysis	8015D		1	4658	JU	EET ALB	05/08/24 16:35
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:36

Client Sample ID: PH05@2

Lab Sample ID: 885-3904-12
Matrix: Solid
Date Collected: 05/02/24 14:00
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8015D		1	4743	JP	EET ALB	05/09/24 22:24
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8021B		1	4744	JP	EET ALB	05/09/24 22:24
Total/NA	Prep	SHAKE			4591	DH	EET ALB	05/08/24 12:55
Total/NA	Analysis	8015D		1	4658	JU	EET ALB	05/08/24 16:59
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:41

Client Sample ID: PH05@8

Lab Sample ID: 885-3904-13
Matrix: Solid
Date Collected: 05/02/24 14:30
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8015D		1	4743	JP	EET ALB	05/09/24 23:58
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8021B		1	4744	JP	EET ALB	05/09/24 23:58
Total/NA	Prep	SHAKE			4591	DH	EET ALB	05/08/24 12:55
Total/NA	Analysis	8015D		1	4658	JU	EET ALB	05/08/24 17:23

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin Gas Com A1E

Job ID: 885-3904-1

Client Sample ID: PH05@8

Lab Sample ID: 885-3904-13

Date Collected: 05/02/24 14:30
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:46

Client Sample ID: PH06A@6

Lab Sample ID: 885-3904-16

Date Collected: 05/02/24 15:30
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8015D		1	4743	JP	EET ALB	05/10/24 00:21
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8021B		1	4744	JP	EET ALB	05/10/24 00:21
Total/NA	Prep	SHAKE			4591	DH	EET ALB	05/08/24 12:55
Total/NA	Analysis	8015D		1	4658	JU	EET ALB	05/08/24 17:47
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/09/24 23:52

Client Sample ID: PH06A@8

Lab Sample ID: 885-3904-17

Date Collected: 05/02/24 15:50
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8015D		1	4743	JP	EET ALB	05/10/24 00:44
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8021B		1	4744	JP	EET ALB	05/10/24 00:44
Total/NA	Prep	SHAKE			4591	DH	EET ALB	05/08/24 12:55
Total/NA	Analysis	8015D		1	4658	JU	EET ALB	05/08/24 18:10
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/10/24 00:08

Client Sample ID: PH06B@6

Lab Sample ID: 885-3904-18

Date Collected: 05/02/24 16:20
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8015D		1	4743	JP	EET ALB	05/10/24 01:08
Total/NA	Prep	5030C			4592	JP	EET ALB	05/08/24 12:36
Total/NA	Analysis	8021B		1	4744	JP	EET ALB	05/10/24 01:08
Total/NA	Prep	SHAKE			4591	DH	EET ALB	05/08/24 12:55
Total/NA	Analysis	8015D		1	4658	JU	EET ALB	05/08/24 18:34
Soluble	Leach	DI Leach			80373	SA	EET MID	05/09/24 14:59
Soluble	Analysis	300.0		1	80380	SMC	EET MID	05/10/24 00:14

Lab Chronicle

Client: Hilcorp Energy
Job ID: 885-3904-1
Project/Site: Pipkin Gas Com A1E

Client Sample ID: PH06C@8
Lab Sample ID: 885-3904-20
Date Collected: 05/02/24 16:50
Matrix: Solid
Date Received: 05/04/24 06:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4964	AT	EET ALB	05/14/24 14:16
Total/NA	Analysis	8015D		1	5136	JP	EET ALB	05/16/24 13:02
Total/NA	Prep	5030C			4964	AT	EET ALB	05/14/24 14:16
Total/NA	Analysis	8021B		1	5137	JP	EET ALB	05/16/24 13:02
Total/NA	Prep	SHAKE			5028	JU	EET ALB	05/15/24 11:48
Total/NA	Analysis	8015D		1	5073	JU	EET ALB	05/15/24 16:17
Total/NA	Prep	300_Prep			5043	RC	EET ALB	05/15/24 14:26
Total/NA	Analysis	300.0		20	5082	RC	EET ALB	05/15/24 23:22

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: Pipkin Gas Com A1E

Job ID: 885-3904-1

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
300.0	300_Prep	Solid	Chloride
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: Pipkin Gas Com A1E
Project #:
Project Manager: S. Hyde
Sampler: AT
On Ice: ☑ Yes ☐ No marty
# of Coolers: 1
Cooler Temp(including CF): 2.9-0.1=2.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 871
Tel. 505-345-3975 Fax 505-345-4107
885-3904 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE / TMBs~~ (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)	HOLD
5-2	1000	soil	PH01@6	1x4oz	cool	1	X	X					X				
	1030		PH01@9			2	X	X					X				
	1050		PH02@2			3											X
	1130		PH02@8			4											X
	1150		PH03@4			5	X	X					X				
	1220		PH03@8			6	↓	↓					X				
	1240		PH04@4			7							X				
	1300		PH04@6			8							X				
	1310		PH04A@6			9											X
	1320		PH04B@2			10	X	X					X				
↓	1350	↓	PH04B@8	↓	↓	11	X	X					X				
						tr											

Date	Time	Relinquished by	Received by	Via	Date	Time
5-2	1800	Al Thomson	Chad Walla		5/2/24	1800
5/3/24	1717	Chad Walla		courier	5/4/24	6:40

Remarks: Please cc:
shyde@ensolum.com
athomson@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

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: Pipkin Gas Com A1E
Project #:
Project Manager: S. Hyde
Sampler: AT
On Ice: ☑ Yes ☐ No morty
# of Coolers: 1
Cooler Temp(Including CF): 2.9 - 0.1 = 2.8 (°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.	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)	Hold
5-2	1400	Soil	PH05@2	1x 4oz	Cool	~~13~~ 12	X	X					X				
	1430		PH05@8			~~14~~ 13	X	X					X				
	1450		PH06@4			~~15~~ 14											X
	1520		PH06@8			~~16~~ 15											X
	1530		PH06A@6			TMC 5/14/24 ~~17~~ 16	X	X					X				
	1550		PH06A@8			~~18~~ 17							X				
	1620		PH06B@6			~~19~~ 18							X				
	1640		PH06C@6			~~20~~ 19											X
↓	1650	↓	PH06C@8	↓	↓	~~21~~ 20											X

Date	Time	Relinquished by:	Received by	Via:	Date	Time
5/2/24	1800	Al Thomson			5/2/24	1800
5/3/24	1717			Via: courier		6:46

Remarks: Please cc:
shyde@ensolum.com
athomson@ "

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: 885-3904-1

Login Number: 3904 **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: 885-3904-1

Login Number: 3904 **List Source: Eurofins Midland**
List Number: 2 **List Creation: 05/09/24 01:09 PM**
Creator: Rodriguez, Leticia

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 7/24/2024 1:05:17 PM

JOB DESCRIPTION

Pipkin GCAIE

JOB NUMBER

885-8085-1

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
7/24/2024 1:05:17 PM

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

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Laboratory Job ID: 885-8085-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low 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: Pipkin GCAIE

Job ID: 885-8085-1

Job ID: 885-8085-1 Eurofins Albuquerque

Job Narrative
885-8085-1

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

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

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

Receipt
The samples were received on 7/17/2024 7:10 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 5.8°C.

