Received by OCD: 8/22/2023 10:34:35 AM Form C-141 State of New Mexico

Page 3

Oil Conservation Division

	I use I of
Incident ID	NAPP2315954357
District RP	
Facility ID	
Application ID	

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Site Assessment/Characterization

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?						
Did this release impact groundwater or surface water?						
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🛛 Yes 🗌 No					
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No					
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🔀 No					
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No					
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🔀 No					
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🔀 No					
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No					
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No					
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No					
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No					
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🛛 No					

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- \boxtimes Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-mile of the lateral extents of the release
- \boxtimes Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Received by OCD: 8/22/	2023 10:34:35 AM State of New Mexico	Page 2 of 7					
			Incident ID	NAPP2315954357			
Page 4	Oil Conservation Divisi	on	District RP				
			Facility ID				
			Application ID				
regulations all operators public health or the envir failed to adequately inve addition, OCD acceptance and/or regulations.	nformation given above is true and complete to are required to report and/or file certain release ronment. The acceptance of a C-141 report by stigate and remediate contamination that pose a ce of a C-141 report does not relieve the operato	e notifications and perfor the OCD does not reliev a threat to groundwater, a or of responsibility for co	m corrective actions for rele e the operator of liability sh surface water, human health ompliance with any other fe	eases which may endanger ould their operations have or the environment. In deral, state, or local laws			
	gh@hilcorp.com		Date:8/11/2023_ 713-757-5247				
OCD Only Received by:		Date:					

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Oil Conservation Division

<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

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Incident ID	NAPP2315954357	
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Remediation Plan

Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points \square Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation. Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. Extents of contamination must be fully delineated. Contamination does not cause an imminent risk to human health, the environment, or groundwater. 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. Printed Name: ____Mitch Killough______ Title: ___Environmental Specialist John July _____ Date: ____8/11/2023_____ Signature: Telephone: _____713-757-5247_____ email: _____mkillough@hilcorp.com_____ OCD Only Received by: _____ Date: _____ Approved Approved with Attached Conditions of Approval Denied Deferral Approved Signature: Date: _____

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Received by OCD: 8/22/2023 10:34:35 AM Form C-141 State of New Mexico

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Oil Conservation Division

<u>Remediation Plan Checklist:</u> Each of the following items must be included in the plan.

	Page 4 of	77
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Remediation plan is approved with the following conditions; 1. Soil Vapor Extraction Pilot Test to be completed by 02/26/2024. 2. Report of Pilot Test to be completed and submitted to OCD by 03/26/2024.



August 11, 2023

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

Re: Site Characterization and Remediation Work Plan 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 *Site Characterization and Remediation Work Plan* associated with a release discovered at 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 conducted on July 26, 2022. Analytical results collected on July 29, 2022 confirmed the presence of total petroleum hydrocarbon (TPH) concentrations exceeding the applicable New Mexico Oil Conservation Division (NMOCD) closure criteria. Once delineation activities were completed at the Site in April and May 2023 (as described in this document), 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*. The release was assigned NMOCD Incident Number NAPP2315954357.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

The Site is located within the Nacimiento Geologic Formation. In the report titled "*Hydrogeology and Water Resources of San Juan Basin, New Mexico*" (Stone, et. al., 1983), the Nacimiento Formation is characterized by interbedded black carbonaceous mudstones and white, coarse-grained sandstones, which ranges in thickness from 418 feet to 2,232 feet. The hydrogeologic properties of the Nacimiento Formation display variable properties dependent on location. Where sufficient yield is present, the primary use of water from this formation is for domestic and/or livestock supply. The Nacimiento Formation is underlain by the Ojo Alamo sandstone (Stone et. al., 1983).

The closest significant watercourse and wetland is an unnamed dry wash located 240 feet to the northeast of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake (Figure 1). The nearest fresh-water well is New Mexico Office of the State Engineer (NMOSE) permitted well SJ-00034 (Appendix A), located approximately 7,905 feet east of the Site. The recorded depth to water on the NMOSE database is 170 feet below ground surface (bgs). No wellhead protection areas, springs, or domestic/stock wells are located within a ½-mile from the Site. The Site is not within a 100-year floodplain, overlying a subsurface mine, or located within an area underlain by unstable geology (area designated as low potential karst by the BLM). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site.

Based on the information presented above and in accordance with the *Table I, Closure Criteria for Soils Impacted by a Release* (19.15.29.12 NMAC), the following Closure Criteria will be 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

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 at a maximum depth of 14 feet bgs. During this event, samples were collected at depths of 8, 10, 12, and 14 feet bgs and submitted to Hall Environmental Analysis Laboratory (Hall) for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH by EPA Method 8015M/D, and chloride by EPA Method 300.0. The soil sample was collected directly into laboratory-provided jars and immediately placed on ice. Laboratory analytical results indicated the presence of TPH at concentrations exceeding the NMOCD Table I Closure Criteria in all collected samples. A summary of analytical results is included in Table 1, with the complete laboratory analytical report attached as Appendix B.

Based on the initial field screening and sampling results, additional vertical and horizontal delineation with a drill rig was required. Ensolum submitted notice of sampling to the NMOCD at least 48 hours in advance of sampling activities (Appendix C). Due to inclement weather through the winter and spring of 2022 and 2023, additional delineation activities could not be performed until April 2023. 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). Photographs taken during delineation activities are included in Appendix D. Because of the open pothole in the center of the former BGT location, as shown on Photograph 2 in Appendix D, a boring was not able to be advanced at this location during the April 2023 drilling effort.

During drilling, an Ensolum geologist logged lithology, inspected the soil for petroleum hydrocarbon staining and odors, and field screened for volatile organic compounds (VOCs) using a photoionization detector (PID), with results noted on the field logs (attached as Appendix E). 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 Envirotech, Inc. or Hall for analysis of BTEX; TPH-GRO, TPH-DRO, TPH-MRO; and chloride by EPA Method 300.0.



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Soil composition at the Site was homogenous and primarily brown, dry, poorly sorted sand from the ground surface to depths up to 30 feet bgs. The poorly sorted sand was generally underlain by bluegrey, dry, sandy silt and/or siltstone/shale at an approximate depth of 30 feet bgs. Groundwater and/or saturated soils were not encountered in any of the borings during drilling. Laboratory analysis of the soil sample collected from boring BH01 at a depth of 25 feet bgs identified elevated concentrations of TPH 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 initial drilling effort are summarized in Table 1 and Figure 2, with the complete laboratory analytical report attached in Appendix B.

ADDITIONAL DELINEATION ACTIVITIES

Based on the laboratory analytical results gathered 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. Field screening and soil sampling during the May 2023 drilling was performed as described above. All soil samples analyzed during the May 2023 delineation effort were in compliance with the applicable Closure Criteria for TPH, BTEX, and chloride. Laboratory analytical results from this event are included in Table 1 and Figure 2, with the complete laboratory analytical report also attached in Appendix B.

SVE WELL CONSTRUCTION AND INSTALLATION

Based on field screening during drilling, borings BH01 and BH04 were completed as soil vapor extraction (SVE) wells to be used for future remediation. Screened casing was installed across the subsurface interval with the highest petroleum hydrocarbon impacts based on PID readings in order to direct the applied vacuum to these depth intervals. Two nested SVE wells, SVE-1S (shallow) and SVE-1D (deep) were installed in boring BH04, located at the center of the former BGT. To address both shallow and deep impacts at this location, SVE-1S was constructed with 10 feet of screen placed at a depth of 5 feet to 15 feet bgs. SVE-1D was screened from 24 feet to 34 feet bgs in order to address potential deep impacts in this area and to provide an observation point for future pilot test activities. SVE well SVE-2 was installed in boring BH01 and was screened at a depth of 20 feet to 30 feet bgs.

SVE wells were constructed with 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 2inch Schedule 40 PVC 0.010-inch slotted screen. Wells were completed with 10-20 silica sand pack to 2 feet above the screened interval, then hydrated bentonite seal to the ground surface. SVE well locations are shown on Figure 3.

REMEDIATION WORK PLAN

Based on the vertical extent of soil impacts and favorable soil lithology, Ensolum recommends the use of SVE techniques to remediate soil at the Site. As described by the EPA, SVE is an in-situ technique for the removal of 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. Depending on contaminant concentrations in the removed air, the SVE system may emit exhaust directly to the atmosphere.

SVE PILOT TEST

Ensolum recommends performing an SVE pilot test to evaluate the effectiveness of SVE for the Site and, if applicable, assess the Site-specific flow and vacuum rates required to volatilize and remove contaminants from the impacted subsurface. Data collected during the SVE pilot test will be used to estimate the system's radius-of-influence (ROI) and radius-of-effect (ROE) to determine well spacing and the need for additional SVE wells at the Site.



A vacuum truck will be used to remove air at one SVE well at a time (used as the "extraction" well). Flow and vacuum rates will be measured at the extraction well using an adjustable manifold and vacuum responses will be measured in the other SVE wells at the Site (used as "observation" wells). The pilottest manifold will be used to control and incrementally increase vacuum being applied to the extraction well to assess the relationship between flow and vacuum. Vacuum measurements collected at the observation wells will be used to assess the ROI and ROE achievable at the Site. The following general procedures will be used to perform the SVE pilot test:

- 1. Collect initial VOC measurements using a PID from all SVE wells.
- 2. Attach a flexible hose from the vacuum truck to the SVE pilot test manifold. Connect the manifold to the first extraction well, start the vacuum truck, and slowly open the valve to increase flow and vacuum at the well.
- 3. During each test, apply a vacuum of approximately 10 inches of water column (IWC) and allow flow/vacuum measurements to stabilize for up to 15 minutes. Collect vacuum measurements and PID readings at each observation well once flow and vacuum have stabilized.
- 4. Increase the extraction well vacuum by 10 to 20 IWC, allow the vacuum/flow to stabilize, and collect observation well measurements as described below. Continue Steps 3 and 4 until 100 IWC is being applied at the extraction well or the vacuum truck capabilities are reached.
- 5. Close the manifold valve, allow the vacuum to dissipate, and collect PID readings from each observation well.
- 6. Collect air samples from the extraction wells in 1-liter Tedlar[®] bags and submit to Hall for analysis of BTEX and total volatile petroleum hydrocarbons (TVPH).

After completion of the SVE pilot test, Ensolum will prepare a *Pilot Test Report* summarizing the results of the test and recommendations for the design and construction of the full-scale SVE system. The report will include the calculations for ROI and ROE, system specifications required to remediate subsurface impacts, and, if determined feasible, an operation and maintenance (O&M) plan for the system and the proposed remediation schedule and timeline.

REFERENCES

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

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

Sincerely, Ensolum, LLC

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

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



Attachments:

Figure 1:	Site Location Map
Figure 2:	Soil Sample Analytical Results
Figure 3:	SVE Well Locations
Table 1:	Delineation Soil Sample Analytical Results
Appendix A:	NMOSE Point of Diversion Summary
Appendix B:	Laboratory Analytical Reports
Appendix C:	Agency Sampling Notifications
Appendix D:	Photographic Log
Appendix E:	Boring Logs

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FIGURES

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Sources: Google Earth

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Sources: Google Earth





TABLES

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E N S O L U M

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)	Benzene (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	NMOCD Closure Criteria for Soils Impacted by a Release 10 50 NE NE NE 100 600									
8ft Sample (1)	10/28/2022	8	<0.021	2.9	110	1,900	1,000	3,010	<60	
10ft Sample (1)	10/28/2022	10	<0.018	8.4	260	2,400	980	3,640	<60	
12ft Sample (1)	10/28/2022	12	<0.020	3.6	200	1,700	630	2,530	120	
14ft Sample (1)	10/28/2022	14	<0.017	1.4	110	1,200	<500	1,310	63	
BH01 @ 25'	4/14/2023	25	<0.12	<0.47	<23	120	63	183	<60	
BH01 @ 30'	4/14/2023	30	<0.024	<0.098	<4.9	<10	<50	<50	<60	
BH01 @ 35'	4/14/2023	35	<0.024	<0.096	<4.8	<9.7	<49	<49	<60	
BH02 @ 30'	4/14/2023	30	<0.025	<0.099	<4.9	<9.2	<46	<46	<60	
BH02 @ 35'	4/14/2023	35	< 0.024	<0.097	<4.8	<9.7	<49	<49	<60	
BH03 @ 25'	4/14/2023	25	<0.025	<0.10	<5.0	<8.8	<50	<50	<60	
BH03 @ 30'	4/14/2023	30	<0.025	<0.10	<5.0	<9.6	<48	<48	<60	
BH03 @ 35'	4/14/2023	35	<0.025	<0.099	<5.0	<8.4	<42	<42	<60	
BH-04 (13-15ft)	5/17/2023	13-15	<0.025	<0.099	<4.9	<9.6	<48	<48	<60	
BH-04 (18-20ft)	5/17/2023	18-20	<0.025	<0.099	<4.9	<9.3	<46	<46	<59	
BH-04 (23-25ft)	5/17/2023	23-25	<0.024	<0.097	<4.8	22	<47	22	140	
BH-04 (28-30ft)	5/17/2023	28-30	<0.025	0.499	<4.9	<9.3	<46	<46	<60	
BH-04 (33-35ft)	5/17/2023	33-35	<0.024	<0.096	<4.8	<9.4	<47	<47	<60	
BH05 23-25'	5/18/2023	23-25	<0.024	< 0.097	<4.9	<9.7	<48	<48	<60	
BH05 33-35'	5/18/2023	33-35	<0.025	<0.098	<4.9	<9.7	<48	<48	<60	

