

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

# I Release Notification

## Responsible Party

Responsible Party Hilcorp Energy	OGRID 372171
Contact Name: Kate Kaufman	Contact Telephone: 346-237-2275
Contact email: kkaufman@hilcorp.com	Incident # (assigned by OCD) nAPP2329050957
Contact mailing address: 1111 Travis St. Houston, TX 77471	

## Location of Release Source

Latitude 36.48358 \_\_\_\_\_ Longitude -107.77312 \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Ballard #9	Site Type: Well Site
Date Release Discovered: 6/5/2023	API# (if applicable) 30-045-05824

Unit Letter	Section	Township	Range	County
O	15	026N	009W	San Juan

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) Est. 0.3 bbls	Volume Recovered (bbls) Est. 0.3 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

### Cause of Release

Historical release discovered during the permanent removal of a below-grade tank (BGT). BGT closure sample results for TPH exceeded the closure criteria. Hilcorp conducted delineation operations and determined the release volume is less than the NMOCD reportable quantity.

State of New Mexico  
Oil Conservation Division

Incident ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:  This is a historic release and there was no active source at the time of discovery.
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u> Kate Kaufman </u> Title: <u> Environmental Specialist </u> Signature: <u>  </u> Date: <u> 10/17/2023 </u> email: <u> kkaufman@hilcorp.com </u> Telephone: <u> 346-237-2275 </u>
<b><u>OCD Only</u></b> Received by: _____ Date: _____

Incident ID	NAPP2329050957
District RP	
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## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>        </u> <100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	NAPP2329050957
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kathryn H Kaufman Title: Environmental Specialist

Signature:  Date: 10/19/2023

email: kk Kaufman@hilcorp.com Telephone: 346-237-2275

**OCD Only**

Received by: Shelly Wells Date: 10/19/2023

Incident ID	NAPP2329050957
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kathryn H. Kaufman Title: Environmental Specialist

Signature:  Date: 10/19/2023

email: kkaufman@hilcorp.com Telephone: 346-237-2275

**OCD Only**

Received by: Shelly Wells Date: 10/19/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

**INFORMATION ONLY**

Closure Approved by: \_\_\_\_\_ Date: 02/05/2024

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

**Application accepted for the record. Did not meet reportable event per 19.15.29.7A or 7B NMAC based on volume calculation and physically removed soil quantity (<10-12 cubic yards). Release resolved.**

## Executive Summary – Incident #nAPP2329050957

Hilcorp removed a below ground tank (BGT) at the Ballard #9 wellsite (API 30-045-25509) on May 24, 2023. The closure sample results were above the BGT permit closure limits and above the NMOCD action criteria in NMAC 19.15.29 Table 1 for total petroleum hydrocarbons (TPH).

Five-point composite samples were collected from the base and sidewalls on 7/6, 8/11 and 8/31 to delineate the extent of impacts, removing potentially impacted soil between sampling event. Sample results are included at the end of this summary report. While delineating impacts, Hilcorp removed approximately 7 yds<sup>3</sup> of clean and potentially impacted soil from the excavation. Impacted material was hauled offsite for disposal.

Final analytical results from these sampling events were below NMOCD action criteria noted in NMAC 19.15.29 Table 1. The historic hydrocarbon release volume was estimated to be approximately 0.3 bbls. The release volume estimate is attached.

# Scaled Site Map

Lat: 36.48358  
Long: -107.77312

Ballard #9 Wellsite  
API: 30-045-05824

 Historic Release Area



# Depth to groundwater determination.

Estimated depth to groundwater at the Ballard #9 wellsite is ~98'.