Receipt Exceptions
The Field Sampler was not listed on the Chain of Custody.

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 following samples were diluted due to the nature of the sample matrix and abundance of target analytes: SW-08 (885-8085-11) and SW-09 (885-8085-12). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

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: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: FS-01

Date Collected: 07/16/24 16:02
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	14		5.0		mg/Kg		07/17/24 16:10	07/20/24 00:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*227*	*S1+*	*35 - 166*	*07/17/24 16:10*	*07/20/24 00:41*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 00:41	1
Ethylbenzene	ND		0.050		mg/Kg		07/17/24 16:10	07/20/24 00:41	1
Toluene	ND		0.050		mg/Kg		07/17/24 16:10	07/20/24 00:41	1
Xylenes, Total	0.11		0.10		mg/Kg		07/17/24 16:10	07/20/24 00:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*48 - 145*	*07/17/24 16:10*	*07/20/24 00:41*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	720		10		mg/Kg		07/18/24 12:18	07/18/24 18:26	1
Motor Oil Range Organics [C28-C40]	360		50		mg/Kg		07/18/24 12:18	07/18/24 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*120*		*62 - 134*	*07/18/24 12:18*	*07/18/24 18:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 19:20	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: FS-02

Date Collected: 07/16/24 16:03
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	15		5.0		mg/Kg		07/17/24 16:10	07/22/24 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*153*		*35 - 166*	*07/17/24 16:10*	*07/22/24 19:16*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/22/24 19:16	1
Ethylbenzene	ND		0.050		mg/Kg		07/17/24 16:10	07/22/24 19:16	1
Toluene	ND		0.050		mg/Kg		07/17/24 16:10	07/22/24 19:16	1
Xylenes, Total	ND		0.10		mg/Kg		07/17/24 16:10	07/22/24 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*48 - 145*	*07/17/24 16:10*	*07/22/24 19:16*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	830		9.2		mg/Kg		07/18/24 12:18	07/18/24 19:16	1
Motor Oil Range Organics [C28-C40]	370		46		mg/Kg		07/18/24 12:18	07/18/24 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*	*07/18/24 12:18*	*07/18/24 19:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 19:57	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: FS-03

Date Collected: 07/16/24 16:04
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-3

Matrix: Solid

Method: SW846 8015M/D - 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		07/17/24 16:10	07/20/24 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*	*07/17/24 16:10*	*07/20/24 02:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 02:08	1
Ethylbenzene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 02:08	1
Toluene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 02:08	1
Xylenes, Total	ND		0.099		mg/Kg		07/17/24 16:10	07/20/24 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/17/24 16:10*	*07/20/24 02:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**350**		9.5		mg/Kg		07/18/24 12:18	07/18/24 20:05	1
Motor Oil Range Organics [C28-C40]	**230**		47		mg/Kg		07/18/24 12:18	07/18/24 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*119*		*62 - 134*	*07/18/24 12:18*	*07/18/24 20:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 20:09	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-01

Date Collected: 07/16/24 16:05
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-4

Matrix: Solid

Method: SW846 8015M/D - 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		07/17/24 16:10	07/20/24 03:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*07/17/24 16:10*	*07/20/24 03:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 03:14	1
Ethylbenzene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 03:14	1
Toluene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 03:14	1
Xylenes, Total	ND		0.099		mg/Kg		07/17/24 16:10	07/20/24 03:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/17/24 16:10*	*07/20/24 03:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		07/18/24 12:18	07/18/24 20:54	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/18/24 12:18	07/18/24 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*129*		*62 - 134*	*07/18/24 12:18*	*07/18/24 20:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 20:21	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-02

Date Collected: 07/16/24 16:06
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-5

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	12		4.9		mg/Kg		07/17/24 16:10	07/22/24 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*224*	*S1+*	*35 - 166*	*07/17/24 16:10*	*07/22/24 19:38*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/17/24 16:10	07/22/24 19:38	1
Ethylbenzene	ND		0.049		mg/Kg		07/17/24 16:10	07/22/24 19:38	1
Toluene	ND		0.049		mg/Kg		07/17/24 16:10	07/22/24 19:38	1
Xylenes, Total	ND		0.098		mg/Kg		07/17/24 16:10	07/22/24 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*48 - 145*	*07/17/24 16:10*	*07/22/24 19:38*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	520		9.5		mg/Kg		07/18/24 12:18	07/18/24 21:44	1
Motor Oil Range Organics [C28-C40]	250		47		mg/Kg		07/18/24 12:18	07/18/24 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*123*		*62 - 134*	*07/18/24 12:18*	*07/18/24 21:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 20:58	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-03
Date Collected: 07/16/24 16:07
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-6
Matrix: Solid

Method: SW846 8015M/D - 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		07/17/24 16:10	07/20/24 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*07/17/24 16:10*	*07/20/24 03:57*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 03:57	1
Ethylbenzene	ND		0.050		mg/Kg		07/17/24 16:10	07/20/24 03:57	1
Toluene	ND		0.050		mg/Kg		07/17/24 16:10	07/20/24 03:57	1
Xylenes, Total	ND		0.10		mg/Kg		07/17/24 16:10	07/20/24 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*07/17/24 16:10*	*07/20/24 03:57*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**130**		9.7		mg/Kg		07/18/24 12:18	07/18/24 22:33	1
Motor Oil Range Organics [C28-C40]	**76**		48		mg/Kg		07/18/24 12:18	07/18/24 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*123*		*62 - 134*	*07/18/24 12:18*	*07/18/24 22:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 21:11	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-04

Date Collected: 07/16/24 16:08
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-7

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	6.8		4.9		mg/Kg		07/17/24 16:10	07/20/24 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*177*	*S1+*	*35 - 166*	*07/17/24 16:10*	*07/20/24 04:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 04:19	1
Ethylbenzene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 04:19	1
Toluene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 04:19	1
Xylenes, Total	ND		0.098		mg/Kg		07/17/24 16:10	07/20/24 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*	*07/17/24 16:10*	*07/20/24 04:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	450		9.9		mg/Kg		07/18/24 12:18	07/18/24 22:58	1
Motor Oil Range Organics [C28-C40]	260		49		mg/Kg		07/18/24 12:18	07/18/24 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*120*		*62 - 134*	*07/18/24 12:18*	*07/18/24 22:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 21:23	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-05

Date Collected: 07/16/24 16:09
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-8

Matrix: Solid

Method: SW846 8015M/D - 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		07/17/24 16:10	07/20/24 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*07/17/24 16:10*	*07/20/24 04:41*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		07/17/24 16:10	07/20/24 04:41	1
Ethylbenzene	ND		0.047		mg/Kg		07/17/24 16:10	07/20/24 04:41	1
Toluene	ND		0.047		mg/Kg		07/17/24 16:10	07/20/24 04:41	1
Xylenes, Total	ND		0.094		mg/Kg		07/17/24 16:10	07/20/24 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/17/24 16:10*	*07/20/24 04:41*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**50**		9.4		mg/Kg		07/18/24 12:18	07/18/24 23:47	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		07/18/24 12:18	07/18/24 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*128*		*62 - 134*	*07/18/24 12:18*	*07/18/24 23:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 21:35	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-06

