Received by OCD: 5/28/2021 11:57:31 AM Form C-141 State of New Mexico

Oil Conservation Division

	Page 1 of 11
Incident ID	NRM2020945060
District RP	
Facility ID	
Application ID	

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?	32 (ft bgs)
Did this release impact groundwater or surface water? groundwater	X Yes 🗌 No
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 X 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?	\Box Yes \overline{X} 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.

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

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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.

Page 3

Received by OCD: 5/28/2	021 11:57:31 AM State of New Mexico		Page 2 of 11				
Page 4	Oil Conservation Division		Incident ID	NRM2020945060			
rage 4	On Conservation Division		District RP				
			Facility ID				
			Application ID				
regulations all operators ar public health or the enviro failed to adequately invest addition, OCD acceptance and/or regulations. Printed Name: Mitch Signature: Mitch email: mkillough@h		ifications and perform co OCD does not relieve the eat to groundwater, surfa	prrective actions for rele e operator of liability shuce water, human health liance with any other fea ntal Specialist	eases which may endanger ould their operations have or the environment. In			
OCD Only Received by:	ng hin	Date: 5/28/	2021				

From:	Smith, Cory, EMNRD
То:	Hencmann, Devin; Burns, Daniel
Cc:	<u>Mitch Killough</u> , <u>Carroll, Eric</u>
Subject:	RE: HEC - Hare 15 - Additional Delineation Activities (Incident# NRM2020945060)
Date:	Wednesday, May 19, 2021 3:59:00 PM
Attachments:	image001.png
	image002.png
	image003.png

Devin,

As per our phone conversation today. Please submit an interim delineation report with the delineation information that HEC has acquired to date. OCD will use this report to determine good cause for granting a 3rd extension due to recent delineation actives going off the active well pad and onto undisturbed BLM surface areas.

Please submit the interim report via the OCD E-permitting portal no later than 5/28/21 and include a brief executive summary of activities of the site to date, indicate that additional delineation will be done upon the approval from BLM and the requested extension date.

Please email me the PO# once it has been submitted so I can quickly review and grant an approval.

Thank you,

Cory Smith • Environmental Specialist Environmental Bureau EMNRD - Oil Conservation Division 1000 Rio Brazos | Aztec, NM 87410 505.334.6178 x115 | <u>Cory.Smith@state.nm.us</u> http://www.emnrd.state.nm.us/OCD/

From: Hencmann, Devin <Devin.Hencmann@wsp.com>
Sent: Friday, May 14, 2021 3:14 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Burns, Daniel <Danny.Burns@wsp.com>;
Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Mitch Killough <mkillough@hilcorp.com>; Carroll, Eric <Eric.Carroll@wsp.com>
Subject: [EXT] RE: HEC - Hare 15 - Additional Delineation Activities (Incident# NRM2020945060)

Cory,

We did conduct additional delineation in February. We felt from the initial field data that we had completed the delineation. When we returned to the site after drilling, we discovered that some of the borings had groundwater in them and required sampling to determine if additional delineation was necessary. The lab data confirmed that additional boreholes would be required. To conduct the additional delineation, we had to evaluate our plan moving forward and schedule drilling, which led to the 5/17/21 drilling date. We have access to the rig until 5/25/21 and are confident we can complete drilling activities during this round of drilling. We have drilled 20 borings during two separate drilling events and have been active in working toward completing the delineation and

reporting by the 5/28/2021 extension deadline, but were limited by driller availability. Due to the complexity of the site, we are looking for a little extra time to compile data and provide a thorough report.

Thank you, Devin

Devin Hencmann Senior Consultant, Geologist Devin.Hencmann@wsp.com



M + 1 970-403-6023 T + 1 970-385-1096

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From: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>
Sent: Friday, May 14, 2021 1:49 PM
To: Hencmann, Devin <<u>Devin.Hencmann@wsp.com</u>>; Burns, Daniel <<u>Danny.Burns@wsp.com</u>>;
Enviro, OCD, EMNRD <<u>OCD.Enviro@state.nm.us</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Carroll, Eric <<u>Eric.Carroll@wsp.com</u>>
Subject: RE: HEC - Hare 15 - Additional Delineation Activities (Incident# NRM2020945060)

Devin,

Just reading through the notes.. this would be the 3rd extension request... This plan was suppose to be done in Feb. Did the work done in Feb require more delineation if so what was the hold up on getting a rig asap?

Cory Smith • Environmental Specialist Environmental Bureau EMNRD - Oil Conservation Division 1000 Rio Brazos | Aztec, NM 87410 505.334.6178 x115 | <u>Cory.Smith@state.nm.us</u> http://www.emnrd.state.nm.us/OCD/

From: Hencmann, Devin <<u>Devin.Hencmann@wsp.com</u>>
Sent: Friday, May 14, 2021 1:18 PM
To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Burns, Daniel <<u>Danny.Burns@wsp.com</u>>;
Enviro, OCD, EMNRD <<u>OCD.Enviro@state.nm.us</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Carroll, Eric <<u>Eric.Carroll@wsp.com</u>>
Subject: [EXT] RE: HEC - Hare 15 - Additional Delineation Activities (Incident# NRM2020945060)

Cory,

We also wanted to follow up on the email sent 5/12/21 requesting an extension to the 5/28/21 deadline. We have had to work with drill rig availability and now that we are confirmed for 5/17/21 we would like additional 30 days beyond the 5/28/21 deadline to submit the delineation findings and present remediation options.

Let us know if have any questions.

Thank you, Devin

Devin Hencmann Senior Consultant, Geologist Devin.Hencmann@wsp.com

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From: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>
Sent: Friday, May 14, 2021 12:22 PM
To: Burns, Daniel <<u>Danny.Burns@wsp.com</u>>; Enviro, OCD, EMNRD <<u>OCD.Enviro@state.nm.us</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Hencmann, Devin <<u>Devin.Hencmann@wsp.com</u>>;
Carroll, Eric <<u>Eric.Carroll@wsp.com</u>>
Subject: RE: HEC - Hare 15 - Additional Delineation Activities (Incident# NRM2020945060)

Danny,

Thank you for the update.. Please proceeded with Delineation activities.

Cory Smith • Environmental Specialist Environmental Bureau EMNRD - Oil Conservation Division 1000 Rio Brazos | Aztec, NM 87410 505.334.6178 x115 | <u>Cory.Smith@state.nm.us</u> http://www.emnrd.state.nm.us/OCD/

From: Burns, Daniel <<u>Danny.Burns@wsp.com</u>>
Sent: Friday, May 14, 2021 11:37 AM
To: Enviro, OCD, EMNRD <<u>OCD.Enviro@state.nm.us</u>>

Cc: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Mitch Killough <<u>mkillough@hilcorp.com</u>>; Hencmann, Devin <<u>Devin.Hencmann@wsp.com</u>>; Carroll, Eric <<u>Eric.Carroll@wsp.com</u>> Subject: [EXT] HEC - Hare 15 - Additional Delineation Activities (Incident# NRM2020945060)

On behalf of Hilcorp Energy Company, we are submitting this notification that additional delineation activities will occur at the Hare 15 beginning on May 17, 2021 at 8 AM. The initial C-141 was submitted on 7/27/20 and assigned incident number NRM2020945060. An additional 4 borehole/monitoring well locations are proposed to continue delineation of soil and groundwater to the north and west of previously identified impacts. Following receipt of additional soil and groundwater analytical results, a characterization report and remediation work plan will be submitted to the NMOCD.

Thank you.

Danny Burns

Consultant, Geologist *Please note the new email address.*



T+ 1 970-385-1096 M+ 1 701-570-4727

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May 28, 2021

District III New Mexico Oil Conservation Division 1000 Rio Brazos Aztec, New Mexico 87410

Subject: Interim Report - Delineation Activities Update Hare 15 NMOCD Incident Number: NRM2020945060 San Juan County, New Mexico

To Whom It May Concern:

WSP USA Inc. (WSP), on behalf of Hilcorp Energy Company (Hilcorp), presents the following *Delineation Activities Update* for the Hare 15 natural gas production well site (Site). This document details site investigation activities completed to date and proposed actions moving forward to address impacted soil and groundwater resulting from a release of natural gas condensate. The Site is located in Lot Unit M17, Section 3, Township 29 North, Range 10 West, in San Juan County, New Mexico (Figure 1).

SITE BACKGROUND

On July 15, 2020, vandalism of an aboveground storage tank caused a failure and release of approximately 115 barrels (bbls) of natural gas condensate. The release occurred on location and remained inside the secondary containment. Hilcorp operations removed the remaining liquids from inside of the tank. No released liquids were recovered during initial emergency response efforts. Hilcorp reported the release to the New Mexico Oil Conservation Division (NMOCD) by submitting a *Release Notification and Corrective Action Form C-141* (Form C-141) on July 27, 2020. The release was assigned Incident Number NRM2020945060.

SITE CHARACTERIZATION

WSP characterized the Site according to "Table 1, Closure Criteria for Soils Impacted by a Release," of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). As measured from in on-Site monitoring wells, depth to groundwater is approximately 32 to 40 feet below ground surface (bgs). The nearest domestic/stock water well is New Mexico Office of the State Engineer (NMOSE) permitted well SJ-00785-S, located approximately 0.59 miles north of the Site. The well has a depth to water of approximately 20 feet bgs and a total depth of approximately 60 feet bgs.

No wellhead protection areas, springs, or domestic/stock wells are located within a half mile from the site (Figure 1). The nearest significant watercourse to the Site is Slane Canyon, located approximately 660 feet to the east. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and greater than 300 feet from any wetland. The Site is not within a 100-year floodplain or overlying a subsurface mine and is not located within an area underlain by unstable geology (low potential karst designation area by the Bureau of Land Management, or BLM). No occupied permanent residence or structures, including schools, hospitals, institutions, and/or churches, are located within 300 feet of the Site.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply to Site soil:

— Benzene: 10 milligrams per kilogram (mg/kg)

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- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO): 100 mg/kg
- Chloride: 600 mg/kg

Additionally, the following New Mexico Groundwater Quality Control Commission (NMWQCC) standards apply to groundwater present at the Site:

- Phase-separated hydrocarbons (PSH): shall not be present, as can be reasonably measured
- Benzene: 5 microgram per liter (μ g/L)
- Toluene: 1,000 μg/L
- Ethylbenzene: 700 µg/L
- Xylenes: 620 µg/L

SITE INVESTIGATION ACTIVITIES AND RESULTS

To date, there have been three separate mobilization events to delineate subsurface impacts: August 17, 2020 to August 25, 2020; February 9, 2021 to February 11, 2021; and May 17, 2021 to May 18, 2021. During each site delineation attempt, WSP personnel advanced boreholes via hollow-stem auger to confirm the presence or absence of petroleum hydrocarbon impacts to soil. Groundwater was encountered in those boreholes and WSP additionally worked to delineate potential impact to groundwater.

SOIL ASSESSMENT

To date, 26 boreholes have been advanced at the Site (shown on Figure 2). Soil samples were collected from boreholes and submitted for laboratory analysis of BTEX (benzene, toluene, ethylbenzene, and xylene compounds) by United States Environmental Protection Agency (EPA) Method 8021, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), TPH-motor oil range organics (MRO) by EPA Method 8015, and chloride by EPA method 300.0. A summary of soil analytical results is presented in Table 1 and Figure 3, with laboratory analytical reports attached as Enclosure A. At this time, WSP is still awaiting soil analytical results from the May 2021 delineation event.

The following soil samples have detections of BTEX, benzene, and/or TPH above NMOCD standards (chloride has not been detected above applicable standards at the Site):

BH01@20'-24', BH03@23'-25', BH04@25'-27', BH04@30'-35', BH07@15'-20', BH08@25'-30', BH09@25'-27', BH10@15'-20', BH11@10'-15', BH13@25'-27', BH14 @ 25'-27', BH15 @ 25'-30', BH16@25'-30', and BH20 @ 25'-30'

GROUNDWATER ASSESSMENT

During the initial delineation event in August 2020, saturated soils indicative of groundwater were not observed during drilling. Because of this, groundwater-monitoring wells were not installed at the Site; however, boreholes with petroleum impacts were completed as potential soil-vapor extraction (SVE) wells, with the screened intervals placed at depths with the highest observed field screening measurements (using a photoionization detector, or PID). During subsequent site visits, groundwater and phase-separated hydrocarbons (PSH) were observed to have accumulated in several of the SVE wells. Subsequent groundwater sampling activities indicated impacts to groundwater exist at the Site and further delineation was warranted. Additional groundwater monitoring wells were installed at the Site during the follow-up delineation events conducted in February and May, 2021. Groundwater samples were collected from wells BH06, BH09, BH11, BH19, and BH20 in February 2021 and were analyzed for BTEX by EPA Method 8260. Groundwater results from this event are summarized in Table 2 and Figure 4, with laboratory analytical reports also included in Enclosure A. At this time, WSP is still awaiting groundwater analytical results from the May 2021 delineation event.

To date, 23 wells have been installed at the Site. Currently, seven wells contain measurable quantities of PSH: BH03, BH04, BH07, BH10, BH13, BH15, and BH16. Additionally, the following wells contain groundwater with detections above NMWQCC standards for BTEX: BH06, BH09, BH11, BH19, and BH20. Since the discovery of

vsp

the PSH, WSP has conducted several PSH-recovery events using a disposable bailer. Additionally, adsorbent socks have been placed in all wells containing PSH and replaced as necessary since October 2020.

FINDINGS AND RECOMMENDATIONS:

Based on the nature and volume of the recent condensate-vandalism release, impacts from this release are likely confined to the southern borings at the Site. However, while delineating the recent release, it appears that historical impacts have been discovered. The historical impacts are typically confined to a medium, dense sand between 20 and 32 feet bgs. Where groundwater or saturated intervals are encountered, they sit on top of a dense, low permeable, fine sandy silt and then pure silt and clay. Based on field screening and analytical results, there is limited to no observable impacts in the silt/clay layers located below the impacted sand unit.

At this time, WSP is waiting on soil and groundwater analytical results from the most recent May 2021 delineation event. The results will provide data to determine if full delineation has been attained. Based on the information obtained from the Site thus far, Hilcorp will continue Site activities as described below. For the proposed work, Hilcorp is required to obtain permission from the BLM to advance additional borings at the Site. Hilcorp will submit a Sundry notification to the BLM within 7 days of the NMOCD approving this document. Hilcorp will then perform the following actions, to be completed within 60-days of BLM approval:

- Develop newly installed wells and conduct site-wide groundwater sampling.
- Continue to bail PSH from wells and replace adsorbent socks, as necessary, on a monthly basis.
- Upon receipt of laboratory results, continue site delineation and/or prepare a site-characterization report and remediation work plan for the Site.
- Hilcorp will update the NMOCD biweekly regarding Site access and other Site activities, as necessary.

If you have any questions or comments, please do not hesitate to contact Mr. Devin Hencmann at (970) 385-1096.

Kind regards,

Senta-

Devin Hencmann Senior Consultant, Geologist

cc: Mitch Killough, Hilcorp Energy Company

Enclosures:

Figure 1	Receptor Map
Figure 2	Soil Boring Locations
Figure 3	Soil Analytical Results
Figure 4	Groundwater Analytical Results
Table 1	Soil Analytical Results
Table 2	Groundwater Analytical Results
F 1 4	

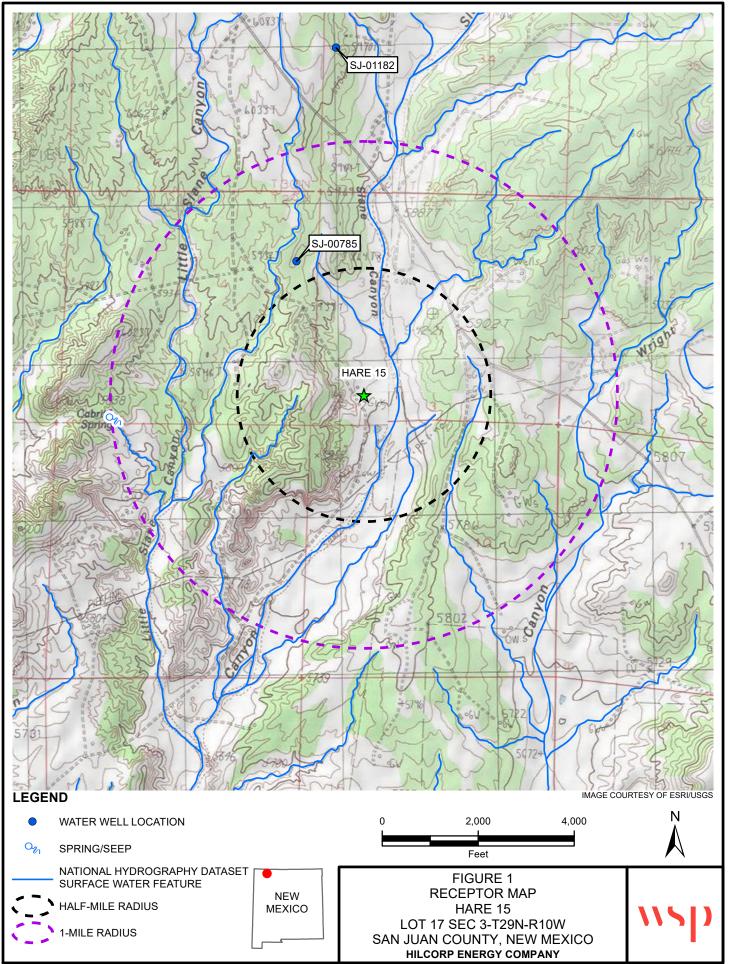
Enclosure A Laboratory Analytical Reports

Ashley L. ager

Ashley Ager, M.S., P.G. Senior Geologist, Managing Director

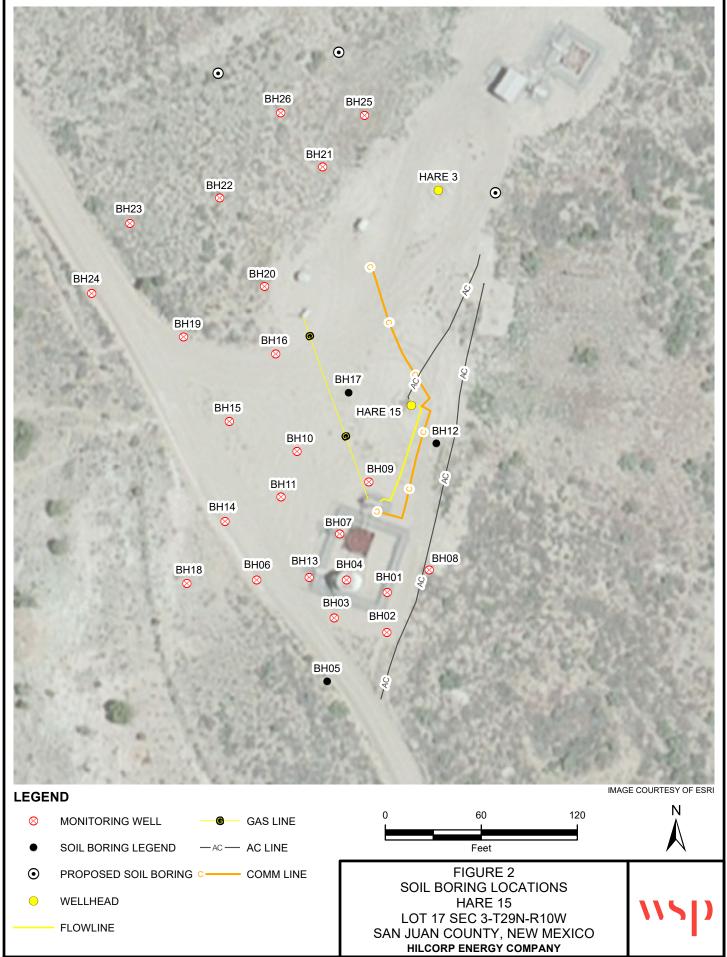
Page 10 of 114

FIGURES



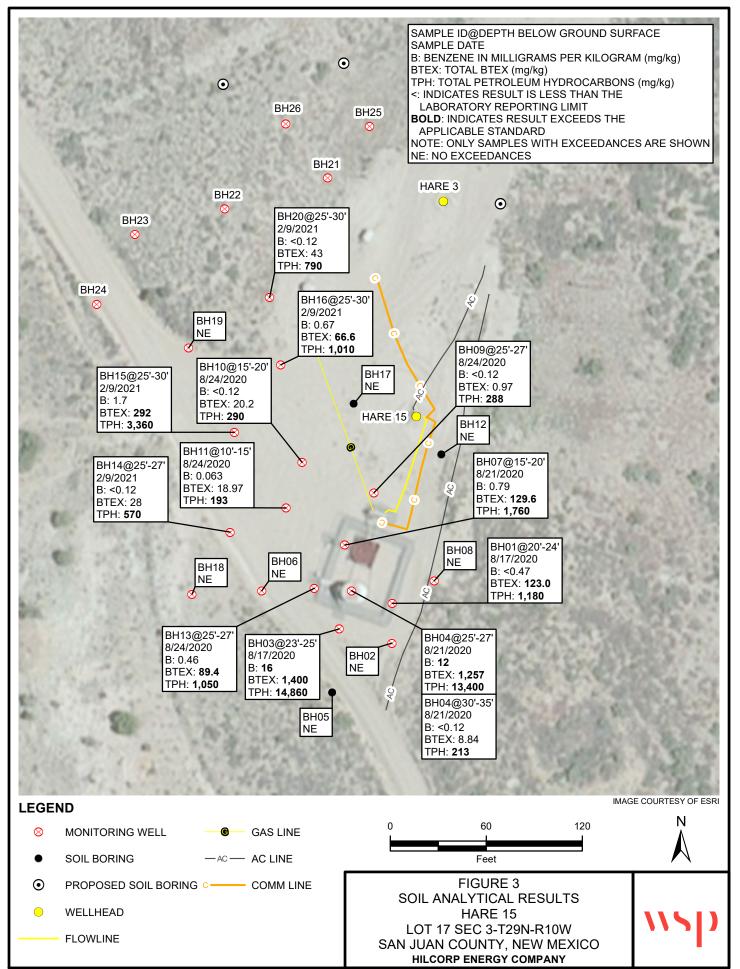
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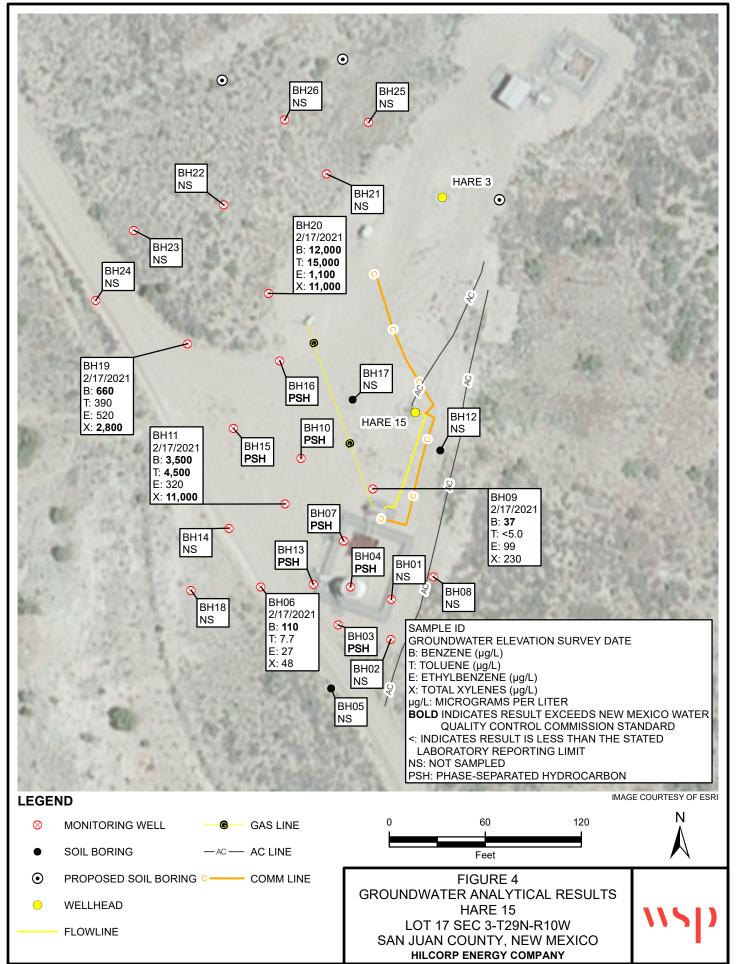
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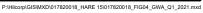