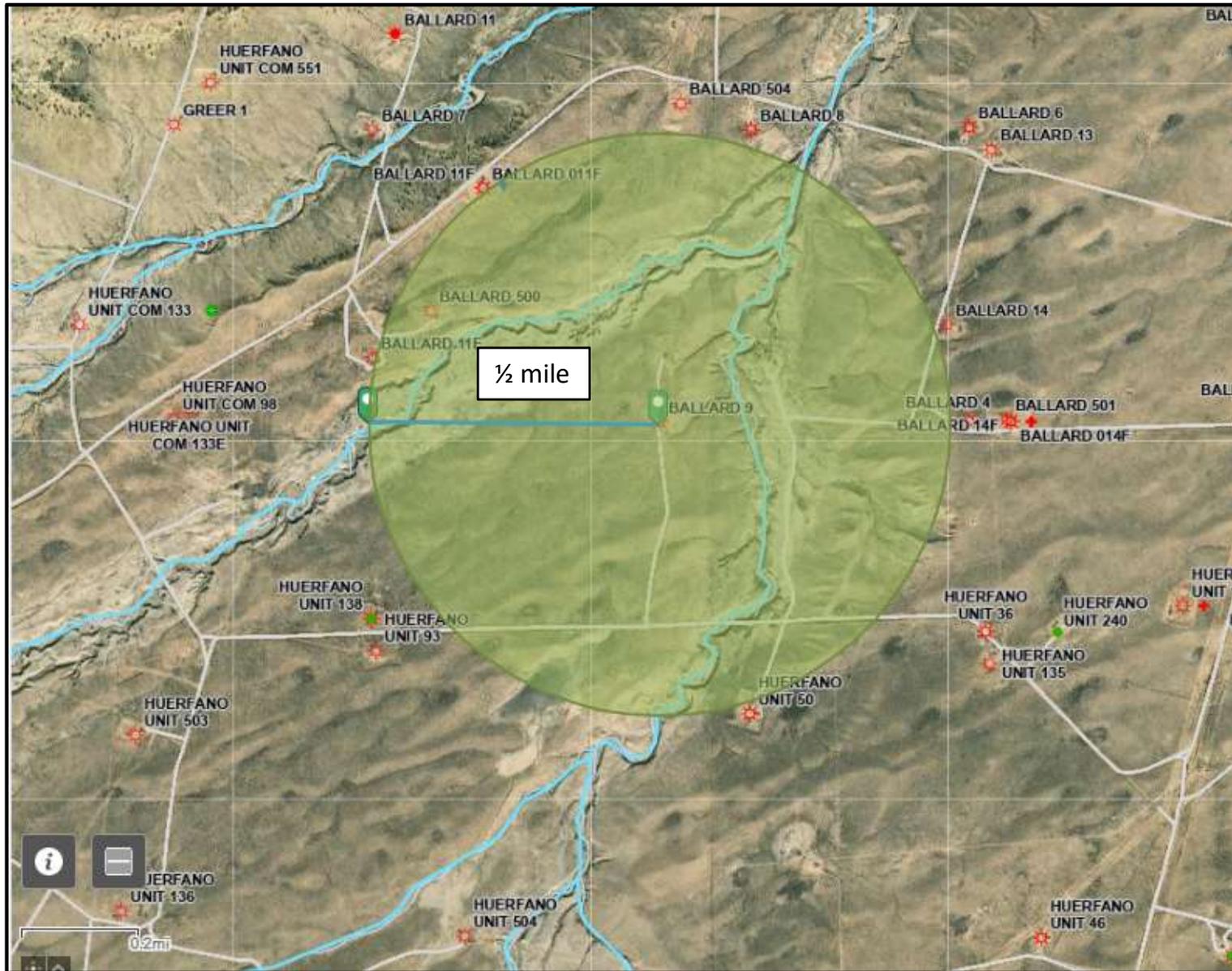
## **BALLARD 9**

### Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'BALLARD 9', which is located at 36.48358 degrees North latitude and 107.77312 degrees West longitude. This location is located on the Huerfano Trading Post 7.5' USGS topographic quadrangle. This location is in section 15 of Township 26 North Range 9 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in San Juan County, New Mexico. The nearest town is Nageezi, located 15.1 miles to the south. The nearest large town (population greater than 10,000) is Farmington, located 29.6 miles to the northwest (National Atlas). The nearest highway is US Highway 550, located 6.8 miles to the southwest. The location is on BLM land and is 3,569 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Blanco Canyon, New Mexico, Sub-basin. This location is located 1927 meters or 6320 feet above sea level and receives 10 inches of rain each year. The vegetation at this location is classified as Inter-Mountain Basins Semi-Desert Grassland as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 98 feet. This estimation is based on the data published on the New Mexico Engineer's iWaters Database website and water depth data from ConocoPhillips' cathodic wells. Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. The nearest stream is 592 feet to the east and is classified by the USGS as an intermittent stream. The nearest perennial stream is 8,015 feet to the west. The nearest water body is 2,405 feet to the southwest. It is classified by the USGS as an intermittent lake and is 4.2 acres in size. The nearest spring is 39,808 feet to the north. All stream, river, water body and spring information was determined as per the USGS Hydrographic Dataset (High Resolution), downloaded 3/2008. The nearest water well is 4,368 feet to the west. There is no wetland data available for this area. The slope at this location is 2 degrees to the northeast as calculated from USGS 30M National Elevation Dataset. This information is also discerned from the aerial and topographic map included. The surface geology at this location is NACIMIENTO FORMATION—Shale and sandstone with a Shale dominated formations of all ages substrate. The soil at this location is 'Doak-Sheppard-Shiprock association, rolling' and is well drained and not hydric with moderate erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008. The nearest underground mine is 20.7 miles to the south as indicated on the Mines, Mills and Quarries Map of New Mexico provided.