Date Collected: 07/16/24 16:10
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-9

Matrix: Solid

Method: SW846 8015M/D - 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		07/17/24 16:10	07/20/24 05:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*07/17/24 16:10*	*07/20/24 05:02*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/17/24 16:10	07/20/24 05:02	1
Ethylbenzene	ND		0.048		mg/Kg		07/17/24 16:10	07/20/24 05:02	1
Toluene	ND		0.048		mg/Kg		07/17/24 16:10	07/20/24 05:02	1
Xylenes, Total	ND		0.097		mg/Kg		07/17/24 16:10	07/20/24 05:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/17/24 16:10*	*07/20/24 05:02*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**88**		9.8		mg/Kg		07/18/24 12:18	07/19/24 00:11	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/18/24 12:18	07/19/24 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*129*		*62 - 134*	*07/18/24 12:18*	*07/19/24 00:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 21:48	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-07

Date Collected: 07/16/24 16:11
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-10

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	23		4.8		mg/Kg		07/17/24 16:10	07/20/24 05:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*156*		*35 - 166*	*07/17/24 16:10*	*07/20/24 05:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/17/24 16:10	07/20/24 05:24	1
Ethylbenzene	ND		0.048		mg/Kg		07/17/24 16:10	07/20/24 05:24	1
Toluene	ND		0.048		mg/Kg		07/17/24 16:10	07/20/24 05:24	1
Xylenes, Total	0.32		0.095		mg/Kg		07/17/24 16:10	07/20/24 05:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*		*48 - 145*	*07/17/24 16:10*	*07/20/24 05:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	830		9.9		mg/Kg		07/18/24 12:18	07/19/24 00:36	1
Motor Oil Range Organics [C28-C40]	410		49		mg/Kg		07/18/24 12:18	07/19/24 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*123*		*62 - 134*	*07/18/24 12:18*	*07/19/24 00:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/18/24 09:40	07/18/24 22:00	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-08

Date Collected: 07/16/24 16:12
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-11

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	38		4.8		mg/Kg		07/17/24 16:10	07/20/24 06:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*183*	*S1+*	*35 - 166*	*07/17/24 16:10*	*07/20/24 06:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/17/24 16:10	07/20/24 06:08	1
Ethylbenzene	ND		0.048		mg/Kg		07/17/24 16:10	07/20/24 06:08	1
Toluene	ND		0.048		mg/Kg		07/17/24 16:10	07/20/24 06:08	1
Xylenes, Total	0.32		0.096		mg/Kg		07/17/24 16:10	07/20/24 06:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*48 - 145*	*07/17/24 16:10*	*07/20/24 06:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1600		97		mg/Kg		07/18/24 12:18	07/20/24 03:31	10
Motor Oil Range Organics [C28-C40]	620		480		mg/Kg		07/18/24 12:18	07/20/24 03:31	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*07/18/24 12:18*	*07/20/24 03:31*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		61		mg/Kg		07/19/24 07:01	07/19/24 08:48	20

Client Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-09
Date Collected: 07/16/24 16:13
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	21		4.9		mg/Kg		07/17/24 16:10	07/20/24 06:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*329*	*S1+*	*35 - 166*	*07/17/24 16:10*	*07/20/24 06:30*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 06:30	1
Ethylbenzene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 06:30	1
Toluene	ND		0.049		mg/Kg		07/17/24 16:10	07/20/24 06:30	1
Xylenes, Total	ND		0.099		mg/Kg		07/17/24 16:10	07/20/24 06:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*		*48 - 145*	*07/17/24 16:10*	*07/20/24 06:30*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1100		85		mg/Kg		07/18/24 12:18	07/20/24 04:20	10
Motor Oil Range Organics [C28-C40]	430		430		mg/Kg		07/18/24 12:18	07/20/24 04:20	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*07/18/24 12:18*	*07/20/24 04:20*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		07/19/24 07:01	07/19/24 09:01	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

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

Lab Sample ID: MB 885-8604/1-A
Matrix: Solid
Analysis Batch: 8847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8604

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		07/17/24 16:10	07/20/24 00:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*07/17/24 16:10*	*07/20/24 00:20*	*1*

Lab Sample ID: LCS 885-8604/2-A
Matrix: Solid
Analysis Batch: 8847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8604

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	21.8		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*198*	*S1+*	*35 - 166*

Lab Sample ID: 885-8085-1 MS
Matrix: Solid
Analysis Batch: 8847

Client Sample ID: FS-01
Prep Type: Total/NA
Prep Batch: 8604

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	14		25.0	34.6		mg/Kg		84	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*318*	*S1+*	*35 - 166*

Lab Sample ID: 885-8085-1 MSD
Matrix: Solid
Analysis Batch: 8847

Client Sample ID: FS-01
Prep Type: Total/NA
Prep Batch: 8604

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	14		25.0	39.0		mg/Kg		102	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*343*	*S1+*	*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-8604/1-A
Matrix: Solid
Analysis Batch: 8848

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8604

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/17/24 16:10	07/20/24 00:20	1
Ethylbenzene	ND		0.050		mg/Kg		07/17/24 16:10	07/20/24 00:20	1
Toluene	ND		0.050		mg/Kg		07/17/24 16:10	07/20/24 00:20	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

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

Lab Sample ID: MB 885-8604/1-A
Matrix: Solid
Analysis Batch: 8848

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8604

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		0.10		mg/Kg		07/17/24 16:10	07/20/24 00:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*07/17/24 16:10*	*07/20/24 00:20*	*1*

Lab Sample ID: LCS 885-8604/3-A
Matrix: Solid
Analysis Batch: 8848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8604

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.818		mg/Kg		82	70 - 130		
Ethylbenzene			1.00	0.830		mg/Kg		83	70 - 130		
m&p-Xylene			2.00	1.65		mg/Kg		83	70 - 130		
o-Xylene			1.00	0.833		mg/Kg		83	70 - 130		
Toluene			1.00	0.822		mg/Kg		82	70 - 130		
Xylenes, Total			3.00	2.49		mg/Kg		83	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*

Lab Sample ID: 885-8085-3 MS
Matrix: Solid
Analysis Batch: 8848

Client Sample ID: FS-03
Prep Type: Total/NA
Prep Batch: 8604

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.990	0.809		mg/Kg		82	70 - 130		
Ethylbenzene	ND		0.990	0.832		mg/Kg		84	70 - 130		
m&p-Xylene	ND		1.98	1.65		mg/Kg		84	70 - 130		
o-Xylene	ND		0.990	0.831		mg/Kg		84	70 - 130		
Toluene	ND		0.990	0.824		mg/Kg		83	70 - 130		
Xylenes, Total	ND		2.97	2.48		mg/Kg		84	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*