Notes:

(1): sample collected from pothole in same location as BH04

bgs: below ground surface

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

mg/kg: milligrams per kilogram

NE: Not Established

NMOCD: New Mexico Oil Conservation Division

': feet

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Concentrations in **bold** and shaded exceed the New Mexico Oil Conservation Division Table I Closure Criteria for Soils Impacted by a Release

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APPENDIX A

NMOSE Point of Diversion Summary

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New Mexico Office of the State Engineer **Point of Diversion Summary**

			(quarters are 1=NW 2=NE 3=SW 4=SE)								
			(qua	rters are s	mallest	to larges	st)	(NAD83 U	TM in meters)		
Well Tag	POD) Number	Q64	Q16 Q4	4 Sec	Tws	Rng	Х	Y		
	SJ 0	0034	3	2 2	2 08	27N	10W	239378	4053822*	>	
x Driller Lic	ense:		Drille	r Comp	any:						
Driller Na	me:	CONLEY COX									
Drill Start	Date:	10/01/1951	Drill F	inish D	ate:	1	0/09/1951	Pl	ug Date:		
Log File Date: 12/16/1953		12/16/1953	PCW Rcv Date:					So	ource:	Shallow	
Pump Typ	e:		Pipe Discharge Size:					Estimated Yield:			
Casing Siz	ze:	10.00	Depth Well:			235 feet		De	epth Water:	170 feet	
х	Wate	er Bearing Stratific	ations:]	Fop 1	Bottom	1 Descrij	ption			
					170	230) Other/U	Jnknown			
х		Casing Perform	rations:]	Cop l	Bottom	1				
					170	235	-				

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

12/20/22 9:41 AM

POINT OF DIVERSION SUMMARY



APPENDIX B

Laboratory Analytical Reports



November 07, 2022

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

RE: Pipkin Gas Com A1E

OrderNo.: 2210E71

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Fasho Trujillo:

Hall Environmental Analysis Laboratory received 4 sample(s) on 10/29/2022 for the analyses presented in the following report.

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

Please don't hesitate to contact HEAL for any additional information or clarifications.

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2210E71

Date Reported: 11/7/2022

CLIENT:	HILCORP ENERGY

Project: Pipkin Gas Com A1E

Lab ID: 2210E71-001 Client Sample ID: 8ft Sample Collection Date: 10/28/2022 8:40:00 AM Received Date: 10/29/2022 8:45:00 AM

Result **RL** Qual Units DF **Date Analyzed** Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: DGH **Diesel Range Organics (DRO)** 1900 150 mg/Kg 10 11/1/2022 9:54:16 AM Motor Oil Range Organics (MRO) 1000 500 mg/Kg 10 11/1/2022 9:54:16 AM Surr: DNOP 0 21-129 S %Rec 10 11/1/2022 9:54:16 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 10/30/2022 7:21:30 AM 110 4.2 mg/Kg 1 Surr: BFB 733 37.7-212 S %Rec 1 10/30/2022 7:21:30 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 10/30/2022 7:21:30 AM 0.021 mg/Kg 1 Toluene ND 0.042 mg/Kg 1 10/30/2022 7:21:30 AM Ethylbenzene ND 0.042 mg/Kg 1 10/30/2022 7:21:30 AM Xylenes, Total 0.084 mg/Kg 10/30/2022 7:21:30 AM 29 1 Surr: 4-Bromofluorobenzene 117 70-130 %Rec 1 10/30/2022 7:21:30 AM **EPA METHOD 300.0: ANIONS** Analyst: NAI mg/Kg 11/1/2022 4:08:16 PM Chloride ND 60 20

Matrix: MEOH (SOIL)

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

Qualifiers:

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

Page 1 of 8

Lab ID:

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2210E71

Date Reported: 11/7/2022

CLIENT:	HILCORP ENERGY
Project:	Pipkin Gas Com A1E

2210E71-002

Client Sample ID: 10ft Sample Collection Date: 10/28/2022 8:52:00 AM

Matrix: MEOH (SOIL) Received Date: 10/29/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	GANICS					Analyst: DGH
Diesel Range Organics (DRO)	2400	150		mg/Kg	10	11/1/2022 11:35:21 AM
Motor Oil Range Organics (MRO)	980	480		mg/Kg	10	11/1/2022 11:35:21 AM
Surr: DNOP	0	21-129	S	%Rec	10	11/1/2022 11:35:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	260	3.7		mg/Kg	1	10/30/2022 7:44:52 AM
Surr: BFB	2060	37.7-212	S	%Rec	1	10/30/2022 7:44:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	10/30/2022 7:44:52 AM
Toluene	ND	0.037		mg/Kg	1	10/30/2022 7:44:52 AM
Ethylbenzene	0.49	0.037		mg/Kg	1	10/30/2022 7:44:52 AM
Xylenes, Total	7.9	0.74		mg/Kg	10	10/31/2022 11:20:45 AM
Surr: 4-Bromofluorobenzene	252	70-130	S	%Rec	1	10/30/2022 7:44:52 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	11/1/2022 5:10:20 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

- н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 8

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order **2210E71** Date Reported: **11/7/2022**

2210E71-003

Pipkin Gas Com A1E

Project:

Lab ID:

Client Sample ID: 12ft Sample Collection Date: 10/28/2022 9:06:00 AM Matrix: MEOH (SOIL) Received Date: 10/29/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst: DGH
Diesel Range Organics (DRO)	1700	150		mg/Kg	10	11/1/2022 12:07:23 PM
Motor Oil Range Organics (MRO)	630	500		mg/Kg	10	11/1/2022 12:07:23 PM
Surr: DNOP	0	21-129	S	%Rec	10	11/1/2022 12:07:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	200	3.9		mg/Kg	1	10/30/2022 8:31:34 AM
Surr: BFB	1810	37.7-212	S	%Rec	1	10/30/2022 8:31:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	10/30/2022 8:31:34 AM
Toluene	ND	0.039		mg/Kg	1	10/30/2022 8:31:34 AM
Ethylbenzene	ND	0.039		mg/Kg	1	10/30/2022 8:31:34 AM
Xylenes, Total	3.6	0.079		mg/Kg	1	10/30/2022 8:31:34 AM
Surr: 4-Bromofluorobenzene	228	70-130	S	%Rec	1	10/30/2022 8:31:34 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	120	60		mg/Kg	20	11/1/2022 5:22:44 PM

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

Qualifiers:

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

Page 3 of 8

Lab ID:

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2210E71 Date Reported: 11/7/2022

CLIENT:	HILCORP ENERGY
Project:	Pipkin Gas Com A1E

2210E71-004

Client Sample ID: 14ft Sample Collection Date: 10/28/2022 9:19:00 AM

Matrix: MEOH (SOIL)

Received Date: 10/29/2022 8:45:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS					Analyst: DGH
Diesel Range Organics (DRO)	1200	74		mg/Kg	5	11/3/2022 12:43:06 PM
Motor Oil Range Organics (MRO)	530	250		mg/Kg	5	11/3/2022 12:43:06 PM
Surr: DNOP	112	21-129		%Rec	5	11/3/2022 12:43:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	110	3.5		mg/Kg	1	10/30/2022 8:54:57 AM
Surr: BFB	1260	37.7-212	S	%Rec	1	10/30/2022 8:54:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/30/2022 8:54:57 AM
Toluene	ND	0.035		mg/Kg	1	10/30/2022 8:54:57 AM
Ethylbenzene	ND	0.035		mg/Kg	1	10/30/2022 8:54:57 AM
Xylenes, Total	1.4	0.070		mg/Kg	1	10/30/2022 8:54:57 AM
Surr: 4-Bromofluorobenzene	144	70-130	S	%Rec	1	10/30/2022 8:54:57 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	63	60		mg/Kg	20	11/1/2022 5:35:09 PM

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

Qualifiers:

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

RL

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Client:	HILCORI	PENERGY								
Project:	Pipkin Ga	as Com A1E								
Sample ID:	MB-71198	SampType: n	ıblk	Tes	tCode: EP	A Method	300.0: Anions			
Client ID:	PBS	Batch ID: 7	1198	F	RunNo: 92	252				
Prep Date:	11/1/2022	Analysis Date:	11/1/2022	S	SeqNo: 33	13633	Units: mg/Kg]		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND 1.	5							
Sample ID:	LCS-71198	SampType: Ics TestCode: EPA Method 300.0: Anions								
Client ID:	LCSS	Batch ID: 7	1198	F	RunNo: 92	252				
Prep Date:	11/1/2022	Analysis Date:	11/1/2022	S	SeqNo: 33	13634	Units: mg/Kg	J		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		15 1.	5 15.00	0	97.5	90	110			
Sample ID:	MB-71218	SampType: mblk TestCode: EPA Method 300.0: Anions					300.0: Anions			
Client ID:	PBS	Batch ID: 7		F	RunNo: 92	252				
Client ID: Prep Date:	PBS 11/1/2022		1218		RunNo: 92 SeqNo: 33	-	Units: mg/K g	3		
		Batch ID: 7	1218 11/1/2022		SeqNo: 33	-	Units: mg/K ថ្ HighLimit) %RPD	RPDLimit	Qual
Prep Date:		Batch ID: 7 Analysis Date:	1218 11/1/2022 SPK value	S	SeqNo: 33	13663		•	RPDLimit	Qual
Prep Date: Analyte Chloride		Batch ID: 7 Analysis Date: Result PQL	1218 11/1/2022 SPK value	SPK Ref Val	SeqNo: 33 %REC	13663 LowLimit		•	RPDLimit	Qual
Prep Date: Analyte Chloride	11/1/2022	Batch ID: 7 Analysis Date: Result PQL ND 1.	1218 11/1/2022 5 5 25	SPK Ref Val	SeqNo: 33 %REC	A Method	HighLimit	•	RPDLimit	Qual
Prep Date: Analyte Chloride Sample ID:	11/1/2022 LCS-71218	Batch ID: 7 Analysis Date: Result PQL ND 1. SampType: Id	1218 11/1/2022 5 5 5 5 1218	SPK Ref Val Tes	SeqNo: 33 %REC tCode: EP	A Method	HighLimit	%RPD	RPDLimit	Qual
Prep Date: Analyte Chloride Sample ID: Client ID:	11/1/2022 LCS-71218 LCSS	Batch ID: 7 Analysis Date: Result PQL ND 1. SampType: Id Batch ID: 7	1218 11/1/2022 SPK value 5 1218 11/1/2022	SPK Ref Val Tes	SeqNo: 33 %REC tCode: EP RunNo: 92	A Method	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

2210E71

07-Nov-22

WO#:

	RP ENERG Gas Com A1									
Sample ID: LCS-71171	SampT	ype: LC	s	Tes	tCode: EF	A Method	8015M/D: Die	sel Range	Organics	
Client ID: LCSS	Batch	n ID: 71 ′	171	RunNo: 92198						
Prep Date: 10/31/2022	Analysis D	Date: 10	/31/2022	5	SeqNo: 33	811075	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.2	64.4	127			
Surr: DNOP	4.4		5.000		88.2	21	129			
Sample ID: MB-71171	SampT	ype: ME	BLK	Tes	tCode: EF	A Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch	n ID: 71 ′	171	F	RunNo: 92	2198				
Prep Date: 10/31/2022	Analysis D	Date: 10	/31/2022	Ş	SeqNo: 33	811076	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.3	21	129			

Qualifiers:

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

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2210E71

07-Nov-22

WO#:

	P ENERG	-								
Sample ID: mb-II		Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8015D: Gasol	ine Range		
Client ID: PBS	Batcl	h ID: B9 :	2186	RunNo: 92186						
Prep Date:	Analysis I	Date: 10	/30/2022	S	SeqNo: 33	809782	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.6	37.7	212			
Sample ID: 2.5ug gro Ics-II	SampT	Гуре: LC	S	Tes	tCode: EF	PA Method	8015D: Gasol	ine Range		
Client ID: LCSS	Batcl	h ID: B9	2186	F	RunNo: 92	2186				
Prep Date:	Analysis I	Date: 10	/30/2022	S	SeqNo: 33	809783	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.4	72.3	137			
Surr: BFB	1900		1000		195	37.7	212			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.