# Determination of water sources and significant watercourses within 1/2 mile of the lateral extent of the release



**Note 1:** Release point is within 300 ft of a continuously flowing watercourse or other significant water course.

**Note 2:** The lateral extents of the release point are not within 300 feet of a mapped wetland.

- Wetlands
- Waterways
- POD Waters

### Distance to mapped water wells.



**Note:** The lateral extents of the release point are not shown to be within 500 ft of a spring or domestic freshwater well used by less than 5 households (or stock watering) or within 1,000 ft of any freshwater water well or spring.

## Data table of soil contaminant concentrations

Sample Name	Sample Date	Ballard 9 Laboratory Results									
		Chloride (mg/kg)	TPH as DRO (mg/kg)	TPH as GRO (mg/kg)	TPH as MRO (mg/kg)	Total TPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylene (mg/kg)	Total BTEX (mg/kg)
<b>BGT Permit Closure Criteria &lt; 50'</b>		<b>600</b>	-	-	-	<b>100</b>	<b>10</b>	-	-	-	<b>50</b>
Sample	05/24/23	ND	1900	ND	1200	<b>3100</b>	ND	ND	ND	ND	ND
HA01 2'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA01 3'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA02 1'	07/06/23	ND	270	ND	ND	<b>270</b>	ND	ND	ND	ND	ND
HA02 2'	07/06/23	ND	60	ND	ND	61	ND	ND	ND	ND	ND
HA03 1'	07/06/23	ND	11	ND	ND	11	ND	ND	ND	ND	ND
HA03 2'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA04 1'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA04 2'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA05 1'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA05 2'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HA06 1'	07/06/23	ND	38	ND	ND	38	ND	ND	ND	ND	ND
HA06 2'	07/06/23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FS-01*	08/11/23	ND	180	ND	120	<b>300</b>	ND	ND	ND	ND	ND
FS-02*	08/11/23	ND	36	ND	ND	36	ND	ND	ND	ND	ND
FS-01A*	08/31/23	ND	34	ND	ND	34	ND	ND	ND	ND	ND

Delineation samples were collected on 7/6/2023, 8/11/2023 and 8/31/2023 by Ensolum. Hand Auger (HA) samples collected on 7/6/2023 were clean except for one location, HA-02. After excavation of impacted material at this location, floor samples (FS) were collected in two locations on 8/11/2023. FS-01 results were still above closure limits, so additional material was removed. The final sample FS-01A collected on 8/31/2023 was below NMOCD 19.15.29.12.D Table 1 closure criteria.