Lab Sample ID: 885-8085-3 MSD
Matrix: Solid
Analysis Batch: 8848

Client Sample ID: FS-03
Prep Type: Total/NA
Prep Batch: 8604

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.985	0.816		mg/Kg		83	70 - 130	1	20
Ethylbenzene	ND		0.985	0.847		mg/Kg		86	70 - 130	2	20
m&p-Xylene	ND		1.97	1.69		mg/Kg		86	70 - 130	2	20
o-Xylene	ND		0.985	0.839		mg/Kg		85	70 - 130	1	20
Toluene	ND		0.985	0.841		mg/Kg		85	70 - 130	2	20
Xylenes, Total	ND		2.96	2.53		mg/Kg		86	70 - 130	2	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

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

Lab Sample ID: 885-8085-3 MSD
Matrix: Solid
Analysis Batch: 8848

Client Sample ID: FS-03
Prep Type: Total/NA
Prep Batch: 8604

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*

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

Lab Sample ID: MB 885-8671/1-A
Matrix: Solid
Analysis Batch: 8691

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8671

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/18/24 12:18	07/18/24 17:37	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/18/24 12:18	07/18/24 17:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*123*		*62 - 134*	*07/18/24 12:18*	*07/18/24 17:37*	*1*

Lab Sample ID: LCS 885-8671/2-A
Matrix: Solid
Analysis Batch: 8691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8671

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	50.6		mg/Kg		101	60 - 135		

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-8642/1-A
Matrix: Solid
Analysis Batch: 8749

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8642

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/18/24 09:40	07/18/24 16:02	1

Lab Sample ID: LCS 885-8642/2-A
Matrix: Solid
Analysis Batch: 8749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8642

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.4		mg/Kg		95	90 - 110		

Lab Sample ID: 885-8085-1 MS
Matrix: Solid
Analysis Batch: 8749

Client Sample ID: FS-01
Prep Type: Total/NA
Prep Batch: 8642

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	ND		29.9	70.4		mg/Kg		NC	50 - 150		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 885-8085-1 MSD — **Client Sample ID: FS-01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 8749 — **Prep Batch: 8642**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		29.9	74.0		mg/Kg		NC	50 - 150	5	20

Lab Sample ID: MB 885-8735/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 8833 — **Prep Batch: 8735**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/19/24 07:01	07/19/24 07:49	1

Lab Sample ID: LCS 885-8735/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 8833 — **Prep Batch: 8735**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	31.2		mg/Kg		104	90 - 110		

Lab Sample ID: MB 885-8749/101 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 8749

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/Kg			07/18/24 22:37	1

Lab Sample ID: MRL 885-8749/100 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 8749

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			0.500	0.523		mg/L		105	50 - 150		

QC Association Summary

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

GC VOA

Prep Batch: 8604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	5030C	
885-8085-2	FS-02	Total/NA	Solid	5030C	
885-8085-3	FS-03	Total/NA	Solid	5030C	
885-8085-4	SW-01	Total/NA	Solid	5030C	
885-8085-5	SW-02	Total/NA	Solid	5030C	
885-8085-6	SW-03	Total/NA	Solid	5030C	
885-8085-7	SW-04	Total/NA	Solid	5030C	
885-8085-8	SW-05	Total/NA	Solid	5030C	
885-8085-9	SW-06	Total/NA	Solid	5030C	
885-8085-10	SW-07	Total/NA	Solid	5030C	
885-8085-11	SW-08	Total/NA	Solid	5030C	
885-8085-12	SW-09	Total/NA	Solid	5030C	
MB 885-8604/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8604/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8604/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-8085-1 MS	FS-01	Total/NA	Solid	5030C	
885-8085-1 MSD	FS-01	Total/NA	Solid	5030C	
885-8085-3 MS	FS-03	Total/NA	Solid	5030C	
885-8085-3 MSD	FS-03	Total/NA	Solid	5030C	

Analysis Batch: 8847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	8015M/D	8604
885-8085-3	FS-03	Total/NA	Solid	8015M/D	8604
885-8085-4	SW-01	Total/NA	Solid	8015M/D	8604
885-8085-6	SW-03	Total/NA	Solid	8015M/D	8604
885-8085-7	SW-04	Total/NA	Solid	8015M/D	8604
885-8085-8	SW-05	Total/NA	Solid	8015M/D	8604
885-8085-9	SW-06	Total/NA	Solid	8015M/D	8604
885-8085-10	SW-07	Total/NA	Solid	8015M/D	8604
885-8085-11	SW-08	Total/NA	Solid	8015M/D	8604
885-8085-12	SW-09	Total/NA	Solid	8015M/D	8604
MB 885-8604/1-A	Method Blank	Total/NA	Solid	8015M/D	8604
LCS 885-8604/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8604
885-8085-1 MS	FS-01	Total/NA	Solid	8015M/D	8604
885-8085-1 MSD	FS-01	Total/NA	Solid	8015M/D	8604

Analysis Batch: 8848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	8021B	8604
885-8085-3	FS-03	Total/NA	Solid	8021B	8604
885-8085-4	SW-01	Total/NA	Solid	8021B	8604
885-8085-6	SW-03	Total/NA	Solid	8021B	8604
885-8085-7	SW-04	Total/NA	Solid	8021B	8604
885-8085-8	SW-05	Total/NA	Solid	8021B	8604
885-8085-9	SW-06	Total/NA	Solid	8021B	8604
885-8085-10	SW-07	Total/NA	Solid	8021B	8604
885-8085-11	SW-08	Total/NA	Solid	8021B	8604
885-8085-12	SW-09	Total/NA	Solid	8021B	8604
MB 885-8604/1-A	Method Blank	Total/NA	Solid	8021B	8604
LCS 885-8604/3-A	Lab Control Sample	Total/NA	Solid	8021B	8604

QC Association Summary

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

GC VOA (Continued)

Analysis Batch: 8848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-3 MS	FS-03	Total/NA	Solid	8021B	8604
885-8085-3 MSD	FS-03	Total/NA	Solid	8021B	8604

Analysis Batch: 8978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-2	FS-02	Total/NA	Solid	8015M/D	8604
885-8085-5	SW-02	Total/NA	Solid	8015M/D	8604

Analysis Batch: 8979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-2	FS-02	Total/NA	Solid	8021B	8604
885-8085-5	SW-02	Total/NA	Solid	8021B	8604

GC Semi VOA

Prep Batch: 8671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	SHAKE	
885-8085-2	FS-02	Total/NA	Solid	SHAKE	
885-8085-3	FS-03	Total/NA	Solid	SHAKE	
885-8085-4	SW-01	Total/NA	Solid	SHAKE	
885-8085-5	SW-02	Total/NA	Solid	SHAKE	
885-8085-6	SW-03	Total/NA	Solid	SHAKE	
885-8085-7	SW-04	Total/NA	Solid	SHAKE	
885-8085-8	SW-05	Total/NA	Solid	SHAKE	
885-8085-9	SW-06	Total/NA	Solid	SHAKE	
885-8085-10	SW-07	Total/NA	Solid	SHAKE	
885-8085-11	SW-08	Total/NA	Solid	SHAKE	
885-8085-12	SW-09	Total/NA	Solid	SHAKE	
MB 885-8671/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8671/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 8691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	8015M/D	8671
885-8085-2	FS-02	Total/NA	Solid	8015M/D	8671
885-8085-3	FS-03	Total/NA	Solid	8015M/D	8671
885-8085-4	SW-01	Total/NA	Solid	8015M/D	8671
885-8085-5	SW-02	Total/NA	Solid	8015M/D	8671
885-8085-6	SW-03	Total/NA	Solid	8015M/D	8671
885-8085-7	SW-04	Total/NA	Solid	8015M/D	8671
885-8085-8	SW-05	Total/NA	Solid	8015M/D	8671
885-8085-9	SW-06	Total/NA	Solid	8015M/D	8671
885-8085-10	SW-07	Total/NA	Solid	8015M/D	8671
MB 885-8671/1-A	Method Blank	Total/NA	Solid	8015M/D	8671
LCS 885-8671/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8671