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TABLES

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TABLE 1 SOIL ANALYTICAL RESULTS

HARE 15 SAN JUAN COUNTY, NEW MEXICO HILCORP ENERGY COMPANY

Soil Sample Identification	Sample Date	PID Reading (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
NMOCD Closur	re Criteria	NE	10	NE	NE	NE	50	600	NE	NE	NE	100
BH01@20'-24'	8/17/2020	3,118	< 0.47	< 0.94	3.0	120	123	<60	1,000	180	<47	1,180
BH01@27'-30'	8/17/2020	41.2	< 0.019	< 0.039	< 0.039	0.10	0.10	<60	<3.9	<9.8	<49	<62.7
BH02@25'-30'	8/17/2020	1,454	0.053	0.43	0.20	3.9	4.58	<60	48	17	<50	65
BH02@35'-38'	8/17/2020	515	< 0.020	< 0.039	< 0.039	0.15	0.15	<60	<3.9	<9.9	<50	<63.8
BH03@10'-15'	8/17/2020	22	< 0.024	< 0.048	< 0.048	< 0.095	< 0.215	<60	<4.8	<9.1	<45	<58.9
BH03@15'-18'	8/17/2020	246	< 0.025	< 0.050	< 0.050	< 0.10	< 0.225	<60	<5.0	<9.8	<49	<63.8
BH03@23'-25'	8/20/2020	1,238	16	360	64	960	1,400	<60	14,000	860	<480	14,860
BH03@29'-30'	8/20/2020	2,246	< 0.024	0.70	0.28	4.9	5.88	<60	76	16	<46	92
BH03@35'-38'	8/20/2020	173	< 0.025	< 0.050	< 0.050	< 0.099	< 0.224	<59	<5.0	<9.0	<45	<59
BH04@23'-25'	8/17/2020	1,448	< 0.023	0.11	0.14	2.5	2.75	<60	43	35	<45	78
BH04@25'-27'	8/21/2020	1,499	12	300	55	890	1,257	<60	12,000	1,400	<450	13,400
BH04@28'-30'	8/21/2020	102	< 0.025	< 0.049	< 0.049	< 0.098	< 0.221	<60	<4.9	<9.4	<47	<61.3
BH04@30'-35'	8/21/2020	403	< 0.12	0.68	0.56	7.6	8.84	<60	130	83	<44	213
BH04@35'-38'	8/21/2020	46	< 0.025	0.073	< 0.049	0.2	0.273	<60	<4.9	10	<49	10
BH05@20'-25'	8/21/2020	62.6	< 0.024	< 0.048	< 0.048	< 0.097	< 0.217	<59	<4.8	<9.9	<49	<63.7
BH05@25'-30'	8/21/2020	24.1	< 0.024	< 0.049	< 0.049	< 0.097	< 0.219	<60	<4.9	<9.0	<45	<58.9
BH06@15'-20'	8/21/2020	22.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH06@20'-25'	8/21/2020	41.0	< 0.12	< 0.25	< 0.25	< 0.49	<1.11	<60	<25	<9.5	<48	<82.5
BH06@25'-30'	8/21/2020	17.1	< 0.024	< 0.049	< 0.049	0.45	0.45	<60	<4.9	<8.5	<43	<56.4
BH06@30'-35'	8/21/2020	8.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH07@15'-20'	8/21/2020	2,402	0.79	12	6.8	110	130	76	1600	160	<48	1,760
BH07@28'-30'	8/21/2020	174	< 0.023	< 0.046	< 0.046	< 0.092	< 0.207	<60	<4.6	<8.7	<43	<56.3
BH07@30'-35'	8/21/2020	41.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH08@25'-30'	8/21/2020	649	< 0.050	< 0.10	0.23	1.1	1.3	610	120	270	<45	390
BH08@30'-35'	8/21/2020	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH08@30'-35'	8/21/2020	233	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 1 SOIL ANALYTICAL RESULTS

HARE 15 SAN JUAN COUNTY, NEW MEXICO HILCORP ENERGY COMPANY

Soil Sample Identification	Sample Date	PID Reading (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
NMOCD Closur	re Criteria	NE	10	NE	NE	NE	50	600	NE	NE	NE	100
BH09@25'-27'	8/24/2020	3,359	< 0.12	< 0.25	< 0.25	0.97	0.970	120	98	190	<43	288
BH09@28'-30'	8/24/2020	30.1	< 0.025	< 0.049	< 0.049	< 0.099	< 0.222	73	<4.9	11	<47	11
BH09@30'-35'	8/24/2020	6.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH10@15'-20'	8/24/2020	3,317	< 0.12	< 0.24	1.2	19	20.2	<60	180	110	<49	290
BH10@28'-30'	8/24/2020	193	0.044	0.11	< 0.048	0.53	0.684	<60	<4.8	<8.6	<43	<56.4
BH11@10'-15'	8/24/2020	1,841	0.063	0.33	0.58	18	19.0	200	120	73	<50	193
BH11@25'-30'	8/24/2020	686	0.039	0.14	0.079	1.0	1.3	<60	20	19	<47	39
BH12@10'-15'	8/24/2020	6.1	< 0.024	< 0.049	< 0.049	< 0.097	< 0.219	98	<4.9	<8.9	<45	<58.8
BH12@25'-30'	8/24/2020	0.8	< 0.024	< 0.049	< 0.049	< 0.098	< 0.220	<60	<4.9	<9.7	<49	<63.6
BH13@25'-27'	8/24/2020	1,912	0.46	11	4.9	73	89.4	<60	800	250	<45	1,050
BH13@28'-30'	8/24/2020	39.4	< 0.024	< 0.048	< 0.048	< 0.096	< 0.216	<60	<4.8	<9.4	<47	<61.2
BH13@30'-35'	8/24/2020	174	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH14 @ 25'-27'	2/9/2021	3,204	< 0.12	< 0.25	2.1	26	28	<60	400	170	<46	570
BH14 @ 30'-35'	2/9/2021	20	< 0.023	< 0.046	< 0.046	< 0.092	< 0.207	<60	<4.6	<9.8	<49	<63.4
BH15 @ 25'-30'	2/9/2021	3,055	1.7	23	17	250	292	<60	3,000	360	<47	3,360
BH15 @ 30'-35'	2/9/2021	82	< 0.024	< 0.048	< 0.048	< 0.096	< 0.216	<60	<4.8	<9.9	<49	<63.7
BH16 @ 25'-30'	2/9/2021	2,332	0.67	9.6	3.3	53	66.6	<60	800	210	<50	1,010
BH16 @ 33'-35'	2/9/2021	212	0.074	0.19	< 0.047	0.42	0.684	<60	<4.7	<9.8	<49	<63.5
BH17 @ 20'-25'	2/10/2021	1.8	< 0.024	< 0.048	< 0.048	< 0.095	< 0.215	<60	<4.8	<9.4	<47	<61.2
BH17 @ 25'-30'	2/10/2021	0.3	< 0.023	< 0.047	< 0.047	< 0.094	< 0.211	<60	<4.7	<10	<51	<65.7
BH18 @ 20'-25'	2/10/2021	0.3	< 0.024	< 0.048	< 0.048	< 0.095	< 0.215	<60	<4.8	<9.7	<48	<62.5
BH18 @ 25'-30'	2/10/2021	0	< 0.025	< 0.050	< 0.050	< 0.099	< 0.224	<60	<5.0	<8.4	<42	<55.4
BH19 @ 30'-35'	2/10/2021	119	< 0.024	< 0.049	< 0.049	0.43	0.430	<60	9.4	<9.0	<45	9.4
BH19 @ 35'-40'	2/10/2021	4.8	0.050	0.12	0.14	2.1	2.41	<60	13	<10	<50	13
BH20 @ 25'-30'	2/11/2021	2,023	< 0.12	2.8	2.2	38	43	<60	600	190	<49	790
BH20 @ 33'-35'	2/11/2021	80	0.056	0.72	0.091	1.5	2.37	<60	9.9	<9.2	<46	9.9
NMOCD Closur	re Criteria	NE	10	NE	NE	NE	50	600	NE	NE	NE	100

TABLE 1SOIL ANALYTICAL RESULTS

HARE 15 SAN JUAN COUNTY, NEW MEXICO HILCORP ENERGY COMPANY

Soil Sample Identification	Sample Date	PID Reading (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
NMOCD Closu	re Criteria	NE	10	NE	NE	NE	50	600	NE	NE	NE	100

Notes:

BTEX - benzene, toluene, ethylbenzene, and total xylenes analyzed by US EPA Method 8021B

DRO - diesel range organics analyzed by US EPA Method 8015D

GRO - gasoline range organics analyzed by US EPA Method 8015D

mg/kg - milligrams per kilogram

MRO - motor oil range organics analyzed by US EPA method 8015D

NA - not analyzed

NE - not established

NMOCD - New Mexico Oil Conservation Division

PID - photoionization detector

ppm - parts per million

TPH - total petroleum hydrocarbon (sum of GRO, DRO, and MRO)

Bold - indicates value exceeds stated NMOCD Closure Criteria

< - indicates result is less than the stated laboratory reporting limit

TABLE 2GROUNDWATER ANALYTICAL RESULTS

HARE 15 SAN JUAN COUNTY, NEW MEXICO HILCORP ENERGY COMPANY

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)
BH06	2/17/2021	110	7.7	27	48
BH09	2/17/2021	37	<5.0	99	230
BH11	2/17/2021	3,500	4,500	320	11,000
BH19	2/17/2021	660	390	520	2,800
BH20	2/17/2021	12,000	15,000	1,100	10,000
NMWQCC Groundwater Standard		5	1,000	700	620

Notes:

 $\mu g/L$ - micrograms per liter

NMWQCC - New Mexico Water Quality Control Commision

Bold - indicates value exceeds the NMWQCC Standard

< - indicates result is less than the stated laboratory reporting limit

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ENCLOSURE A – LABORATORY ANALYTICAL REPORTS



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

August 25, 2020

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

RE: Hare 15

OrderNo.: 2008906

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/18/2020 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

Surr: 4-Bromofluorobenzene

Analytical Report

Lab Order 2008906

%Rec 20 8/19/2020 1:31:49 PM 54505

Date Reported: 8/25/2020

CLIENT: HILCORP ENERGY		Cl	lient S	ample II	D: BH	H01@ 20'-24'				
Project: Hare 15		Collection Date: 8/17/2020 9:15:00 AM								
Lab ID: 2008906-001	Matrix: SOIL	Received Date: 8/18/2020 7:55:00 AM								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS						Analyst	CJS			
Chloride	ND	60		mg/Kg	20	8/24/2020 6:09:05 PM	54629			
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANICS					Analyst	BRM			
Diesel Range Organics (DRO)	180	9.5		mg/Kg	1	8/20/2020 1:07:25 AM	54513			
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/20/2020 1:07:25 AM	54513			
Surr: DNOP	100	30.4-154		%Rec	1	8/20/2020 1:07:25 AM	54513			
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	: NSB			
Gasoline Range Organics (GRO)	1000	94		mg/Kg	20	8/19/2020 1:31:49 PM	54505			
Surr: BFB	298	75.3-105	S	%Rec	20	8/19/2020 1:31:49 PM	54505			
EPA METHOD 8021B: VOLATILES						Analyst	: NSB			
Benzene	ND	0.47		mg/Kg	20	8/19/2020 1:31:49 PM	54505			
Toluene	ND	0.94		mg/Kg	20	8/19/2020 1:31:49 PM	54505			
Ethylbenzene	3.0	0.94		mg/Kg	20	8/19/2020 1:31:49 PM	54505			
Xylenes, Total	120	1.9		mg/Kg	20	8/19/2020 1:31:49 PM	54505			

110

80-120

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 15

Lab Order 2008906

Date Reported: 8/25/2020

CLIENT: HILCORP ENERGY		(Client Sample ID: BH01@ 27'-30'
Project:	Hare 15		Collection Date: 8/17/2020 9:45:00 AM
Lab ID:	2008906-002	Matrix: MEOH (SOIL)	Received Date: 8/18/2020 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	8/18/2020 11:56:09 AM	54499
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/18/2020 11:13:13 AM	54497
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/18/2020 11:13:13 AM	54497
Surr: DNOP	90.3	30.4-154	%Rec	1	8/18/2020 11:13:13 AM	54497
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	8/18/2020 10:00:33 AM	54485
Surr: BFB	95.5	75.3-105	%Rec	1	8/18/2020 10:00:33 AM	54485
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.019	mg/Kg	1	8/18/2020 10:00:33 AM	54485
Toluene	ND	0.039	mg/Kg	1	8/18/2020 10:00:33 AM	54485
Ethylbenzene	ND	0.039	mg/Kg	1	8/18/2020 10:00:33 AM	54485
Xylenes, Total	0.10	0.077	mg/Kg	1	8/18/2020 10:00:33 AM	54485
Surr: 4-Bromofluorobenzene	98.6	80-120	%Rec	1	8/18/2020 10:00:33 AM	54485

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 range due to dilution or matrix

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

Page 2 of 15

Lab Order 2008906

Date Reported: 8/25/2020

- · ·	Client Sample ID: BH02@ 25'-30'							
Project: Lab ID:	Hare 15 2008906-003	Collection Date: 8/17/2020 12:00:00 PM Matrix: SOIL Received Date: 8/18/2020 7:55:00 AM						
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS						Analyst	: CJS
Chloride		ND	60		mg/Kg	20	8/24/2020 6:46:18 PM	54629
EPA METHOD 8015M/D: DIESEL RANGE		ORGANICS					Analyst	BRM
Diesel R	ange Organics (DRO)	17	10		mg/Kg	1	8/20/2020 1:17:34 AM	54513
Motor Oi	Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2020 1:17:34 AM	54513
Surr: [DNOP	87.7	30.4-154		%Rec	1	8/20/2020 1:17:34 AM	54513
EPA MET	HOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline	Range Organics (GRO)	48	4.8		mg/Kg	1	8/20/2020 1:40:55 AM	54505
Surr: E	3FB	204	75.3-105	S	%Rec	1	8/20/2020 1:40:55 AM	54505
EPA METHOD 8021B: VOLATILES							Analyst	: NSB
Benzene		0.053	0.024		mg/Kg	1	8/20/2020 1:40:55 AM	54505
Toluene		0.43	0.048		mg/Kg	1	8/20/2020 1:40:55 AM	54505
Ethylben	zene	0.20	0.048		mg/Kg	1	8/20/2020 1:40:55 AM	54505
Xylenes,	Total	3.9	0.097		mg/Kg	1	8/20/2020 1:40:55 AM	54505
Surr: 4	I-Bromofluorobenzene	114	80-120		%Rec	1	8/20/2020 1:40:55 AM	54505

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
- S % Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL Reporting Limit
- Page 3 of 15

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Lab Order 2008906

Date Reported: 8/25/2020

CLIENT :	HILCORP ENERGY	Client Sample ID: BH02@ 35'-38'
Project:	Hare 15	Collection Date: 8/17/2020 12:30:00 PM
Lab ID:	2008906-004	Matrix: MEOH (SOIL) Received Date: 8/18/2020 7:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	8/18/2020 12:08:34 PM	54499
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/18/2020 11:37:24 AM	54497
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/18/2020 11:37:24 AM	54497
Surr: DNOP	92.0	30.4-154	%Rec	1	8/18/2020 11:37:24 AM	54497
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	8/18/2020 10:24:02 AM	54485
Surr: BFB	101	75.3-105	%Rec	1	8/18/2020 10:24:02 AM	54485
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.020	mg/Kg	1	8/18/2020 10:24:02 AM	54485
Toluene	ND	0.039	mg/Kg	1	8/18/2020 10:24:02 AM	54485
Ethylbenzene	ND	0.039	mg/Kg	1	8/18/2020 10:24:02 AM	54485
Xylenes, Total	0.15	0.079	mg/Kg	1	8/18/2020 10:24:02 AM	54485
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	8/18/2020 10:24:02 AM	54485

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 range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008906

Date Reported: 8/25/2020

CLIENT: HILCORP ENERGY Client Sample ID: BH03@ 10'-15'									
Project: Hare 15		Collection Date: 8/17/2020 2:20:00 PM							
Lab ID: 2008906-005	Matrix: SOIL	8/2020 7:55:00 AM							
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analyst	: CJS			
Chloride	ND	60	mg/Kg	20	8/24/2020 6:58:43 PM	54629			
EPA METHOD 8015M/D: DIESEL RANGI	E ORGANICS				Analyst	BRM			
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	8/20/2020 1:27:44 AM	54513			
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/20/2020 1:27:44 AM	54513			
Surr: DNOP	95.7	30.4-154	%Rec	1	8/20/2020 1:27:44 AM	54513			
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/20/2020 2:04:18 AM	54505			
Surr: BFB	96.0	75.3-105	%Rec	1	8/20/2020 2:04:18 AM	54505			
EPA METHOD 8021B: VOLATILES					Analyst	: NSB			
Benzene	ND	0.024	mg/Kg	1	8/20/2020 2:04:18 AM	54505			
Toluene	ND	0.048	mg/Kg	1	8/20/2020 2:04:18 AM	54505			
Ethylbenzene	ND	0.048	mg/Kg	1	8/20/2020 2:04:18 AM	54505			
Xylenes, Total	ND	0.095	mg/Kg	1	8/20/2020 2:04:18 AM	54505			
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	8/20/2020 2:04:18 AM	54505			

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 5 of 15

Surr: 4-Bromofluorobenzene

Analytical Report

Hall Environmental	Analysis	Laboratory,	Inc.

Lab Order 2008906

Date Reported: 8/25/2020

8/20/2020 10:15:11 AM 54526

CLIENT: HILCORP ENERGY	Client Sample ID: BH03@ 15'-18'					
Project: Hare 15			Collection Dat	t e: 8/1	17/2020 2:30:00 PM	
Lab ID: 2008906-006	Matrix: SOIL Received Date: 8/18/2020 7:55:00 AM					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CJS
Chloride	ND	60	mg/Kg	20	8/24/2020 7:11:07 PM	54629
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/20/2020 4:28:28 PM	54549
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/20/2020 4:28:28 PM	54549
Surr: DNOP	94.8	30.4-154	%Rec	1	8/20/2020 4:28:28 PM	54549
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/20/2020 10:15:11 AM	54526
Surr: BFB	94.9	75.3-105	%Rec	1	8/20/2020 10:15:11 AM	54526
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	8/20/2020 10:15:11 AM	54526
Toluene	ND	0.050	mg/Kg	1	8/20/2020 10:15:11 AM	54526
Ethylbenzene	ND	0.050	mg/Kg	1	8/20/2020 10:15:11 AM	54526
Xylenes, Total	ND	0.10	mg/Kg	1	8/20/2020 10:15:11 AM	54526

99.4

80-120

%Rec

1

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Sample pH Not In Range
- Р RL Reporting Limit

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Surr: 4-Bromofluorobenzene

Analytical Report

	Hall	Environmental	Analysis	Laboratory,	Inc.
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Lab Order 2008906

Date Reported: 8/25/2020

8/20/2020 11:25:34 AM 54526

	Cl	ient Sa	ample II	D: BH	H04@ 23'-25'	
	(Collect	tion Dat	e: 8/1	17/2020 3:15:00 PM	
Matrix: SOIL		Recei	ved Dat	e: 8/1	18/2020 7:55:00 AM	
Result	RL	Qual	Units	DF	Date Analyzed	Batch
					Analyst	CJS
ND	60		mg/Kg	20	8/24/2020 7:23:32 PM	54629
ORGANICS					Analyst	BRM
35	9.0		mg/Kg	1	8/20/2020 4:58:03 PM	54549
ND	45		mg/Kg	1	8/20/2020 4:58:03 PM	54549
101	30.4-154		%Rec	1	8/20/2020 4:58:03 PM	54549
E					Analyst	RAA
43	4.7		mg/Kg	1	8/20/2020 11:25:34 AM	54526
296	75.3-105	S	%Rec	1	8/20/2020 11:25:34 AM	54526
					Analyst	RAA
ND	0.023		mg/Kg	1	8/20/2020 11:25:34 AM	54526
0.11	0.047		mg/Kg	1	8/20/2020 11:25:34 AM	54526
0.14	0.047		mg/Kg	1	8/20/2020 11:25:34 AM	54526
2.5	0.094		mg/Kg	1	8/20/2020 11:25:34 AM	54526
	Result ND CORGANICS 35 ND 101 E 43 296 ND 0.11 0.14	Matrix: SOIL Result RL Result RL ND 60 CORGANICS 35 9.0 ND 45 101 30.4-154 E 43 4.7 296 75.3-105 ND 0.023 0.11 0.047 0.14 0.047	Matrix: SOIL Collect Result RL Qual ND 60 SORGANICS 35 9.0 ND 45 101 101 30.4-154 5 43 4.7 296 75.3-105 S ND 0.023 0.11 0.047 0.14 0.047	ND 60 mg/Kg SORGANICS 35 9.0 mg/Kg ND 45 mg/Kg 101 30.4-154 %Rec 43 4.7 mg/Kg 296 75.3-105 S %Rec ND 0.023 mg/Kg 0.11 0.047 mg/Kg 0.14 0.047 mg/Kg	ND 60 mg/Kg 20 ORGANICS 35 9.0 mg/Kg 1 ND 45 mg/Kg 1 101 30.4-154 %Rec 1 296 75.3-105 S %Rec 1 ND 0.023 mg/Kg 1 0.11 0.047 mg/Kg 1 0.14 0.047 mg/Kg 1	Result RL Qual Units DF Date Analyzed ND 60 mg/Kg 20 8/24/2020 7:23:32 PM ND 60 mg/Kg 1 8/20/2020 7:23:32 PM SORGANICS Analyst 35 9.0 mg/Kg 1 8/20/2020 4:58:03 PM ND 45 mg/Kg 1 8/20/2020 4:58:03 PM ND 45 mg/Kg 1 8/20/2020 4:58:03 PM 101 30.4-154 %Rec 1 8/20/2020 4:58:03 PM MD 45 mg/Kg 1 8/20/2020 11:25:34 AM 296 75.3-105 S %Rec 1 8/20/2020 11:25:34 AM 296 75.3-105 S %Rec 1 8/20/2020 11:25:34 AM 296 75.3-105 S %Rec 1 8/20/2020 11:25:34 AM 0.11 0.047 mg/Kg 1 8/20/2020 11:25:34 AM 0.14 0.047 mg/Kg 1 8/20/2020 11:25:34 AM

117

80-120

%Rec

1

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
- S % Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Client:	HILCOR	P ENERGY									
Project:	Hare 15										
Sample ID:	MB-54499	SampTyp	e: mb	olk	Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID:	PBS	Batch I	D: 54 4	199	RunNo: 71154						
Prep Date:	8/18/2020	Analysis Date: 8/18/2020			SeqNo: 2481784			Units: ma/Ka			
Analyte Chloride		Result I ND	PQL 1.5	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID:	LCS-54499	SampTyp	e: Ics		Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID:	LCSS	Batch I	D: 54 4	499	RunNo: 71154						
Prep Date:	8/18/2020	Analysis Date	e: 8/	18/2020	SeqNo: 2481785			Units: mg/Kg			
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	94.8	90	110			
Sample ID:	MB-54629	SampTyp	e: mb	lk	Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID:	PBS	Batch II	D: 54	629	F	lunNo: 7	1303				
Prep Date:	8/24/2020	Analysis Date	e: 8/ 3	24/2020	S	eqNo: 24	488391	Units: mg/Kg			
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID:	LCS-54629	SampTyp	e: Ics		Tes	tCode: El	PA Method	300.0: Anions	8		
Client ID:	LCSS	Batch II	D: 54 (629	F	lunNo: 7	1303				
Prep Date:	8/24/2020	Analysis Date	e: 8/	24/2020	SeqNo: 2488392			Units: mg/Kg			
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	93.4	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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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- P Sample pH Not In Range