Released to Imaging: 11/28/2023 10:45:13 AM

- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Page 7 of 8

	IILCORP ENERG ipkin Gas Com A									
Sample ID: mb-II	•	Туре: МЕ	a k	Tes	tCode: EE	24 Method	8021B: Volati			
Client ID: PBS		:h ID: D9		RunNo: 92186			JVZ ID. VUIGUICS			
Prep Date:	Analysis I						Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenze	ene 0.99		1.000		99.2	70	130			
Sample ID: 100ng bte	ex Ics-II Samp	Туре: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batc	h ID: D9	2186	F	RunNo: 92	2186				
Prep Date:	Analysis I	Date: 10	/30/2022	5	SeqNo: 33	809820	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenze	ene 1.0		1.000		101	70	130			

Qualifiers:

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

Page 8 of 8

WO#: 2210E71 07-Nov-22

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3	ntal Analysis Labora 4901 Hawkins Albuquerque, NM 87 975 FAX: 505-345-4 y.hallenvironmental.	NE 109 San 107	nple Log-In Che	eck List
Client Name: HILCORP ENERGY	Work Order Num	ber: 2210E71		RcptNo: 1	
Received By: Tracy Casarrubias	10/29/2022 8:45:00				
Completed By: Tracy Casarrubias Reviewed By:	10/29/2022 9:45:11	AM			
<u>Chain of Custody</u> 1. Is Chain of Custody complete? 2. How was the sample delivered?		Yes ⊻ <u>Courier</u>	No 🗌	Not Present	
Log In 3. Was an attempt made to cool the sam	ples?	Yes 🗹	No 🗌	na 🗆	
4. Were all samples received at a temper	ature of >0° C to 6.0°C	Yes 🔽	No 🗌	na 🗆	
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
6. Sufficient sample volume for indicated		Yes 🗹	No 🗆		
7. Are samples (except VOA and ONG) p8. Was preservative added to bottles?	roperly preserved?	Yes ☑ Yes □	No 🗌 No 🗹		
9. Received at least 1 vial with headspace	e <1/4" for AQ VOA?	Yes	No 🗌	NA 🗹	
10. Were any sample containers received	broken?	Yes	No 🗹	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custod	y)	Yes 🗹	No 🗌		unless noted)
12. Are matrices correctly identified on Cha	ain of Custody?	Yes 🗹	No 🗌	Adjusted?	
13. Is it clear what analyses were requested	d?	Yes 🗹	No 🗌		
14. Were all holding times able to be met? (If no, notify customer for authorization		Yes 🗹	No 🗌	Checked by: TIL	10/29/22
Special Handling (if applicable)					
15. Was client notified of all discrepancies	with this order?	Yes	No 🗆		
Person Notified:	Date	:			
By Whom:	Via:	eMail P	hone 📋 Fax	In Person	
Regarding:					
Client Instructions:		<u></u>			
16. Additional remarks:					
17. <u>Cooler Information</u> Cooler No Temp °C Condition 1 2.5 Good	Seal Intact Seal No Yes	Seal Date	Signed By	A second s	

•

Released to Imaging: 11/28/2023 10:45:13 AM

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Received b	y OC	D: 8 /	22/2023	10:34:3	35 AM
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Received by OCD: 8/22/2023 10:34:35 AM		Page 29 of 77
Client: 1111	Turn-Around Time:	HALL ENVIRONMENTAL
Client: Hilcorp	Project Name: Project Name: P:pKin Gas Con AIE	ANALYSIS LABORATORY
Mailing Address: 382CR31D0	Piekon Gus Com AIE	www.hallenvironmental.com
Actec 87410	Project #:	4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107
Phone #: 505.5993400	e sente etter anna sector anna en anna anna anna anna anna anna	Analysis Request
email or Fax#: KKaufman Ohiluper	Project Manager:	21) 21) 8 8 8 8 8
QA/QC Package: ETTLjille Chilconp. Kom	Fasho Trujillo	 (/ MTBE / TMB's (8021) 8015D(GRO / DRO / MRO) Pesticides/8082 PCB's Method 504.1) (Method 504.1) (Method 504.1) A 8 Metals A 8 Metals Br, NO₃, NO₂, PO₄, SO₄ (VOA) (VOA) (Semi-VOA) (Semi-VOA) Coliform (Present/Absent)
Accreditation:	Sampler: FTnujillo	TMB's TMB's 9082 P 9082
□ NELAC □ Other □ EDD (Type)	On Ice: Ŋ Yes □ No # of Coolers:	H COA 33 A COA 4 20 A COA 4
	Cooler Temp(including CF): 2.4 +0.1 = 2.5 (°C)	MTBE ssticide: h, N03 A) A Metals Metals Metals Metals
Date Time Matrix Sample Name	Container Preservative HEAL No. Type and # Type 72.0671	BTEX / MTBE / TMB's (802 TPH:8015D(GRO / DRO / MF 8081 Pesticides/8082 PCB's BDB (Method 504.1) PAHs by 8310 or 8270SIMS RCRA 8 Metals RCRA 8 Metals Z01, J., Br, NO3, NO2, PO4, C Z1, J. B260 (VOA) B270 (Semi-VOA) Total Coliform (Present/Abse
12/22/22 8:40 Soil 8Ft Sample	to Gloss/ Cold 001	
10/28/28:52 Soil 10ft Sample	Huz Glass/ Cold 002	
0/28/2906 Soil 12. ft Sample	totolass/1 Cold 003	
10/25/23 919 Soil 14ft Sample	for 61655/1 Cold 004	
	 Description of the model of the second process of the	
	en anti-anti-anti-anti-anti-anti-anti-anti-	
	Construction of the second sec	
	 A second constrained generic constrained and a second cons	
	so the or max assumes we show a second second of 18,000 constraints	
Date: Time: Relinquished by: 10 18 18 18 18 18 10 18 10 18 10 18 18 18 18 18 18 18 18 18 18	Received by: Via: Date Time JAA Wat 10/28/22 13/5 Received by: Via: Date Time	Remarks:



April 24, 2023

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

RE: Pipkin GC A 1E

OrderNo.: 2304669

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 8 sample(s) on 4/15/2023 for the analyses presented in the following report.

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

Please don't hesitate to contact HEAL for any additional information or clarifications.

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Pipkin GC A 1E

2304669-001

Project:

Lab ID:

Analytical Report Lab Order 2304669

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2023 Client Sample ID: BH01@25' Collection Date: 4/14/2023 10:50:00 AM

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst: PRD
Diesel Range Organics (DRO)	120	9.6		mg/Kg	1	4/20/2023 4:58:44 PM
Motor Oil Range Organics (MRO)	63	48		mg/Kg	1	4/20/2023 4:58:44 PM
Surr: DNOP	90.3	69-147		%Rec	1	4/20/2023 4:58:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	23	D	mg/Kg	5	4/20/2023 2:33:00 PM
Surr: BFB	97.9	37.7-212	D	%Rec	5	4/20/2023 2:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12	D	mg/Kg	5	4/20/2023 2:33:00 PM
Toluene	ND	0.23	D	mg/Kg	5	4/20/2023 2:33:00 PM
Ethylbenzene	ND	0.23	D	mg/Kg	5	4/20/2023 2:33:00 PM
Xylenes, Total	ND	0.47	D	mg/Kg	5	4/20/2023 2:33:00 PM
Surr: 4-Bromofluorobenzene	93.3	70-130	D	%Rec	5	4/20/2023 2:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	4/21/2023 6:10:10 PM

Matrix: SOIL

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 1 of 12

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Project: Pipkin GC A 1E

Analytical Report Lab Order 2304669

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2023 Client Sample ID: BH01@30' Collection Date: 4/14/2023 11:00:00 AM

ingreen inprime een ind									
Lab ID: 2304669-002	Matrix: SOIL	Received Date: 4/15/2023 8:40:00 AM							
Analyses	Result	RL Qu	al Units	DF	Date Analyzed				
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS				Analyst: PRD				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/20/2023 5:09:25 PM				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/20/2023 5:09:25 PM				
Surr: DNOP	82.9	69-147	%Rec	1	4/20/2023 5:09:25 PM				
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst: CCM				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/20/2023 2:54:00 PM				
Surr: BFB	139	37.7-212	%Rec	1	4/20/2023 2:54:00 PM				
EPA METHOD 8021B: VOLATILES					Analyst: CCM				
Benzene	ND	0.024	mg/Kg	1	4/20/2023 2:54:00 PM				
Toluene	ND	0.049	mg/Kg	1	4/20/2023 2:54:00 PM				
Ethylbenzene	ND	0.049	mg/Kg	1	4/20/2023 2:54:00 PM				
Xylenes, Total	ND	0.098	mg/Kg	1	4/20/2023 2:54:00 PM				
Surr: 4-Bromofluorobenzene	131	70-130	S %Rec	1	4/20/2023 2:54:00 PM				
EPA METHOD 300.0: ANIONS					Analyst: JTT				
Chloride	ND	60	mg/Kg	20	4/21/2023 6:22:35 PM				

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL

Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 2 of 12

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Pipkin GC A 1E

Project:

Analytical Report Lab Order 2304669

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2023 Client Sample ID: BH01@35' Collection Date: 4/14/2023 11:10:00 AM Baseived Date: 4/15/2023 8:40:00 AM

Lab ID: 2304669-003	Matrix: SOIL	Received Date: 4/15/2023 8:40:00 AM			
Analyses	Result	RL Qual Units D		DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/20/2023 5:20:07 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/20/2023 5:20:07 PM
Surr: DNOP	103	69-147	%Rec	1	4/20/2023 5:20:07 PM
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/20/2023 3:16:00 PM
Surr: BFB	89.0	37.7-212	%Rec	1	4/20/2023 3:16:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	4/20/2023 3:16:00 PM
Toluene	ND	0.048	mg/Kg	1	4/20/2023 3:16:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	4/20/2023 3:16:00 PM
Xylenes, Total	ND	0.096	mg/Kg	1	4/20/2023 3:16:00 PM
Surr: 4-Bromofluorobenzene	87.3	70-130	%Rec	1	4/20/2023 3:16:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	4/21/2023 6:34:59 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.
 Sample Diluted Due to Matrix

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

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Pipkin GC A 1E

Project:

Analytical Report Lab Order 2304669

Date Reported: 4/24/2023

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH02@30' Collection Date: 4/14/2023 12:40:00 PM Dessived Data: 1/15/2022 8:40:00 AM

Lab ID: 2304669-004	Matrix: SOIL	Received Date: 4/15/2023 8:40:00 AM				
Analyses	Result	RL Qual Units D		DF	Date Analyzed	
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANICS				Analyst: PRD	
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/20/2023 5:41:20 PM	
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/20/2023 5:41:20 PM	
Surr: DNOP	84.8	69-147	%Rec	1	4/20/2023 5:41:20 PM	
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst: CCM	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/20/2023 3:37:00 PM	
Surr: BFB	92.0	37.7-212	%Rec	1	4/20/2023 3:37:00 PM	
EPA METHOD 8021B: VOLATILES					Analyst: CCM	
Benzene	ND	0.025	mg/Kg	1	4/20/2023 3:37:00 PM	
Toluene	ND	0.049	mg/Kg	1	4/20/2023 3:37:00 PM	
Ethylbenzene	ND	0.049	mg/Kg	1	4/20/2023 3:37:00 PM	
Xylenes, Total	ND	0.099	mg/Kg	1	4/20/2023 3:37:00 PM	
Surr: 4-Bromofluorobenzene	86.8	70-130	%Rec	1	4/20/2023 3:37:00 PM	
EPA METHOD 300.0: ANIONS					Analyst: JTT	
Chloride	ND	60	mg/Kg	20	4/21/2023 6:47:24 PM	

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

Qualifiers:

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

Page 4 of 12

Pipkin GC A 1E

2304669-005

Project:

Lab ID:

Analytical Report Lab Order 2304669

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2023 Client Sample ID: BH02@35' Collection Date: 4/14/2023 12:50:00 PM

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS				Analyst: PRD	
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/20/2023 5:52:00 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/20/2023 5:52:00 PM
Surr: DNOP	92.3	69-147	%Rec	1	4/20/2023 5:52:00 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/20/2023 3:59:00 PM
Surr: BFB	90.4	37.7-212	%Rec	1	4/20/2023 3:59:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	4/20/2023 3:59:00 PM
Toluene	ND	0.048	mg/Kg	1	4/20/2023 3:59:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	4/20/2023 3:59:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	4/20/2023 3:59:00 PM
Surr: 4-Bromofluorobenzene	88.4	70-130	%Rec	1	4/20/2023 3:59:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	4/21/2023 6:59:48 PM