Analysis Batch: 8776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-11	SW-08	Total/NA	Solid	8015M/D	8671
885-8085-12	SW-09	Total/NA	Solid	8015M/D	8671

QC Association Summary

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

HPLC/IC

Prep Batch: 8642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	300_Prep	
885-8085-2	FS-02	Total/NA	Solid	300_Prep	
885-8085-3	FS-03	Total/NA	Solid	300_Prep	
885-8085-4	SW-01	Total/NA	Solid	300_Prep	
885-8085-5	SW-02	Total/NA	Solid	300_Prep	
885-8085-6	SW-03	Total/NA	Solid	300_Prep	
885-8085-7	SW-04	Total/NA	Solid	300_Prep	
885-8085-8	SW-05	Total/NA	Solid	300_Prep	
885-8085-9	SW-06	Total/NA	Solid	300_Prep	
885-8085-10	SW-07	Total/NA	Solid	300_Prep	
MB 885-8642/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8642/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-8085-1 MS	FS-01	Total/NA	Solid	300_Prep	
885-8085-1 MSD	FS-01	Total/NA	Solid	300_Prep	

Prep Batch: 8735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-11	SW-08	Total/NA	Solid	300_Prep	
885-8085-12	SW-09	Total/NA	Solid	300_Prep	
MB 885-8735/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8735/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-1	FS-01	Total/NA	Solid	300.0	8642
885-8085-2	FS-02	Total/NA	Solid	300.0	8642
885-8085-3	FS-03	Total/NA	Solid	300.0	8642
885-8085-4	SW-01	Total/NA	Solid	300.0	8642
885-8085-5	SW-02	Total/NA	Solid	300.0	8642
885-8085-6	SW-03	Total/NA	Solid	300.0	8642
885-8085-7	SW-04	Total/NA	Solid	300.0	8642
885-8085-8	SW-05	Total/NA	Solid	300.0	8642
885-8085-9	SW-06	Total/NA	Solid	300.0	8642
885-8085-10	SW-07	Total/NA	Solid	300.0	8642
MB 885-8642/1-A	Method Blank	Total/NA	Solid	300.0	8642
MB 885-8749/101	Method Blank	Total/NA	Solid	300.0	
LCS 885-8642/2-A	Lab Control Sample	Total/NA	Solid	300.0	8642
MRL 885-8749/100	Lab Control Sample	Total/NA	Solid	300.0	
885-8085-1 MS	FS-01	Total/NA	Solid	300.0	8642
885-8085-1 MSD	FS-01	Total/NA	Solid	300.0	8642

Analysis Batch: 8833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8085-11	SW-08	Total/NA	Solid	300.0	8735
885-8085-12	SW-09	Total/NA	Solid	300.0	8735
MB 885-8735/1-A	Method Blank	Total/NA	Solid	300.0	8735
LCS 885-8735/2-A	Lab Control Sample	Total/NA	Solid	300.0	8735

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: FS-01
Date Collected: 07/16/24 16:02
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 00:41
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 00:41
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 18:26
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 19:20

Client Sample ID: FS-02
Date Collected: 07/16/24 16:03
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8978	RA	EET ALB	07/22/24 19:16
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8979	RA	EET ALB	07/22/24 19:16
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 19:16
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 19:57

Client Sample ID: FS-03
Date Collected: 07/16/24 16:04
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 02:08
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 02:08
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 20:05
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 20:09

Client Sample ID: SW-01
Date Collected: 07/16/24 16:05
Date Received: 07/17/24 07:10

Lab Sample ID: 885-8085-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 03:14

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-01

Lab Sample ID: 885-8085-4
Matrix: Solid
Date Collected: 07/16/24 16:05
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 03:14
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 20:54
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 20:21

Client Sample ID: SW-02

Lab Sample ID: 885-8085-5
Matrix: Solid
Date Collected: 07/16/24 16:06
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8978	RA	EET ALB	07/22/24 19:38
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8979	RA	EET ALB	07/22/24 19:38
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 21:44
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 20:58

Client Sample ID: SW-03

Lab Sample ID: 885-8085-6
Matrix: Solid
Date Collected: 07/16/24 16:07
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 03:57
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 03:57
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 22:33
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 21:11

Client Sample ID: SW-04

Lab Sample ID: 885-8085-7
Matrix: Solid
Date Collected: 07/16/24 16:08
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 04:19
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 04:19

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-04

Lab Sample ID: 885-8085-7

Date Collected: 07/16/24 16:08
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 22:58
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 21:23

Client Sample ID: SW-05

Lab Sample ID: 885-8085-8

Date Collected: 07/16/24 16:09
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 04:41
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 04:41
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/18/24 23:47
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 21:35

Client Sample ID: SW-06

Lab Sample ID: 885-8085-9

Date Collected: 07/16/24 16:10
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 05:02
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 05:02
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/19/24 00:11
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 21:48

Client Sample ID: SW-07

Lab Sample ID: 885-8085-10

Date Collected: 07/16/24 16:11
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 05:24
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 05:24
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		1	8691	DH	EET ALB	07/19/24 00:36

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

Client Sample ID: SW-07

Lab Sample ID: 885-8085-10

Date Collected: 07/16/24 16:11
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			8642	EH	EET ALB	07/18/24 09:40
Total/NA	Analysis	300.0		20	8749	JT	EET ALB	07/18/24 22:00

Client Sample ID: SW-08

Lab Sample ID: 885-8085-11

Date Collected: 07/16/24 16:12
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 06:08
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 06:08
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		10	8776	DH	EET ALB	07/20/24 03:31
Total/NA	Prep	300_Prep			8735	JT	EET ALB	07/19/24 07:01
Total/NA	Analysis	300.0		20	8833	RC	EET ALB	07/19/24 08:48

Client Sample ID: SW-09

Lab Sample ID: 885-8085-12

Date Collected: 07/16/24 16:13
Matrix: Solid
Date Received: 07/17/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8015M/D		1	8847	AT	EET ALB	07/20/24 06:30
Total/NA	Prep	5030C			8604	AT	EET ALB	07/17/24 16:10
Total/NA	Analysis	8021B		1	8848	AT	EET ALB	07/20/24 06:30
Total/NA	Prep	SHAKE			8671	KR	EET ALB	07/18/24 12:18
Total/NA	Analysis	8015M/D		10	8776	DH	EET ALB	07/20/24 04:20
Total/NA	Prep	300_Prep			8735	JT	EET ALB	07/19/24 07:01
Total/NA	Analysis	300.0		20	8833	RC	EET ALB	07/19/24 09:01