# Field Sample Diagram



# Sample Photos



# Sample Photos



# Sample Photos





**ESTIMATED RELEASE VOLUME TOOL  
BALLARD 9 BGT  
HILCORP ENERGY COMPANY**

*This tool estimates a release volume based on the size and concentration of a dry excavation.*

**Instructions:** Input the excavation parameters (dimensions) in red text, and the spreadsheet calculates a potential spill volume. Other parameters can be changed as appropriate.

Tool Inputs	
Soil Density	99.88473696 lbs/ft <sup>3</sup>
Condensate Density	6.259053338 lbs/gal

Excavation Parameters	
Hydrocarbon Concentration	734.00 mg/kg
Length	14 ft
Width	14 ft
Depth	1 ft
Expansion Factor	3 %
<b>Total Soil Volume</b>	<b>7 yds<sup>2</sup></b>

*Choose the appropriate column for the released product*

	Crude Oil/Condensate	Produced Water
Hydrocarbon Concentration (Percent)	25 %	75 %

***CALCULATED SPILL VOLUME***

Hydrocarbon Mass	15 lbs	15 lbs
Hydrocarbon (Release) Volume	9 gal 0.2 bbls	3 gal 0.1 bbls

**Notes**

% - percent      ft - feet      kg - kilograms      mg - milligrams  
 bbls - barrels      gal - gallons      lbs - pounds      yd - yard

Red values are variable and can be changed according to site specific information.

## Analytical Data, Samples Collected 7/6/2023, 8/11/2023, and 8/31/2023

See attached Lab Reports.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

July 17, 2023

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

RE: Ballard 9

OrderNo.: 2307258

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 18 sample(s) on 7/8/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA01@2'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 11:30:00 AM

**Lab ID:** 2307258-001

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/14/2023 4:42:14 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/14/2023 4:42:14 AM
Surr: DNOP	90.9	69-147		%Rec	1	7/14/2023 4:42:14 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 6:29:54 AM
Surr: BFB	95.9	15-244		%Rec	1	7/13/2023 6:29:54 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	7/13/2023 6:29:54 AM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 6:29:54 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 6:29:54 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/13/2023 6:29:54 AM
Surr: 4-Bromofluorobenzene	77.1	39.1-146		%Rec	1	7/13/2023 6:29:54 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 11:23:54 AM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA01@3'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 11:32:00 AM

**Lab ID:** 2307258-002

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	7/14/2023 4:53:23 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	7/14/2023 4:53:23 AM
Surr: DNOP	94.2	69-147		%Rec	1	7/14/2023 4:53:23 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 6:53:24 AM
Surr: BFB	94.3	15-244		%Rec	1	7/13/2023 6:53:24 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 6:53:24 AM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 6:53:24 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 6:53:24 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/13/2023 6:53:24 AM
Surr: 4-Bromofluorobenzene	77.9	39.1-146		%Rec	1	7/13/2023 6:53:24 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 12:01:08 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA02@1'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 11:49:00 AM

**Lab ID:** 2307258-004

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	270	9.8		mg/Kg	1	7/14/2023 5:04:29 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2023 5:04:29 AM
Surr: DNOP	94.4	69-147		%Rec	1	7/14/2023 5:04:29 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/13/2023 7:16:57 AM
Surr: BFB	93.5	15-244		%Rec	1	7/13/2023 7:16:57 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	7/13/2023 7:16:57 AM
Toluene	ND	0.050		mg/Kg	1	7/13/2023 7:16:57 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/13/2023 7:16:57 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/13/2023 7:16:57 AM
Surr: 4-Bromofluorobenzene	77.2	39.1-146		%Rec	1	7/13/2023 7:16:57 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 1:03:11 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA02@2'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 11:52:00 AM