Matrix: SOIL

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 5 of 12

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Project: Pipkin GC A 1E

Analytical Report Lab Order 2304669

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2023 Client Sample ID: BH03@25' Collection Date: 4/14/2023 2:00:00 PM

Lab ID: 2304669-006	Matrix: SOIL	Received Date: 4/15/2023 8:40:00 AM				
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst: PRD	
Diesel Range Organics (DRO)	ND	8.8	mg/Kg	1	4/20/2023 6:02:40 PM	
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	4/20/2023 6:02:40 PM	
Surr: DNOP	83.8	69-147	%Rec	1	4/20/2023 6:02:40 PM	
EPA METHOD 8015D: GASOLINE RANG	θE				Analyst: CCM	
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/20/2023 4:42:00 PM	
Surr: BFB	90.4	37.7-212	%Rec	1	4/20/2023 4:42:00 PM	
EPA METHOD 8021B: VOLATILES					Analyst: CCM	
Benzene	ND	0.025	mg/Kg	1	4/20/2023 4:42:00 PM	
Toluene	ND	0.050	mg/Kg	1	4/20/2023 4:42:00 PM	
Ethylbenzene	ND	0.050	mg/Kg	1	4/20/2023 4:42:00 PM	
Xylenes, Total	ND	0.10	mg/Kg	1	4/20/2023 4:42:00 PM	
Surr: 4-Bromofluorobenzene	84.5	70-130	%Rec	1	4/20/2023 4:42:00 PM	
EPA METHOD 300.0: ANIONS					Analyst: JTT	
Chloride	ND	60	mg/Kg	20	4/21/2023 7:37:02 PM	

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

- Analyte detected in the associated Method Blank в
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 6 of 12

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CLIENT: HILCORP ENERGY

Project: Pipkin GC A 1E

Analytical Report Lab Order 2304669

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2023 Client Sample ID: BH03@30' Collection Date: 4/14/2023 2:20:00 PM

9 1										
Lab ID: 2304669-007	Matrix: SOIL	Received Date: 4/15/2023 8:40:00 AM								
Analyses	Result	RL Qu	al Units	DF	Date Analyzed					
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst: PRD					
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/20/2023 6:13:24 PM					
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/20/2023 6:13:24 PM					
Surr: DNOP	73.2	69-147	%Rec	1	4/20/2023 6:13:24 PM					
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst: CCM					
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/20/2023 5:03:00 PM					
Surr: BFB	90.2	37.7-212	%Rec	1	4/20/2023 5:03:00 PM					
EPA METHOD 8021B: VOLATILES					Analyst: CCM					
Benzene	ND	0.025	mg/Kg	1	4/20/2023 5:03:00 PM					
Toluene	ND	0.050	mg/Kg	1	4/20/2023 5:03:00 PM					
Ethylbenzene	ND	0.050	mg/Kg	1	4/20/2023 5:03:00 PM					
Xylenes, Total	ND	0.10	mg/Kg	1	4/20/2023 5:03:00 PM					
Surr: 4-Bromofluorobenzene	86.4	70-130	%Rec	1	4/20/2023 5:03:00 PM					
EPA METHOD 300.0: ANIONS					Analyst: JTT					
Chloride	ND	60	mg/Kg	20	4/21/2023 7:49:26 PM					

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

- н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- ND PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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CLIENT: HILCORP ENERGY

Pipkin GC A 1E

Project:

Analytical Report Lab Order 2304669

Date Reported: 4/24/2023

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH03@35 Collection Date: 4/14/2023 2:30:00 PM

Lab ID: 2304669-008 Matrix: SOIL Received Date: 4/15/2023 8:40:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: PRD Diesel Range Organics (DRO) ND 8.4 mg/Kg 1 4/20/2023 6:24:07 PM Motor Oil Range Organics (MRO) ND 42 mg/Kg 1 4/20/2023 6:24:07 PM Surr: DNOP 69.4 69-147 %Rec 1 4/20/2023 6:24:07 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 4/20/2023 5:25:00 PM 5.0 mg/Kg 1 Surr: BFB 91.1 37.7-212 %Rec 1 4/20/2023 5:25:00 PM **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 4/20/2023 5:25:00 PM 0.025 mg/Kg 1 Toluene ND 0.050 mg/Kg 1 4/20/2023 5:25:00 PM Ethylbenzene ND 0.050 mg/Kg 1 4/20/2023 5:25:00 PM Xylenes, Total ND mg/Kg 4/20/2023 5:25:00 PM 0.099 1 Surr: 4-Bromofluorobenzene 88.6 70-130 %Rec 1 4/20/2023 5:25:00 PM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 4/21/2023 8:01:51 PM ND 60 20

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

Qualifiers:

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit POL

Practical Quanitative Limit S % Recovery outside of standard limits. If undiluted results may be estimated

Analyte detected in the associated Method Blank в

- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 8 of 12

Client: Project:		CORP ENERGY n GC A 1E	7								
Sample ID:	MB-74444	SampTy	/pe: ME	BLK	Tes	stCode: EP	PA Method	300.0: Anions	6		
Client ID:	PBS	Batch	ID: 744	144	F	RunNo: 96	6239				
Prep Date:	4/20/2023	Analysis Da	ate: 4/2	21/2023	5	SeqNo: 34	184717	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID:	LCS-74444	SampTy	/pe: LC	S	Tes	stCode: EF	PA Method	300.0: Anions	5		
Client ID:	LCSS	Batch	ID: 744	144	F	RunNo: 96	6239				
Prep Date:	4/20/2023	Analysis Da	ate: 4/2	21/2023	5	SeqNo: 34	184718	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	96.4	90	110			

Qualifiers:

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

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24-Apr-23

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2304669

WO#:

Hall Envi	ironmenta	l Analy	sis L	aborato	ry, Inc.						24-Apr-23
Client: Project:	HILCOR Pipkin G	P ENERG C A 1E	Y								
Sample ID: MI	B-74430	SampT	уре: МЕ	BLK	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PE	BS	Batch	n ID: 74 4	130	F	RunNo: 96	6162				
Prep Date: 4	/19/2023	Analysis D)ate: 4/2	20/2023	Ś	SeqNo: 34	182718	Units: %Rec	:		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		7.9		10.00		79.3	69	147			
Sample ID: LC	CS-74430	SampT	ype: LC	S	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: LC	SS	Batch	n ID: 74 4	430	F	RunNo: 96	6162				
Prep Date: 4	/19/2023	Analysis D)ate: 4/2	20/2023	5	SeqNo: 34	182719	Units: %Rec	;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.8		5.000		96.6	69	147			
Sample ID: MI	B-74418	SampT	уре: МЕ	BLK	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PE	BS	Batch	n ID: 74 4	118	F	RunNo: 96	6162				
Prep Date: 4	/19/2023	Analysis D)ate: 4/2	20/2023	Ş	SeqNo: 34	182949	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	, ,	ND	10								
Motor Oil Range O Surr: DNOP	rganics (MRO)	ND 10	50	10.00		104	69	147			
Sample ID: LC	CS-74418	SampT	ype: LC	S	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: LC	SS	Batch	n ID: 74 4	118	F	RunNo: 96	6162				
Prep Date: 4	/19/2023	Analysis D)ate: 4/2	20/2023	Ş	SeqNo: 34	483127	Units: mg/K	g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Orga	anics (DRO)	41	10	50.00	0	81.6	61.9	130			
Surr: DNOP		4.0		5.000		79.1	69	147			

Qualifiers:

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

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Client:	HILCOR	RP ENERGY	7								
Project:	Pipkin G	CA 1E									
Sample ID:	lcs-74410	SampTy	/pe: LC	S	Tes	tCode: El	PA Method	8015D: Gasol	ine Range		
Client ID:	LCSS	Batch	ID: 744	110	F	RunNo: 9	6201				
Prep Date:	4/19/2023	Analysis Da	ate: 4/ 2	20/2023	S	SeqNo: 34	483284	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		2000		1000		195	37.7	212			
Sample ID:	mb-74410	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8015D: Gasol	ine Range		
Client ID:	PBS	Batch	ID: 744	410	F	RunNo: 9	6201				
Prep Date:	4/19/2023	Analysis Da	ate: 4/ 2	20/2023	S	SeqNo: 34	483285	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		900		1000		89.6	37.7	212			
Sample ID:	lcs-74401	SampTy	/pe: LC	S	Tes	tCode: El	PA Method	8015D: Gasol	ine Range		
Sample ID: Client ID:			/pe: LC ID: 74 4			tCode: El		8015D: Gasol	ine Range		
•			ID: 74 4	401	F		6201	8015D: Gasol Units: mg/K	-		
Client ID:	LCSS	Batch	ID: 74 4	401 20/2023	F	RunNo: 9 SeqNo: 3 4	6201		-	RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang	LCSS	Batch Analysis Da Result 23	ID: 744 ate: 4/2	401 20/2023 SPK value 25.00	F	RunNo: 9 SeqNo: 3 %REC 93.2	6201 483312 LowLimit 70	Units: mg/K HighLimit 130	g		Qual
Client ID: Prep Date: Analyte	LCSS 4/18/2023	Batch Analysis Da Result	D: 74 4 ate: 4 /2 PQL	401 20/2023 SPK value	F S SPK Ref Val	RunNo: 9 SeqNo: 3 %REC	6201 483312 LowLimit	Units: mg/K HighLimit	g		Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	LCSS 4/18/2023	Batch Analysis Da Result 23	ID: 74 ate: 4 / PQL 5.0	401 20/2023 SPK value 25.00 1000	F SPK Ref Val 0	RunNo: 9 SeqNo: 3 %REC 93.2 201	6201 483312 LowLimit 70 37.7	Units: mg/K HighLimit 130	g %RPD	RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	LCSS 4/18/2023 ge Organics (GRO)	Batch Analysis Da Result 23 2000 SampTy	ID: 74 ate: 4 / PQL 5.0	401 20/2023 SPK value 25.00 1000 BLK	F SPK Ref Val 0 Tes	RunNo: 9 SeqNo: 3 %REC 93.2 201	6201 483312 LowLimit 70 37.7 PA Method	Units: mg/K HighLimit 130 212	g %RPD	RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID:	LCSS 4/18/2023 ge Organics (GRO) mb-74401	Batch Analysis Da Result 23 2000 SampTy	ID: 74 4 ate: 4 /2 PQL 5.0 /pe: ME ID: 74 4	401 20/2023 SPK value 25.00 1000 BLK 401	F SPK Ref Val 0 Tes F	RunNo: 9 SeqNo: 3 %REC 93.2 201 tCode: El	6201 483312 LowLimit 70 37.7 PA Method 6201	Units: mg/K HighLimit 130 212	g %RPD ine Range	RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID: Client ID: Prep Date: Analyte	LCSS 4/18/2023 ge Organics (GRO) mb-74401 PBS	Batch Analysis Da Result 23 2000 SampTy Batch	ID: 74 4 ate: 4 /2 PQL 5.0 /pe: ME ID: 74 4	401 20/2023 SPK value 25.00 1000 3LK 401 20/2023	F SPK Ref Val 0 Tes F	RunNo: 9 SeqNo: 3 %REC 93.2 201 tCode: El RunNo: 9 SeqNo: 3	6201 483312 LowLimit 70 37.7 PA Method 6201	Units: mg/Ku HighLimit 130 212 8015D: Gasol	g %RPD ine Range	RPDLimit	Qual

Qualifiers:

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

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2304669

24-Apr-23

Client:	HILCOR	P ENERG	Y								
Project:	Pipkin G	CA1E									
Sample ID:	lcs-74401	Samp	Гуре: LC	S	Tes	tCode: EF	PA Method	8021B: Volatil	es		
Client ID:	LCSS	Batc	h ID: 74 4	401	F	RunNo: 96	6201				
Prep Date:	4/18/2023	Analysis [Date: 4/2	20/2023	S	SeqNo: 34	483335	Units: mg/Kg	9		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.87	0.025	1.000	0	87.1	80	120			
Toluene		0.87	0.050	1.000	0	87.4	80	120			
Ethylbenzene		0.86	0.050	1.000	0	85.8	80	120			
Xylenes, Total		2.5	0.10	3.000	0	84.7	80	120			
Surr: 4-Brom	nofluorobenzene	0.88		1.000		88.2	70	130			
Sample ID:	mb-74401	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volatil	es		
Client ID:	PBS	Batcl	h ID: 74 4	401	F	RunNo: 96	6201				
Prep Date:	4/18/2023	Analysis [Date: 4/2	20/2023	S	SeqNo: 34	483336	Units: mg/Kg	9		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Brom	nofluorobenzene	0.85		1.000		85.1	70	130			
Sample ID:	lcs-74410	Samp	Гуре: LC	s	Tes	tCode: EF	PA Method	8021B: Volatil	es		
Client ID:	LCSS	Batcl	h ID: 74 4	1 10	F	RunNo: 96	6201				
Prep Date:	4/19/2023	Analysis [Date: 4/2	20/2023	S	SeqNo: 34	483359	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Brom	nofluorobenzene	0.87		1.000		86.9	70	130			
Sample ID:	mb-74410	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volatil	es		
Client ID:	PBS	Batcl	h ID: 74 4	410	F	RunNo: 96	5201				
Prep Date:	4/19/2023	Analysis [Date: 4/2	20/2023	S	SeqNo: 34	483360	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Brom	nofluorobenzene	0.85		1.000		85.1	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