RL Reporting Limit

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Client: HILCO	RP ENERGY						
Project: Hare 15	i						
Sample ID: MB-54497	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range	e Organics			
Client ID: PBS	Batch ID: 54497	RunNo: 71146	J.				
Prep Date: 8/18/2020	Analysis Date: 8/18/2020	SeqNo: 2480616	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Diesel Range Organics (DRO)	ND 10		-				
Motor Oil Range Organics (MRO)	ND 50	07.0 00.4	454				
Surr: DNOP	9.7 10.00	97.2 30.4	154				
Sample ID: LCS-54497	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range	e Organics			
Client ID: LCSS	Batch ID: 54497	RunNo: 71146					
Prep Date: 8/18/2020	Analysis Date: 8/18/2020	SeqNo: 2480639	Units: mg/Kg				
Analyte		SPK Ref Val %REC LowLimit	6	RPDLimit Qual			
Diesel Range Organics (DRO) Surr: DNOP	53 10 50.00 4.8 5.000						
	4.6 5.000	90.1 30.4	154				
Sample ID: LCS-54468	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range	• Organics			
Client ID: LCSS	Batch ID: 54468	RunNo: 71149					
Prep Date: 8/17/2020	Analysis Date: 8/19/2020	SeqNo: 2482200	Units: %Rec				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	0	RPDLimit Qual			
Surr: DNOP	4.9 5.000	97.1 30.4	154				
Sample ID: MB-54468	SampType: MBLK	TestCode: EPA Method	l 8015M/D: Diesel Range	• Organics			
Client ID: PBS	Batch ID: 54468	RunNo: 71149	RunNo: 71149				
Prep Date: 8/17/2020	Analysis Date: 8/19/2020	SeqNo: 2482202	Units: %Rec				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Surr: DNOP	10 10.00	103 30.4	154				
Sample ID: LCS-54512	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range	Organics			
Client ID: LCSS	Batch ID: 54512	RunNo: 71197					
Prep Date: 8/18/2020	Analysis Date: 8/19/2020	SeqNo: 2483610	Units: %Rec				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Surr: DNOP	4.7 5.000	93.2 30.4	154				
Sample ID: LCS-54513	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range	e Organics			
Client ID: LCSS	Batch ID: 54513	RunNo: 71197					
Prep Date: 8/18/2020	Analysis Date: 8/19/2020	SeqNo: 2483611	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
			-				
Diesel Range Organics (DRO) Surr: DNOP	54 10 50.00	0 108 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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Client: Project:	HILCOR Hare 15	P ENERGY									
Sample ID:	MB-54512	SampTyp	e: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	PBS	Batch II	D: 54	512	R	RunNo: 7 '	1197				
Prep Date:	8/18/2020	Analysis Date	e: 8/ '	19/2020	S	SeqNo: 24	483614	Units: %Red	•		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		10		10.00		102	30.4	154			
Sample ID:	MB-54513	SampTyp	e: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	PBS	Batch II	D: 54	513	R	RunNo: 7 ′	1197				
Prep Date:	8/18/2020	Analysis Date	e: 8/	19/2020	S	SeqNo: 24	483615	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
•	Organics (DRO)	ND	10								
Motor Oil Rang Surr: DNOP	ge Organics (MRO)	ND 11	50	10.00		115	30.4	154			
					_			-			
	2008906-006AMS	SampTyp						8015M/D: Die	esel Range	e Organics	
Client ID:		Batch II				RunNo: 7					
Prep Date:	8/19/2020	Analysis Date	e: 8/ 2	20/2020	5	SeqNo: 24	485416	Units: mg/K	g		
Analyte			PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	Organics (DRO)	48 4.8	9.1	45.41 4.541	5.403	93.0 105	47.4 30.4	136 154			
	2008906-006AMSI							8015M/D: Die	esel Range	e Organics	
Client ID:		Batch II			RunNo: 71237						
	8/19/2020	Analysis Date				SeqNo: 24		Units: mg/K	•		
Analyte			PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	Organics (DRO)	47 4.5	9.5	47.53 4.753	5.403	86.8 93.8	47.4 30.4	136 154	2.11 0	43.4 0	
								-			
	LCS-54549	SampTyp						8015M/D: Die	esel Range	e Organics	
Client ID:		Batch II				RunNo: 7		11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1			
-	8/19/2020	Analysis Date	e: 8/ 2			SeqNo: 24		Units: mg/K	-		
Analyte			PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	Organics (DRO)	59 5.6	10	50.00 5.000	0	119 113	70 30.4	130 154			
	MB-54549	SampTyp Batab II						8015M/D: Die	esel Range	e Organics	
Client ID:	-	Batch II				RunNo: 7			·		
Prep Date:	8/19/2020	Analysis Date				SeqNo: 24		Units: mg/K	•		a <i>i</i>
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
- H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
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- B Analyte detected in the associated Method Blank
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- P Sample pH Not In Range
- RL Reporting Limit

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	HLCORF Iare 15	P ENERG	Y								
Sample ID: MB-54549	9	SampT	ype: ME	BLK	Test	Code: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS		Batcl	n ID: 54	549	R	unNo: 7	1237				
Prep Date: 8/19/202	20	Analysis D	0ate: 8/	20/2020	S	eqNo: 24	185499	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DR	RO)	ND	10								
Motor Oil Range Organics (I	MRO)	ND	50								
Surr: DNOP		11		10.00		111	30.4	154			

Qualifiers:

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- H Holding times for preparation or analysis exceeded
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- PQL Practical Quanitative Limit
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- E Value above quantitation range
- J Analyte detected below quantitation limits
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- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:HILCORProject:Hare 15	RP ENERGY								
Sample ID: mb-54485	SampType: M	BLK	Tes	tCode: EP	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch ID: 54	485	F	RunNo: 71140					
Prep Date: 8/17/2020	Analysis Date: 8/	18/2020	S	SeqNo: 24	81489	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 1000	1000		99.6	75.3	105			
Sample ID: Ics-54485	SampType: LC	S	Tes	tCode: EP	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: 54	485	F	RunNo: 71	140				
Prep Date: 8/17/2020	Analysis Date: 8/	18/2020	S	SeqNo: 24	81490	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22 5.0	25.00	0	88.6	72.5	106			
Surr: BFB	1100	1000		110	75.3	105			S
Sample ID: mb-54505	SampType: M	BLK	Tes	tCode: EP	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch ID: 54	505	F	RunNo: 71	173				
Prep Date: 8/18/2020	Analysis Date: 8/	19/2020	S	SeqNo: 24	83097	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 1000	1000		102	75.3	105			
Sample ID: Ics-54505	SampType: LC	S	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: 54	505	F	RunNo: 71	173				
Prep Date: 8/18/2020	Analysis Date: 8/	19/2020	S	SeqNo: 24	83098	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23 5.0	25.00	0	90.9	72.5	106			
Surr: BFB	1100	1000		105	75.3	105			S
Sample ID: 2008906-007ams	SampType: MS	3	Tes	tCode: EP	A Method	8015D: Gaso	line Rang	e	
Client ID: BH04@ 23'-25'	Batch ID: 54	526	F	RunNo: 71	246				
Prep Date: 8/18/2020	Analysis Date: 8/	20/2020	S	SeqNo: 24	85750	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	59 4.8	24.15	42.60	65.9	61.3	114			_
Surr: BFB	2600	966.2		273	75.3	105			S
Sample ID: 2008906-007ams	d SampType: MS	SD .	Tes	tCode: EP	PA Method	8015D: Gaso	line Rang	e	
Client ID: BH04@ 23'-25'	Batch ID: 54	526	F	RunNo: 71	246				
Prep Date: 8/18/2020	Analysis Date: 8/	20/2020	S	SeqNo: 24	85751	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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit

WO#: 2008906 25-Aug-20 Hare 15

Sample ID: 2008906-007amsd

Client ID: BH04@ 23'-25'

Client:

Project:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

HILCORP ENERGY

Analysis Laborato	ory, Inc.	WO#:	2008906 25-Aug-20		
ENERGY					
SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range				
Batch ID: 54526	RunNo: 71246				

				-						
Prep Date: 8/18/2020	Analysis Da	ate: 8/	20/2020	5	SeqNo: 2485751			g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	52	4.9	24.63	42.60	39.9	61.3	114	11.0	20	S
Surr: BFB	2400		985.2		242	75.3	105	0	0	S
Sample ID: Ics-54526	SampT	ype: LC	S	Tes	PA Method	8015D: Gaso	line Rang	e		
Client ID: LCSS	Batch	ID: 54	526	RunNo: 71246						
Prep Date: 8/18/2020	Analysis Da	ate: 8/	20/2020	S	SeqNo: 2	485797	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	72.5	106			
Surr: BFB	1100		1000		108	75.3	105			S
Sample ID: mb-54526	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch	ID: 54	526	F	RunNo: 7	1246				
Prep Date: 8/18/2020	Analysis Da	ate: 8/	20/2020	S	SeqNo: 2	485801	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	1000		1000		101	75.3	105			

Qualifiers:

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- P Sample pH Not In Range
- RL Reporting Limit

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Client: Project:	HILCOR Hare 15	P ENERG	Y								
Sample ID:		SamoT	ype: ME		Tes	tCode: FI	PA Method	8021B: Volat	ilos		
	PBS		1 ID: 54			RunNo: $7'$		00210. 10101	1103		
	-										
Prep Date:	8/17/2020	Analysis D	oate: 8/	18/2020	2	SeqNo: 24	481537	Units: mg/K	g		
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	a .	ND	0.10	4 0 0 0		400		100			
Surr: 4-Bromo	ofluorobenzene	1.0		1.000		102	80	120			
Sample ID:	LCS-54485	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	LCSS	Batch	n ID: 54	485	F	RunNo: 7	1140				
Prep Date:	8/17/2020	Analysis D)ate: 8/	18/2020	S	SeqNo: 24	481538	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.92	0.025	1.000	0	92.0	80	120			
Toluene		0.93	0.050	1.000	0	93.3	80	120			
Ethylbenzene		0.94	0.050	1.000	0	93.5	80	120			
Xylenes, Total		2.8	0.10	3.000	0	93.9	80	120			
Surr: 4-Brome	ofluorobenzene	1.0		1.000		102	80	120			
Sample ID:	mb-54505	SampT	ype: ME	BLK	Tes						
Client ID:	PBS	Batch	n ID: 54	505	F						
Prep Date:	8/18/2020	Analysis D	0ate: 8/	19/2020	S	SeqNo: 24	483124	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-Bromo	ofluorobenzene	1.0		1.000		105	80	120			
Sample ID:	LCS-54505	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	LCSS	Batch	n ID: 54	505	F	RunNo: 7 '	1173				
Prep Date:	8/18/2020	Analysis D	0ate: 8/	19/2020	S	SeqNo: 24	483125	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.93	0.025	1.000	0	93.0	80	120			
Toluene		0.95	0.050	1.000	0	95.0	80	120			
Ethylbenzene		0.95	0.050	1.000	0	95.0	80	120			
Xylenes, Total		2.9	0.10	3.000	0	96.4	80	120			
Surr: 4-Bromo	ofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

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- D Sample Diluted Due to Matrix
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

2008906

25-Aug-20

Hare 15

Client:

Project:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Sample ID: 2008906-006ams	Samp	Гуре: МS	6	Tes	tCode: EF	PA Method	8021B: Volat	tiles		
Client ID: BH03@ 15'-18'	Batc	h ID: 54	526	F	RunNo: 7	246				
Prep Date: 8/18/2020	Analysis [Date: 8/ 3	20/2020	5	SeqNo: 24	185953	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.024	0.9579	0	92.8	76.3	120			
Toluene	0.90	0.048	0.9579	0	93.7	78.5	120			
Ethylbenzene	0.91	0.048	0.9579	0	95.5	78.1	124			
Xylenes, Total	2.7	0.096	2.874	0	95.5	79.3	125			
Surr: 4-Bromofluorobenzene	1.0		0.9579		105	80	120			
Sample ID: 2008906-006amsd	Samp	Гуре: МS	SD.	Tes	tCode: EF	PA Method	8021B: Volat	tiles		
Client ID: BH03@ 15'-18'	Batc	h ID: 54	526	F	RunNo: 7 ′	246				
Prep Date: 8/18/2020	Analysis E	Date: 8/ 3	20/2020	S	SeqNo: 24	185954	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9542	0	90.7	76.3	120	2.67	20	
Toluene	0.88	0.048	0.9542	0	92.1	78.5	120	2.11	20	
Ethylbenzene	0.89	0.048	0.9542	0	93.5	78.1	124	2.57	20	
Xylenes, Total	2.7	0.095	2.863	0	92.8	79.3	125	3.23	20	
Surr: 4-Bromofluorobenzene	0.98		0.9542		103	80	120	0	0	
Sample ID: LCS-54526	Samp	Гуре: LC	S	Tes	tCode: EF	PA Method	8021B: Volat	tiles		
Sample ID: LCS-54526 Client ID: LCSS		Гуре: LC h ID: 54 !			tCode: Ef RunNo: 7 ′		8021B: Volat	tiles		
-		h ID: 54	526	F		246	8021B: Volat			
Client ID: LCSS	Batc	h ID: 54	526 20/2020	F	RunNo: 7 ′	246			RPDLimit	Qual
Client ID: LCSS Prep Date: 8/18/2020	Batc Analysis [h ID: 54: Date: 8/	526 20/2020	F	RunNo: 7 ' SeqNo: 2 '	1246 185989	Units: mg/k	ζg	RPDLimit	Qual
Client ID: LCSS Prep Date: 8/18/2020 Analyte	Batc Analysis I Result	h ID: 54 Date: 8/2 PQL	526 20/2020 SPK value	F S SPK Ref Val	RunNo: 7 ′ SeqNo: 2 ⁄ %REC	1 246 185989 LowLimit	Units: mg/K HighLimit	ζg	RPDLimit	Qual
Client ID: LCSS Prep Date: 8/18/2020 Analyte Benzene	Batc Analysis I Result 0.90	h ID: 54 Date: 8 PQL 0.025	526 20/2020 SPK value 1.000	F S SPK Ref Val 0	RunNo: 7 SeqNo: 2 4 <u>%REC</u> 90.4	1246 185989 LowLimit 80	Units: mg/K HighLimit 120	ζg	RPDLimit	Qual
Client ID: LCSS Prep Date: 8/18/2020 Analyte Benzene Toluene	Batc Analysis I Result 0.90 0.91	h ID: 54 Date: 8/ PQL 0.025 0.050	526 20/2020 SPK value 1.000 1.000	F SPK Ref Val 0 0	RunNo: 7 SeqNo: 24 %REC 90.4 90.6	246 485989 LowLimit 80 80	Units: mg/K HighLimit 120 120	ζg	RPDLimit	Qual
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Client ID: LCSS Prep Date: 8/18/2020 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID: mb-54526	Batc Analysis I Result 0.90 0.91 0.91 2.7 1.0 Samp	h ID: 54 Date: 8/ PQL 0.025 0.050 0.050 0.10 Type: ME h ID: 54	526 20/2020 3PK value 1.000 1.000 3.000 1.000 3LK 526	F SPK Ref Val 0 0 0 0 0 Tes F	RunNo: 7 SeqNo: 2 %REC 90.4 90.6 90.5 91.6 103 tCode: EF	1246 485989 LowLimit 80 80 80 80 80 80 80 80 80 80	Units: mg/k HighLimit 120 120 120 120 120	Sg %RPD	RPDLimit	Qual
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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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 15 of 15

WO#: 2008906

25-Aug-20

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Wed by OCD: 5/28/2021 11:57:31 AM HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3	ntal Analysis Labord 4901 Hawkin, Albuquerque, NM 85 975 FAX: 505-345-4 s.hallenvironmental.	s NE 7109 Sam 4107	Sample Log-In Check List				
Client Name: HILCORP ENERGY	Work Order Num	ber: 2008906		RcptNo: 1				
Received By: Cheyenne Cason	8/18/2020 7:55:00	AM						
Completed By: Isaiah Ortiz	8/18/2020 8:26:26	AM	エーク	A				
Reviewed By:	6 18 20			,				
Chain of Custody								
1. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present				
2. How was the sample delivered?		Courier						
Log In 3. Was an attempt made to cool the samples	2	Yes 🖌	No 🗔					
4. Were all samples received at a temperature	e of >0° C to 6.0°C	Yes 🔽	No 🗌					
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗌					
6. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 📋					
7. Are samples (except VOA and ONG) prope	rly preserved?	Yes 🗹	No 🗌					
8. Was preservative added to bottles?		Yes 🗌	No 🗹					
9. Received at least 1 vial with headspace <1/	4" for AQ VOA?	Yes	No 🗌	NA 🗹				
10. Were any sample containers received brok	en?	Yes 🗌	No 🗹	# of preserved				
 Does paperwork match bottle labels? (Note discrepancies on chain of custody) 		Yes 🗹	No 🗌	bottles checked for pH: <2 or >12 unless note				
 Are matrices correctly identified on Chain or 	f Custody?	Yes 🗹	No 🗌	Adjusted?				
3. Is it clear what analyses were requested?		Yes 🗹	No 🗌	Checked by MC 8/15				
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by A V Q L Q				
Special Handling (if applicable)								
15. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	NA 🗹				
Person Notified:	Date:							
By Whom:	Via:	eMail 🔄 Pl	hone 🗌 Fax	In Person				
Regarding:	ander ander 2000 et al. 1990 et al. 199	E 100 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200		and the second second and the second s				
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16. Additional remarks:								
17. Cooler Information								
Cooler No Temp °C Condition S	Seal Intact Seal No	Seal Date	Signed By					

Page 1 of 1

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ENVIRONME YSIS LABOR/ environmental.com Albuquerque, NM 87109	505-345-4107 Request											W	the ana
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Chain-of-Custody Record Hilcorp Everay Company Hri. Sennifer Deal	*	² acka dard tation	AC (Type Time	09.15	0945	1230	1420	1430			Time: \ \	Time:	necess
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September 01, 2020

Jennifer Deal HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

RE: Hare 15

OrderNo.: 2008C46

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 19 sample(s) on 8/22/2020 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 2008C46

Date Reported: 9/1/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH03@23'-25' **Project:** Hare 15 Collection Date: 8/20/2020 3:15:00 PM Lab ID: 2008C46-001 Matrix: SOIL Received Date: 8/22/2020 9:23:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: BRM Diesel Range Organics (DRO) mg/Kg 860 95 10 8/27/2020 2:28:25 PM Motor Oil Range Organics (MRO) ND 480 D mg/Kg 10 8/27/2020 2:28:25 PM Surr: DNOP 0 30.4-154 S %Rec 10 8/27/2020 2:28:25 PM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 8/29/2020 9:08:55 PM 60 mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene 0.49 mg/Kg 20 8/26/2020 5:14:52 AM 16 Toluene 360 mg/Kg 200 8/27/2020 5:51:33 AM 9.8 Ethvlbenzene 64 0.98 mg/Kg 20 8/26/2020 5:14:52 AM Xylenes, Total 960 20 mg/Kg 200 8/27/2020 5:51:33 AM Surr: 1.2-Dichloroethane-d4 112 70-130 %Rec 20 8/26/2020 5:14:52 AM Surr: 4-Bromofluorobenzene 86.2 70-130 %Rec 20 8/26/2020 5:14:52 AM Surr: Dibromofluoromethane 109 70-130 %Rec 20 8/26/2020 5:14:52 AM Surr: Toluene-d8 103 70-130 %Rec 20 8/26/2020 5:14:52 AM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR Gasoline Range Organics (GRO) 14000 980 8/27/2020 5:51:33 AM mg/Kg 200 Surr: BFB 106 70-130 %Rec 200 8/27/2020 5:51:33 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
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

Page 1 of 16

Hare 15

Project:

Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH03@29-30' Collection Date: 8/20/2020 3:45:00 PM

Lab ID: 2008C46-002 Matrix: SOIL Received Date: 8/22/2020 9:23:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 16 9.2 mg/Kg 1 8/26/2020 8:31:45 PM Motor Oil Range Organics (MRO) ND 46 mg/Kg 1 8/26/2020 8:31:45 PM Surr: DNOP 74.4 30.4-154 %Rec 1 8/26/2020 8:31:45 PM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 8/29/2020 9:45:56 PM 60 mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 0.024 mg/Kg 8/26/2020 5:43:40 AM 1 Toluene 0.70 0.049 mg/Kg 8/26/2020 5:43:40 AM 1 Ethvlbenzene 0.28 0.049 mg/Kg 1 8/26/2020 5:43:40 AM Xylenes, Total 4.9 0.097 mg/Kg 1 8/26/2020 5:43:40 AM Surr: 1.2-Dichloroethane-d4 102 70-130 %Rec 1 8/26/2020 5:43:40 AM Surr: 4-Bromofluorobenzene 95.1 70-130 %Rec 1 8/26/2020 5:43:40 AM Surr: Dibromofluoromethane 70-130 %Rec 1 8/26/2020 5:43:40 AM 112 Surr: Toluene-d8 101 70-130 %Rec 1 8/26/2020 5:43:40 AM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR Gasoline Range Organics (GRO) 76 8/26/2020 5:43:40 AM 49 mg/Kg 1

114

70-130

%Rec

1

8/26/2020 5:43:40 AM

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

Qualifiers:

Surr: BFB

- 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 range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 16

Gasoline Range Organics (GRO)

Surr: BFB

Hare 15

Project:

Analytical Report Lab Order 2008C46

8/27/2020 6:20:01 AM

8/27/2020 6:20:01 AM

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH04@25'-27' Collection Date: 8/21/2020 8:45:00 AM

Lab ID: 2008C46-004 Matrix: SOIL Received Date: 8/22/2020 9:23:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: BRM Diesel Range Organics (DRO) mg/Kg 1400 90 10 8/27/2020 2:52:26 PM Motor Oil Range Organics (MRO) ND 450 D mg/Kg 10 8/27/2020 2:52:26 PM Surr: DNOP 0 30.4-154 S %Rec 10 8/27/2020 2:52:26 PM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 8/29/2020 9:58:17 PM 60 mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene 12 0.49 mg/Kg 20 8/26/2020 6:12:14 AM Toluene 300 9.9 mg/Kg 200 8/27/2020 6:20:01 AM Ethvlbenzene 55 0.99 mg/Kg 20 8/26/2020 6:12:14 AM Xylenes, Total 890 20 mg/Kg 200 8/27/2020 6:20:01 AM Surr: 1.2-Dichloroethane-d4 109 70-130 %Rec 20 8/26/2020 6:12:14 AM Surr: 4-Bromofluorobenzene 92.7 70-130 %Rec 20 8/26/2020 6:12:14 AM Surr: Dibromofluoromethane 70-130 %Rec 20 8/26/2020 6:12:14 AM 112 Surr: Toluene-d8 98.7 70-130 %Rec 20 8/26/2020 6:12:14 AM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR

12000

107

990

70-130

mg/Kg

%Rec

200

200

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 range due to dilution or matrix

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

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Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH04@28-30' Collection Date: 8/21/2020 8:50:00 AM

Project:	Hare 15	ction Date:	8/21/2	020 8:50:00 AM						
Lab ID:	2008C46-005	Matrix: SOIL	Received Date: 8/22/2020 9:23:00 AM							
Analyses		Result	RL Qu	al Units	DF	Date Analyzed				
EPA MET	HOD 8015M/D: DIESEL RA	ANGE ORGANICS				Analyst: BRM				
Diesel R	ange Organics (DRO)	ND	9.4	mg/Kg	1	8/26/2020 8:52:09 PM				
Motor Oi	I Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2020 8:52:09 PM				
Surr: I	ONOP	90.4	30.4-154	%Rec	1	8/26/2020 8:52:09 PM				
EPA MET	HOD 300.0: ANIONS					Analyst: JMT				
Chloride		ND	60	mg/Kg	20	8/29/2020 10:10:36 PM				
EPA MET	HOD 8260B: VOLATILES	SHORT LIST				Analyst: JMR				
Benzene	9	ND	0.025	mg/Kg	1	8/26/2020 6:40:42 AM				
Toluene		ND	0.049	mg/Kg	1	8/26/2020 6:40:42 AM				
Ethylben	zene	ND	0.049	mg/Kg	1	8/26/2020 6:40:42 AM				
Xylenes,	Total	ND	0.098	mg/Kg	1	8/26/2020 6:40:42 AM				
Surr: 7	1,2-Dichloroethane-d4	96.8	70-130	%Rec	1	8/26/2020 6:40:42 AM				
Surr: 4	4-Bromofluorobenzene	103	70-130	%Rec	1	8/26/2020 6:40:42 AM				
Surr: I	Dibromofluoromethane	110	70-130	%Rec	1	8/26/2020 6:40:42 AM				
Surr:	Toluene-d8	96.8	70-130	%Rec	1	8/26/2020 6:40:42 AM				
EPA MET	HOD 8015D MOD: GASOL	INE RANGE				Analyst: JMR				
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2020 6:40:42 AM				
Surr: I	BFB	101	70-130	%Rec	1	8/26/2020 6:40:42 AM				