**Lab ID:** 2307258-005

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	61	9.7		mg/Kg	1	7/14/2023 5:15:31 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2023 5:15:31 AM
Surr: DNOP	89.7	69-147		%Rec	1	7/14/2023 5:15:31 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 7:40:25 AM
Surr: BFB	94.3	15-244		%Rec	1	7/13/2023 7:40:25 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	7/13/2023 7:40:25 AM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 7:40:25 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 7:40:25 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/13/2023 7:40:25 AM
Surr: 4-Bromofluorobenzene	78.2	39.1-146		%Rec	1	7/13/2023 7:40:25 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 1:15:35 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA03@1'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 12:20:00 PM

**Lab ID:** 2307258-007

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	11	9.1		mg/Kg	1	7/14/2023 5:26:34 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/14/2023 5:26:34 AM
Surr: DNOP	91.9	69-147		%Rec	1	7/14/2023 5:26:34 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 8:04:00 AM
Surr: BFB	93.4	15-244		%Rec	1	7/13/2023 8:04:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 8:04:00 AM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 8:04:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 8:04:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/13/2023 8:04:00 AM
Surr: 4-Bromofluorobenzene	77.3	39.1-146		%Rec	1	7/13/2023 8:04:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 1:27:59 PM

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

**Qualifiers:**

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA03@2'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 12:23:00 PM

**Lab ID:** 2307258-008

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	7/14/2023 5:37:35 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/14/2023 5:37:35 AM
Surr: DNOP	88.2	69-147		%Rec	1	7/14/2023 5:37:35 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 8:27:30 AM
Surr: BFB	94.6	15-244		%Rec	1	7/13/2023 8:27:30 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 8:27:30 AM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 8:27:30 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 8:27:30 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/13/2023 8:27:30 AM
Surr: 4-Bromofluorobenzene	77.6	39.1-146		%Rec	1	7/13/2023 8:27:30 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 1:40:24 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA04@1'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 12:40:00 PM

**Lab ID:** 2307258-010

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	7/14/2023 5:48:33 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	7/14/2023 5:48:33 AM
Surr: DNOP	91.4	69-147		%Rec	1	7/14/2023 5:48:33 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 8:50:59 AM
Surr: BFB	92.7	15-244		%Rec	1	7/13/2023 8:50:59 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 8:50:59 AM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 8:50:59 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 8:50:59 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/13/2023 8:50:59 AM
Surr: 4-Bromofluorobenzene	76.9	39.1-146		%Rec	1	7/13/2023 8:50:59 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 1:52:48 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA04@2'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 12:42:00 PM

**Lab ID:** 2307258-011

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/14/2023 5:59:28 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2023 5:59:28 AM
Surr: DNOP	86.2	69-147		%Rec	1	7/14/2023 5:59:28 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 2:05:13 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 5:01:39 PM
Toluene	ND	0.049		mg/Kg	1	7/13/2023 5:01:39 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/13/2023 5:01:39 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/13/2023 5:01:39 PM
Surr: 1,2-Dichloroethane-d4	111	64.8-147		%Rec	1	7/13/2023 5:01:39 PM
Surr: 4-Bromofluorobenzene	96.5	62.1-144		%Rec	1	7/13/2023 5:01:39 PM
Surr: Dibromofluoromethane	119	73-145		%Rec	1	7/13/2023 5:01:39 PM
Surr: Toluene-d8	97.9	70-130		%Rec	1	7/13/2023 5:01:39 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/13/2023 5:01:39 PM
Surr: BFB	106	70-130		%Rec	1	7/13/2023 5:01:39 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA05@1'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 1:00:00 PM