Laboratory References:

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Pipkin GCAIE

Job ID: 885-8085-1

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
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	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

Chain-of-Custody Record

Client: Hilcorp

ATTN: Mitch Killough

Mailing Address: mkillough@hilcorp.com

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: Pipkin GC A 1E

Project #:

Project Manager: Stuart Hyde

Sampler:

On Ice: ☒ Yes ☐ No yog

# of Coolers: 1

Cooler Temp (including CF): 5.8±0=5.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

885-8085 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)						
7/16	16:02	Soil	FS-01	4 oz	cool	1	X	X					X									
7/16	16:03		FS-02			2																
7/16	16:04		FS-03			3																
7/16	16:05		SW-01			4																
	16:06		SW-02			5																
	16:07		SW-03			6																
	16:08		SW-04			7																
	16:09		SW-05			8																
	16:10		SW-06			9																
	16:11		SW-07			10																
	16:12		SW-08			11																
	16:13		SW-09			12																

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/16	17:15	Wattala	Wait		7/16/24	1715
Date:	Time:	Relinquished by:	Received by:	Via: courier	Date 7/17/24	Time 7:10

Remarks: CC* shyde@ensolum.com, smahanay@ensolum.com, panderson@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.

7/24/2024

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-8085-1

Login Number: 8085 **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?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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APPENDIX B

Agency Correspondence

From: OCDOnline@state.nm.us
To: Stuart Hyde
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 338546
Date: Monday, April 29, 2024 12:05:20 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#) nAPP2315954357.

The sampling event is expected to take place:

When: 05/02/2024 @ 09:00
Where: C-07-27N-10W 1065 FNL 1645 FWL (36.594145,-107.940016)

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

Additional Instructions: Pipkin Gas Com A #1E former well pad, Coordinates 36.59396, -107.94056

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: 362346
Date: Tuesday, July 9, 2024 2:32:41 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#) nAPP2315954357.

The sampling event is expected to take place:

When: 07/16/2024 @ 09:30
Where: C-07-27N-10W 1065 FNL 1645 FWL (36.594145,-107.940016)

Additional Information: Note sampling will range from Tuesday through Thursday (July 16 - July 18).
Primary contact: Sidney Mahanay 979-877-8887
Alternative Contact Stuart Hyde 970-903-1607

Additional Instructions: Pipkin Gas Com A #1E former well pad, Coordinates 36.59396, -107.94056

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

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

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

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

From: Velez, Nelson, EMNRD
To: Stuart Hyde
Cc: Adeloye, Abiodun A; Mitch Killough; Sidney Mahanay
Subject: Re: [EXTERNAL] NAPP2315954357 - Pipkin GC A1E Extension Request
Date: Wednesday, July 31, 2024 9:50:21 AM
Attachments: image001.png
image002.png
image003.png
Outlook-kgeizkv4.png

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

Thank you for your inquiry. Your time extension request is approved. Remediation Due date has been updated to October 29, 2024.

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

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

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.nm.gov/ocd

From: Stuart Hyde <shyde@ensolum.com>
Sent: Wednesday, July 31, 2024 9:33 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Adeloye, Abiodun A <aadeloye@blm.gov>; Mitch Killough <mkillough@hilcorp.com>; Sidney Mahanay <smahanay@ensolum.com>
Subject: [EXTERNAL] NAPP2315954357 - Pipkin GC A1E Extension Request

Nelson and Emmanuel,

On behalf of Hilcorp Energy Company, we are requesting a 90-day extension to the remediation and reporting deadline of July 31, 2024 for the Pipkin GC A1E site located in San Juan County. At this time, Hilcorp has completed the initial remedial excavation effort at the site (performed on July 16th) and we are waiting on final analytical results.

If approved, the new reporting deadline would be Tuesday, October 29, 2024. Please reach out with any questions or comments regarding this site. 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

From: Adeloye, Abiodun A
To: Stuart Hyde; Velez, Nelson, EMNRD
Cc: Mitch Killough; Sidney Mahanay
Subject: RE: [EXTERNAL] NAPP2315954357 - Pipkin GC A1E Extension Request
Date: Wednesday, July 31, 2024 9:53:08 AM
Attachments: image001.png
image002.png
image003.png

[**EXTERNAL EMAIL**]

Hi, Stuart, BLM approve the 90 days extension as requested. The new deadline would be October 9, 2023.
Thank you.

Abiodun Adeloye (Emmanuel)
Natural Resources Specialist (NRS)
6251 College Blvd., Suite A
Farmington, NM 87402
Office: 505-564-7665
Mobile: 505-635-0984

From: Stuart Hyde <shyde@ensolum.com>
Sent: Wednesday, July 31, 2024 9:33 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Adeloye, Abiodun A <aadeloye@blm.gov>; Mitch Killough <mkillough@hilcorp.com>; Sidney Mahanay <smahanay@ensolum.com>
Subject: [EXTERNAL] NAPP2315954357 - Pipkin GC A1E Extension Request

Nelson and Emmanuel,

On behalf of Hilcorp Energy Company, we are requesting a 90-day extension to the remediation and reporting deadline of July 31, 2024 for the Pipkin GC A1E site located in San Juan County. At this time, Hilcorp has completed the initial remedial excavation effort at the site (performed on July 16th) and we are waiting on final analytical results.

If approved, the new reporting deadline would be Tuesday, October 29, 2024. Please reach out with any questions or comments regarding this site. 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

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APPENDIX C

Photographic Log

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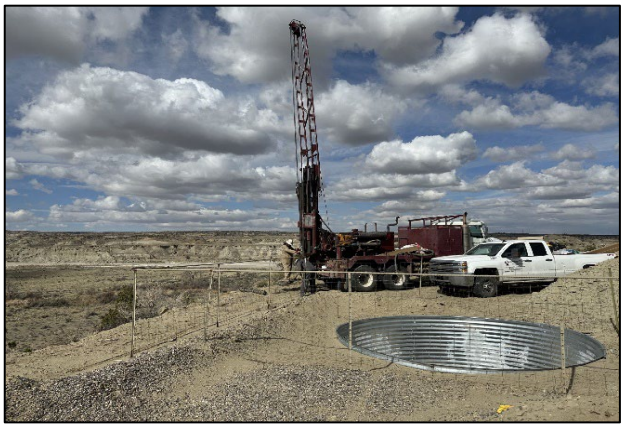
Photographic Log
Hilcorp Energy Company
Pipkin Gas Com A #1E
San Juan County, New Mexico

Photograph: 1 Date: 4/14/2023
Description: View of Site and former BGT location
View: West

Photograph: 2 Date: 4/15/2023
Description: View of pothole advanced on 10/28/2022
View: South



Photograph: 3 Date: 4/14/2023
Description: Drilling boring BH01
View: West

Photograph: 4 Date: 4/15/2023
Description: Drilling boring BH03
View: Southwest

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Photographic Log
Hilcorp Energy Company
Pipkin Gas Com A #1E
San Juan County, New Mexico