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 range due to dilution or matrix

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

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2008C46-008

Hare 15

Project:

Lab ID:

Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH05@20-25' Collection Date: 8/21/2020 10:30:00 AM

Received Date: 8/22/2020 9:23:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	ORGANICS				Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/26/2020 9:02:15 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2020 9:02:15 PM
Surr: DNOP	75.6	30.4-154	%Rec	1	8/26/2020 9:02:15 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	59	mg/Kg	20	8/29/2020 10:22:57 PM
EPA METHOD 8260B: VOLATILES SHORT	LIST				Analyst: JMR
Benzene	ND	0.024	mg/Kg	1	8/26/2020 7:09:13 AM
Toluene	ND	0.048	mg/Kg	1	8/26/2020 7:09:13 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/26/2020 7:09:13 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/26/2020 7:09:13 AM
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	8/26/2020 7:09:13 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/26/2020 7:09:13 AM
Surr: Dibromofluoromethane	114	70-130	%Rec	1	8/26/2020 7:09:13 AM
Surr: Toluene-d8	96.7	70-130	%Rec	1	8/26/2020 7:09:13 AM
EPA METHOD 8015D MOD: GASOLINE RA	NGE				Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/26/2020 7:09:13 AM
Surr: BFB	102	70-130	%Rec	1	8/26/2020 7:09:13 AM

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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2008C46-009

Hare 15

Project:

Lab ID:

Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH05@25-30' Collection Date: 8/21/2020 10:40:00 AM

Received Date: 8/22/2020 9:23:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: BRM
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	8/26/2020 9:12:24 PM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/26/2020 9:12:24 PM
Surr: DNOP	97.5	30.4-154	%Rec	1	8/26/2020 9:12:24 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/29/2020 10:35:18 PM
EPA METHOD 8260B: VOLATILES SHORT LI	ST				Analyst: JMR
Benzene	ND	0.024	mg/Kg	1	8/26/2020 7:37:51 AM
Toluene	ND	0.049	mg/Kg	1	8/26/2020 7:37:51 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2020 7:37:51 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/26/2020 7:37:51 AM
Surr: 1,2-Dichloroethane-d4	96.2	70-130	%Rec	1	8/26/2020 7:37:51 AM
Surr: 4-Bromofluorobenzene	99.8	70-130	%Rec	1	8/26/2020 7:37:51 AM
Surr: Dibromofluoromethane	108	70-130	%Rec	1	8/26/2020 7:37:51 AM
Surr: Toluene-d8	102	70-130	%Rec	1	8/26/2020 7:37:51 AM
EPA METHOD 8015D MOD: GASOLINE RANG	ε				Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2020 7:37:51 AM
Surr: BFB	100	70-130	%Rec	1	8/26/2020 7:37:51 AM

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Gasoline Range Organics (GRO)

Surr: BFB

Analytical Report Lab Order 2008C46

Date Reported: 9/1/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH06@20'-25' **Project:** Hare 15 Collection Date: 8/21/2020 11:40:00 AM Lab ID: 2008C46-011 Matrix: SOIL Received Date: 8/22/2020 9:23:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: BRM Diesel Range Organics (DRO) ND 9.5 mg/Kg 1 8/26/2020 9:22:34 PM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/26/2020 9:22:34 PM Surr: DNOP 75.2 30.4-154 %Rec 1 8/26/2020 9:22:34 PM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 60 8/29/2020 10:47:38 PM mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 0.12 mg/Kg 8/26/2020 8:06:35 AM 5 Toluene 5 ND 0.25 mg/Kg 8/26/2020 8:06:35 AM 5 Ethvlbenzene ND 0.25 mg/Kg 8/26/2020 8:06:35 AM Xylenes, Total ND 0.49 mg/Kg 5 8/26/2020 8:06:35 AM Surr: 1.2-Dichloroethane-d4 99.6 70-130 %Rec 5 8/26/2020 8:06:35 AM 5 Surr: 4-Bromofluorobenzene 102 70-130 %Rec 8/26/2020 8:06:35 AM Surr: Dibromofluoromethane 70-130 %Rec 5 8/26/2020 8:06:35 AM 110 5 Surr: Toluene-d8 104 70-130 %Rec 8/26/2020 8:06:35 AM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR

ND

106

25

70-130

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 range due to dilution or matrix

B Analyte detected in the associated Method Blank

5

5

mg/Kg

%Rec

8/26/2020 8:06:35 AM

8/26/2020 8:06:35 AM

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Project: Hare 15

Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH06@25-30' Collection Date: 8/21/2020 11:50:00 AM

Lab ID: 2008C46-012	Matrix: SOIL	Rece	ived Date:	8/22/2	020 9:23:00 AM
Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst: BRM
Diesel Range Organics (DRO)	ND	8.5	mg/Kg	1	8/26/2020 9:32:46 PM
Motor Oil Range Organics (MRO)	ND	43	mg/Kg	1	8/26/2020 9:32:46 PM
Surr: DNOP	75.8	30.4-154	%Rec	1	8/26/2020 9:32:46 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/29/2020 10:59:59 PM
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analyst: JMR
Benzene	ND	0.024	mg/Kg	1	8/26/2020 8:35:12 AM
Toluene	ND	0.049	mg/Kg	1	8/26/2020 8:35:12 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2020 8:35:12 AM
Xylenes, Total	0.45	0.098	mg/Kg	1	8/26/2020 8:35:12 AM
Surr: 1,2-Dichloroethane-d4	100	70-130	%Rec	1	8/26/2020 8:35:12 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/26/2020 8:35:12 AM
Surr: Dibromofluoromethane	110	70-130	%Rec	1	8/26/2020 8:35:12 AM
Surr: Toluene-d8	100	70-130	%Rec	1	8/26/2020 8:35:12 AM
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2020 8:35:12 AM
Surr: BFB	104	70-130	%Rec	1	8/26/2020 8:35:12 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
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Hare 15

Project:

Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH07@15'-20' Collection Date: 8/21/2020 12:35:00 PM **Dessived Deter** 8/22/2020 0.22.00 AM

Lab ID: 2008C46-014	Matrix: SOIL	Rece	ived Date:	8/22/2	020 9:23:00 AM
Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analyst: BRM
Diesel Range Organics (DRO)	160	9.5	mg/Kg	1	8/26/2020 9:42:50 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2020 9:42:50 PM
Surr: DNOP	81.2	30.4-154	%Rec	1	8/26/2020 9:42:50 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	76	60	mg/Kg	20	8/29/2020 11:12:19 PM
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst: JMR
Benzene	0.79	0.25	mg/Kg	10	8/26/2020 9:03:41 AM
Toluene	12	0.49	mg/Kg	10	8/26/2020 9:03:41 AM
Ethylbenzene	6.8	0.49	mg/Kg	10	8/26/2020 9:03:41 AM
Xylenes, Total	110	0.98	mg/Kg	10	8/26/2020 9:03:41 AM
Surr: 1,2-Dichloroethane-d4	109	70-130	%Rec	10	8/26/2020 9:03:41 AM
Surr: 4-Bromofluorobenzene	98.9	70-130	%Rec	10	8/26/2020 9:03:41 AM
Surr: Dibromofluoromethane	109	70-130	%Rec	10	8/26/2020 9:03:41 AM
Surr: Toluene-d8	96.5	70-130	%Rec	10	8/26/2020 9:03:41 AM
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst: JMR
Gasoline Range Organics (GRO)	1600	49	mg/Kg	10	8/26/2020 9:03:41 AM
Surr: BFB	108	70-130	%Rec	10	8/26/2020 9:03:41 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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Project: Hare 15

Analytical Report Lab Order 2008C46

Date Reported: 9/1/2020

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH07@28'-30' Collection Date: 8/21/2020 12:50:00 PM Received Date: 8/22/2020 9:23:00 AM

Lab ID: 2008C46-015	Matrix: SOIL	Rece	ived Date:	8/22/2	2020 9:23:00 AM
Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst: BRM
Diesel Range Organics (DRO)	ND	8.7	mg/Kg	1	8/26/2020 9:52:55 PM
Motor Oil Range Organics (MRO)	ND	43	mg/Kg	1	8/26/2020 9:52:55 PM
Surr: DNOP	84.7	30.4-154	%Rec	1	8/26/2020 9:52:55 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/29/2020 9:50:15 AM
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst: JMR
Benzene	ND	0.023	mg/Kg	1	8/26/2020 9:32:14 AM
Toluene	ND	0.046	mg/Kg	1	8/26/2020 9:32:14 AM
Ethylbenzene	ND	0.046	mg/Kg	1	8/26/2020 9:32:14 AM
Xylenes, Total	ND	0.092	mg/Kg	1	8/26/2020 9:32:14 AM
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	1	8/26/2020 9:32:14 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/26/2020 9:32:14 AM
Surr: Dibromofluoromethane	113	70-130	%Rec	1	8/26/2020 9:32:14 AM
Surr: Toluene-d8	95.8	70-130	%Rec	1	8/26/2020 9:32:14 AM
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/26/2020 9:32:14 AM
Surr: BFB	100	70-130	%Rec	1	8/26/2020 9:32:14 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
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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2008C46-017

Hare 15

Project:

Lab ID:

Analytical Report Lab Order 2008C46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/1/2020 Client Sample ID: BH08@25-30'

Collection Date: 8/21/2020 3:15:00 PM Received Date: 8/22/2020 9:23:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: mb
Diesel Range Organics (DRO)	270	9.1	mg/Kg	1	8/31/2020 9:07:35 PM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/31/2020 9:07:35 PM
Surr: DNOP	74.8	30.4-154	%Rec	1	8/31/2020 9:07:35 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	610	60	mg/Kg	20	8/29/2020 10:02:36 AM
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst: DJF
Benzene	ND	0.050	mg/Kg	2	8/30/2020 4:37:03 AM
Toluene	ND	0.10	mg/Kg	2	8/30/2020 4:37:03 AM
Ethylbenzene	0.23	0.10	mg/Kg	2	8/30/2020 4:37:03 AM
Xylenes, Total	1.1	0.20	mg/Kg	2	8/30/2020 4:37:03 AM
Surr: 1,2-Dichloroethane-d4	102	70-130	%Rec	2	8/30/2020 4:37:03 AM
Surr: 4-Bromofluorobenzene	80.4	70-130	%Rec	2	8/30/2020 4:37:03 AM
Surr: Dibromofluoromethane	112	70-130	%Rec	2	8/30/2020 4:37:03 AM
Surr: Toluene-d8	97.7	70-130	%Rec	2	8/30/2020 4:37:03 AM
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst: DJF
Gasoline Range Organics (GRO)	120	10	mg/Kg	2	8/30/2020 4:37:03 AM
Surr: BFB	121	70-130	%Rec	2	8/30/2020 4:37:03 AM

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	HILCOR	P ENERG	Y										
Project:	Hare 15												
Sample ID:	MB-54776	SampT	ype: m ł	olk	Tes	tCode: E	PA Method	300.0: Anions	5				
Client ID:	PBS	Batch	n ID: 54	776	F	RunNo: 71475							
Prep Date:	8/28/2020	Analysis D)ate: 8/	29/2020	5	SeqNo: 2	495781	Units: mg/Kg					
Analyte		Result	PQL 1.5	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Sample ID:	LCS-54776		ype: Ics	6	Tes	tCode: E	PA Method	300.0: Anion:	6				
Client ID:	LCSS	Batch ID: 54776 RunNo: 71475											
Prep Date:	8/28/2020	Analysis Date: 8/29/2020 SeqNo: 2495782 Units: mg											
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Chloride		14	1.5	15.00	0	96.5	90	110					
Sample ID:	MB-54771	SampT	ype: ml	olk	Tes	tCode: E	PA Method	300.0: Anions	8				
Client ID:	PBS	Batch	n ID: 54	771	F	RunNo: 7	1475						
Prep Date:	8/28/2020	Analysis D	0ate: 8/	29/2020	S	SeqNo: 2	495821	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-54771	SampT	ype: Ics	6	Tes	tCode: E	PA Method	300.0: Anions	S				
Client ID:	LCSS	Batch	n ID: 54	771	F	RunNo: 7	1475						
Prep Date:	8/28/2020	Analysis D)ate: 8/	29/2020	5	SeqNo: 2	495822	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	95.3	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 range due to dilution or matrix

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

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2008C46

01-Sep-20

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:	HILCOR Hare 15	P ENERG	Y								
Sample ID: LC	S-54670	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LC	SS	Batch	n ID: 54	670	F	RunNo: 7	1390				
Prep Date: 8/	/25/2020	Analysis D	ate: 8/	26/2020	S	SeqNo: 24	492006	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organ	nics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP		4.1		5.000		81.6	30.4	154			
Sample ID: MB	3-54670	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PB	S	Batch	n ID: 54	670	F	RunNo: 7	1390				
Prep Date: 8/	/25/2020	Analysis D	ate: 8/	26/2020	SeqNo: 2492010 Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organ	. ,	ND	10								
Motor Oil Range Or	ganics (MRO)	ND	50								
Surr: DNOP		9.6		10.00		96.1	30.4	154			
Sample ID: MB	3-54770	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PB	S	Batch	n ID: 54	770	F	RunNo: 7	1494				
Prep Date: 8/	/28/2020	Analysis D	ate: 8/	31/2020	S	SeqNo: 24	496848	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organ	nics (DRO)	ND	10								
Motor Oil Range Or	ganics (MRO)	ND	50								
Surr: DNOP		11		10.00		105	30.4	154			
Sample ID: LC	S-54770	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LC	SS	Batch	n ID: 54	770	F	RunNo: 7	1494				
Prep Date: 8/	/28/2020	Analysis D	ate: 8/	31/2020	S	SeqNo: 24	496851	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organ	nics (DRO)	54	10	50.00	0	108	70	130			
Surr: DNOP		4.9		5.000		98.3	30.4	154			

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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

Page 13 of 16

2008C46

01-Sep-20

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project: Hare 1	5									
Sample ID: Ics-54644	SampT	Гуре: LC	S4	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: BatchQC	Batc	h ID: 540	644	F	RunNo: 7	1358				
Prep Date: 8/24/2020	Analysis E	Date: 8/	25/2020	S	SeqNo: 2	490933	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.9	80	120			
Toluene	0.96	0.050	1.000	0	95.6	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.8	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.4	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130			
Surr: Toluene-d8	0.49		0.5000		97.0	70	130			
Sample ID: mb-54644	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batc	h ID: 540	644	F	RunNo: 7	1358				
Prep Date: 8/24/2020	Analysis E	Date: 8/	25/2020	5	SeqNo: 2	490934	Units: mg/K	g		
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: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		99.0	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		115	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			
Sample ID: mb-54766	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batc	h ID: 54 7	766	F	RunNo: 7	1470				
Prep Date: 8/28/2020	Analysis E	Date: 8/	29/2020	S	SeqNo: 2	495418	Units: mg/K	g		
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: 1,2-Dichloroethane-d4	0.49		0.5000		98.6	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.3	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		114	70	130			
Surr: Toluene-d8	0.52		0.5000		104	70	130			

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 14 of 16

2008C46

01-Sep-20

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

Sample Diluted Due to Matrix

PQL Practical Quanitative Limit

Not Detected at the Reporting Limit

Qualifiers:

*

D

Н

ND

S

Client:	HILCORP ENERGY
Project:	Hare 15

Sample ID: Ics-54766	Samp	Гуре: LC	S4	TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: BatchQC	Batc	h ID: 54	766	F	RunNo: 7	1470								
Prep Date: 8/28/2020	Analysis [Date: 8/	29/2020	S	SeqNo: 2	495419	Units: mg/#	٢g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	0.95	0.025	1.000	0	95.2	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	3.2	0.10	3.000	0	108	80	120							
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130							
Surr: 4-Bromofluorobenzene	0.51		0.5000		101	70	130							
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130							
Surr: Toluene-d8	0.51		0.5000		101	70	130							

Analyte detected in the associated Method Blank в

Е

Р Sample pH Not In Range

Reporting Limit RL

- Value above quantitation range
- J Analyte detected below quantitation limits

Page 15 of 16

WO#: 2008C46

01-Sep-20

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project: Hare 15	5								
Sample ID: Ics-54644	SampType: LC	S	Test	tCode: EF	A Method	8015D Mod:	Gasoline	Range	
Client ID: LCSS	Batch ID: 54	644	R	lunNo: 71	358				
Prep Date: 8/24/2020	Analysis Date: 8/	25/2020	S	SeqNo: 24	90993	Units: mg/k	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22 5.0	25.00	0	86.3	70	130			
Surr: BFB	500	500.0		100	70	130			
Sample ID: mb-54644	SampType: MI	BLK	Tes	tCode: EF	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch ID: 54	644	R	lunNo: 71	358				
Prep Date: 8/24/2020	Analysis Date: 8/	25/2020	S	eqNo: 24	90994	Units: mg/k	٤g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5.0								
Surr: BFB	500	500.0		99.2	70	130			
Sample ID: mb-54766	SampType: MI	BLK	Tes	tCode: EF	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch ID: 54	766	R	lunNo: 71	470				
Prep Date: 8/28/2020	Analysis Date: 8/	29/2020	S	eqNo: 24	195454	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	510	500.0		103	70	130			
Sample ID: Ics-54766	SampType: LC	s	Tes	tCode: EF	A Method	8015D Mod:	Gasoline	Range	
Client ID: LCSS	Batch ID: 54	766	R	lunNo: 71	470				
Prep Date: 8/28/2020	Analysis Date: 8/	29/2020	S	eqNo: 24	195455	Units: mg/k	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22 5.0	25.00	0	89.3	70	130			
Surr: BFB	520	500.0		104	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 range due to dilution or matrix

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

Page 16 of 16

WO#: 2008C46 01-Sep-20

	ANAL	ONMENT YSIS Ratory	AL.	TEI	l Environmer L: 505-345-3 ebsite: client.	490 Albuquerq 975 FAX:	1 Haw nue, NN 505-3-	vkins NE M 87109 45-4107	Sar	nple Log-In C	heck List
С	lient Name:	HILCORP E	ENERGY	Work	Order Num	ber: 200	8C46			RcptNo:	1
	eceived By: ompleted By:	Juan Roja Juan Roja			20 9:23:00 / 20 8:10:02 /			44 44	antay antay		
Re	eviewed By:	61		8 [74]	20						
1.	ain of Cus Is Chain of Cu How was the	ustody compl				Yes <u>Cou</u>		I	No 🗌	Not Present	
	o g In Was an attem	pt made to c	ool the sampl	es?		Yes	✓	1	No 🗌	NA 🗌	
4.	Were all samp	oles received	at a temperat	ure of >0° C t	o 6.0°C	Yes	✓	1	No 🗌	NA 🗌	
5.	Sample(s) in p	oroper contai	ner(s)?			Yes	✓	1	No 🗌		
6. 8	Sufficient sam	ple volume fo	or indicated te	st(s)?		Yes	✓	N	lo 🗌		
7. /	Are samples (e	except VOA a	and ONG) pro	perly preserve	d?	Yes	\checkmark	N	lo 🗌		
8. \	Nas preservat	tive added to	bottles?			Yes		N	lo 🗸	NA 🗌	
9. 1	Received at le	ast 1 vial with	n headspace <	<1/4" for AQ V	OA?	Yes		N	lo 🗌	NA 🔽	
10.	Were any sam	nple containe	rs received br	oken?		Yes		١	No 🔽	# of preserved bottles checked	
	Does paperwo Note discrepa					Yes	~	N	lo 🗌	for pH:	>12 unless noted)
12./	Are matrices c	orrectly ident	ified on Chair	of Custody?		Yes	✓	N	lo 🗌	Adjusted?	
13.1	s it clear what	analyses we	re requested?	?		Yes	\checkmark	N	lo 🗌		(1,1)
	Vere all holdir If no, notify cu					Yes	✓	N	lo 🗌	Checked by	C 8/24/20
Spe	cial Handli	ing (if app	licable)								
15.	Was client not	tified of all dis	screpancies w	ith this order?		Yes		٢	10 🗌	NA 🗹	
	Person	Notified:			Date	Γ					
	By Who	m: 🖡			Via:	eMa	ail 🗌	Phone	🗌 Fax	In Person	
	Regardi	ng:									
	Client In	structions:									
16.	Additional ren	narks:									
17.	Cooler Inform										
	Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Da	ate	Signe	d By		
	1	2.8	Good								

Page 1 of 1

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September 01, 2020

Jennifer Deal Hilcorp Energy PO Box 61529 Houston, TX 77208-1529 TEL: (337) 276-7676 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

RE: Hare 15

OrderNo.: 2008C94

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 12 sample(s) on 8/25/2020 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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		Cl	ient Sa	ample II	D: BI	H09@ 25'-27'	
Project: Hare 15		(Collect	ion Dat	e: 8/2	24/2020 9:35:00 AM	
Lab ID: 2008C94-001	Matrix: SOIL		Recei	ved Dat	e: 8/2	25/2020 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	JMT
Chloride	120	60		mg/Kg	20	8/29/2020 7:07:45 PM	54781
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	190	8.6		mg/Kg	1	8/27/2020 2:22:29 PM	54694
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/27/2020 2:22:29 PM	54694
Surr: DNOP	84.8	30.4-154		%Rec	1	8/27/2020 2:22:29 PM	54694
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	98	25		mg/Kg	5	8/26/2020 1:11:40 PM	54684
Surr: BFB	319	75.3-105	S	%Rec	5	8/26/2020 1:11:40 PM	54684
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.12		mg/Kg	5	8/26/2020 1:11:40 PM	54684
Toluene	ND	0.25		mg/Kg	5	8/26/2020 1:11:40 PM	54684
Ethylbenzene	ND	0.25		mg/Kg	5	8/26/2020 1:11:40 PM	54684
Xylenes, Total	0.97	0.50		mg/Kg	5	8/26/2020 1:11:40 PM	54684
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	5	8/26/2020 1:11:40 PM	54684

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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CLIENT: Hilcorp Energy

Hare 15

Project:

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

Client Sample ID: BH09@ 28'-30' Collection Date: 8/24/2020 9:40:00 AM Received Date: 8/25/2020 8:00:00 AM

Lab ID: 2008C94-002	Matrix: SOIL		Received Dat	e: 8/2	25/2020 8:00:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	73	60	mg/Kg	20	8/29/2020 7:20:10 PM	54781
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	11	9.4	mg/Kg	1	8/27/2020 2:52:19 PM	54694
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/27/2020 2:52:19 PM	54694
Surr: DNOP	97.4	30.4-154	%Rec	1	8/27/2020 2:52:19 PM	54694
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2020 6:17:41 PM	54684
Surr: BFB	100	75.3-105	%Rec	1	8/26/2020 6:17:41 PM	54684
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	8/26/2020 6:17:41 PM	54684
Toluene	ND	0.049	mg/Kg	1	8/26/2020 6:17:41 PM	54684
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2020 6:17:41 PM	54684
Xylenes, Total	ND	0.099	mg/Kg	1	8/26/2020 6:17:41 PM	54684
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	8/26/2020 6:17:41 PM	54684

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy				-		H10@ 15'-20'	
Project: Hare 15 Lab ID: 2008C94-004	Matrix: SOIL					24/2020 10:30:00 AM 25/2020 8:00:00 AM	
Lab ID: 2008C94-004	Matrix: SOIL		Kecel	veu Dat	e: 0/2	25/2020 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: JMT
Chloride	ND	60		mg/Kg	20	8/29/2020 7:32:34 PM	54781
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	110	9.8		mg/Kg	1	8/27/2020 3:02:13 PM	54694
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/27/2020 3:02:13 PM	54694
Surr: DNOP	81.5	30.4-154		%Rec	1	8/27/2020 3:02:13 PM	54694
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst	NSB
Gasoline Range Organics (GRO)	180	24		mg/Kg	5	8/26/2020 1:35:07 PM	54684
Surr: BFB	295	75.3-105	S	%Rec	5	8/26/2020 1:35:07 PM	54684
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.12		mg/Kg	5	8/26/2020 1:35:07 PM	54684
Toluene	ND	0.24		mg/Kg	5	8/26/2020 1:35:07 PM	54684
Ethylbenzene	1.2	0.24		mg/Kg	5	8/26/2020 1:35:07 PM	54684
Xylenes, Total	19	0.48		mg/Kg	5	8/26/2020 1:35:07 PM	54684
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	5	8/26/2020 1:35:07 PM	54684