**Lab ID:** 2307258-013

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/14/2023 6:10:22 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/14/2023 6:10:22 AM
Surr: DNOP	118	69-147		%Rec	1	7/14/2023 6:10:22 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 2:17:38 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.025		mg/Kg	1	7/13/2023 6:33:31 PM
Toluene	ND	0.050		mg/Kg	1	7/13/2023 6:33:31 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/13/2023 6:33:31 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/13/2023 6:33:31 PM
Surr: 1,2-Dichloroethane-d4	109	64.8-147		%Rec	1	7/13/2023 6:33:31 PM
Surr: 4-Bromofluorobenzene	98.0	62.1-144		%Rec	1	7/13/2023 6:33:31 PM
Surr: Dibromofluoromethane	119	73-145		%Rec	1	7/13/2023 6:33:31 PM
Surr: Toluene-d8	95.0	70-130		%Rec	1	7/13/2023 6:33:31 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/13/2023 6:33:31 PM
Surr: BFB	108	70-130		%Rec	1	7/13/2023 6:33:31 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA05@2'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 1:03:00 PM

**Lab ID:** 2307258-014

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/14/2023 6:21:16 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2023 6:21:16 AM
Surr: DNOP	88.0	69-147		%Rec	1	7/14/2023 6:21:16 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	59		mg/Kg	20	7/13/2023 2:30:02 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 8:05:07 PM
Toluene	ND	0.048		mg/Kg	1	7/13/2023 8:05:07 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/13/2023 8:05:07 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/13/2023 8:05:07 PM
Surr: 1,2-Dichloroethane-d4	113	64.8-147		%Rec	1	7/13/2023 8:05:07 PM
Surr: 4-Bromofluorobenzene	95.1	62.1-144		%Rec	1	7/13/2023 8:05:07 PM
Surr: Dibromofluoromethane	123	73-145		%Rec	1	7/13/2023 8:05:07 PM
Surr: Toluene-d8	94.4	70-130		%Rec	1	7/13/2023 8:05:07 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/13/2023 8:05:07 PM
Surr: BFB	103	70-130		%Rec	1	7/13/2023 8:05:07 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA06@1'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 1:24:00 PM

**Lab ID:** 2307258-016

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	38	9.8		mg/Kg	1	7/14/2023 6:32:06 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2023 6:32:06 AM
Surr: DNOP	104	69-147		%Rec	1	7/14/2023 6:32:06 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 2:42:27 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/13/2023 11:07:08 PM
Toluene	ND	0.048		mg/Kg	1	7/13/2023 11:07:08 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/13/2023 11:07:08 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/13/2023 11:07:08 PM
Surr: 1,2-Dichloroethane-d4	107	64.8-147		%Rec	1	7/13/2023 11:07:08 PM
Surr: 4-Bromofluorobenzene	96.7	62.1-144		%Rec	1	7/13/2023 11:07:08 PM
Surr: Dibromofluoromethane	117	73-145		%Rec	1	7/13/2023 11:07:08 PM
Surr: Toluene-d8	93.8	70-130		%Rec	1	7/13/2023 11:07:08 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/13/2023 11:07:08 PM
Surr: BFB	104	70-130		%Rec	1	7/13/2023 11:07:08 PM

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

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

**Analytical Report**

Lab Order **2307258**

Date Reported: **7/17/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** HA06@2'

**Project:** Ballard 9

**Collection Date:** 7/6/2023 1:28:00 PM

**Lab ID:** 2307258-017

**Matrix:** SOIL

**Received Date:** 7/8/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/14/2023 6:42:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/14/2023 6:42:57 AM
Surr: DNOP	92.7	69-147		%Rec	1	7/14/2023 6:42:57 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	7/13/2023 2:54:51 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.025		mg/Kg	1	7/13/2023 11:37:18 PM
Toluene	ND	0.050		mg/Kg	1	7/13/2023 11:37:18 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/13/2023 11:37:18 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/13/2023 11:37:18 PM
Surr: 1,2-Dichloroethane-d4	104	64.8-147		%Rec	1	7/13/2023 11:37:18 PM
Surr: 4-Bromofluorobenzene	102	62.1-144		%Rec	1	7/13/2023 11:37:18 PM
Surr: Dibromofluoromethane	116	73-145		%Rec	1	7/13/2023 11:37:18 PM
Surr: Toluene-d8	95.7	70-130		%Rec	1	7/13/2023 11:37:18 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/13/2023 11:37:18 PM
Surr: BFB	106	70-130		%Rec	1	7/13/2023 11:37:18 PM