Page 12 of 12

2304669

24-Apr-23

ANALY	DNMENT/ SIS ATORY	AL.	TE	ll Environmen L: 505-345-3 Website: www	4901 Albuquerque 975 FAX: 5	Hawkins N 2, NM 8710 05-345-410	E 9 San 7	nple Log-In C	heck List
Client Name:	HILCORP I	ENERGY	Work	Order Num	ber: 23046	69		RcptNo	: 1
Received By:	Cheyenne	Cason	4/15/20	23 8:40:00 /	٩M	(hul		
Completed By:		ominquez	4/17/20	23 9:39:46	AM		hul		
Reviewed By:	-1	NO	ellinl				13		
Chain of Cust	ody								
1. Is Chain of Cu	stody comp	lete?			Yes	\checkmark	No 🗌	Not Present	
2. How was the s	ample deliv	ered?			<u>Client</u>				
Log In 3. Was an attemp	ot made to c	cool the samp	les?		Yes		No 🗌	NA 🗌	
4. Were all sampl	es received	at a tempera	ture of >0° C	to 6.0°C	Yes		No 🗌	NA 🗌	
5. Sample(s) in p	roper contai	iner(s)?			Yes		No 🗌		
6. Sufficient samp	ole volume f	or indicated te	est(s)?		Yes		No 🗌		
7. Are samples (e	xcept VOA	and ONG) pro	perly preserve	ed?	Yes		No 🗌		
8. Was preservati	ve added to	bottles?			Yes [No 🗹	na 🗌	
9. Received at lea	ist 1 vial wit	h headspace	<1/4" for AQ V	'OA?	Yes [No 🗌	NA 🗹	
10. Were any sam	ple containe	ers received b	roken?		Yes [No 🗹	# of preserved bottles checked	
11.Does paperwor (Note discrepar)		Yes		No 🗌	for pH:	r >12 unless noted)
2. Are matrices co	prrectly iden	tified on Chai	n of Custody?		Yes 🖌		No 🗌	Adjusted?	
3. Is it clear what	analyses we	ere requested	?		Yes 🖌		No 🗌		
4. Were all holding (If no, notify cu	-				Yes 🛓		No 🗌	Checked by:	Jny 1723
Special Handlin	ng (if app	licable)						-	
15. Was client noti	ified of all di	screpancies v	vith this order?		Yes [No 🗌	NA 🗹	
Person N				Date:	2				
By Whor Regardin				Via:	eMail		ne 🗌 Fax	In Person	
	structions:								
16. Additional rem	arks:								1
17. <u>Cooler Inform</u>	1								
Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	e Sig	gned By		
1	4.7	Good	Yes	Morty					

Page 43 of 77

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Client:	Hile	OFD /	Energy	Star	ndard	y 7.4¶ □ Rush				E,	1.1									OR	
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		K Kaut	man@hillorg.com	Project	Mana	ger:			6					SO4							
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🗆 Stan	dard		Level 4 (Full Validation)					S.	10	PCB's		OSI		PO4,			hth				
			ompliance			any Bi	rms	TMB's (8021)	Į į	3082	1 .1	827		NO ₂ ,			rese		in a set		05
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Date	Time	Matrix	Sample Name	Contain		Preservative Type	2304669	BTEX	TPH:8015D/GRO / DRO / MRO)	8081 Pesticides/8082	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCR	CI F, Br, NO ₃ ,	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)				
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											0	I PI	ur	115	,						

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Received by OCD: 8/22/2023 10:34:35 AM



May 31, 2023

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

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

RE: Pipkin

OrderNo.: 2305B01

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/20/2023 for the analyses presented in the following report.

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

Please don't hesitate to contact HEAL for any additional information or clarifications.

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 2305B01

Date Reported: 5/31/2023

5/26/2023 12:01:00 AM

5/26/2023 12:01:00 AM

5/25/2023 1:49:02 AM

Analyst: CAS

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH-04(13-15ft) **Project:** Pipkin Collection Date: 5/17/2023 2:00:00 PM Lab ID: 2305B01-001 Matrix: SOIL Received Date: 5/20/2023 9:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: PRD Diesel Range Organics (DRO) ND 9.6 mg/Kg 1 5/25/2023 10:35:27 AM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 5/25/2023 10:35:27 AM 69-147 Surr: DNOP 106 %Rec 1 5/25/2023 10:35:27 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: KMN Gasoline Range Organics (GRO) ND 5/26/2023 12:01:00 AM 4.9 mg/Kg 1 Surr: BFB 88.2 15-244 %Rec 1 5/26/2023 12:01:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: KMN Benzene ND 0.025 mg/Kg 5/26/2023 12:01:00 AM 1 Toluene ND 0.049 mg/Kg 1 5/26/2023 12:01:00 AM ND 0.049 1 5/26/2023 12:01:00 AM

Ethylbenzene mg/Kg Xylenes, Total ND 0.099 mg/Kg 1 Surr: 4-Bromofluorobenzene 83.9 39.1-146 %Rec 1 **EPA METHOD 300.0: ANIONS** Chloride ND 60 ma/Ka 20

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

Qualifiers:

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

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

RL Rej

Page 1 of 14

CLIENT: HILCORP ENERGY

Pipkin

Project:

Analytical Report Lab Order 2305B01

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/31/2023 Client Sample ID: BH-04(18-20ft) Collection Date: 5/17/2023 2:05:00 PM **Descrived Deter 5/20/2022 0.20.00 AM**

Lab ID: 2305B01-002	Matrix: SOIL	Rece	Received Date: 5/20/2023 9:30:00 AM							
Analyses	Result	RL Qu	al Units	DF	Date Analyzed					
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: PRD					
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	5/25/2023 10:46:02 AM					
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	5/25/2023 10:46:02 AM					
Surr: DNOP	110	69-147	%Rec	1	5/25/2023 10:46:02 AM					
EPA METHOD 8015D: GASOLINE RANGI	E				Analyst: KMN					
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/26/2023 12:23:00 AM					
Surr: BFB	83.4	15-244	%Rec	1	5/26/2023 12:23:00 AM					
EPA METHOD 8021B: VOLATILES					Analyst: KMN					
Benzene	ND	0.025	mg/Kg	1	5/26/2023 12:23:00 AM					
Toluene	ND	0.049	mg/Kg	1	5/26/2023 12:23:00 AM					
Ethylbenzene	ND	0.049	mg/Kg	1	5/26/2023 12:23:00 AM					
Xylenes, Total	ND	0.099	mg/Kg	1	5/26/2023 12:23:00 AM					
Surr: 4-Bromofluorobenzene	82.0	39.1-146	%Rec	1	5/26/2023 12:23:00 AM					
EPA METHOD 300.0: ANIONS					Analyst: CAS					
Chloride	ND	59	mg/Kg	20	5/25/2023 2:01:27 AM					

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

Qualifiers:

* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

- н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit PQL
- Practical Quanitative Limit % Recovery outside of standard limits. If undiluted results may be estimated. S
- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 14

Analytical Report Lab Order 2305B01

Date Reported: 5/31/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH-04(23-25ft) **Project:** Pipkin Collection Date: 5/17/2023 2:10:00 PM Lab ID: 2305B01-003 Matrix: SOIL Received Date: 5/20/2023 9:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: PRD Diesel Range Organics (DRO) 22 9.4 mg/Kg 1 5/25/2023 10:56:37 AM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 5/25/2023 10:56:37 AM 69-147 Surr: DNOP 103 %Rec 1 5/25/2023 10:56:37 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: KMN Gasoline Range Organics (GRO) ND 5/26/2023 12:44:00 AM 4.8 mg/Kg 1 Surr: BFB 109 15-244 %Rec 1 5/26/2023 12:44:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: KMN Benzene ND 0.024 mg/Kg 5/26/2023 12:44:00 AM 1 Toluene ND 0.048 mg/Kg 1 5/26/2023 12:44:00 AM Ethylbenzene ND 0.048 mg/Kg 1 5/26/2023 12:44:00 AM Xylenes, Total ND 0.097 mg/Kg 1 5/26/2023 12:44:00 AM Surr: 4-Bromofluorobenzene 86.2 39.1-146 %Rec 1 5/26/2023 12:44:00 AM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride 140 60 5/25/2023 2:13:52 AM ma/Ka 20

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

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit POL
- Practical Quanitative Limit S

% Recovery outside of standard limits. If undiluted results may be estimated.

- Analyte detected in the associated Method Blank в
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

Reporting Limit RL

Page 3 of 14

CLIENT: HILCORP ENERGY

Project: Pipkin

Analytical Report Lab Order 2305B01

Date Reported: 5/31/2023

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH-04(28-30ft) Collection Date: 5/17/2023 2:15:00 PM od Data, 5/20/2022 0.20.00 AM ъ .

Lab ID: 2305B01-004	Matrix: SOIL	Rece	Received Date: 5/20/2023 9:30:00 AM							
Analyses	Result	RL Qua	al Units	DF	Date Analyzed					
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: PRD					
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	5/25/2023 11:07:11 AM					
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	5/25/2023 11:07:11 AM					
Surr: DNOP	77.6	69-147	%Rec	1	5/25/2023 11:07:11 AM					
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst: KMN					
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/26/2023 1:05:00 AM					
Surr: BFB	95.7	15-244	%Rec	1	5/26/2023 1:05:00 AM					
EPA METHOD 8021B: VOLATILES					Analyst: KMN					
Benzene	ND	0.025	mg/Kg	1	5/26/2023 1:05:00 AM					
Toluene	0.14	0.049	mg/Kg	1	5/26/2023 1:05:00 AM					
Ethylbenzene	0.059	0.049	mg/Kg	1	5/26/2023 1:05:00 AM					
Xylenes, Total	0.30	0.098	mg/Kg	1	5/26/2023 1:05:00 AM					
Surr: 4-Bromofluorobenzene	85.4	39.1-146	%Rec	1	5/26/2023 1:05:00 AM					
EPA METHOD 300.0: ANIONS					Analyst: CAS					
Chloride	ND	60	mg/Kg	20	5/25/2023 2:26:16 AM					

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

Qualifiers:

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

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Analytical Report Lab Order 2305B01

Date Reported: 5/31/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH-04(33-35ft) **Project:** Pipkin Collection Date: 5/17/2023 2:20:00 PM Lab ID: 2305B01-005 Matrix: SOIL Received Date: 5/20/2023 9:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: PRD Diesel Range Organics (DRO) ND 9.4 mg/Kg 1 5/25/2023 11:17:48 AM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 5/25/2023 11:17:48 AM 69-147 Surr: DNOP 85.4 %Rec 1 5/25/2023 11:17:48 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: KMN Gasoline Range Organics (GRO) ND 5/26/2023 1:27:00 AM 4.8 mg/Kg 1 Surr: BFB 87.3 15-244 %Rec 1 5/26/2023 1:27:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: KMN Benzene ND 5/26/2023 1:27:00 AM 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 5/26/2023 1:27:00 AM Ethylbenzene ND 0.048 mg/Kg 1 5/26/2023 1:27:00 AM Xylenes, Total ND 0.096 mg/Kg 1 5/26/2023 1:27:00 AM Surr: 4-Bromofluorobenzene 82.5 39.1-146 %Rec 1 5/26/2023 1:27:00 AM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride ND 60 5/25/2023 2:38:41 AM ma/Ka 20

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

Qualifiers:

Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix

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

RL Repo

Page 5 of 14

CLIENT: HILCORP ENERGY

2305B01-006

Pipkin

Project:

Lab ID:

Analytical Report Lab Order 2305B01

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/31/2023 Client Sample ID: BH05 23-25' Collection Date: 5/18/2023 11:20:00 AM