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		Cl	ient S	ample II	D: BF	H10@ 28'-30'	
Project: Hare 15		(Collec	tion Dat	e: 8/2	24/2020 10:45:00 AM	
Lab ID: 2008C94-005	Matrix: SOIL		Recei	ived Dat	e: 8/2	25/2020 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: JMT
Chloride	ND	60		mg/Kg	20	8/29/2020 7:44:59 PM	54781
EPA METHOD 8015M/D: DIESEL RANGE	E ORGANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	8/27/2020 3:12:06 PM	54694
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/27/2020 3:12:06 PM	54694
Surr: DNOP	89.0	30.4-154		%Rec	1	8/27/2020 3:12:06 PM	54694
EPA METHOD 8015D: GASOLINE RANG	Ε					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/26/2020 6:41:11 PM	54684
Surr: BFB	106	75.3-105	S	%Rec	1	8/26/2020 6:41:11 PM	54684
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	0.044	0.024		mg/Kg	1	8/26/2020 6:41:11 PM	54684
Toluene	0.11	0.048		mg/Kg	1	8/26/2020 6:41:11 PM	54684
Ethylbenzene	ND	0.048		mg/Kg	1	8/26/2020 6:41:11 PM	54684
Xylenes, Total	0.53	0.097		mg/Kg	1	8/26/2020 6:41:11 PM	54684
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	8/26/2020 6:41:11 PM	54684

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		Cl	ient Sa	ample II	D: BH	H11@ 10'-15'	
Project: Hare 15		(Collect	ion Dat	e: 8/2	24/2020 11:50:00 AM	
Lab ID: 2008C94-006	Matrix: SOIL		Recei	ved Dat	e: 8/2	25/2020 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	: JMT
Chloride	200	60		mg/Kg	20	8/29/2020 7:57:24 PM	54781
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analys	BRM
Diesel Range Organics (DRO)	73	10		mg/Kg	1	8/27/2020 3:21:59 PM	54694
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/27/2020 3:21:59 PM	54694
Surr: DNOP	76.0	30.4-154		%Rec	1	8/27/2020 3:21:59 PM	54694
EPA METHOD 8015D: GASOLINE RANG	E					Analys	: NSB
Gasoline Range Organics (GRO)	120	4.9		mg/Kg	1	8/26/2020 7:04:38 PM	54684
Surr: BFB	284	75.3-105	S	%Rec	1	8/26/2020 7:04:38 PM	54684
EPA METHOD 8021B: VOLATILES						Analys	: NSB
Benzene	0.063	0.024		mg/Kg	1	8/26/2020 7:04:38 PM	54684
Toluene	0.33	0.049		mg/Kg	1	8/26/2020 7:04:38 PM	54684
Ethylbenzene	0.58	0.049		mg/Kg	1	8/26/2020 7:04:38 PM	54684
Xylenes, Total	18	0.98		mg/Kg	10	8/27/2020 9:00:32 AM	54684
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	1	8/26/2020 7:04:38 PM	54684

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		C	ient S	ample II	D: BF	H11@ 25'-30'			
Project: Hare 15			Collec	tion Dat	e: 8/2	4/2020 12:20:00 PM			
Lab ID: 2008C94-007	Matrix: SOIL Received Date: 8/25/2020 8:00:00 AM								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analyst	: JMT		
Chloride	ND	60		mg/Kg	20	8/29/2020 8:09:49 PM	54781		
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					Analyst	BRM		
Diesel Range Organics (DRO)	19	9.3		mg/Kg	1	8/27/2020 3:31:51 PM	54694		
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/27/2020 3:31:51 PM	54694		
Surr: DNOP	88.3	30.4-154		%Rec	1	8/27/2020 3:31:51 PM	54694		
EPA METHOD 8015D: GASOLINE RANG	θE					Analyst	: NSB		
Gasoline Range Organics (GRO)	20	4.7		mg/Kg	1	8/26/2020 7:28:06 PM	54684		
Surr: BFB	163	75.3-105	S	%Rec	1	8/26/2020 7:28:06 PM	54684		
EPA METHOD 8021B: VOLATILES						Analyst	: NSB		
Benzene	0.039	0.024		mg/Kg	1	8/26/2020 7:28:06 PM	54684		
Toluene	0.14	0.047		mg/Kg	1	8/26/2020 7:28:06 PM	54684		
Ethylbenzene	0.079	0.047		mg/Kg	1	8/26/2020 7:28:06 PM	54684		
Xylenes, Total	1.0	0.094		mg/Kg	1	8/26/2020 7:28:06 PM	54684		
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	8/26/2020 7:28:06 PM	54684		

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 range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		Cl	ient Sample I	D: BF	H12@ 10'-15'					
Project: Hare 15	Collection Date: 8/24/2020 1:45:00 PM									
Lab ID: 2008C94-008	Matrix: SOIL	25/2020 8:00:00 AM								
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	98	60	mg/Kg	20	8/30/2020 9:14:17 AM	54784				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM				
Diesel Range Organics (DRO)	ND	8.9	mg/Kg	1	8/27/2020 3:41:44 PM	54694				
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/27/2020 3:41:44 PM	54694				
Surr: DNOP	105	30.4-154	%Rec	1	8/27/2020 3:41:44 PM	54694				
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2020 7:51:39 PM	54684				
Surr: BFB	98.2	75.3-105	%Rec	1	8/26/2020 7:51:39 PM	54684				
EPA METHOD 8021B: VOLATILES					Analyst	: NSB				
Benzene	ND	0.024	mg/Kg	1	8/26/2020 7:51:39 PM	54684				
Toluene	ND	0.049	mg/Kg	1	8/26/2020 7:51:39 PM	54684				
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2020 7:51:39 PM	54684				
Xylenes, Total	ND	0.097	mg/Kg	1	8/26/2020 7:51:39 PM	54684				
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	8/26/2020 7:51:39 PM	54684				

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 range due to dilution or matrix S

в Analyte detected in the associated Method Blank

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		Cl	ient Sample II): BI	H12@ 25'-30'					
Project: Hare 15	Collection Date: 8/24/2020 2:00:00 PM									
Lab ID: 2008C94-009	Matrix: SOIL	25/2020 8:00:00 AM								
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	ND	60	mg/Kg	20	8/30/2020 9:51:18 AM	54784				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	8/27/2020 3:51:36 PM	54694				
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/27/2020 3:51:36 PM	54694				
Surr: DNOP	87.9	30.4-154	%Rec	1	8/27/2020 3:51:36 PM	54694				
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2020 8:15:07 PM	54684				
Surr: BFB	102	75.3-105	%Rec	1	8/26/2020 8:15:07 PM	54684				
EPA METHOD 8021B: VOLATILES					Analyst	: NSB				
Benzene	ND	0.024	mg/Kg	1	8/26/2020 8:15:07 PM	54684				
Toluene	ND	0.049	mg/Kg	1	8/26/2020 8:15:07 PM	54684				
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2020 8:15:07 PM	54684				
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2020 8:15:07 PM	54684				
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	1	8/26/2020 8:15:07 PM	54684				

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy		Cl	ient Sa	ample II	D: BH	H13@ 25'-27'				
Project: Hare 15	Collection Date: 8/24/2020 2:45:00 PM									
Lab ID: 2008C94-010	Matrix: SOIL		Received Date: 8/25/2020 8:00:00 AM							
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS						Analyst	MRA			
Chloride	ND	60		mg/Kg	20	8/30/2020 10:03:38 AM	54784			
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	BRM			
Diesel Range Organics (DRO)	250	8.9		mg/Kg	1	8/27/2020 4:01:29 PM	54694			
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/27/2020 4:01:29 PM	54694			
Surr: DNOP	82.8	30.4-154		%Rec	1	8/27/2020 4:01:29 PM	54694			
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst	NSB			
Gasoline Range Organics (GRO)	800	47		mg/Kg	10	8/26/2020 8:38:32 PM	54684			
Surr: BFB	375	75.3-105	S	%Rec	10	8/26/2020 8:38:32 PM	54684			
EPA METHOD 8021B: VOLATILES						Analyst	NSB			
Benzene	0.46	0.24		mg/Kg	10	8/26/2020 8:38:32 PM	54684			
Toluene	11	0.47		mg/Kg	10	8/26/2020 8:38:32 PM	54684			
Ethylbenzene	4.9	0.47		mg/Kg	10	8/26/2020 8:38:32 PM	54684			
Xylenes, Total	73	0.95		mg/Kg	10	8/26/2020 8:38:32 PM	54684			
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	10	8/26/2020 8:38:32 PM	54684			

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 2008C94

Date Reported: 9/1/2020

CLIENT: Hilcorp Energy			ient Sample II			
Project: Hare 15 Lab ID: 2008C94-011	Matrix: SOIL	(24/2020 2:50:00 PM 25/2020 8:00:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	8/30/2020 10:15:59 AM	54784
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	8/27/2020 4:11:21 PM	54694
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/27/2020 4:11:21 PM	54694
Surr: DNOP	80.2	30.4-154	%Rec	1	8/27/2020 4:11:21 PM	54694
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/26/2020 10:12:14 PM	54684
Surr: BFB	99.4	75.3-105	%Rec	1	8/26/2020 10:12:14 PM	54684
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	8/26/2020 10:12:14 PM	54684
Toluene	ND	0.048	mg/Kg	1	8/26/2020 10:12:14 PM	54684
Ethylbenzene	ND	0.048	mg/Kg	1	8/26/2020 10:12:14 PM	54684
Xylenes, Total	ND	0.096	mg/Kg	1	8/26/2020 10:12:14 PM	54684
Surr: 4-Bromofluorobenzene	103	80-120	%Rec	1	8/26/2020 10:12:14 PM	54684

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	Hilcorp E	Energy										
Project:	Hare 15											
Sample ID:	MB-54781	SampType: m	blk	Tes	tCode: EF	EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID: 54	781	F	RunNo: 7 1	1481						
Prep Date:	8/29/2020	Analysis Date: 8	/29/2020	S	SeqNo: 24	496084	Units: mg/K	g				
Analyte Chloride		Result PQL ND 1.5		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Sample ID:	LCS-54781											
Client ID:	LCSS	Batch ID: 54	781	F	RunNo: 7 1	1481						
Prep Date:	8/29/2020	Analysis Date: 8	/29/2020	S	SeqNo: 24	496085	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	94.8	90	110					
Sample ID:	MB-54784	SampType: m	blk	Tes	tCode: EF	PA Method	300.0: Anions	6				
Client ID:	PBS	Batch ID: 54	784	F	RunNo: 7 1	1487						
Prep Date:	8/30/2020	Analysis Date: 8	/30/2020	S	SeqNo: 24	496319	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-54784	SampType: Ic	s	Tes	tCode: EF	PA Method	300.0: Anions	5				
Client ID:	LCSS	Batch ID: 54	784	F	RunNo: 7 1	1487						
Prep Date:	8/30/2020	Analysis Date: 8	/30/2020	S	SeqNo: 24	496320	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	94.7	90	110					

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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2008C94

01-Sep-20

QC SUMMARY REPORT Hall Env

Page	71	of 114
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	WO#:	2008C94
vironmental Analysis Laboratory, Inc.		01-Sep-20

Client:	Hilcorp E	nergy									
Project:	Hare 15										
Sample ID:	2008C94-001AMS	SampT	ype: M\$	6	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID:	BH09@ 25'-27'	Batch	ID: 54	694	F	RunNo: 7	1442				
Prep Date:	8/26/2020	Analysis D	ate: 8/	27/2020	S	SeqNo: 2	494229	Units: mg/k	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	260	8.5	42.30	190.8	157	47.4	136			S
Surr: DNOP		3.9		4.230		92.7	30.4	154			
Sample ID:	2008C94-001AMSI	SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	BH09@ 25'-27'	Batch	ID: 54	694	F	RunNo: 7	1442				
Prep Date:	8/26/2020	Analysis D	ate: 8/	27/2020	S	SeqNo: 2	494230	Units: mg/k	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	270	8.6	43.18	190.8	189	47.4	136	5.72	43.4	S
Surr: DNOP		4.0		4.318		92.3	30.4	154	0	0	
Sample ID:	LCS-54694	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch	ID: 54	694	F	RunNo: 7	1442				
Prep Date:	8/26/2020	Analysis D	ate: 8/	27/2020	S	SeqNo: 2	494270	Units: mg/k	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	44	10	50.00	0	87.6	70	130			
Surr: DNOP		4.0		5.000		80.5	30.4	154			
Sample ID:	MB-54694	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	PBS	Batch	ID: 54	694	F	RunNo: 7	1442				
Prep Date:	8/26/2020	Analysis D	ate: 8/	27/2020	S	SeqNo: 2	494272	Units: mg/k	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	ND	10								
lotor Oil Range	e Organics (MRO)	ND	50								
Surr: DNOP		7.5		10.00		75.1	30.4	154			

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Hilcorp E Hare 15	Energy							
Sample ID:	mb-54684	SampType:	MBLK	Test	Code: EPA Method	8015D: Gasoli	ne Range	9	
Client ID:	PBS	Batch ID:	54684	R	unNo: 71387				
Prep Date:	8/25/2020	Analysis Date:	8/26/2020	S	eqNo: 2491806	Units: mg/Kg			
Analyte		Result PC	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	ND	5.0						
Surr: BFB		980	1000		98.4 75.3	105			
Sample ID:	lcs-54684	SampType:	LCS	Test	Code: EPA Method	8015D: Gasoli	ne Range	e	
Client ID:	LCSS	Batch ID:	54684	R	unNo: 71387				
Prep Date:	8/25/2020	Analysis Date:	8/26/2020	S	eqNo: 2491807	Units: mg/Kg			
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	20	5.0 25.00	0	80.2 72.5	106			
Surr: BFB		1100	1000		110 75.3	105			S
Sample ID:	lcs-54699	SampType:	LCS	Test	Code: EPA Method	8015D: Gasoli	ne Range	e	
Client ID:	LCSS	Batch ID:	54699	R	unNo: 71413				
Prep Date:	8/26/2020	Analysis Date:	8/27/2020	S	eqNo: 2494653	Units: %Rec			
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		1100	1000		111 75.3	105			S
Sample ID:	lcs-54720	SampType:	LCS	Test	Code: EPA Method	8015D: Gasoli	ne Range	9	
Client ID:		Batch ID:			unNo: 71413		J		
Prep Date:	8/26/2020	Analysis Date:	8/27/2020	S	eqNo: 2494654	Units: %Rec			
Analyte		Result PC) SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		1100	1000		110 75.3	105			S
Sample ID:	MB-54699	SampType:		Test	Code: EPA Method	8015D: Gasoli	ne Range	9	
Client ID:		Batch ID:			unNo: 71413	ourse. cason	ne rrange	-	
	8/26/2020	Analysis Date:			eqNo: 2494655	Units: %Rec			
	000				•		م <u>م</u> ۵۷		Qual
Analyte Surr: BFB		Result PC 930	L SPK Value 1000	SPK KEI VAI	%REC LowLimit 93.5 75.3	HighLimit 105	%RPD	RPDLimit	Qual
	mh 54700						n n D		
Sample ID:		SampType:			Code: EPA Method	8015D: Gasoli	ne Range	9	
Client ID:		Batch ID:			unNo: 71413				
-	8/26/2020	Analysis Date:			eqNo: 2494656	Units: %Rec			
Analyte		Result PC		SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		980	1000		97.9 75.3	105			

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 range due to dilution or matrix

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

2008C94

01-Sep-20

Client:HilcorpProject:Hare 15	Energy										
Sample ID: mb-54684	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volati	les			
Client ID: PBS	Batch	n ID: 546	684	F	unNo: 7	1387					
Prep Date: 8/25/2020	Analysis D	ate: 8/ 2	26/2020	S	eqNo: 24	491855	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120				
Sample ID: LCS-54684	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volati	les			
Client ID: LCSS	Batch	n ID: 546	684	F	tunNo: 7	1387					
Prep Date: 8/25/2020	Analysis D	ate: 8/ 2	26/2020	S	eqNo: 24	491856	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.84	0.025	1.000	0	83.7	80	120				
Toluene	0.86	0.050	1.000	0	85.6	80	120				
Ethylbenzene	0.86	0.050	1.000	0	86.2	80	120				
Xylenes, Total	2.6	0.10	3.000	0	87.1	80	120				
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120				
Sample ID: LCS-54699	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volati	les			
Client ID: LCSS	Batch	n ID: 546	599	F	unNo: 7	1413					
Prep Date: 8/26/2020	Analysis D	ate: 8/ 2	27/2020	S	eqNo: 2	494691	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120				
Sample ID: LCS-54720	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volati	les			
Client ID: LCSS	Batch	n ID: 547	720	F	lunNo: 7	1413					
Prep Date: 8/26/2020	Analysis D	ate: 8/ 2	27/2020	S	eqNo: 24	494692	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120				
Sample ID: MB-54699	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volati	les			
Client ID: PBS	Batch	n ID: 546	599	F	lunNo: 7	1413					
Prep Date: 8/26/2020	Analysis D	ate: 8/ 2	27/2020	S	eqNo: 24	494693	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120				

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 range due to dilution or matrix

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

WO#:	2008C94

01-Sep-20

Client: Project:	Hilcorp l Hare 15	Energy									
Sample ID: mb-54720 SampType: MBLK TestCode: EPA Method 8021B: Volatiles											
Client ID: PBS	PBS Batch ID: 54720 RunNo: 71413										
Prep Date: 8/26/	2020	Analysis D	ate: 8	/27/2020	S	SeqNo: 24	194694	Units: %Red	;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorob	enzene	1.0		1.000		101	80	120			

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 range due to dilution or matrix

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

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WO#: 2008C94 01-Sep-20

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: clients.ha	490 Iquera FAX:)1 Hawkins jue, NM 871 505-345-41	NE 109 107	San	nple Log-In Che	Pag eck List
Client Name: Hilcorp Energy	Nork Order Number:	200	BC94			RcptNo: 1	4 a.
Received By: Cheyenne Cason 8/2	5/2020 8:00:00 AM						
Completed By: Isaiah Ortiz 8/2	5/2020 9:02:54 AM			-7	$ \subset $		
Reviewed By: JR 8/25-120						,	
Chain of Custody							
1. Is Chain of Custody complete?		Yes		No		Not Present	
2. How was the sample delivered?		<u>Cou</u>	rier				÷.
Log In 3. Was an attempt made to cool the samples?		Yes		No			
4. Were all samples received at a temperature of >0	0° C to 6.0°C	Yes		No		NA 🗍	
5. Sample(s) in proper container(s)?		Yes		Na			
6. Sufficient sample volume for indicated test(s)?		Yes		No			
7. Are samples (except VOA and ONG) properly pre	served?	Yes		No			÷.,
8. Was preservative added to bottles?		Yes		No	\checkmark	NA 🗌	
9. Received at least 1 vial with headspace <1/4" for J	AQ VOA?	Yes		No		NA 🗹	
10. Were any sample containers received broken?		Yes		No			
11. Does paperwork match bottle labels?		Yes		No		# of preserved bottles checked for pH:	
(Note discrepancies on chain of custody) 12. Are matrices correctly identified on Chain of Custo	du?	Yes	✓	No		Adjusted?	unless noted
13. Is it clear what analyses were requested?	•			No	-		·
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes		No		Checked by:	1/8/25
Special Handling (if applicable)							
15. Was client notified of all discrepancies with this o	rder?	Yes		No			
Person Notified:	Date:				NAME OF A DESCRIPTION OF A		
By Whom:	Via:] eM	ail 🗌 Phe	one 🗌	Fax	📋 In Person	
Regarding:					*****		
Client Instructions:							
16. Additional remarks:							
17. <u>Cooler Information</u> Cooler No Temp °C Condition Seal In		eal D	ate S	Signed	By		
1 2.5 Good Not Pres	ent		een and and a second				

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Page 1 of 1

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Hall Environmental com Analysis Laboratory Analysis Laboratory Analysis Laboratory RCRA 8 Metals (NA)	f necessary, samples submitted to Hall Edvironmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
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Chain-of-Custody Record Hillorp Etheray Company Ani. Jumiful Deal Chilorp Company or Fax#: Jdeal Chilorp.com C Package: andard Level 4 (Full Validati andard Level 4 (Full Validati andard Level 2 (Full Validati BH 10 C 25:27' 10 (Type) BH 10 C 25:27' 10 (Type) BH 10 C 25:27' 10 (Type) BH 10 C 25:27' 11 (450 BH 12 C 10'-15' 11 (450 BH 12 C 10'-1	sample
Hill Hill Hill Hill Hill Hill Address Address Address Address Inter Time Inter 1345 Inter 1150 Inter 1150 Inter 1150	essary,
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Client: H-16 Client: H-16 AHn, Je Mailing Address: Phone #: Address: A EDD (Type) A	3

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February 19, 2021

Danny Burns HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

RE: Hare 15

OrderNo.: 2102671

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 14 sample(s) on 2/12/2021 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

Hare 15

Project:

Analytical Report Lab Order 2102671

Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH 14 @ 25'-27' Collection Date: 2/9/2021 10:15:00 AM Received Date: 2/12/2021 7:30:00 AM

Lab ID: 2102671-001	Matrix: SOIL	Received Date: 2/12/2021 7:30:00 AM						
Analyses	Result	RL Q	Qual J	U nits	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst: JME		
Diesel Range Organics (DRO)	170	9.2		mg/Kg	1	2/18/2021 7:35:46 AM		
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/18/2021 7:35:46 AM		
Surr: DNOP	93.7	70-130		%Rec	1	2/18/2021 7:35:46 AM		
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM		
Gasoline Range Organics (GRO)	400	25		mg/Kg	5	2/18/2021 12:42:00 PM		
Surr: BFB	227	75.3-105	S	%Rec	5	2/18/2021 12:42:00 PM		
EPA METHOD 8021B: VOLATILES						Analyst: CCM		
Benzene	ND	0.12		mg/Kg	5	2/18/2021 12:42:00 PM		
Toluene	ND	0.25		mg/Kg	5	2/18/2021 12:42:00 PM		
Ethylbenzene	2.1	0.25		mg/Kg	5	2/18/2021 12:42:00 PM		
Xylenes, Total	26	0.49		mg/Kg	5	2/18/2021 12:42:00 PM		
Surr: 4-Bromofluorobenzene	157	80-120	S	%Rec	5	2/18/2021 12:42:00 PM		
EPA METHOD 300.0: ANIONS						Analyst: VP		
Chloride	ND	60		mg/Kg	20	2/17/2021 12:28:10 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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Project: Hare 15

Analytical Report Lab Order 2102671

Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH 14 @ 30'-35' Collection Date: 2/9/2021 10:30:00 AM Received Date: 2/12/2021 7:30:00 AM

Lab ID: 2102671-002	Matrix: SOIL	Received Date: 2/12/2021 7:30:00 AM						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst: JME		
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/17/2021 10:53:40 PM		
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/17/2021 10:53:40 PM		
Surr: DNOP	147	70-130	S	%Rec	1	2/17/2021 10:53:40 PM		
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM		
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/17/2021 12:40:00 AM		
Surr: BFB	88.3	75.3-105		%Rec	1	2/17/2021 12:40:00 AM		
EPA METHOD 8021B: VOLATILES						Analyst: CCM		
Benzene	ND	0.023		mg/Kg	1	2/17/2021 12:40:00 AM		
Toluene	ND	0.046		mg/Kg	1	2/17/2021 12:40:00 AM		
Ethylbenzene	ND	0.046		mg/Kg	1	2/17/2021 12:40:00 AM		
Xylenes, Total	ND	0.092		mg/Kg	1	2/17/2021 12:40:00 AM		
Surr: 4-Bromofluorobenzene	85.5	80-120		%Rec	1	2/17/2021 12:40:00 AM		
EPA METHOD 300.0: ANIONS						Analyst: VP		
Chloride	ND	60		mg/Kg	20	2/17/2021 1:05:24 PM		

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.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 range due to dilution or matrix

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

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Hare 15

Project:

Analytical Report Lab Order 2102671

Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH 15 @ 25'-30' Collection Date: 2/9/2021 12:45:00 PM Received Date: 2/12/2021 7:30:00 AM