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>MB-76176</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76176</b>	RunNo: <b>98195</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3573236</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76176</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76176</b>	RunNo: <b>98195</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3573237</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>LCS-76160</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76160</b>		RunNo: <b>98169</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572216</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		110	69	147			

Sample ID: <b>LCS-76166</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76166</b>		RunNo: <b>98169</b>							
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572217</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.4	69	147			

Sample ID: <b>MB-76157</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76157</b>		RunNo: <b>98169</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572218</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		106	69	147			

Sample ID: <b>MB-76160</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76160</b>		RunNo: <b>98169</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572219</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		107	69	147			

Sample ID: <b>MB-76166</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76166</b>		RunNo: <b>98169</b>							
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572220</b>				Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.2		10.00		91.7	69	147			

Sample ID: <b>LCS-76156</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76156</b>		RunNo: <b>98169</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572750</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	61.9	130			
Surr: DNOP	5.5		5.000		109	69	147			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>LCS-76157</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76157</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572751</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.2	61.9	130			
Surr: DNOP	5.1		5.000		102	69	147			

Sample ID: <b>LCS-76168</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76168</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572752</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.0	69	147			

Sample ID: <b>MB-76156</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76156</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572753</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		119	69	147			

Sample ID: <b>MB-76168</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76168</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572754</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.9	69	147			

Sample ID: <b>2307258-011AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>HA04@2'</b>	Batch ID: <b>76157</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/14/2023</b>	SeqNo: <b>3572924</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.7	48.50	0	95.3	54.2	135			
Surr: DNOP	4.4		4.850		90.5	69	147			

Sample ID: <b>2307258-011AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>HA04@2'</b>	Batch ID: <b>76157</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/14/2023</b>	SeqNo: <b>3572925</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.9	49.46	0	114	54.2	135	20.0	29.2	

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>2307258-011AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>HA04@2'</b>	Batch ID: <b>76157</b>	RunNo: <b>98169</b>								
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/14/2023</b>	SeqNo: <b>3572925</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		4.946		111	69	147	0	0	

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY  
**Project:** Ballard 9

Sample ID: <b>ics-76094</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76094</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572011</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1900		1000		188	15	244			

Sample ID: <b>ics-76095</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76095</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572012</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.3	70	130			
Surr: BFB	2100		1000		206	15	244			

Sample ID: <b>mb-76094</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76094</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572013</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.3	15	244			

Sample ID: <b>mb-76095</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76095</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572014</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.8	15	244			

Sample ID: <b>ics-76148</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76148</b>		RunNo: <b>98173</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572253</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		204	15	244			

Sample ID: <b>mb-76148</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76148</b>		RunNo: <b>98173</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572254</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		98.7	15	244			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY  
**Project:** Ballard 9

Sample ID: <b>LCS-76094</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76094</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572066</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.85		1.000		84.9	39.1	146			

Sample ID: <b>LCS-76095</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76095</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572067</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.4	70	130			
Toluene	0.87	0.050	1.000	0	87.2	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.7	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.2	70	130			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.0	39.1	146			

Sample ID: <b>mb-76094</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76094</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572068</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.83		1.000		83.1	39.1	146			

Sample ID: <b>mb-76095</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76095</b>		RunNo: <b>98162</b>							
Prep Date: <b>7/10/2023</b>	Analysis Date: <b>7/12/2023</b>		SeqNo: <b>3572069</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.82		1.000		82.3	39.1	146			

Sample ID: <b>LCS-76148</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76148</b>		RunNo: <b>98173</b>							
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>		SeqNo: <b>3572257</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.81		1.000		80.8	39.1	146			