Received Date: 5/20/2023 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	5/26/2023 12:45:30 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	5/26/2023 12:45:30 PM
Surr: DNOP	101	69-147	%Rec	1	5/26/2023 12:45:30 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/26/2023 12:07:10 AM
Surr: BFB	65.1	15-244	%Rec	1	5/26/2023 12:07:10 AM
EPA METHOD 8021B: VOLATILES					Analyst: JJP
Benzene	ND	0.024	mg/Kg	1	5/26/2023 12:07:10 AM
Toluene	ND	0.049	mg/Kg	1	5/26/2023 12:07:10 AM
Ethylbenzene	ND	0.049	mg/Kg	1	5/26/2023 12:07:10 AM
Xylenes, Total	ND	0.097	mg/Kg	1	5/26/2023 12:07:10 AM
Surr: 4-Bromofluorobenzene	88.0	39.1-146	%Rec	1	5/26/2023 12:07:10 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	5/26/2023 5:29:05 PM

Matrix: SOIL

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

Qualifiers:

* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

- н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit PQL
- Practical Quanitative Limit % Recovery outside of standard limits. If undiluted results may be estimated. S
- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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CLIENT: HILCORP ENERGY

2305B01-007

Pipkin

Project:

Lab ID:

Analytical Report Lab Order 2305B01

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/31/2023 Client Sample ID: BH05 33-35' Collection Date: 5/18/2023 11:40:00 AM

Received Date: 5/20/2023 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	5/26/2023 12:56:10 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	5/26/2023 12:56:10 PM
Surr: DNOP	89.2	69-147	%Rec	1	5/26/2023 12:56:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/26/2023 1:16:58 AM
Surr: BFB	75.7	15-244	%Rec	1	5/26/2023 1:16:58 AM
EPA METHOD 8021B: VOLATILES					Analyst: JJP
Benzene	ND	0.025	mg/Kg	1	5/26/2023 1:16:58 AM
Toluene	ND	0.049	mg/Kg	1	5/26/2023 1:16:58 AM
Ethylbenzene	ND	0.049	mg/Kg	1	5/26/2023 1:16:58 AM
Xylenes, Total	ND	0.098	mg/Kg	1	5/26/2023 1:16:58 AM
Surr: 4-Bromofluorobenzene	91.7	39.1-146	%Rec	1	5/26/2023 1:16:58 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	5/26/2023 5:41:29 PM

Matrix: SOIL

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

Qualifiers:

* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

- ND Not Detected at the Reporting Limit PQL
- Practical Quanitative Limit % Recovery outside of standard limits. If undiluted results may be estimated. S
- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Client:	HILCOR	P ENERGY								
Project:	Pipkin									
Sample ID:	MB-75159	SampType: mblk		Test	Code: EF	PA Method	300.0: Anions	6		
Client ID:	PBS	Batch ID: 75159		R	unNo: 96	6996				
Prep Date:	5/24/2023	Analysis Date: 5/24/2	2023	S	eqNo: 3	520080	Units: mg/K	g		
Analyte Chloride		Result PQL SI ND 1.5	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID:	LCS-75159	SampType: Ics		Test	Code: EF	PA Method	300.0: Anions	5		
Client ID:	LCSS	Batch ID: 75159		R	unNo: 96	6996				
Prep Date:	5/24/2023	Analysis Date: 5/24/2	2023	S	eqNo: 3	520082	Units: mg/K	g		
Analyte		Result PQL SI	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14 1.5	15.00	0	94.8	90	110			
Sample ID:	MB-75213	SampType: MBLK		Test	Code: EF	PA Method	300.0: Anions	5		
Client ID:	PBS	Batch ID: 75213		R	unNo: 97	7064				
Prep Date:	5/26/2023	Analysis Date: 5/26/2	2023	S	eqNo: 3	522775	Units: mg/K	g		
Analyte		Result PQL SI	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND 1.5					-			
Sample ID:	LCS-75213	SampType: LCS		Test	Code: EF	PA Method	300.0: Anions	3		
Client ID:	LCSS	Batch ID: 75213		R	unNo: 97	7064				
Prep Date:	5/26/2023	Analysis Date: 5/26/2	2023	S	eqNo: 3	522776	Units: mg/K	g		
Analyte		Result PQL SI	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14 1.5	15.00	0	93.2	90	110			

Qualifiers:

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

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2305B01

31-May-23

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project:	Pipkin											
Sample ID: 2	305B01-005AMS	SampT	Гуре: М\$	6	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics		
Client ID: B	H-04(33-35ft)	Batc	h ID: 75	149	R	unNo: 9	7035					
Prep Date:	5/24/2023	Analysis E	Date: 5/	25/2023	S	eqNo: 3	521086	Units: mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Org	ganics (DRO)	42	9.5	47.53	0	89.1	54.2	135				
Surr: DNOP		4.5		4.753		95.7	69	147				
Sample ID: 2	305B01-005AMSD	Samp1	Гуре: М	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics		
Client ID: B	8H-04(33-35ft)	Batc	Batch ID: 75149 RunNo: 97035									
Prep Date:	5/24/2023	Analysis E	Date: 5/	25/2023	S	eqNo: 3	521087	Units: mg/K	(g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Org	ganics (DRO)	39	8.7	43.74	0	88.6	54.2	135	8.83	29.2		
Surr: DNOP		4.1		4.374		94.5	69	147	0	0		
Sample ID: L	CS-75149	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics										
Client ID: L	CSS	Batc	h ID: 75	149	R							
Prep Date:	5/24/2023	Analysis E	Date: 5/	25/2023	S	eqNo: 3	521099	Units: mg/K	íg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Org	ganics (DRO)	45	10	50.00	0	89.7	61.9	130				
Surr: DNOP		4.7		5.000		94.0	69	147				
Sample ID: N	IB-75149	SampT	Гуре: МЕ	BLK	Test	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics		
Client ID: P	BS	Batc	h ID: 75	149	R	unNo: 9	7035					
Prep Date:	5/24/2023	Analysis E	Date: 5/	25/2023	S	eqNo: 3	521101	Units: mg/K	íg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Org		ND	10									
Motor Oil Range	Organics (MRO)	ND	50									
Surr: DNOP		13		10.00		126	69	147				
Sample ID: 2	305B01-006AMS	SampT	Гуре: М	6	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics		
Client ID: B	H05 23-25'	Batc	h ID: 75	197	R	lunNo: 9	7073					
Prep Date:	5/25/2023	Analysis E	Date: 5/	27/2023	S	eqNo: 3	523121	Units: mg/K	(g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Org	ganics (DRO)	38	9.7	48.64	0	78.0	54.2	135				
Surr: DNOP		4.6		4.864		95.5	69	147				

Qualifiers:

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

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WO#: 2305B01

31-May-23

Pipkin

Sample ID: 2305B01-006AMSD

Client:

Project:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

SampType: MSD

HILCORP ENERGY

Client ID: BH05 23-25'	Batch ID: 75197 RunNo: 97073								
Prep Date: 5/25/2023	Analysis Date: 5	6/27/2023	S	SeqNo: 3	523122	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42 9.6	6 48.12	0	87.5	54.2	135	10.4	29.2	
Surr: DNOP	4.3	4.812		89.9	69	147	0	0	
Sample ID: LCS-75186	SampType: L	cs	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 7	5186	RunNo: 97073						
Prep Date: 5/25/2023	Analysis Date: 5	6/26/2023	S	SeqNo: 3	523198	Units: %Red	•		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3	5.000		85.4	69	147			
Sample ID: LCS-75197	SampType: L	cs	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 7	5197	F	RunNo: 9 7	7073				
Prep Date: 5/25/2023	Analysis Date: 5	5/26/2023	S	SeqNo: 3	523201	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42 10	50.00	0	84.4	61.9	130			
Surr: DNOP	4.5	5.000		89.5	69	147			
Sample ID: MB-75186	SampType: M	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 7	5186	F	RunNo: 9 7	7073				
Prep Date: 5/25/2023	Analysis Date: 5	5/26/2023	5	SeqNo: 3	523202	Units: %Red	•		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0	10.00		89.5	69	147			
Sample ID: MB-75197	SampType: M	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 7	5197	F	RunNo: 9 7	7073				
Prep Date: 5/25/2023	Analysis Date: 5	6/26/2023	5	SeqNo: 3	523205	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								
Motor Oil Range Organics (MRO)	ND 50								
Surr: DNOP	11	10.00		112	69	147			

Qualifiers:

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

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WO#: 2305B01 31-May-23

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client: Project:	HILCORI Pipkin	P ENERG	Y								
Sample ID: m	nb-75132	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: P	BS	Batc	h ID: 75 ′	132	F	RunNo: 9	7020				
Prep Date:	5/23/2023	Analysis E	Date: 5/	25/2023	5	SeqNo: 3	521524	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range C Surr: BFB	Organics (GRO)	ND 900	5.0	1000		90.2	15	244			
Sample ID: Ic	cs-75132	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: L	CSS	Batc	h ID: 75	132	F	RunNo: 9	7020				
Prep Date:	5/23/2023	Analysis E	Date: 5/	25/2023	S	SeqNo: 3	521525	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range (Organics (GRO)	20	5.0	25.00	0	81.5	70	130			
Surr: BFB		1900		1000		190	15	244			
Sample ID: Ic	cs-75150	SampT	Type: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: L	CSS	Batc	h ID: 75 ′	150	F	RunNo: 9	7018				
Prep Date:	5/24/2023	Analysis E	Date: 5/	25/2023	S	SeqNo: 3	521588	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range (Organics (GRO)	21	5.0	25.00	0	85.6	70	130			
Surr: BFB		4700		1000		472	15	244			S
Sample ID: m	nb-75150	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: P	BS	Batcl	h ID: 75 ′	150	F	RunNo: 9	7018				
Prep Date:	5/24/2023	Analysis E	Date: 5/	25/2023	S	SeqNo: 3	521589	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range (Organics (GRO)	ND	5.0								
Surr: BFB		640		1000		64.4	15	244			
Sample ID: 2	305B01-006AMS	SampT	Гуре: МS	6	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: B	H05 23-25'	Batcl	h ID: 75 ′	150	F	RunNo: 9	7018				
Prep Date:	5/24/2023	Analysis E	Date: 5/	26/2023	S	SeqNo: 3	521599	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range C Surr: BFB	Organics (GRO)	21 4600	4.9	24.41 976.6	0	86.1 475	70 15	130 244			S
Sample ID: 2	305B01-006AMSI	D Samp1	Гуре: МS	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: B	H05 23-25'		h ID: 75			RunNo: 9			U		
Prep Date:	5/24/2023	Analysis E	Date: 5/ 2	26/2023		SeqNo: 3		Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S
- Analyte detected in the associated Method Blank в
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit Page 11 of 14

2305B01

31-May-23

Client:

HILCORP ENERGY

Project:	Pipkin										
Sample ID: 2305	5B01-006AMSD	SampT	уре: МS	SD	Test	Code: El	PA Method	8015D: Gasc	line Rang	e	
Client ID: BH0	5 23-25'	Batcl	n ID: 75	150	R	unNo: 9	7018				
Prep Date: 5/2	4/2023	Analysis D	Date: 5/	26/2023	S	eqNo: 3	521600	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Orga	anics (GRO)	20	4.9	24.27	0	83.6	70	130	3.60	20	
Surr: BFB		4500		970.9		468	15	244	0	0	S

Qualifiers:

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

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2305B01

31-May-23

	HILCORP ENE Pipkin	ERGY								
Sample ID: mb-7513	2 Sa	трТуре: И	IBLK	Tes	stCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	E	Batch ID: 7	5132	F	RunNo: 9	7020				
Prep Date: 5/23/202	23 Analy	sis Date:	5/25/2023	\$	SeqNo: 3	521548	Units: mg/k	٢g		
Analyte	Res	ult PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ID 0.025								
Toluene		ID 0.050								
Ethylbenzene		ID 0.050								
Xylenes, Total		ID 0.10								
Surr: 4-Bromofluorobenz	ene 0.8	36	1.000		86.2	39.1	146			
Sample ID: Ics-7513	2 Sa	mpType: L	cs	Tes	stCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	E	Batch ID: 7	5132	F	RunNo: 9	7020				
Prep Date: 5/23/202	23 Analy	sis Date:	5/25/2023	\$	SeqNo: 3	521549	Units: mg/k	٢g		
Analyte	Res	ult PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.8	37 0.025	5 1.000	0	86.9	70	130			
Toluene	0.8	.050	0 1.000	0	87.1	70	130			
Ethylbenzene	0.8	36 0.050	0 1.000	0	85.6	70	130			
Xylenes, Total	2	.6 0.10	3.000	0	85.1	70	130			
Surr: 4-Bromofluorobenz	ene 0.8	37	1.000		86.8	39.1	146			
Sample ID: LCS-751	50 Sa	mpType: L	cs	Tes	stCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	E	Batch ID: 7	5150	F	RunNo: 9	7018				
Prep Date: 5/24/202	23 Analy	sis Date:	5/25/2023	:	SeqNo: 3	521629	Units: mg/k	٢g		
Analyte	Res	ult PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.8	31 0.025		0	80.6	70	130			
Toluene	0.8	33 0.050		0	83.4	70	130			
Ethylbenzene	0.8	35 0.050	0 1.000	0	84.7	70	130			
Xylenes, Total	2	.5 0.10	3.000	0	84.6	70	130			
Surr: 4-Bromofluorobenz	ene 0.9	93	1.000		92.6	39.1	146			
Sample ID: mb-7515	0 Sa	mpType: N	IBLK	Tes	stCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	I	Batch ID: 7	5150	F	RunNo: 9	7018				
Prep Date: 5/24/202	23 Analy	sis Date:	5/25/2023	\$	SeqNo: 3	521630	Units: mg/k	٢g		
Analyte	Res			SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ID 0.025								
Toluene		ID 0.050								
Ethylbenzene	Ν	ID 0.050								
Xylenes, Total	Ν	ID 0.10)							
Surr: 4-Bromofluorobenz	ene 0.8	38	1.000		88.0	39.1	146			