Lab ID: 2102671-003	Matrix: SOIL	Re	Received Date: 2/12/2021 7:30:00 AM						
Analyses	Result	RL (Qual	Units	DF	Date Analyzed			
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst: JME			
Diesel Range Organics (DRO)	360	9.4		mg/Kg	1	2/15/2021 9:01:28 AM			
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/15/2021 9:01:28 AM			
Surr: DNOP	92.9	70-130		%Rec	1	2/15/2021 9:01:28 AM			
EPA METHOD 8015D: GASOLINE RANG	E					Analyst: NSB			
Gasoline Range Organics (GRO)	3000	230		mg/Kg	50	2/17/2021 9:05:19 AM			
Surr: BFB	233	75.3-105	S	%Rec	50	2/17/2021 9:05:19 AM			
EPA METHOD 8021B: VOLATILES						Analyst: NSB			
Benzene	1.7	1.2		mg/Kg	50	2/17/2021 9:05:19 AM			
Toluene	23	2.3		mg/Kg	50	2/17/2021 9:05:19 AM			
Ethylbenzene	17	2.3		mg/Kg	50	2/17/2021 9:05:19 AM			
Xylenes, Total	250	4.7		mg/Kg	50	2/17/2021 9:05:19 AM			
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	50	2/17/2021 9:05:19 AM			
EPA METHOD 300.0: ANIONS						Analyst: VP			
Chloride	ND	60		mg/Kg	20	2/17/2021 1:42:39 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 range due to dilution or matrix

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

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Project: Hare 15

Analytical Report Lab Order 2102671

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/19/2021 Client Sample ID: BH 15 @ 30'-35' Collection Date: 2/9/2021 1:00:00 PM Received Date: 2/12/2021 7:30:00 AM

Lab ID: 2102671-004	Matrix: SOIL	Matrix: SOIL Received Date			te: 2/12/2021 7:30:00 AM			
Analyses	Result	RL Qu	al Units	DF	Date Analyzed			
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS				Analyst: JME			
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	2/15/2021 10:11:52 AM			
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2021 10:11:52 AM			
Surr: DNOP	95.1	70-130	%Rec	1	2/15/2021 10:11:52 AM			
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst: NSB			
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	2/17/2021 10:16:41 AM			
Surr: BFB	98.2	75.3-105	%Rec	1	2/17/2021 10:16:41 AM			
EPA METHOD 8021B: VOLATILES					Analyst: NSB			
Benzene	ND	0.024	mg/Kg	1	2/17/2021 10:16:41 AM			
Toluene	ND	0.048	mg/Kg	1	2/17/2021 10:16:41 AM			
Ethylbenzene	ND	0.048	mg/Kg	1	2/17/2021 10:16:41 AM			
Xylenes, Total	ND	0.096	mg/Kg	1	2/17/2021 10:16:41 AM			
Surr: 4-Bromofluorobenzene	94.4	80-120	%Rec	1	2/17/2021 10:16:41 AM			
EPA METHOD 300.0: ANIONS					Analyst: VP			
Chloride	ND	60	mg/Kg	20	2/17/2021 1:55:03 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 range due to dilution or matrix

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

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2102671-005

Hare 15

Project:

Lab ID:

Analytical Report Lab Order 2102671

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/19/2021 Client Sample ID: BH 16 @ 25'-30' Collection Date: 2/9/2021 4:00:00 PM

Received Date: 2/12/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS					Analyst: JME
Diesel Range Organics (DRO)	210	10		mg/Kg	1	2/15/2021 10:36:25 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/15/2021 10:36:25 AM
Surr: DNOP	94.2	70-130		%Rec	1	2/15/2021 10:36:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	800	96		mg/Kg	20	2/17/2021 9:29:07 AM
Surr: BFB	176	75.3-105	S	%Rec	20	2/17/2021 9:29:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.67	0.48		mg/Kg	20	2/17/2021 9:29:07 AM
Toluene	9.6	0.96		mg/Kg	20	2/17/2021 9:29:07 AM
Ethylbenzene	3.3	0.96		mg/Kg	20	2/17/2021 9:29:07 AM
Xylenes, Total	53	1.9		mg/Kg	20	2/17/2021 9:29:07 AM
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	20	2/17/2021 9:29:07 AM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	2/17/2021 2:07:27 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
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Project: Hare 15

Analytical Report
Lab Order 2102671

Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BH 16 @ 33'-35' Collection Date: 2/9/2021 4:15:00 PM Received Date: 2/12/2021 7:30:00 AM

Lab ID: 2102671-006	Matrix: SOIL	Re	Received Date: 2/12/2021 7:30:00 AM					
Analyses	Result	RL (Qual	Units	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst: JME		
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/15/2021 10:59:56 AM		
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/15/2021 10:59:56 AM		
Surr: DNOP	92.1	70-130		%Rec	1	2/15/2021 10:59:56 AM		
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst: NSB		
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/17/2021 11:27:28 AM		
Surr: BFB	105	75.3-105	S	%Rec	1	2/17/2021 11:27:28 AM		
EPA METHOD 8021B: VOLATILES						Analyst: NSB		
Benzene	0.074	0.024		mg/Kg	1	2/17/2021 11:27:28 AM		
Toluene	0.19	0.047		mg/Kg	1	2/17/2021 11:27:28 AM		
Ethylbenzene	ND	0.047		mg/Kg	1	2/17/2021 11:27:28 AM		
Xylenes, Total	0.42	0.095		mg/Kg	1	2/17/2021 11:27:28 AM		
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	2/17/2021 11:27:28 AM		
EPA METHOD 300.0: ANIONS						Analyst: VP		
Chloride	ND	60		mg/Kg	20	2/17/2021 2:44:40 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 range due to dilution or matrix

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

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Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 17 @ 20'-25' **Project:** Hare 15 Collection Date: 2/10/2021 9:15:00 AM Lab ID: 2102671-007 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 9.4 mg/Kg 1 2/15/2021 11:23:31 AM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 2/15/2021 11:23:31 AM Surr: DNOP 92.9 70-130 %Rec 1 2/15/2021 11:23:31 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 2/17/2021 11:51:04 AM 4.8 mg/Kg 1 Surr: BFB 101 75.3-105 %Rec 1 2/17/2021 11:51:04 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 2/17/2021 11:51:04 AM 1 Toluene ND 0.048 mg/Kg 1 2/17/2021 11:51:04 AM Ethylbenzene ND 0.048 mg/Kg 1 2/17/2021 11:51:04 AM Xylenes, Total ND 0.095 mg/Kg 1 2/17/2021 11:51:04 AM Surr: 4-Bromofluorobenzene 99.4 80-120 %Rec 1 2/17/2021 11:51:04 AM Analyst: VP **EPA METHOD 300.0: ANIONS** Chloride ND 60 2/17/2021 2:57:05 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 POL
- Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits

ma/Ka

20

- Р Sample pH Not In Range
- Reporting Limit RL

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Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 17 @ 25'-30' **Project:** Hare 15 Collection Date: 2/10/2021 9:30:00 AM Lab ID: 2102671-008 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 10 mg/Kg 1 2/15/2021 11:47:13 AM Motor Oil Range Organics (MRO) ND 51 mg/Kg 1 2/15/2021 11:47:13 AM Surr: DNOP 94.4 70-130 %Rec 1 2/15/2021 11:47:13 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 2/17/2021 12:14:48 PM 4.7 mg/Kg 1 Surr: BFB 102 75.3-105 %Rec 1 2/17/2021 12:14:48 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 2/17/2021 12:14:48 PM 0.023 mg/Kg 1 Toluene ND 0.047 mg/Kg 1 2/17/2021 12:14:48 PM Ethylbenzene ND 0.047 mg/Kg 1 2/17/2021 12:14:48 PM Xylenes, Total ND 0.094 mg/Kg 1 2/17/2021 12:14:48 PM Surr: 4-Bromofluorobenzene 99.5 80-120 %Rec 1 2/17/2021 12:14:48 PM Analyst: VP **EPA METHOD 300.0: ANIONS** Chloride ND 60 2/17/2021 3:09:30 PM 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 range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Limit RL

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Project: Hare 15

Analytical Report Lab Order 2102671

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/19/2021 Client Sample ID: BH 18 @ 20'-25' Collection Date: 2/10/2021 12:00:00 PM Received Date: 2/12/2021 7:30:00 AM

Lab ID: 2102671-009	Matrix: SOIL	Rece	eived Date:	2/12/2	2021 7:30:00 AM
Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	2/15/2021 12:10:50 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/15/2021 12:10:50 PM
Surr: DNOP	93.7	70-130	%Rec	1	2/15/2021 12:10:50 PM
EPA METHOD 8015D: GASOLINE RANG	E				Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	2/17/2021 12:38:34 PM
Surr: BFB	101	75.3-105	%Rec	1	2/17/2021 12:38:34 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	2/17/2021 12:38:34 PM
Toluene	ND	0.048	mg/Kg	1	2/17/2021 12:38:34 PM
Ethylbenzene	ND	0.048	mg/Kg	1	2/17/2021 12:38:34 PM
Xylenes, Total	ND	0.095	mg/Kg	1	2/17/2021 12:38:34 PM
Surr: 4-Bromofluorobenzene	98.7	80-120	%Rec	1	2/17/2021 12:38:34 PM
EPA METHOD 300.0: ANIONS					Analyst: VP
Chloride	ND	60	mg/Kg	20	2/17/2021 3:21:55 PM

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.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 range due to dilution or matrix

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

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Date Reported: 2/19/2021

2/17/2021 3:34:20 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 18 @ 25'-30' **Project:** Hare 15 Collection Date: 2/10/2021 12:15:00 PM Lab ID: 2102671-010 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 8.4 mg/Kg 1 2/15/2021 12:34:26 PM Motor Oil Range Organics (MRO) ND 42 mg/Kg 1 2/15/2021 12:34:26 PM Surr: DNOP 94.0 70-130 %Rec 1 2/15/2021 12:34:26 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 2/17/2021 1:02:14 PM 5.0 mg/Kg 1 Surr: BFB 101 75.3-105 %Rec 1 2/17/2021 1:02:14 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 2/17/2021 1:02:14 PM 0.025 mg/Kg 1 Toluene 0.050 ND mg/Kg 1 2/17/2021 1:02:14 PM Ethylbenzene ND 0.050 mg/Kg 1 2/17/2021 1:02:14 PM Xylenes, Total ND 0.099 mg/Kg 1 2/17/2021 1:02:14 PM 2/17/2021 1:02:14 PM Surr: 4-Bromofluorobenzene 99.2 80-120 %Rec 1 Analyst: VP **EPA METHOD 300.0: ANIONS**

ND

60

ma/Ka

20

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

Qualifiers:

Chloride

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 range due to dilution or matrix

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

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Date Reported: 2/19/2021

2/17/2021 3:46:45 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 19 @ 30'-35' **Project:** Hare 15 Collection Date: 2/10/2021 3:15:00 PM Lab ID: 2102671-011 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 9.0 mg/Kg 1 2/15/2021 12:58:11 PM Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 2/15/2021 12:58:11 PM Surr: DNOP 92.6 70-130 %Rec 1 2/15/2021 12:58:11 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 9.4 2/18/2021 10:29:46 AM 4.9 mg/Kg 1 Surr: BFB 139 75.3-105 S %Rec 1 2/18/2021 10:29:46 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 2/18/2021 10:29:46 AM 1 Toluene ND 0.049 mg/Kg 1 2/18/2021 10:29:46 AM Ethylbenzene ND 0.049 mg/Kg 1 2/18/2021 10:29:46 AM Xylenes, Total 0.43 0.098 mg/Kg 1 2/18/2021 10:29:46 AM Surr: 4-Bromofluorobenzene 103 80-120 %Rec 1 2/18/2021 10:29:46 AM Analyst: VP **EPA METHOD 300.0: ANIONS**

ND

60

ma/Ka

20

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

Qualifiers:

Chloride

- 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 range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Limit RL

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Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 19 @ 35'-40' **Project:** Hare 15 Collection Date: 2/10/2021 3:30:00 PM Lab ID: 2102671-012 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 10 mg/Kg 1 2/15/2021 1:21:55 PM Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 2/15/2021 1:21:55 PM Surr: DNOP 94.5 70-130 %Rec 1 2/15/2021 1:21:55 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 2/17/2021 3:00:22 PM 13 4.8 mg/Kg 1 Surr: BFB 124 75.3-105 S %Rec 1 2/17/2021 3:00:22 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene 0.050 2/17/2021 3:00:22 PM 0.024 mg/Kg 1 Toluene 0.12 0.048 mg/Kg 1 2/17/2021 3:00:22 PM Ethylbenzene 0.14 0.048 mg/Kg 1 2/17/2021 3:00:22 PM Xylenes, Total 2.1 0.096 mg/Kg 1 2/17/2021 3:00:22 PM 2/17/2021 3:00:22 PM Surr: 4-Bromofluorobenzene 102 80-120 %Rec 1 Analyst: VP **EPA METHOD 300.0: ANIONS** Chloride ND 60 2/18/2021 2:57:38 PM 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 range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Limit RL

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Released to Imaging: 5/28/2021 12:23:21 PM

EPA METHOD 300.0: ANIONS

Chloride

Analytical Report
Lab Order 2102671

Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 20 @ 25'-30' **Project:** Hare 15 Collection Date: 2/11/2021 9:45:00 AM Lab ID: 2102671-013 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) 190 9.8 mg/Kg 1 2/15/2021 1:45:39 PM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 2/15/2021 1:45:39 PM Surr: DNOP 94.8 70-130 %Rec 1 2/15/2021 1:45:39 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 600 5 2/17/2021 3:24:01 PM 24 mg/Kg 5 Surr: BFB 507 75.3-105 S %Rec 2/17/2021 3:24:01 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.12 mg/Kg 5 2/17/2021 3:24:01 PM Toluene 5 2.8 0.24 mg/Kg 2/17/2021 3:24:01 PM Ethylbenzene 2.2 0.24 mg/Kg 5 2/17/2021 3:24:01 PM Xylenes, Total 38 0.47 mg/Kg 5 2/17/2021 3:24:01 PM 2/17/2021 3:24:01 PM 5 Surr: 4-Bromofluorobenzene 121 80-120 S %Rec

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.
 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 range due to dilution or matrix

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

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Analyst: VP

2/18/2021 3:10:02 PM

Date Reported: 2/19/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY Client Sample ID: BH 20 @ 33'-35' **Project:** Hare 15 Collection Date: 2/11/2021 10:00:00 AM Lab ID: 2102671-014 Matrix: SOIL Received Date: 2/12/2021 7:30:00 AM Result **RL** Qual Units DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 9.2 mg/Kg 1 2/15/2021 2:09:25 PM Motor Oil Range Organics (MRO) 2/15/2021 2:09:25 PM ND 46 mg/Kg 1 Surr: DNOP 94.5 70-130 %Rec 1 2/15/2021 2:09:25 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 9.9 2/17/2021 3:47:32 PM 4.9 mg/Kg 1 Surr: BFB 105 75.3-105 S %Rec 1 2/17/2021 3:47:32 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene 0.056 0.024 mg/Kg 2/17/2021 3:47:32 PM 1 Toluene 0.72 0.049 mg/Kg 1 2/17/2021 3:47:32 PM Ethylbenzene 0.091 0.049 mg/Kg 1 2/17/2021 3:47:32 PM Xylenes, Total 1.5 0.098 mg/Kg 1 2/17/2021 3:47:32 PM 2/17/2021 3:47:32 PM Surr: 4-Bromofluorobenzene 100 80-120 %Rec 1 Analyst: VP **EPA METHOD 300.0: ANIONS** Chloride ND 60 2/18/2021 3:22:27 PM 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 range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Limit RL

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Client:	HILCORI	PENERG	Y								
Project:	Hare 15										
Sample ID: ME	B-58160	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	300.0: Anions	5		
Client ID: PB	BS	Batch	n ID: 58	160	F	RunNo: 7	5345				
Prep Date: 2	/17/2021	Analysis D	0ate: 2/	17/2021	S	SeqNo: 2	663499	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: LC	CS-58160	SampT	ype: LC	S	Tes	tCode: E	PA Method	300.0: Anion	5		
Client ID: LC	SS	Batch	n ID: 58	160	F	RunNo: 7	5345				
Prep Date: 2	/17/2021	Analysis D	0ate: 2/	17/2021	5	SeqNo: 2	663500	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	93.8	90	110			
Sample ID: ME	B-58190	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	300.0: Anions	6		
Client ID: PB	BS	Batch	n ID: 58	190	F	RunNo: 7	5398				
Prep Date: 2	/18/2021	Analysis D	0ate: 2/	18/2021	S	SeqNo: 2	664555	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: LC	CS-58190	SampT	ype: LC	S	Tes	tCode: E	PA Method	300.0: Anions	S		
Client ID: LC	SS	Batch	n ID: 58	190	F	RunNo: 7	75398				
Prep Date: 2	/18/2021	Analysis D)ate: 2/	18/2021	S	SeqNo: 2	664556	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	96.2	90	110			

Qualifiers:

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- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Client: HILCOF	RP ENERG	Y								
Project: Hare 15										
Sample ID: MB-58108	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 58	108	F	RunNo: 7	5307				
Prep Date: 2/13/2021	Analysis D	ate: 2/	15/2021	S	SeqNo: 2	660760	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.3		10.00		93.3	70	130			
Sample ID: LCS-58108	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: 58	108	F	RunNo: 7	5307				
Prep Date: 2/13/2021	Analysis D	ate: 2/	15/2021	S	SeqNo: 2	660763	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.8	68.9	141	, or a - D		6.00
Surr: DNOP	4.3	-	5.000	-	87.0	70	130			
Sample ID: 2102671-003AMS		ype: MS		Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: BH 15 @ 25'-30'	Batch	n ID: 58	108	F	RunNo: 7	5307				
Prep Date: 2/13/2021	Analysis D	ate: 2/	15/2021	5	SeqNo: 2	660769	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	340	9.6	47.76	358.5	-30.0	15	184			S
Surr: DNOP	4.5		4.776		94.4	70	130			
Sample ID: 2102671-003AMS	D SampT	ype: M S	SD	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: BH 15 @ 25'-30'	Batch	D: 58	108	F	RunNo: 7	5307		-	-	
Prep Date: 2/13/2021	Analysis D	ate: 2/	15/2021	S	SeqNo: 2	660770	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	320	9.1	45.33	358.5	-95.4	15	184	8.77	23.9	S
Surr: DNOP	4.3		4.533		94.6	70	130	0	0	
Sample ID: MB-58107	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 58	107	F	RunNo: 7	5362				
Prep Date: 2/13/2021	Analysis D	ate: 2/	17/2021	ę	SeqNo: 2	663323	Units: mg/k	٢g		
Prep Date: 2/13/2021 Analyte		ate: 2/ PQL		SPK Ref Val	SeqNo: 2 %REC	663323 LowLimit	Units: mg/ł HighLimit	(g %RPD	RPDLimit	Qual
	Analysis D						_	-	RPDLimit	Qual
Analyte	Analysis D Result	PQL					_	-	RPDLimit	Qual
Analyte Diesel Range Organics (DRO)	Analysis D Result ND	PQL 10					_	-	RPDLimit	Qual S

Qualifiers:

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- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Client: Project:	HILCOR Hare 15	P ENERGY								
	MB-58130	SampType					8015M/D: Die	sel Range	e Organics	
Client ID:	PBS	Batch ID:	58130	F	RunNo: 7	5362				
Prep Date:	2/15/2021	Analysis Date:	2/17/2021	S	SeqNo: 26	663324	Units: %Rec			
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1	11	10.00		112	70	130			
Sample ID:	LCS-58107	SampType	LCS	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	LCSS	Batch ID:	58107	F	RunNo: 7	5362				
Prep Date:	2/13/2021	Analysis Date:	2/17/2021	S	SeqNo: 26	663326	Units: mg/K	9		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	60	10 50.00	0	119	68.9	141			
Surr: DNOP	1	6.8	5.000		136	70	130			S
Sample ID:	LCS-58130	SampType	LCS	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	LCSS	Batch ID:	58130	F	RunNo: 7	5362				
Prep Date:	2/15/2021	Analysis Date:	2/17/2021	5	SeqNo: 26	663327	Units: %Rec			
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		5.7	5.000		115	70	130			
Sample ID:	2102698-001AMS	SampType	MS	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	BatchQC	Batch ID:	58130	F	RunNo: 75	5362				
Prep Date:	2/15/2021	Analysis Date:	2/17/2021	S	SeqNo: 26	663364	Units: %Rec			
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		5.2	4.766		108	70	130			
Sample ID:	2102698-001AMSI	SampType	MSD	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	BatchQC	Batch ID:	58130	F	RunNo: 75	5362				
Prep Date:	2/15/2021	Analysis Date:	2/17/2021	S	SeqNo: 26	663365	Units: %Rec			
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.9	4.955		99.8	70	130	0	0	
Sample ID:	2102662-001AMS	SampType	MS	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	BatchQC	Batch ID:	58107	F	RunNo: 7 5	5367		-		
Prep Date:	2/13/2021	Analysis Date:	2/18/2021	S	SeqNo: 26	663963	Units: mg/K	9		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	300	9.3 46.60	301.4	-6.88	15	184			S
Surr: DNOP		5.2	4.660		112	70	130			

Qualifiers:

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ND Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е
- Р
- RL Reporting Limit

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- Value above quantitation range
- J Analyte detected below quantitation limits
 - Sample pH Not In Range

Client:

HILCORP ENERGY

Project:	Hare 15										
Sample ID:	2102662-001AMSD	SampT	ype: MS	D	Test	Code: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	BatchQC	Batch	n ID: 58 ′	107	R	unNo: 7	5367				
Prep Date:	2/13/2021	Analysis D	ate: 2/	18/2021	S	eqNo: 20	63964	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	330	9.7	48.59	301.4	51.8	15	184	9.09	23.9	
Surr: DNOP		5.1		4.859		106	70	130	0	0	