Photograph: 5 Date: 5/2/2024
Description: Pothole PH01
View: East

Photograph: 6 Date: 7/16/2024
Description: Excavation extent, refusal on sandstone
View: Southeast

Photograph: 7 Date: 7/16/2024
Description: Bulldozer refusal on sandstone
View: West

Photograph: 8 Date: 7/16/2024
Description: Excavation extent, refusal on sandstone
View: North

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APPENDIX D

Pit Remediation and Closure Report Form

80113

District I
P O Box 1980, Hobbs, NM
District II
P O Drawer DD, Artesia, NM
District III
1000 Rio Brazos Rd., Aztec, NM

Henry B. Ford
DEPUTY OIL & GAS INSPECTOR
DEC 11 '96

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name PIPKIN GAS Com A #1E

Location: Unit or Qtr/Qtr Sec C Sec 7 T 27 N R 10 W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other Blow / PROD. TANK

Land Type: BLM ___, State ___, Fee ___, Other Com. AGMT.

Pit Location: (Attach diagram)

Pit dimensions: length 20', width 30', depth 2'-5'

Reference: wellhead X, other ___

Footage from reference: 150

Direction from reference: 55 Degrees X East North X of ___ West South ___

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	0
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	0
	RANKING SCORE (TOTAL POINTS):	0

B0113

Date Remediation Started: _____ **Date Completed:** 10-7-94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 60

Landfarmed ___ Insitu Bioremediation ___

Other COMPOST + BIO-REMEDIATE PILE

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

General Description Of Remedial Action: Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 3'

Sample date 10-7-94 Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 2

TPH ND

Ground Water Sample: Yes ___ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 10/14/94

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

RESULTS TO FRANK M. 10-7-94 RLG

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: B0113
C.O.C. NO: —

FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: NAME PIPKIN GAS COM A WELL #: 1E PIT: BLOW/PROD.
QUAD/UNIT C SEC: 7 TWP: 27N RNG: 10W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NE/NW CONTRACTOR: EPC

DATE STARTED: 10-7-94
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: RLG

EXCAVATION APPROX: 20 FT. x 30 FT. x 2-5 FT. DEEP CUBIC YARDS: 60
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: BIO-REM - COMPOST
LAND USE: RANGE LEASE: Fed. LSE * SW-000366 FORMATION:

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 150 FEET N55°E FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: STEEL TANK TO BE INSTALLED

BROWN, MOIST, SILTY SAND. PIT EXCAVATED TO BEDROCK - CONTAMINATED SOILS REMOVED. GRAY STAINING + ODOR IN SANDSTONE BOTTOM. (HAND NO FURTHER EXCAVATION POSSIBLE)

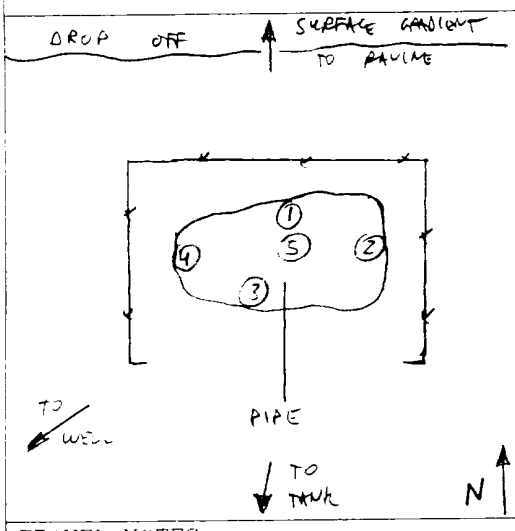
CLOSE PIT

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
NS@ 3'	1176	10.0	20.0	—	3	ND

SCALE
0 10 20 FT

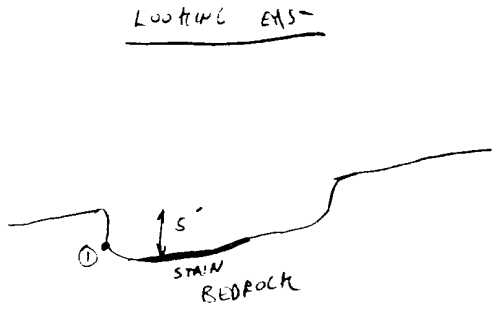
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS@ 3'	2
2 ES@ 3'	2
3 SS@ 2'	6
4 WS@ 2'	2
5 NB@ 5'	757
LAB	SAMPLES

PIT PROFILE



TRAVEL NOTES: CALLOUT: 10-7-94 ONSITE: 10-7-94 1000

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	
Sample ID:	N Side @ 3'	Date Analyzed:	10-7-94
Project Location:	Pipkin GC A 1E	Date Reported:	10-7-94
Laboratory Number:	TPH-1176	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**ND**	**10**

ND = Not Detectable at stated detection limits.

QA/QC	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4,020	4,220	5

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Blow/Prod Pit - B0113

R. E. O'Neill
Analyst

Review

B0113

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name PIPKIN GAS Com A #1E

Location: Unit or Qtr/Qtr Sec C Sec 7 T 27 N R 10 W County SAN JUAN

Pit Type: Separator ___ Dehydrator X Other ___

Land Type: BLM ___, State ___, Fee ___, Other COM. AGMT.

Pit Location: (Attach diagram)
Pit dimensions: length 15', width 15', depth 5'
Reference: wellhead X, other ___
Footage from reference: 100
Direction from reference: 90 Degrees ___ East North X of X West South ___

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	0
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	0
	RANKING SCORE (TOTAL POINTS):	0

B0113

Date Remediation Started: _____ **Date Completed:** 10-7-94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 25

Landfarmed ___ Insitu Bioremediation ___

Other COMPOST + BIO-REMEDIATE PILE

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

General Description Of Remedial Action: Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 3'

Sample date 10-7-94 Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 591

TPH 7320 ppm

Ground Water Sample: Yes ___ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 10/14/94

SIGNATURE BJ Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

RESULTS TO FRANK M. 10-7-94 PEC

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: B0113
C.O.C. NO: —

FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION NAME: PIPKIN GAS COM A WELL #: 1E PIT: DEHY
QUAD/UNIT: C SEC: 7 TWP: 27N RNG: 10 W BM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: NE/NW CONTRACTOR: EPC

DATE STARTED: 10-7-94
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: PEC

EXCAVATION APPROX: 15 FT x 15 FT x 5 FT DEEP. CUBIC YARDS: 25
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: COMPOST/BIO-REM
LAND USE: RANGE LEASE: FED. LSE # SW-000366 FORMATION:

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 100 FEET WEST FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM
SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: STEEL TANK TO BE INSTALLED
MOIST, BROWN, SAND. EXCAVATED INTO SANDSTONE - NO ADDITIONAL EXCAVATION POSSIBLE
EVIDENCE OF HEAVY OILS SOAKED INTO SANDSTONE SIDEWALLS + BOTTOM.