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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2305B01

31-May-23

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project: Pipkin										
Sample ID: 2305B01-007AMS	Samp	Гуре: МS	;	Test	Code: EF	PA Method	8021B: Volat	tiles		
Client ID: BH05 33-35'	Batc	h ID: 75 ′	150	R	unNo: 97					
Prep Date: 5/24/2023	Analysis E	Date: 5/	26/2023	S	eqNo: 3	521633	Units: mg/K	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	0.9862	0	82.1	70	130			
Toluene	0.85	0.049	0.9862	0.01591	84.6	70	130			
Ethylbenzene	0.87	0.049	0.9862	0	88.0	70	130			
Xylenes, Total	2.6	0.099	2.959	0	87.3	70	130			
Surr: 4-Bromofluorobenzene	0.92		0.9862		93.4	39.1	146			
Sample ID: 2305B01-007AMS	D Samp	Гуре: МS	D	Tes	Code: EF	PA Method	8021B: Volat	tiles		
Sample ID: 2305B01-007AMS Client ID: BH05 33-35'		Гуре: МS h ID: 75 ′			Code: Ef		8021B: Volat	tiles		
		h ID: 75 ′	150	R		7018	8021B: Volat Units: mg/K			
Client ID: BH05 33-35'	Batc	h ID: 75 ′	150 26/2023	R	unNo: 97	7018			RPDLimit	Qual
Client ID: BH05 33-35' Prep Date: 5/24/2023	Batc Analysis [h ID: 75 ′ Date: 5/	150 26/2023	R	unNo: 97 SeqNo: 3	7018 521634	Units: mg/K	٤g	RPDLimit 20	Qual
Client ID: BH05 33-35' Prep Date: 5/24/2023 Analyte	Batc Analysis I Result	h ID: 75 Date: 5/ PQL	150 26/2023 SPK value	R S SPK Ref Val	unNo: 97 SeqNo: 38 %REC	7018 521634 LowLimit	Units: mg/K HighLimit	(g %RPD	-	Qual
Client ID: BH05 33-35' Prep Date: 5/24/2023 Analyte Benzene	Batc Analysis I Result 0.76	h ID: 75 Date: 5 /2 PQL 0.025	150 26/2023 SPK value 0.9872	R SPK Ref Val 0	unNo: 97 6eqNo: 38 %REC 76.9	7018 521634 LowLimit 70	Units: mg/K HighLimit 130	5g <u>%RPD</u> 6.36	20	Qual
Client ID: BH05 33-35' Prep Date: 5/24/2023 Analyte Benzene Toluene	Batc Analysis I Result 0.76 0.79	h ID: 75 Date: 5 PQL 0.025 0.049	150 26/2023 SPK value 0.9872 0.9872	R S SPK Ref Val 0 0.01591	kunNo: 97 keqNo: 38 %REC 76.9 78.6	7018 521634 LowLimit 70 70	Units: mg/K HighLimit 130 130	5 %RPD 6.36 7.08	20 20	Qual
Client ID: BH05 33-35' Prep Date: 5/24/2023 Analyte Benzene Toluene Ethylbenzene	Analysis E Result 0.76 0.79 0.80	h ID: 75 ' Date: 5 / <u>PQL</u> 0.025 0.049 0.049	150 26/2023 SPK value 0.9872 0.9872 0.9872	R S SPK Ref Val 0 0.01591 0	eqNo: 9 %REC 76.9 78.6 81.4	7018 521634 LowLimit 70 70 70	Units: mg/K HighLimit 130 130 130	5g %RPD 6.36 7.08 7.61	20 20 20	Qual
Client ID: BH05 33-35' Prep Date: 5/24/2023 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Batc Analysis I Result 0.76 0.79 0.80 2.4	h ID: 75 ' Date: 5 / <u>PQL</u> 0.025 0.049 0.049	150 26/2023 SPK value 0.9872 0.9872 0.9872 2.962	R S SPK Ref Val 0 0.01591 0	eqNo: 9 %REC 76.9 78.6 81.4 82.4	7018 521634 LowLimit 70 70 70 70 70	Units: mg/K HighLimit 130 130 130 130	5g %RPD 6.36 7.08 7.61 5.68	20 20 20 20	Qual

Qualifiers:

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

Page 14 of 14

WO#: 2305B01

31-May-23

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HALL ENVIRONMENTA ANALYSIS LABORATORY	AL.	Hall Environment A TEL: 505-345-39 Website: www.	490 Ibuquerq 75 FAX:	Hawkins ue. NM 871 505-345-41	ve 09 San 07	Sample Log-In Check List				
Client Name: Hilcorp Ene	ergy	Work Order Numb	er: 2305	B01		RcptNo:	1			
Received By: Tracy Cas	arrubias	5/20/2023 9:30:00 A	м							
Completed By: Tracy Cas	arrubias	5/20/2023 1:15:05 P	м							
Reviewed By: Ju 5-12	2/23									
Chain of Custody										
1. Is Chain of Custody compl	lete?		Yes	\checkmark	No 🗌	Not Present				
2. How was the sample delive	ered?		<u>Cour</u>	ier						
<u>Log In</u>										
3. Was an attempt made to c	ool the samples?		Yes		No 🗌					
4. Were all samples received	at a temperature of	>0° C to 6.0°C	Yes		No 🗌	NA 🗆				
5. Sample(s) in proper contai	ner(s)?		Yes		No 🗌					
6. Sufficient sample volume for	or indicated test(s)?		Yes		No 🗌					
7. Are samples (except VOA	and ONG) properly p	preserved?	Yes		No 🗌					
8. Was preservative added to	bottles?		Yes		No 🗹	NA				
9. Received at least 1 vial with	h headspace <1/4" f	or AQ VOA?	Yes		No 🗌	NA 🗹				
10. Were any sample containe	ers received broken?		Yes		No 🗹	# of preserved	1			
11. Does paperwork match bot (Note discrepancies on cha			Yes		No 🗌	bottles checked for pH: (<2 or	>12 unless noted)			
12. Are matrices correctly iden	tified on Chain of Cu	stody?	Yes		No 🗌	Adjusted?				
13. Is it clear what analyses we	ere requested?		Yes		No 🗌					
14. Were all holding times able (If no, notify customer for a			Yes		No 🗌	Checked by:	5/22/23			
Special Handling (if app	licable)					0.0	5110105			
15. Was client notified of all di	screpancies with thi	s order?	Yes		No 🗌	NA 🗹				
Person Notified:		Date:	1							
By Whom:		Via:	🗌 eMa	il 📋 Pho	one 🗌 Fax	In Person				
Regarding:										
Client Instructions:	Email is mising on (COC -TMC 5/20/23								
16. Additional remarks:										
17. <u>Cooler Information</u> Cooler No Temp °C	Condition Sea	Intact Seal No	Seal Da	ate S	Signed By					
1 2.3	Good Yes	Yogi								

Received by OCD: 8/22/2023 10:34:35 AM

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	etved by OCD: 8/22/2023 10:34:35 AM			Turn-Around Time:													Page (
	usiouy Record					HALL ENVIRONMENTAL ANALYSIS LABORATORY												
Client: HilCorp	/ Ensolum	5 - Ju. Standard						A	N/	AL'	YS	IS		AB	OR	AT	JK.	r
	o E. Ind Ave.	Project Name	ikin		www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109													
		Project #:				Tel. 505-345-3975 Fax 505-345-4107												
Durange	0. 01101					Te	1. 50	5-54	.0-02			_	_	uest		ales of		
	903-1607	Project Mana	0.011			6					04			Ê				
email or Fax#:	email or Fax#:			1. ide	021	MRC	3's		SI IS	-	4º 8			psei				
QA/QC Package:		Stu	art t	1900	MTBE / TMB's (8021)	10	PCB's		8270SIMS		2			nt/A				
Standard	Level 4 (Full Validation)	Sampler:			MB	Ы	082	÷.	827(1 02	24		ese				
Accreditation: □ Az C □ NELAC □ Othe	compliance	On Ice:	X Yes	No yogi	15	l S O	es/8	504	Ъ	s	5		(YO)	P.				
□ EDD (Type)		# of Coolers:	1		18	D(G	licide	poq	3310	Aeta	¥	A	v-in	form				
		Cooler Temp	(Including CF): 2.	4-0.1=2.3 (°C)		015	Pest	Met	þ	181	đ	S	(Sei	Coli				
	Comple Nome	Container Type and #	Preservative Type	HEAL No.	BTEX/	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082	EDB (Method 504.1)	PAHs by 8310	RCRA 8 Metals	CI, F., Br, NO3, NO2, PO4, SO4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)				
Date Time Matrix 5-17-23 14:00 5	Sample Name BH-04 (13-15A		a construction of the second second	001	X	X					X							
	11	191000/	Ivarie	and the second second second second second	1	Ì		0.	a 19	0.0	-	1		1.00	dirin i			
14:05	BH-04(18-20F1)			002					1.1	1.47			1.1.1			di sa Rendi Mili saka		
14:10	BH-04 (23-254		Carl Contractor	003		+	-			11.91	-	1.11.11						
14:15	BH-04 (28-30FH	2		004		4			-		4				\neg	din and		-
→ 14:20 →	BH-04 (33-35+	1 7	4	005	- V			-		+	Ň	-					+-+	-
5-19 11:20 5	BH05 23-25			006	K	X			-	-	X	-	-	-			+	+
5-18 11:40 5	BHQ5 33-351	V		607	X	X		+		+				-		_	┽─┤	-+
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Date: Time: Relinqu	uished by:	Received by:	Via:	Date Time	Re	emar	ks:											
5/14/12/1435	YUN	Im	War	119/23 1935	2													
Date: Time: Relinqu	uished by:	Received by:	Via: Cauri	C Date Time 9:30														
9/9/22 1820 (3)	moto Wat	X	2	5/20/23						tod do	to will	ho clo	orly n	otated r	on the a	nalytical r	eport.	

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 reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly notated on the analytical reputation of the subcontracted data will be clearly not at the analytical reputation of the subcontracted data will be clearly not at the analytical reputation of the subcontracted data will be clearly not at the analytical reputation of the subcontracted data will be clearly not at the analytical reputation of the analytical reputation of the subcontracted data will be clearly not at the analytical reputation of the analytical reputation o



APPENDIX C

Agency Sampling Notifications

From:	Burdine, Jaclyn, EMNRD
То:	Stuart Hyde
Cc:	Kate Kaufman; Devin Hencmann; Danny Burns
Subject:	RE: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification
Date:	Thursday, April 6, 2023 9:47:33 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png

[**EXTERNAL EMAIL**]

Thank you for the notice, it has been received and noted.

Jackie Burdine Environmental Specialist-Advanced – Administrative Permitting Program EMNRD - Oil Conservation Division 1220 S. St. Francis Drive | Santa Fe, NM 87505 505.469.6769_Jaclyn.Burdine1@emnrd.nm.gov http://www.emnrd.nm.gov/ocd

From: Stuart Hyde <shyde@ensolum.com>
Sent: Monday, April 3, 2023 5:05 PM
To: Burdine, Jaclyn, EMNRD <Jaclyn.Burdine1@emnrd.nm.gov>
Cc: Kate Kaufman <kkaufman@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>;
Danny Burns <dburns@ensolum.com>
Subject: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification

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

On behalf of Hilcorp Energy Company, Ensolum is submitting this delineation sampling notification for the Pipkin Gas Com A1E site located in San Juan County, NM (coordinates 36.593965, -107.940397). Drilling and sampling work will begin at 10 AM on Thursday April 13, 2023 to assess potential impacts related to the removal of an onsite below-grade tank. Please reach out with any questions or comments at this time. Thank you.

Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f Y

From:	Wells, Shelly, EMNRD
То:	Stuart Hyde
Cc:	Kate Kaufman; Devin Hencmann
Subject:	RE: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification
Date:	Tuesday, May 16, 2023 9:40:57 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png

[**EXTERNAL EMAIL**]

Good morning Stuart,

Thank you for letting me know!

Shelly

From: Stuart Hyde <shyde@ensolum.com>
Sent: Tuesday, May 16, 2023 9:38 AM
To: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Cc: Kate Kaufman <kkaufman@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>
Subject: RE: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification

Shelly,

Due to delays in other drilling projects, we have had to push back the Pipkin drilling and sampling work to Thursday and Friday May 18th and 19th. Please reach out with any questions. Thanks.

Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f Y

From: Stuart Hyde
Sent: Tuesday, May 9, 2023 3:45 PM
To: Burdine, Jaclyn, EMNRD <<u>Jaclyn.Burdine1@emnrd.nm.gov</u>>
Cc: Kate Kaufman <<u>kkaufman@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>; Danny Burns <<u>dburns@ensolum.com</u>>; Eric Carroll <<u>ecarroll@ensolum.com</u>>
Subject: RE: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification

All,

On behalf of Hilcorp Energy Company, Ensolum is submitting this additional delineation sampling notification for the Pipkin Gas Com A1E site located in San Juan County, NM (coordinates 36.593965,

-107.940397). Drilling and sampling work will begin at 9 AM on May 15 and 16, 2023 to assess potential impacts related to the removal of an onsite below-grade tank. Please reach out with any questions or comments at this time. Thank you.



Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC

From: Burdine, Jaclyn, EMNRD <Jaclyn.Burdine1@emnrd.nm.gov>
Sent: Thursday, April 6, 2023 9:47 AM
To: Stuart Hyde <<u>shyde@ensolum.com</u>>
Cc: Kate Kaufman <<u>kkaufman@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>;
Danny Burns <<u>dburns@ensolum.com</u>>
Subject: RE: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification

[**EXTERNAL EMAIL**]

Thank you for the notice, it has been received and noted.

Jackie Burdine • Environmental Specialist-Advanced – Administrative Permitting Program EMNRD - Oil Conservation Division 1220 S. St. Francis Drive | Santa Fe, NM 87505 505.469.6769_Jaclyn.Burdine1@emnrd.nm.gov http://www.emnrd.nm.gov/ocd

From: Stuart Hyde <<u>shyde@ensolum.com</u>>

Sent: Monday, April 3, 2023 5:05 PM

To: Burdine, Jaclyn, EMNRD <<u>Jaclyn.Burdine1@emnrd.nm.gov</u>>

Cc: Kate Kaufman <<u>kkaufman@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>;

Danny Burns <<u>dburns@ensolum.com</u>>

Subject: [EXTERNAL] Pipkin Gas Com A1E - Drilling and Sampling Notification

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

On behalf of Hilcorp Energy Company, Ensolum is submitting this delineation sampling notification for the Pipkin Gas Com A1E site located in San Juan County, NM (coordinates 36.593965, -107.940397). Drilling and sampling work will begin at 10 AM on Thursday April 13, 2023 to assess potential impacts related to the removal of an onsite below-grade tank. Please reach out with any questions or comments at this time. Thank you.



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Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f ♥



APPENDIX D

Photographic Log

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	-
E E N S O L U M	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



APPENDIX E

Boring Logs

.

	Date Samp Drilled By Driller: 3 Logged By	pled: 4-1 : Enviso	4-23 5-01:11	LU	М	Project Na Project Lo Project M Ground S		BORING LOG NUMBER BH01 Project No.: 07A1988057 Borehole Diameter: B' Casing Diameter: - Well Materials: - Surface Completion: - Boring Method: HSA	
	DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	FID/PID READING (PPM)	POTENTIO- METRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTIO		BORING/WELL COMPLETION
50-5"			25%	2.4		5W		nlodor slo)	
50-Y"	8	- - -	25%	0.8		sw	Lt. Brown, med-med fin Dry, No s/o	. Sand	
50-4"	12 14 16		25%	0.2		SW	Same As Above. Dry. No S/O		
50-4"	18 	-	25%	2.1		sw	SAA, Dry, No sto		
43 50 -2"	22 24 26	TIME 1050	50%	38.1		รพ	SAA, Dry, No stain, V tic odor, degraded.	ery sloght	
42 50-2"	28 28 30	1100	75%	44.2		SW -SM	Lt. Brown/tan med-med-med-med-med-med- sand, w/ TR. silt. Dry, V. slt. HC degrad. o	ed coarse	
28 50-2"	32 34 36	1110	100 %.	0.8		5M	Lt. bluish gray, fu-sa Dry, dense, compact. N	ndy silt. o s/o.	
	38 40						No well set, borehole let		
	42 44						placed over	et	
	46 48 50						`		

•

and a support

	Drilled By: Driller: J	iled: H-IV	1-23 Mill	LU	М	Project Nam Project Loca Project Man Ground Sur		BORING LOG NUMBER BH02 Project No.: 07A1988057 Borehole Diameter: 8 ¹¹ Casing Diameter: 8 ¹¹ Well Materials: Surface Completion: Boring Method: HSA	
	DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	FID/PID READING (PPM)	POTENTIO- METRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTIO	N	BORING/WELL COMPLETION
50-5"		-	25%	2,3			Lt. Brown/tan med- Dry, 1005, No s/c		
50-4"	8	-	25.1.	0.0			H. Brown med-med sand. Dry, No slo		
50-5"	12 14 16	+	2 5 %	0.0		SW	Tour, ut. Brown, med. Dry. No slo	sand.	
50-5"	18 20	+	107.	0.0		รพ	SAA, No 5/0.		
50-5"	22 24 26	+	25.1.	0.0		รพ	SAA, No slo.		
28/50-5"	28 30	12:40	50%	8.7		รพ	Did' Deuse' 10-	10	
32/50-5	32 34 	12:60	75%.	0.1		SM	Gray, Lt. Blue-gray, silt + bense silts Dry. No S/O	fn.sandy tone.	
	38 40 42	+ + + + + +					No wells	et.	
	44 46 48 50	+ + + + + + + + + + + + + + + + + + + +							

	Drilled By Driller:	pled: 4-1	150 4.23 0-2011 M Bu		М	Project Na Project Loo Project Ma Ground Su		BORING LOG NUMBER BH03 Project No.: 07A1988057 Borchole Diameter: & ¹¹ Casing Diameter: Well Materials: Surface Completion: Boring Method: MSA	
	DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	FID/PID READING (PPM)	POTENTIO- METRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTIO	N	BORING/WELL COMPLETION
50 -5 ''	0 2 4 6 8		257,	0.0		SW	Tan, med. sand. Dry No s/o. Tan med-fn. sand Dry No 3/o.		
50-5" 50-5"	10 12 14 16	+ + + + + + + + + +	25%	0.0		รพ รพ	Ut. Brown/town mea Dry No S/D.		
50 -5 "	18 20	+	25%	0.0		sw	SAA, Dry, No 5/0.		
30/50-3"	22 24 26	14:00	507.	7.8		รพ	Brown, med-coarse Dry, No Sto. H.gray, med-coarse W) silt. No Sp.	e sand	
19/38/50-3"	28 <u>30</u> 32	14:20	100 %.	2.1		SW -SM	4. gray, med-coarse w) silt. No s/o.	Dry.	
22/50-4"		1430	1007.	0.1		5M	Gray, It blue, fr. Sa Danse, Dry, NO 5	0	
	38 40 42 44	-					No well set	ł.	
	46 48 50	-							

Drilled By Driller: ,	iled: 5. : Envir	17-23 0- Diil	1	Μ	Project Loc Project Ma Ground Su		BORING LOG NUMBER BH-OH Project No.: Borchole Diameter: 8'' Casing Diameter: 2'' Well Materials: SCH 40 PVC Surface Completion: SVE Boring Method: HSA	
DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	FID/PID READING (PPM)	POTENTIO- METRIC SURFACE	LOG SYMBOL GEOLOGIC	GEOLOGIC DESCRIPTIO		BORING/WELL COMPLETION
0		50%	1.3 ppm		SW	SILTY SAND W/G light brown, Fire- wl granel, Moderate Soufed, Unconsolid Dry, No Odor, Fill ?	GRAVEL - Coarse, - Poorly inted,	TBD
6 _ 7 _ 8 _ 9 _ 10 _		60%	1.6 PPM		SW	AS Above Fill? SANDSTONE	- 01an/	
11 12 13 14 15		70%	2.7 ppm		5P	M-C, Moderate-u Consolidated but I Comented, Dry, no * 510W Drilling +	VellSorted Weakly o Odor	
16 17 18 19 20 21		70%	7.2 Jen		SP	SANDSTONE- F-M, WellSoute Friable + Weakly Dry, No odor	jight gray di [Centented	
22 23 24 25		60%	559.2 PPM	-		AS Above, M-C Slight Petro od.	1	

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Date Sam Drilled By Driller: Logged B	pled: 5. :: Envi JUAN	SO 17-23 ro-Dri Jeicher	L U 11	M	Project Loc Project Ma Ground Su	me: Pitkin nation: MM nager: Stuart Hyde rface Elevation: ing Elevation: rdinate:	BORING LC B+ - 04 Project No.: Borchole Diann Casing Diannet Well Materials Surface Compl Boring Method	eter: er: : etion:
DEPTH (FEET)	SAMPLE INTERVAL	RECOVERY (%)	FID/PID READING (PPM)	POTENTIO- METRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTIO	N	BORING/WELL COMPLETION
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		70°6	10.4		SP	SANDSTONE-G black, F-M, Gordad, Consolid Weakly committed Organic rich w/ Woody Materia O Sor SHALE-gray-blac NHU Silt, Consola Dry No Odor		TBD

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STEP 3: CONTINUE WITH

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				. U	Μ	Project	t: <u>HEC</u> Name: <u>Pipkin</u> Location: <u>NM</u> Manager: <u>5. Hyd</u> C	_	BORING LOG NUMBER $BH \circ 5$ Project No.		
Date Samp Drilled by: Driller: Logged by: Sampler:		5-18- Enrir 2440 E. Ca.	o - Dr			Top of 0 North C West C Bench N ℤ At ℤ At	Surface Elevation: Casing Elevation: Coordinate: Mark Elevation: Completion: Completion: Well Stabilization	Borehole Diameter: <u>& "</u> Casing Diameter: <u>AVA</u> Well Materials: <u>N/A</u> Surface Completion: <u>N/A</u> Boring Method: <u>HSA</u>			
DEPTH (A)	SAMPLE INTERVAL	SAMPLE	RECOVERY (%)	FID/PID READING (ppm)	POTENTIO- METRIC SURFACE	DOG SYMBOL	GEOLOGIC DESCRIPTION		BORING / WELL COMPLETION (GRAPHIC DEPICTION)		
	2 5-10 3 0-15 4 5-		100 100	0.2		SP SP	BHOS West of BHO1 It. brown, Dry, Coarse Sand No Stain/Odor SAA NO Stain/Odor It brown, dry, Coarse, Gand, Weathered Sand Stone No Stain/Odor It. gray brown, coarse, Sano NO Stain/Odor SAA NO Stain/Odor SAA NO Stain/Odor	I cemon b Istoric	NO Well installed		

Released to Imaging: 11/28/2023 10:45:13 AM

0.075 MM		14	C	н	E	A	S	1	
						0.5			
:35 AN	\boldsymbol{M}								

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Received by	<i>OCD</i> :	8/22/2023	10:34:35 A
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I. [] [] ...

Driller:					Project 1 Project 1 Project 1 Ground Top of C North C West Cc Bench M ☑ At	:Name: Location: Manager: Surface Elevation: Casing Elevation: oordinate: oordinate: Aark Elevation: Completion Well Stabilization	Borehole D Casing Dia Well Mater Surface Co	oject No iameter: meter: ials: mpletion: thod:	
D EPTH (f) SAMPLE INTERV AL	SAMPLE ID	RECOVERY (%)	FID/PID READING (ppm)	POTENTIO- METRIC SURFACE	GEOLOGIC LOG SYMBO L	GEOLOGIC DESCRIPTION		BORING / WI (GRAPHI	ELL COMPLETION C DEPICTION)
$\begin{array}{c} - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - $						Ib. gray brown, coarse san			

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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

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

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	255416
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan is approved with the following conditions; 1. Soil Vapor Extraction Pilot Test to be completed by 02/26/2024. 2. Report of Pilot Test to be completed and submitted to OCD by 03/26/2024.	11/28/2023

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