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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project:	Hare 15										
Sample ID: LC	CS-58099	SampTy	/pe: LC	S	Tes	tCode: EF	PA Method	8015D: Gaso	oline Rang	e	
Client ID: LC	css	Batch	ID: 58	099	R	unNo: 7	5347				
Prep Date: 2	2/12/2021	Analysis Da	ate: 2/	16/2021	S	eqNo: 20	662785	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range O	Organics (GRO)	25	5.0	25.00	0	98.9	80	120			
Surr: BFB		1000		1000		99.6	75.3	105			
Sample ID: MI	IB-58099	SampTy	/pe: ME	BLK	Test	tCode: EF	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PE	BS	Batch	ID: 58	099	R	unNo: 7	5347				
Prep Date: 2	2/12/2021	Analysis Da	ate: 2/	16/2021	S	eqNo: 20	662786	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range O	Organics (GRO)	ND	5.0	1000			75.0	105			
Surr: BFB		890		1000		88.6	75.3	105			
Sample ID: 21	102662-001ams	SampTy	/pe: M\$	6	Test	tCode: EF	PA Method	8015D: Gaso	oline Rang	e	
Client ID: Ba	atchQC	Batch	ID: 58	099	R	unNo: 7	5347				
Prep Date: 2	2/12/2021	Analysis Da	ate: 2/	16/2021	S	eqNo: 2	662788	Units: mg/ #	٢g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range O	Drganics (GRO)	22	4.9	24.73	0	87.3	61.3	114			
Surr: BFB		990		989.1		100	75.3	105			
	102662-001amsd		/pe: M \$		Tesi			105 8015D: Gaso	oline Rang	e	
Sample ID: 21	102662-001amsd atchQC	SampTy	/pe: M\$ ID: 58	SD			PA Method		oline Rang	e	
Sample ID: 21	atchQC	SampTy	ID: 58	SD 099	R	tCode: Ef	PA Method 5347		_	e	
Sample ID: 21 Client ID: Ba	atchQC	SampTy Batch	ID: 58	SD 099 16/2021	R	tCode: EF RunNo: 7 SeqNo: 20	PA Method 5347	8015D: Gasc	_	e RPDLimit	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O	atchQC 2/12/2021	SampTy Batch Analysis Da Result 23	ID: 58 ate: 2/	5D 099 16/2021 SPK value 24.83	R	tCode: EF RunNo: 7 SeqNo: 20 <u>%REC</u> 91.0	PA Method 5347 662790 LowLimit 61.3	8015D: Gaso Units: mg/F HighLimit 114	(g <u>%RPD</u> 4.57	RPDLimit 20	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte	atchQC 2/12/2021	SampTy Batch Analysis Da Result	D: 58 ate: 2/ PQL	5D 099 16/2021 SPK value	R S SPK Ref Val	Code: EF CunNo: 79 GeqNo: 20 %REC	PA Method 5347 662790 LowLimit	8015D: Gaso Units: mg/k HighLimit	(g %RPD	RPDLimit	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O	atchQC 2/12/2021 Drganics (GRO)	SampTy Batch Analysis Da Result 23	ID: 58 ate: 2/ PQL 5.0	5D 099 16/2021 SPK value 24.83 993.0	R S SPK Ref Val 0	Code: EF RunNo: 79 SeqNo: 20 %REC 91.0 97.7	PA Method 5347 662790 LowLimit 61.3 75.3	8015D: Gaso Units: mg/F HighLimit 114	(g %RPD 4.57 0	RPDLimit 20 0	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB	atchQC 2/12/2021 Drganics (GRO) hb-58102	SampTy Batch Analysis Da Result 23 970 SampTy	ID: 58 ate: 2/ PQL 5.0	5D 099 16/2021 SPK value 24.83 993.0 3LK	R S SPK Ref Val 0 Test	Code: EF RunNo: 79 SeqNo: 20 %REC 91.0 97.7	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method	8015D: Gaso Units: mg/P HighLimit 114 105	(g %RPD 4.57 0	RPDLimit 20 0	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: ml	atchQC 2/12/2021 Drganics (GRO) hb-58102 BS	SampTy Batch Analysis Da Result 23 970 SampTy	ID: 58 ate: 2/ PQL 5.0 /pe: ME ID: 58	SD 099 16/2021 SPK value 24.83 993.0 BLK 102	R S SPK Ref Val 0 Tesi R	Code: EF RunNo: 7 SeqNo: 20 %REC 91.0 97.7 tCode: EF	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364	8015D: Gaso Units: mg/P HighLimit 114 105	Kg %RPD 4.57 0 Dine Rang	RPDLimit 20 0	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: ml Client ID: PE	atchQC 2/12/2021 Drganics (GRO) hb-58102 BS	SampTy Batch Analysis Da Result 23 970 SampTy Batch	ID: 58 ate: 2/ PQL 5.0 /pe: ME ID: 58	SD 099 16/2021 SPK value 24.83 993.0 3LK 102 17/2021	R S SPK Ref Val 0 Tesi R	Code: EF RunNo: 79 GeqNo: 20 91.0 97.7 Code: EF RunNo: 79	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364	8015D: Gaso Units: mg/P HighLimit 114 105 8015D: Gaso	Kg %RPD 4.57 0 Dine Rang	RPDLimit 20 0	Qual
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: ml Client ID: PE Prep Date: 2	atchQC 2/12/2021 Drganics (GRO) bb-58102 BS 2/12/2021	SampTy Batch Analysis Da Result 23 970 SampTy Batch Analysis Da	ID: 58 ate: 2/ PQL 5.0 //pe: ME ID: 58 ate: 2/	SD 099 16/2021 SPK value 24.83 993.0 3LK 102 17/2021	R SPK Ref Val 0 Tesi R S	tCode: EF RunNo: 7 SeqNo: 20 %REC 91.0 97.7 tCode: EF RunNo: 7 SeqNo: 20	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364 663391	8015D: Gaso Units: mg/k HighLimit 114 105 8015D: Gaso Units: mg/k	Kg <u>%RPD</u> 4.57 0 Diline Rang Kg	RPDLimit 20 0	
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: ml Client ID: PE Prep Date: 2 Analyte Gasoline Range O Surr: BFB	atchQC 2/12/2021 Drganics (GRO) b-58102 BS 2/12/2021 Drganics (GRO)	SampTy Batch Analysis Da Result 23 970 SampTy Batch Analysis Da Result ND 990	ID: 58 ate: 2 / PQL 5.0 Vpe: ME ID: 58 ate: 2 / PQL 5.0	SD 099 16/2021 SPK value 24.83 993.0 3LK 102 17/2021 SPK value 1000	R S SPK Ref Val 0 Tesi R S SPK Ref Val	tCode: EF RunNo: 7 SeqNo: 20 91.0 97.7 tCode: EF RunNo: 7 SeqNo: 20 %REC 99.0	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364 663391 LowLimit 75.3	8015D: Gaso Units: mg/k HighLimit 114 105 8015D: Gaso Units: mg/k HighLimit 105	(g <u>%RPD</u> 4.57 0 0 0 0 0 0 0 0 0 0 0 0 0	RPDLimit 20 0 e RPDLimit	
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: mi Client ID: PE Prep Date: 2 Analyte Gasoline Range O	atchQC 2/12/2021 Drganics (GRO) bb-58102 BS 2/12/2021 Drganics (GRO)	SampTy Batch Analysis Da Result 23 970 SampTy Batch Analysis Da Result ND 990 SampTy	ID: 58 ate: 2 / PQL 5.0 Vpe: ME ID: 58 ate: 2 / PQL 5.0	SD 099 16/2021 SPK value 24.83 993.0 3LK 102 17/2021 SPK value 1000	R SPK Ref Val 0 Test SPK Ref Val Test	tCode: EF RunNo: 7 SeqNo: 20 91.0 97.7 tCode: EF RunNo: 7 SeqNo: 20 %REC 99.0	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364 663391 LowLimit 75.3 PA Method	8015D: Gaso Units: mg/k HighLimit 114 105 8015D: Gaso Units: mg/k HighLimit	(g <u>%RPD</u> 4.57 0 0 0 0 0 0 0 0 0 0 0 0 0	RPDLimit 20 0 e RPDLimit	
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: ml Client ID: PE Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: Ic: Client ID: LC	atchQC 2/12/2021 Drganics (GRO) bb-58102 BS 2/12/2021 Drganics (GRO)	SampTy Batch Analysis Da Result 23 970 SampTy Batch Analysis Da Result ND 990 SampTy	<pre>ID: 58 ate: 2/ PQL 5.0 Pee: ME ID: 58 ate: 2/ PQL 5.0 Pee: LC ID: 58</pre>	SD 099 16/2021 SPK value 24.83 993.0 3LK 102 17/2021 SPK value 1000 :S 102	R S SPK Ref Val 0 Tesi SPK Ref Val Tesi R	Code: EF RunNo: 7 GeqNo: 20 91.0 97.7 Code: EF RunNo: 7 GeqNo: 20 %REC 99.0	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364 663391 LowLimit 75.3 PA Method 5364	8015D: Gaso Units: mg/k HighLimit 114 105 8015D: Gaso Units: mg/k HighLimit 105	(g 4.57 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RPDLimit 20 0 e RPDLimit	
Sample ID: 21 Client ID: Ba Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: ml Client ID: PE Prep Date: 2 Analyte Gasoline Range O Surr: BFB Sample ID: Ic: Client ID: LC	atchQC 2/12/2021 Drganics (GRO) bb-58102 BS 2/12/2021 Drganics (GRO) :s-58102 CSS	SampTy Batch Analysis Da Result 23 970 SampTy Batch Analysis Da Result ND 990 SampTy Batch	<pre>ID: 58 ate: 2/ PQL 5.0 Pee: ME ID: 58 ate: 2/ PQL 5.0 Pee: LC ID: 58</pre>	SD 099 16/2021 SPK value 24.83 993.0 3LK 102 17/2021 SPK value 1000 SS 102 17/2021	R S SPK Ref Val 0 Tesi SPK Ref Val Tesi R	tCode: Ef 2unNo: 7 3eqNo: 20 %REC 91.0 97.7 tCode: Ef 3eqNo: 20 %REC 99.0 tCode: Ef 2unNo: 7 3eqNo: 20 3eqNo: 20 3eqNo	PA Method 5347 662790 LowLimit 61.3 75.3 PA Method 5364 663391 LowLimit 75.3 PA Method 5364	8015D: Gaso Units: mg/k HighLimit 114 105 8015D: Gaso Units: mg/k HighLimit 105 8015D: Gaso	(g 4.57 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RPDLimit 20 0 e RPDLimit	

- 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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Client: Project:	HILCORP I Hare 15	ENERGY									
	Hate 15										
Sample ID: Ics-58	3102	SampTy	pe: LC	cs	Tes	tCode: E	PA Method	8015D: Gasol	line Rang	e	
Client ID: LCSS	;	Batch	D: 58	102	F	RunNo: 7	5364				
Prep Date: 2/12/	/ 2021 A	nalysis Da	te: 2	/17/2021	5	SeqNo: 2	663392	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organ	nics (GRO)	29	5.0	25.00	0	114	80	120			
Surr: BFB		1100		1000		112	75.3	105			S
Sample ID: mb-58	8120	SampTy	pe: M I	BLK	Tes	tCode: E	PA Method	8015D: Gasol	line Rang	e	
Client ID: PBS		Batch	D: 58	120	F	RunNo: 7	5364				
Prep Date: 2/15/	/ 2021 A	nalysis Da	te: 2	/17/2021	5	SeqNo: 2	663411	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		980		1000		98.5	75.3	105			
Sample ID: Ics-58	3120	SampTy	pe: LC	CS	Tes	tCode: E	PA Method	8015D: Gasol	line Rang	e	
Client ID: LCSS	;	Batch	D: 58	120	F	RunNo: 7	5364				
Prep Date: 2/15/	/2021 A	nalysis Da	te: 2	/17/2021	5	SeqNo: 2	663412	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		1100		1000		112	75.3	105			S
Sample ID: 21026	698-001ams	SampTy	pe: M	S	Tes	tCode: E	PA Method	8015D: Gasol	line Rang	e	
Client ID: Batch	nQC	Batch	D: 58	120	F	RunNo: 7	5364				
Prep Date: 2/15/	/2021 A	nalysis Da	te: 2	/17/2021	S	SeqNo: 2	663414	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		1100		979.4		110	75.3	105			S
Sample ID: 21026	698-001amsd	SampTy	pe: M	SD	Tes	tCode: E	PA Method	8015D: Gasol	line Rang	e	
Client ID: Batch	nQC	Batch	D: 58	120	F	RunNo: 7	5364		-		
Prep Date: 2/15/	/2021 A	nalysis Da	te: 2	/17/2021	S	SeqNo: 2	663415	Units: %Rec			
		nalysis Da Result	te: 2 / PQL		SPK Ref Val	•	2663415 LowLimit	Units: %Rec 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 range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

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19-Feb-21

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project:	Hare 15										
Sample ID:	LCS-58099	Samp	Гуре: LC	S	Tes	tCode: EF	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: 580	099	F	unNo: 7	5347				
Prep Date:	2/12/2021	Analysis [Date: 2/ *	16/2021	S	eqNo: 26	662841	Units: mg/l	Кg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.88	0.025	1.000	0	88.3	80	120			
Toluene		0.86	0.050	1.000	0	86.4	80	120			
Ethylbenzene		0.86	0.050	1.000	0	85.5	80	120			
Xylenes, Total		2.6	0.10	3.000	0	85.6	80	120			
Surr: 4-Brom	nofluorobenzene	0.86		1.000		85.9	80	120			
Sample ID:	MB-58099	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: 580)99	F	unNo: 7	5347				
Prep Date:	2/12/2021	Analysis [Date: 2/	16/2021	S	eqNo: 26	62842	Units: mg/l	Кg		
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	0.86		1.000		85.6	80	120			
						00.0	00	120			
Sample ID:	2102662-002ams	Samp ⁻	Гуре: МS	;	Tes			8021B: Vola	tiles		
	2102662-002ams BatchQC		Гуре: МS h ID: 58(PA Method		tiles		
	BatchQC		h ID: 580)99	F	tCode: EF	PA Method 5347				
Client ID:	BatchQC	Batc	h ID: 580)99 16/2021	F	tCode: EF	PA Method 5347	8021B: Vola		RPDLimit	Qual
Client ID: Prep Date: Analyte	BatchQC	Batc Analysis [h ID: 58(Date: 2/)99 16/2021	F S	Code: EF CunNo: 7 CeqNo: 26	PA Method 5347 662845	8021B: Vola Units: mg/l	K g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene	BatchQC	Batc Analysis [Result	h ID: 580 Date: 2/ PQL	099 16/2021 SPK value	F S SPK Ref Val	Code: EF CunNo: 75 GeqNo: 26 %REC	PA Method 5347 662845 LowLimit	8021B: Vola Units: mg/l HighLimit	K g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene Toluene	BatchQC	Batc Analysis [Result 0.79	h ID: 580 Date: 2/ PQL 0.025	099 16/2021 SPK value 0.9833	F S SPK Ref Val 0	tCode: EF tunNo: 7! SeqNo: 26 %REC 80.7	PA Method 5347 562845 LowLimit 76.3	8021B: Vola Units: mg/l HighLimit 120	K g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene	BatchQC	Batc Analysis I Result 0.79 0.78	h ID: 58(Date: 2/ PQL 0.025 0.049	099 16/2021 SPK value 0.9833 0.9833	F S SPK Ref Val 0 0	Code: EF RunNo: 7 SeqNo: 26 %REC 80.7 79.7	PA Method 5347 562845 LowLimit 76.3 78.5	8021B: Vola Units: mg/l HighLimit 120 120	K g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	BatchQC	Batc Analysis I Result 0.79 0.78 0.78	h ID: 58 (Date: 2 / PQL 0.025 0.049 0.049	099 16/2021 SPK value 0.9833 0.9833 0.9833	F S SPK Ref Val 0 0 0	Code: EF RunNo: 7 GeqNo: 26 %REC 80.7 79.7 79.3	PA Method 5347 562845 LowLimit 76.3 78.5 78.1	8021B: Vola Units: mg/l HighLimit 120 120 124	K g	RPDLimit	
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom	BatchQC 2/12/2021	Batc Analysis I Result 0.79 0.78 0.78 2.3 0.83	h ID: 58 (Date: 2 / PQL 0.025 0.049 0.049	099 16/2021 SPK value 0.9833 0.9833 0.9833 2.950 0.9833	F S SPK Ref Val 0 0 0 0	Code: EF RunNo: 7 SeqNo: 26 %REC 80.7 79.7 79.3 79.3 84.3	PA Method 5347 562845 LowLimit 76.3 78.5 78.1 79.3 80	8021B: Vola Units: mg/l HighLimit 120 120 124 125	⁄g %RPD	RPDLimit	
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID:	BatchQC 2/12/2021	Batc Analysis I Result 0.79 0.78 0.78 2.3 0.83	h ID: 58 (Date: 2 / PQL 0.025 0.049 0.049 0.098	099 16/2021 SPK value 0.9833 0.9833 0.9833 2.950 0.9833 5D	F SPK Ref Val 0 0 0 0 0 Tes	Code: EF RunNo: 7 SeqNo: 26 %REC 80.7 79.7 79.3 79.3 84.3	PA Method 5347 562845 LowLimit 76.3 78.5 78.1 79.3 80 PA Method	8021B: Vola Units: mg/l HighLimit 120 120 124 125 120	⁄g %RPD	RPDLimit	
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID: Client ID:	BatchQC 2/12/2021 nofluorobenzene 2102662-002amsd	Batc Analysis I Result 0.79 0.78 0.78 2.3 0.83	h ID: 58 (Date: 2 / PQL 0.025 0.049 0.049 0.098 Type: MS h ID: 58 (099 16/2021 SPK value 0.9833 0.9833 0.9833 2.950 0.9833 5D 099	F SPK Ref Val 0 0 0 0 Tes F	Code: EF RunNo: 7 GeqNo: 26 %REC 80.7 79.7 79.3 79.3 84.3 tCode: EF	PA Method 5347 562845 LowLimit 76.3 78.5 78.1 79.3 80 PA Method 5347	8021B: Vola Units: mg/l HighLimit 120 120 124 125 120	Kg %RPD tiles	RPDLimit	
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID: Client ID:	BatchQC 2/12/2021 nofluorobenzene 2102662-002amsd BatchQC	Batc Analysis I Result 0.79 0.78 0.78 2.3 0.83 Samp Batc Analysis I Result	h ID: 58 (Date: 2 / PQL 0.025 0.049 0.049 0.098 Type: MS h ID: 58 (099 16/2021 SPK value 0.9833 0.9833 2.950 0.9833 5D 099 16/2021	F SPK Ref Val 0 0 0 0 Tes F	Code: EF RunNo: 7 SeqNo: 26 %REC 80.7 79.7 79.3 79.3 84.3 tCode: EF RunNo: 7	PA Method 5347 562845 LowLimit 76.3 78.5 78.1 79.3 80 PA Method 5347	8021B: Vola Units: mg/l HighLimit 120 124 125 120 8021B: Vola	Kg %RPD tiles	RPDLimit	
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date:	BatchQC 2/12/2021 nofluorobenzene 2102662-002amsd BatchQC	Batc Analysis I Result 0.79 0.78 0.78 2.3 0.83 Samp Batc Analysis I	h ID: 58(Date: 2/ PQL 0.025 0.049 0.049 0.098 Type: MS h ID: 58(Date: 2/	099 16/2021 SPK value 0.9833 0.9833 2.950 0.9833 5D 099 16/2021	F SPK Ref Val 0 0 0 0 0 Tes F S	Code: EF RunNo: 7 GeqNo: 26 %REC 80.7 79.7 79.3 79.3 84.3 Code: EF RunNo: 7 GeqNo: 26	PA Method 5347 562845 LowLimit 76.3 78.5 78.1 79.3 80 PA Method 5347 562846	8021B: Vola Units: mg/l HighLimit 120 124 125 120 8021B: Vola Units: mg/l	≺g %RPD tiles ≺g		S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Benzene	BatchQC 2/12/2021 nofluorobenzene 2102662-002amsd BatchQC	Batc Analysis I Result 0.79 0.78 0.78 2.3 0.83 Samp Batc Analysis I Result	h ID: 58(Date: 2/ PQL 0.025 0.049 0.049 0.098 Type: MS h ID: 58(Date: 2/ PQL	099 16/2021 SPK value 0.9833 0.9833 2.950 0.9833 2.950 0.9833 50 099 16/2021 SPK value	F SPK Ref Val 0 0 0 0 Tes F SPK Ref Val	Code: EF RunNo: 7 %REC 80.7 79.7 79.3 79.3 84.3 Code: EF RunNo: 7 SeqNo: 26 %REC	PA Method 5347 562845 LowLimit 76.3 78.5 78.1 79.3 80 PA Method 5347 562846 LowLimit	8021B: Vola Units: mg/l HighLimit 120 124 125 120 8021B: Vola Units: mg/l HighLimit	<pre>{g %RPD tilles {g %RPD</pre>	RPDLimit	S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Benzene Toluene	BatchQC 2/12/2021 nofluorobenzene 2102662-002amsd BatchQC	Batc Analysis I 0.79 0.78 0.78 2.3 0.83 Samp Batc Analysis I Result 0.79	h ID: 58(Date: 2/ PQL 0.025 0.049 0.049 0.098 Type: MS h ID: 58(Date: 2/ PQL 0.024	099 16/2021 SPK value 0.9833 0.9833 2.950 0.9833 2.950 0.9833 50 50 50 50 50 50 50 50 50 50	F SPK Ref Val 0 0 0 0 Tes F SPK Ref Val 0	Code: EF RunNo: 7 SeqNo: 26 %REC 80.7 79.7 79.7 79.3 79.3 84.3 tCode: EF RunNo: 7 SeqNo: 26 %REC 81.1	PA Method 5347 562845 LowLimit 76.3 78.1 79.3 80 PA Method 5347 562846 LowLimit 76.3	8021B: Vola Units: mg/l HighLimit 120 124 125 120 8021B: Vola Units: mg/l HighLimit 120	√g %RPD tiles √g 0.189	RPDLimit 20	S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte	BatchQC 2/12/2021 nofluorobenzene 2102662-002amsd BatchQC	Batc Analysis I 0.79 0.78 0.78 2.3 0.83 Samp Batc Analysis I Result 0.79 0.78	h ID: 58(Date: 2/ PQL 0.025 0.049 0.049 0.098 Type: MS h ID: 58(Date: 2/ PQL 0.024 0.049	099 16/2021 SPK value 0.9833 0.9833 2.950 0.9833 2.950 0.9833 50 999 16/2021 SPK value 0.9766 0.9766	F SPK Ref Val 0 0 0 0 Tes 5 SPK Ref Val 0 0	Code: EF RunNo: 7 SeqNo: 26 %REC 80.7 79.7 79.3 79.3 84.3 Code: EF RunNo: 7 SeqNo: 26 %REC 81.1 80.3	PA Method 5347 562845 562845 162845 78.1 79.3 80 PA Method 5347 562846 LowLimit 76.3 78.5	8021B: Vola Units: mg/l HighLimit 120 120 124 125 120 8021B: Vola Units: mg/l HighLimit 120 120	✓g %RPD tiles ✓g %RPD 0.189 0.00802	RPDLimit 20 20	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 range due to dilution or matrix

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

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WO#: 2102671 19-Feb-21



Client: Project:	HILCORI Hare 15	P ENERG	Y								
Sample ID:	mb-58102	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batch	n ID: 58	102	F	RunNo: 7	5364				
Prep Date:	2/12/2021	Analysis D	ate: 2/	17/2021	S	SeqNo: 2	663437	Units: mg/k	٢g		
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	ofluorobenzene	0.97		1.000		96.7	80	120			
Sample ID:	LCS-58102	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batch	n ID: 58	102	F	RunNo: 7	5364				
Prep Date:	2/12/2021	Analysis D	ate: 2/	17/2021	S	SeqNo: 2	663438	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.0	0.025	1.000	0	100	80	120			
Toluene		1.0	0.050	1.000	0	101	80	120			
Ethylbenzene		1.0	0.050	1.000	0	100	80	120			
Xylenes, Total		3.0	0.10	3.000	0	99.9	80	120			
Surr: 4-Brom	ofluorobenzene	0.99		1.000		99.0	80	120			
Sample ID:	2102671-004ams	SampT	ype: MS	;	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	BH 15 @ 30'-35'	Batch	n ID: 58	102	F	RunNo: 7	5364				
Prep Date:	2/12/2021	Analysis D	ate: 2/	17/2021	5	SeqNo: 2	663441	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.93	0.025	0.9930	0.01367	92.2	76.3	120			
Toluene		0.97	0.050	0.9930	0.02050	96.0	78.5	120			
Ethylbenzene		0.97	0.050	0.9930	0.01347	96.4	78.1	124			
Xylenes, Total		3.0	0.099	2.979	0.08345	96.7	79.3	125			
Surr: 4-Brom	ofluorobenzene	1.0		0.9930		101	80	120			
Sample ID:	2102671-004amsd	SampT	ype: MS	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	BH 15 @ 30'-35'	Batch	n ID: 58	102	F	RunNo: 7	5364				
Prep Date:	2/12/2021	Analysis D	ate: 2/	17/2021	S	BeqNo: 2	663442	Units: mg/k	٢g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.93	0.025	0.9872	0.01367	92.8	76.3	120	0.0132	20	
Toluene		0.98	0.049	0.9872	0.02050	96.7	78.5	120	0.117	20	
Ethylbenzene		0.96	0.049	0.9872	0.01347	96.2	78.1	124	0.789	20	
Xylenes, Total		3.0	0.099	2.962	0.08345	96.9	79.3	125	0.400	20	
Surr: 4-Brom	ofluorobenzene	0.97		0.9872		98.2	80	120	0	0	

Qualifiers:

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- 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 range due to dilution or matrix

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

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2102671

19-Feb-21

Client:	HILCORI	P ENERG	Y								
Project:	Hare 15										
Sample ID: m	b-58120	SampT	уре: М	BLK	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: PI	BS	Batch	n ID: 58	3120	F	lunNo: 7	5364				
Prep Date: 2	2/15/2021	Analysis D	ate: 2	/17/2021	S	eqNo: 2	663454	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromoflu	uorobenzene	0.97		1.000		97.3	80	120			
Sample ID: LO	CS-58120	SampT	ype: L	cs	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: LC	CSS	Batch	ID: 58	3120	F	lunNo: 7	5364				
Prep Date: 2	2/15/2021	Analysis D	ate: 2	/17/2021	S	eqNo: 2	663455	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromoflu	uorobenzene	1.0		1.000		102	80	120			
Sample ID: 21	02698-002ams	SampT	ype: M	S	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: Ba	atchQC	Batch	ID: 58	3120	F	lunNo: 7	5364				
Prep Date: 2	2/15/2021	Analysis D	ate: 2	/17/2021	S	eqNo: 2	663458	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromoflu	uorobenzene	0.97		0.9662		100	80	120			
Sample ID: 21	102698-002amsd	SampT	уре: М	SD	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: Ba	atchQC	Batch	n ID: 58	3120	F	lunNo: 7	5364				
Prep Date: 2	2/15/2021	Analysis D	ate: 2	/17/2021	S	eqNo: 2	663459	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromoflu	uorobenzene	0.97		0.9804		98.5	80	120	0	0	

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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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19-Feb-21

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.