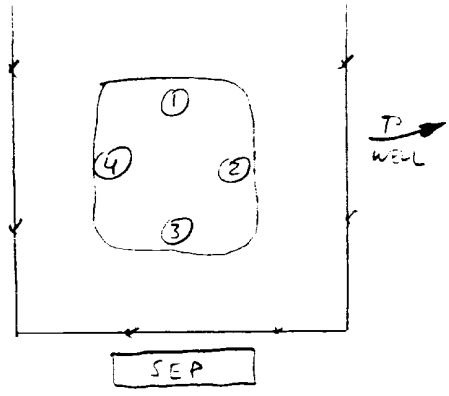
CLOSE PIT DUE TO BEDROCK.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
WS @ 3'	1177	10.0	20.0	10	300	7320

SCALE
0 5 10 FT

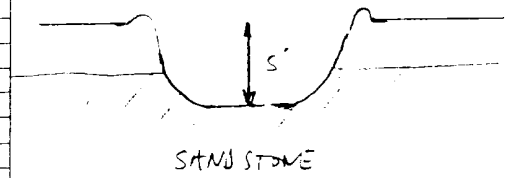
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS @ 3'	270
2 ES @ 3'	96
3 SS @ 3'	241
4 WS @ 3'	591
5	
LAB SAMPLES	

PIT PROFILE



TRAVEL NOTES: CALLOUT: 10-7-94 ONSITE: 10-7-94 1130

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	
Sample ID:	W Side @ 3'	Date Analyzed:	10-7-94
Project Location:	Pipkin GC A 1E	Date Reported:	10-7-94
Laboratory Number:	TPH-1177	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**7300**	**100**

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4.020	4.220	5

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Dehydrator Pit - B0113

R. E. O'Neill
Analyst

Nelson Velez
Review

B0113

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) - 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name PIPKIN GAS Com A #1E

Location: Unit or Qtr/Qtr Sec C Sec 7 T 27 N R 10 W County SAN JUAN

Pit Type: Separator X Dehydrator ___ Other ___

Land Type: BLM ___, State ___, Fee ___, Other Com. AGMT.

Pit Location: (Attach diagram)
Pit dimensions: length 20', width 20', depth 5'
Reference: wellhead X, other ___
Footage from reference: 90
Direction from reference: 0 Degrees ___ East North ___ of ___ West South X

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	0
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	0
	RANKING SCORE (TOTAL POINTS):	0

B0113

Date Remediation Started: _____ **Date Completed:** 10-7-94

Remediation Method: (Check all appropriate sections) Excavation X Approx. cubic yards 50

Landfarmed ___ Insitu Bioremediation ___

Other COMPOST + BIO-REMEDIATE PILE

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

General Description Of Remedial Action: Excavation

Ground Water Encountered: No X Yes ___ Depth _____

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 4'

Sample date 10-7-94 Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 289

TPH 15,940 ppm

Ground Water Sample: Yes ___ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 10/14/94

SIGNATURE B J Shaw

PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

RESULTS TO FRANK M. 10-7-94 REO

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: B0113
COC NO: —

FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: NAME PIPKIN GAS Com A WELL #: 1E PIT: SEP.
QUAD/UNIT: C SEC: 7 TWP: 27N RNG: 10W BM: NM CNTY: SJ ST: NM
UTR/FOOTAGE: NE/NW CONTRACTOR: EPC

DATE STARTED: 10-7-94
DATE FINISHED: —
ENVIRONMENTAL SPECIALIST: REO

EXCAVATION APPROX 20 FT. x 20 FT. x 5 FT. DEEP. CUBIC YARDS: 50
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: COMPOST / BIO-REM
LAND USE: RANGE LEASE: FED. LSE # SW-000366 FORMATION: —

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 90 FEET SOUTH FROM WELLHEAD.
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: STEEL TANK TO BE INSTALLED.
MOIST, BROWN, SAND - HYDROCARBON ODOR + STAIN IN SIDEWALLS AND BOTTOM.
BOTTOM EXCAVATED TO BEDROCK - PIPELINES + EQUIPMENT IN WAY OF ADDITIONAL EXCAVATION.

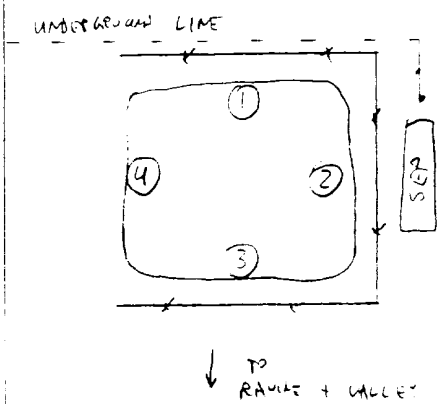
CONDITIONAL.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
NS @ 4'	1178	10.0	20.0	10	797	15,940

SCALE
0 5 10 FT

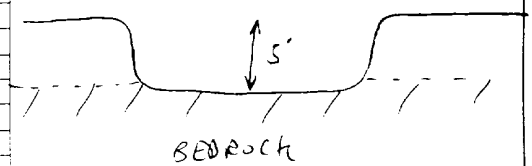
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS @ 4'	289
2 ES @ 4'	163
3 SS @ 4'	307
4 WS @ 3'	310
5	
LAB SAMPLES	

PIT PROFILE



TRAVEL NOTES: CALLOUT: 10-7-94 ONSITE: 10-7-94 1230

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	
Sample ID:	N Side @ 4'	Date Analyzed:	10-7-94
Project Location:	Pipkin GC A 1E	Date Reported:	10-7-94
Laboratory Number:	TPH-1178	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	**15900**	**100**

ND = Not Detectable at stated detection limits.

QA/QC	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	4.020	4.220	5

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Separator Pit - B0113

R. E. O'Neill
Analyst

Review

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Action 389174

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2315954357**
Incident Name	**NAPP2315954357 PIPKIN GAS COM A #1E @ 30-045-25634**
Incident Type	**Release Other**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-045-25634] PIPKIN GAS COM A #001E**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PIPKIN GAS COM A #1E
Date Release Discovered	07/29/2022
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	Cause: Other | Pit (Specify) | Other (Specify) | Released: 23 BBL | Recovered: 0 BBL | Lost: 23 BBL.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Historic hydrocarbon release discovered during BGT removal. Estimated volumes based on soil sample analysis.

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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	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: 10/02/2024

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 200 and 300 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 500 and 1000 (ft.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 200 and 300 (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 1000 (ft.) and ½ (mi.)
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)	140
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3640
GRO+DRO (EPA SW-846 Method 8015M)	2660
BTEX (EPA SW-846 Method 8021B or 8260B)	8.4
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	07/16/2024
On what date will (or did) the final sampling or liner inspection occur	07/16/2024
On what date will (or was) the remediation complete(d)	07/16/2024
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	2300
What is the estimated volume (in cubic yards) that will be remediated	462
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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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	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: 10/02/2024
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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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**362346**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**07/16/2024**
What was the (estimated) number of samples that were to be gathered	**15**
What was the sampling surface area in square feet	**800**

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	2300
What was the total volume (cubic yards) remediated	462
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)	Not applicable

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: 10/02/2024

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 389174
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Variance and remediation closure report are approved. Release resolved.	2/5/2025