	ALL NVIRONMENTAL NALYSIS NBORATORY	TEL: 505-345-3	ntal Analysis Lau 4901 Haw Albuquerque, NI 975 FAX: 505-3 s.hallenvironme	kins NE M 87109 San 45-4107	nple Log-In Cł	neck List
Client Nar	ne: HILCORP ENERGY	Work Order Num	ber: 2102671		RcptNo:	1
Received	By: Desiree Domingue	z 2/12/2021 7:30:00 /	AM	D		
Completed	By: Desiree Domingue	z 2/12/2021 10:21:51	AM	De		
Reviewed	By: ENM	2/12/21				
<u>Chain of</u>	Custody					
1. Is Chair	of Custody complete?		Yes 🖌	No 🗌	Not Present	
2. How wa	s the sample delivered?		Courier			
<u>Log In</u> 3. Was an	attempt made to cool the sa	amples?	Yes ✔	No 🗌	NA 🗌	
4. Were all	samples received at a temp	perature of >0° C to 6.0°C	Yes 🗹	No 🗌		
5. Sample(s) in proper container(s)?		Yes 🖌	No 🗌		
6. Sufficien	t sample volume for indicate	ed test(s)?	Yes 🗹	No 🗌	9	
7. Are sam	ples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌		
8. Was pre	servative added to bottles?		Yes 🗌	No 🗹	NA 🗌	
9. Received	at least 1 vial with headspa	ace <1/4" for AQ VOA?	Yes	No 🗌	NA 🔽	
0. Were an	y sample containers receive	ed broken?	Yes	No 🗹	# of procented	
	perwork match bottle labels' crepancies on chain of cust		Yes 🖌	No 🗌	# of preserved bottles checked for pH: (<2 or >	12 unless noted)
	ices correctly identified on C	.,	Yes 🖌	No 🗌	Adjusted?	,
	what analyses were reques		Yes 🔽	No 🗌		
	holding times able to be me tify customer for authorization		Yes 🗹	No 🗌	Checked by: DA	10 2/12/21
pecial Ha	andling (if applicable)	2				
15. Was clie	ent notified of all discrepanci	ies with this order?	Yes	No 🗌	NA 🗹	
Pe	erson Notified:	Date:		NEW WARK CONTRACTOR OF A CONTRACT		
	Whom:	Via:	eMail] Phone 🗌 Fax	In Person	
	egarding:					
	ient Instructions:					
7. <u>Cooler</u> Cool	Information er No Temp °C Conditi	ion Seal Intact Seal No	Seal Date	Signed By		
1	1.8 Good	Yes		Cigilica by		

Received by OCD: 5/28/2021 11:57:31 AM

A		RY RY		Albuquerque, NM 87109				1924A			-		D IstoT													Q WS P. Com	Los de mo	
2			www.hallenvironmental.com	4901 Hawkins NE - Albuquerqu	Tel. 505-345-3975 Fax 505-	Analysis		C) (SINS BCB, ²	ףל <u>א</u> 3520 11) 285	05) 004 { 005 { 0	4O ³ tala 10 10 10 10 10 10 10 10 10 10 10 10 10	15D etho 3 Me 3 Me 3 Me	BTEX) (S) E, E BOB1 Pc BOB1 Pc BCRA 8 BCRA 8 BCRA 8 BCRA 8 BCC (V BCRA 8 BCC (V BCRA 8 BCC (V BCC (V BCC (V C) E, E C) E C) E C) E C) E C) E C) E C) E C)													Remarks: P.C. Janny, burns	devin. hen cmann	In AUMA-UMA-UMA-UMA-UMA-UMA-UMA-UMA-UMA-UMA
P0109		Rush	L	C			5			D No		(°C) \$.1 = 0.0 = %	ALAL No.	100 -	- 002	- 003	h00-	-005	- 006	F00-	-008	-009	~ DIO ~	110-	-012	LC	Date Ti	serves as notice of this poe
	Turn-Around Time:	X Standard	Project Name:	MARE	Project #:		Project Manager:	WSP-Danny Burns	Sampler: D. Burrns		# of Coolers: \	Cooler Temp(including CF): \	Container Preservative Type and # Type													Received by: Via:	Received by: Via:	scontracted to other accredited laborator
	Chain-of-Custody Record	rergy Company	\square					Level 4 (Full Validation)	mpliance				Sample Name	BH 14 @ 25-27'	BH 14 @ 30-35'	BH 15@ 25'-30'	BH 15 @ 301-351	BH 16 @ 25-30'	BH 16 @ 33'-35'	BH 17 @ 20 - 25	BH17@25-30'	BH18 @ 201-251	BH 18 @ 25-30'	C)	BH19035-40'	d by:	shed by:	mitted to Hall Environmental may be sul
	nain-of-Cu	Client: Hilcorp Energy	Jennifer	ddress:			=ax#:	ackage: ard	tion: Az Compliance		1		Time Matrix	1015 SOIL	1030	1245	1300	0091	1615	0915	0930	200	1215	1515	0	Time: Relinquished by:	Relinquis	ecessary. samples subr
Re		Client:	HHH Imagi	Mailing Address:	5/28	.# ehone #:	email or Fax#:	A/QC Package: □ Standard	Accreditation:	D NELAC	□ EDD (Type)		Date T	2-9-21	-		-		~	2-10-21 (_					Date: Tii 2-(/-21		

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			www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis		SM SM s,83) PC	102 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	05 8/8 504 01 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8	(GF 310 310 310 310 310 310 310 310 310 310	15D ethd y 83 8 Mé 83 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	TPH:80 8081 Pe PPHs b 8260 (V 8250 (V 8270 (S 7081 Co							2				Remarks:		1871 / Mucuu Wucuu Vucuu Vucuu Vucuu Vucuu Vucuu 21/21/21 7:30
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	Chain-of-Custody Record	CORP Energy Company	0						Level 4 (Full Validation)	Az Compliance				Sample Name	BH20@25-30'	BH 20 @ 33'-35'		()		(the point of the p	id by:	MUQUU WWWWWWW se submitted to Hall Environmental may be subr
	n-of-Cu	LCORP	Jennifer					 6		D Az Col	□ Other	()		Matrix	5 Soil	N									Relinquished by:	Relinc	WWW /
	Chair	of Client:	AHN	Mailing Address:		Phone #:	email or Fax#:	2.5 QA/QC Package:	Standard	Accreditation:	DI NELAC	EDD (Type)		Date Time	2-11-21 0945	V 1000								2	Date: Time: 2-11-21	Date: Time:	



February 23, 2021

Jennifer Deal HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

RE: Hare 15

OrderNo.: 2102809

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/18/2021 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

Date 1	Reported:	2/23/2	2021
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CLIENT: HILCORP ENERGY Project: Hare 15			Sample ID: ection Date:		2021 1:55:00 PM					
Lab ID: 2102809-001	Matrix: AQUEOUS	Rec	Received Date: 2/18/2021 7:50:00 AM							
Analyses	Result	RL Qu	al Units	DF	Date Analyzed					
EPA METHOD 8021B: VOLATILES					Analyst: CCM					
Benzene	110	5.0	µg/L	5	2/19/2021 5:05:00 PM					
Toluene	7.7	5.0	µg/L	5	2/19/2021 5:05:00 PM					
Ethylbenzene	27	5.0	µg/L	5	2/19/2021 5:05:00 PM					
Xylenes, Total	48	10	µg/L	5	2/19/2021 5:05:00 PM					
Surr: 4-Bromofluorobenzene	92.2	80-120	%Rec	5	2/19/2021 5:05:00 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
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 7

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Date Reported: 2/23/2021

CLIENT:HILCORP ENERGYProject:Hare 15Lab ID:2102809-002	Client Sample ID: BH09 Collection Date: 2/17/2021 1:23:00 PM Matrix: AQUEOUS Received Date: 2/18/2021 7:50:00 AM									
Analyses	Result	RL (Qual	Units	DF	Date Analyzed				
EPA METHOD 8021B: VOLATILES						Analyst: CCM				
Benzene	37	5.0	Р	µg/L	5	2/19/2021 6:16:00 PM				
Toluene	ND	5.0	Р	µg/L	5	2/19/2021 6:16:00 PM				
Ethylbenzene	99	5.0	Ρ	µg/L	5	2/19/2021 6:16:00 PM				
Xylenes, Total	230	10	Ρ	µg/L	5	2/19/2021 6:16:00 PM				
Surr: 4-Bromofluorobenzene	91.0	80-120	Ρ	%Rec	5	2/19/2021 6:16:00 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
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 7

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/23/2021

CLIENT:HILCORP ENERGYProject:Hare 15Lab ID:2102809-003	Client Sample ID: BH11Collection Date: 2/17/2021 2:17:00 PMMatrix: AQUEOUSReceived Date: 2/18/2021 7:50:00 AM									
Analyses	Result	RL (Qual	Units	DF	Date Analyzed				
EPA METHOD 8021B: VOLATILES						Analyst: CCM				
Benzene	3500	50	Р	µg/L	50	2/20/2021 12:25:00 PM				
Toluene	4500	100		µg/L	100	2/23/2021 11:43:00 AM				
Ethylbenzene	320	50	Ρ	µg/L	50	2/20/2021 12:25:00 PM				
Xylenes, Total	11000	100	Ρ	µg/L	50	2/20/2021 12:25:00 PM				
Surr: 4-Bromofluorobenzene	92.4	80-120	Р	%Rec	50	2/20/2021 12:25:00 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 range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 3 of 7

Hall Environmental	Analysis	Laboratory.	Inc.

CLIENT: HILCORP ENERGY Project: Hare 15 Lab ID: 2102809-004	Client Sample ID: BH19 Collection Date: 2/17/2021 12:25:00 PM Matrix: AQUEOUS Received Date: 2/18/2021 7:50:00 AM									
Analyses	Result	RL (Qual	Units	DF	Date Analyzed				
EPA METHOD 8021B: VOLATILES						Analyst: CCM				
Benzene	660	10	Р	µg/L	10	2/20/2021 1:13:00 PM				
Toluene	390	10	Ρ	µg/L	10	2/20/2021 1:13:00 PM				
Ethylbenzene	520	10	Ρ	µg/L	10	2/20/2021 1:13:00 PM				
Xylenes, Total	2800	200	Ρ	µg/L	100	2/20/2021 12:49:00 PM				
Surr: 4-Bromofluorobenzene	109	80-120	Ρ	%Rec	10	2/20/2021 1:13:00 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
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 4 of 7

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 2102809

Date Reported: 2/23/2021

CLIENT: HILCORP ENERGY Project: Hare 15		Client Sample ID: BH20 Collection Date: 2/17/2021 1:00:00 PM									
Lab ID: 2102809-005	Matrix: AQUEOUS	Matrix: AQUEOUS Received Date: 2/18/2021									
Analyses	Result	RL	Qual	Units	DF	Date Analyzed					
EPA METHOD 8021B: VOLATILES						Analyst: CCM					
Benzene	12000	200	Р	µg/L	200	2/20/2021 2:00:00 PM					
Toluene	15000	200	Р	µg/L	200	2/20/2021 2:00:00 PM					
Ethylbenzene	1100	200	Р	µg/L	200	2/20/2021 2:00:00 PM					
Xylenes, Total	10000	400	Р	µg/L	200	2/20/2021 2:00:00 PM					
Surr: 4-Bromofluorobenzene	91.7	80-120	Р	%Rec	200	2/20/2021 2:00:00 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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 5 of 7

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Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Analytic Result PCL SPK xef Val %REC LowLinit HighLimit %RPD RPDLimit Qual enzene 18 1.0 20.00 0 89.6 80 120 blane 18 1.0 20.00 0 89.6 80 120 ylenes, Total 54 2.0 60.00 0 89.6 80 120 Sample ID: MB SampType: MBLK TestCode: EPA Method 80218: Volatiles Volatiles Volatiles Sample ID: MB SampType: MBLK TestCode: EPA Method 80218: Volatiles Volatiles Volatiles Volatiles Sample ID: MB SampType: MBLK TestCode: EPA Method 80218: Volatiles Volatiles Volatiles Volatiles Client ID: PBW Batch ID: R75423 RunNo: 75423 Volatiles Volatiles Volatiles Sample ID: 2102809-001ams SampType: MS TestCode: EPA Method 80218: Volatiles Volatiles Volatiles Volatiles Volatiles Volatiles Volatiles Volatiles Volatiles <th>Project:</th> <th>Hare 15</th> <th>r Enero</th> <th>1</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Project:	Hare 15	r Enero	1												
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Prep Date: Analysis Date: $1/1 + 2/1 + 2/2 + 2/1$ SeqNo: 2665204 Units: $\mu g/L$ $NRPD$ $RPDL$ init Qual Analyte Result PQL SPK value SPK Ref Val $NREC$ LowLimit HighLimit $NRPD$ $RPDL$ init Qual enzene 210 5.0 100.0 113.7 93.7 80 120 120 100.1000 113.7 93.7 80 120 $100.1000000000000000000000000000000000$	Sample ID:	2102809-001ams	SampT	Гуре: МS	6	Tes	tCode: El	PA Method	8021B: Volat	iles						
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enzene 210 5.0 100.0 113.7 93.7 80 120 oluene 100 5.0 100.0 7.695 96.6 80 120 thylbenzene 120 5.0 100.0 26.64 93.9 80 120 surr 4-Bromofluorobenzene 90 100.0 26.64 93.9 80 120 Surr 4-Bromofluorobenzene 90 100.0 26.64 93.9 80 120 Sample ID: 2102809-001amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: BH06 Batch ID: R75423 RunNo: 75423 Prep Date: Analysis Date: 2/19/2021 SeqNo: 2665205 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 oluene 120 5.0 100.0 7.695 117 80 120 18.0 20	Prep Date:		Analysis D	Date: 2/	19/2021	S	SeqNo: 2	665204								
oluene 100 5.0 100.0 7.695 96.6 80 120 thylbenzene 120 5.0 100.0 26.64 93.9 80 120 ylenes, Total 330 10 300.0 47.60 94.9 80 120 surr 4-Bromofluorobenzene 90 100.0 7.695 96.6 80 120 Sample ID: 2102809-001amsd SampType: MSD TestCode: EVA Wethod S021B: Volatiles Sample ID: 2102809-001amsd SampType: RT5423 RunNo: T5423 Prep Date: Analysis Date: 2/19/2021 SeqNo: 2665205 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 oluene 120 5.0 100.0 26.64 114 80 120 18.0 20 thylbenzene, Total 400 1	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
thylbenzene 120 5.0 100.0 26.64 93.9 80 120 ylenes, Total 330 10 300.0 47.60 94.9 80 120 sur: 4-Bromofluorobenzene 90 100.0 90.2 80 120 120 Sample ID: 2102809-001amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Volatiles <td< td=""><td>Benzene</td><td></td><td>210</td><td>5.0</td><td>100.0</td><td>113.7</td><td>93.7</td><td>80</td><td>120</td><td></td><td></td><td></td></td<>	Benzene		210	5.0	100.0	113.7	93.7	80	120							
yienes, Total 330 10 300.0 47.60 94.9 80 120 Sur: 4-Bromofluorobenzene 90 100.0 90.2 80 120 Sample ID: 2102809-001amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: BH06 Batch ID: R75423 RunNo: 75423 Prep Date: Analysis Date: 2/19/2021 SeqNo: 2665205 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 thylbenzene 140 5.0 100.0 26.64 114 80 120 15.7 20 yienes, Total 400 10 300.0 47.60 117 80 120 18.1 20	Toluene		100	5.0	100.0	7.695	96.6	80	120							
Sur: 4-Bromofluorobenzene 90 100.0 90.2 80 120 Sample ID: 2102809-001amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Image: Content of the state of the	Ethylbenzene		120	5.0	100.0	26.64	93.9	80	120							
Sample ID: 2102809-001amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: BH06 Batch ID: R75423 RunNo: 75423 Prep Date: Analysis Date: 2/19/2021 SeqNo: 2665205 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 oluene 120 5.0 100.0 7.695 117 80 120 18.0 20 thylbenzene 140 5.0 100.0 26.64 114 80 120 15.7 20 ylenes, Total 400 10 300.0 47.60 117 80 120 18.1 20	Xylenes, Total		330	10	300.0	47.60	94.9	80	120							
Client ID: BH06 Batch ID: R75423 RunNo: 75423 Prep Date: Analysis Date: 2/19/2021 SeqNo: 2665205 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 oluene 120 5.0 100.0 7.695 117 80 120 18.0 20 thylbenzene 140 5.0 100.0 26.64 114 80 120 15.7 20 ylenes, Total 400 10 300.0 47.60 117 80 120 18.1 20	Surr: 4-Brom	ofluorobenzene	90		100.0		90.2	80	120							
Prep Date: Analysis Date: 2/19/2021 SeqNo: 2665205 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 oluene 120 5.0 100.0 7.695 117 80 120 18.0 20 thylbenzene 140 5.0 100.0 26.64 114 80 120 15.7 20 ylenes, Total 400 10 300.0 47.60 117 80 120 18.1 20	Sample ID:	2102809-001amsd	SampT	Гуре: МS	SD	TestCode: EPA Method 8021B: Volatiles										
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 220 5.0 100.0 113.7 105 80 120 5.37 20 oluene 120 5.0 100.0 7.695 117 80 120 18.0 20 thylbenzene 140 5.0 100.0 26.64 114 80 120 15.7 20 ylenes, Total 400 10 300.0 47.60 117 80 120 18.1 20	Client ID:	BH06	Batch	h ID: R7	5423	F	RunNo: 7	5423								
enzene2205.0100.0113.7105801205.3720oluene1205.0100.07.6951178012018.020thylbenzene1405.0100.026.641148012015.720ylenes, Total40010300.047.601178012018.120	Prep Date:		Analysis D	Date: 2/	19/2021	S	SeqNo: 2	665205	Units: µg/L							
oluene1205.0100.07.6951178012018.020thylbenzene1405.0100.026.641148012015.720ylenes, Total40010300.047.601178012018.120	Analyte		Result						HighLimit	%RPD	RPDLimit	Qual				
thylbenzene1405.0100.026.641148012015.720ylenes, Total40010300.047.601178012018.120	Benzene						105	80	120	5.37	20					
ylenes, Total 400 10 300.0 47.60 117 80 120 18.1 20	Toluene		120	5.0	100.0	7.695	117	80	120	18.0	20					
	Ethylbenzene		140	5.0	100.0	26.64	114	80	120	15.7	20					
Surr: 4-Bromofluorobenzene 85 100.0 85.5 80 120 0 0	Xylenes, Total		400	10	300.0	47.60	117	80	120	18.1	20					
	Surr: 4-Brom	ofluorobenzene	85		100.0		85.5	80	120	0	0					

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 range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

2102809

23-Feb-21

Client:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

HILCORP ENERGY

Project:	Hare 15													
Sample ID: 100ng	g BTEX lcs	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles					
Client ID: LCSV	v	Batch	n ID: R7	5442	F	RunNo: 7	5442							
Prep Date:		Analysis D	ate: 2/	20/2021	S	SeqNo: 2	665923	Units: µg/L						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene		18	1.0	20.00	0	92.4	80	120						
Toluene		18	1.0	20.00	0	91.3	80	120						
Ethylbenzene		18	1.0	20.00	0	90.6	80	120						
Xylenes, Total		55	2.0	60.00	0	91.2	80	120						
Surr: 4-Bromofluorol	penzene	18		20.00		90.3	80	120						
Sample ID: MB		SampT	ype: ME	BLK	Tes	tCode: El	iles							
Client ID: PBW		Batch	n ID: R7	5442	F	RunNo: 7	5442							
Prep Date:		Analysis D	ate: 2/	20/2021	5	SeqNo: 2	665924	Units: µg/L						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene		ND	1.0											
Toluene		ND	1.0											
Ethylbenzene		ND	1.0											
Xylenes, Total		ND	2.0											
Surr: 4-Bromofluorol	penzene	18		20.00		90.9	80	120						
Sample ID: MB		SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles									
Client ID: PBW		Batch	n ID: R7	5471	F	RunNo: 7	5471							
Prep Date:		Analysis D	ate: 2/	23/2021	5	SeqNo: 2	667158	Units: µg/L						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Toluene		ND	1.0											
Surr: 4-Bromofluorol	penzene	18		20.00		87.8	80	120						

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 range due to dilution or matrix

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

WO#:	2102809
	12 E.L 11

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: clients.hau	4901 Ha iquerque, 1 FAX: 505-	wkins NE NM 87109 345-4107	Sample Log-In Check List						
Client Name: HILCORP ENERGY	Work Order Number:	2102809	1	RcptN	lo: 1					
Completed By: Cheyenne Cason	2/18/2021 7:50:00 AM 2/18/2021 8:12:10 AM									
Reviewed By: ENM	2/18/21									
Chain of Custody										
1. Is Chain of Custody complete?		Yes 🗸	No [Not Present						
2. How was the sample delivered?		<u>Courier</u>								
Log In 3. Was an attempt made to cool the samples?		Yes 🗸	No							
4. Were all samples received at a temperature of	>0° C to 6.0°C	Yes 🗹	No							
5. Sample(s) in proper container(s)?		Yes 🗹	No [
6. Sufficient sample volume for indicated test(s)?		Yes 🗹	No 🗌]						
7. Are samples (except VOA and ONG) properly	preserved?	Yes 🗹	No 🗌]						
8. Was preservative added to bottles?		Yes 🗌	No 🔽	NA 🗌						
9. Received at least 1 vial with headspace <1/4" f	or 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 custody)		Yes 🗹	No 🗌	R	or >12 unless noted)					
12. Are matrices correctly identified on Chain of Cu	ustody?	Yes 🗹	No	Adjusted?						
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌							
 Were all holding times able to be met? (If no, notify customer for authorization.) 		Yes 🗹	No 🗌	Checked by:	SPA 2,18,2					
Special Handling (if applicable)										
15. Was client notified of all discrepancies with thi	s order?	Yes 🗌	No 🗌	NA 🗹						
Person Notified:	Date:		www.teloupe.com	nar						
By Whom:	Via:] eMail [Phone F	ax 🗌 In Person						
Regarding:		A 2 M D I W A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2 M A 2								
Client Instructions:										
16. Additional remarks:										
17. <u>Cooler Information</u> Cooler No Temp °C Condition Seal 1 2.1 Good Yes	Intact Seal No Se	eal Date	Signed By							

Page 1 of 1

Received by OCD: 5/28/2021 11:57:31 AM

HALL ENVIRONMENTAL	LABORATORY	ental com	87100			(1	nəsdA\t	ļuəs	(A	οΛ	(AO -ime	Cl, F, B 8260 (V Total Cc								Danny. Burns & WSP. com Eric. Carvoll & WSP. com
HALL	ANALYSIS		4901 Hawkins NF -			((SIMS DCB, ² C WKC	270 (1) (1)	0 \ 0 3/80 04. 8 70	GR des des des des des des des des des des	I 5D(831ici 83 83	08:Н9Т 99 1808 М) 803 М) 803								Remarks: P/Ease cc: Dani Eric
1 Time:	d 🗆 Rush	e:	Have 15				Burns	108	ON 🗆		0 +0.1 - 2.1 (°C)	Preservative HEAL No.	Ce l	× 200	(203 ×	Gev x	1 005 X			Via: Date Time Re Via: Date Time Re Via: Date Time
Turn-Around Time:	Standard	Project Name:	Йо	Project #:		Project Manager		Sampler:	11576	el l	Cooler Temp(including CF): 2	Container Type and #	3 102				_			Received by: Received by:
Chain-of-Custody Record		Deal					Level 4 (Full Validation)	□ Az Compliance	at the "			Sample Name	BHOG	BHOG	BHII	BHIG	Bit 20			inquished by: East name Inquished by: Murthu Jubelen
n-of-Cu	110010	Jennifer				ť.	je:			(5		Matrix	Acheos	-		.0	7 1			Re
Client:	H	Jen	Mailing Address:		Phone #:	email or Fax#	QA/QC Package:	Accreditation:		□ EDD (Type)		Date Time	2/17/h 1355	1 1333	1417	5e el	1 300			Date: Time: 2//7 1575 Date: Time: 3/17/21 18/1

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	29935
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
	Extension request approved until Aug 13, 2021. please submit the full site characterization and remediation plan at that time. Please include the BLM Request and approval for offsite Delineation in the report and The Report should be a complete report even if the data was included in this interim report.	5/28/2021

Action 29935