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>mb-76148</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76148</b>	RunNo: <b>98173</b>								
Prep Date: <b>7/12/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572258</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.82		1.000		81.7	39.1	146			

**Qualifiers:**

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>2307258-013ams</b>	SampType: <b>MS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>HA05@1'</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572934</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9852	0	109	75.8	123			
Toluene	0.95	0.049	0.9852	0	96.0	68.3	130			
Ethylbenzene	0.96	0.049	0.9852	0	97.8	76.6	132			
Xylenes, Total	3.0	0.099	2.956	0	101	74.7	132			
Surr: 1,2-Dichloroethane-d4	0.53		0.4926		107	64.8	147			
Surr: 4-Bromofluorobenzene	0.47		0.4926		95.4	62.1	144			
Surr: Dibromofluoromethane	0.58		0.4926		118	73	145			
Surr: Toluene-d8	0.48		0.4926		98.1	70	130			

Sample ID: <b>2307258-013amsd</b>	SampType: <b>MSD4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>HA05@1'</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572935</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9911	0	103	75.8	123	5.15	20	
Toluene	0.89	0.050	0.9911	0	90.0	68.3	130	5.85	20	
Ethylbenzene	0.90	0.050	0.9911	0	91.1	76.6	132	6.52	20	
Xylenes, Total	2.8	0.099	2.973	0	93.4	74.7	132	6.87	20	
Surr: 1,2-Dichloroethane-d4	0.53		0.4955		108	64.8	147	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4955		97.7	62.1	144	0	0	
Surr: Dibromofluoromethane	0.60		0.4955		122	73	145	0	0	
Surr: Toluene-d8	0.48		0.4955		97.0	70	130	0	0	

Sample ID: <b>Ics-76131</b>	SampType: <b>LCS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572950</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	80	120			
Toluene	0.88	0.050	1.000	0	88.0	80	120			
Ethylbenzene	0.89	0.050	1.000	0	88.7	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.9	80	120			
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	64.8	147			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.7	62.1	144			
Surr: Dibromofluoromethane	0.57		0.5000		115	73	145			
Surr: Toluene-d8	0.47		0.5000		93.7	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>mb-76131</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3572951</b>			Units: <b>mg/Kg</b>					
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	0.51		0.5000		101	64.8	147			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.3	62.1	144			
Surr: Dibromofluoromethane	0.57		0.5000		113	73	145			
Surr: Toluene-d8	0.47		0.5000		94.5	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307258

17-Jul-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>2307258-011ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>HA04@2'</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3573093</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.46	0	85.5	65.9	123			
Surr: BFB	510		489.2		104	70	130			

Sample ID: <b>2307258-011amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>HA04@2'</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3573094</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.9	24.41	0	77.0	65.9	123	10.7	20	
Surr: BFB	530		488.3		108	70	130	0	0	

Sample ID: <b>lcs-76131</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3573110</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.0	70	130			
Surr: BFB	520		500.0		104	70	130			

Sample ID: <b>mb-76131</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76131</b>	RunNo: <b>98186</b>								
Prep Date: <b>7/11/2023</b>	Analysis Date: <b>7/13/2023</b>	SeqNo: <b>3573111</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	540		500.0		107	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2307258 RcptNo: 1

Received By: Tracy Casarrubias 7/8/2023 9:00:00 AM
Completed By: Tracy Casarrubias 7/8/2023 11:16:07 AM
Reviewed By: [Signature] 7/10/23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [ ] No [x] Not Present [ ]
2. How was the sample delivered? Courier

Log In

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

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

Checked by: [Signature] 7/10/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [x]

Person Notified: [ ] Date: [ ]
By Whom: [ ] Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person [ ]
Regarding: [ ]
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC - TMC 7/8/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 4.8, Good, Yes, Yogi, [ ], [ ]

### Chain-of-Custody Record

Client: Hilcorp, Kate Kaufman  
 KKaufman@hilcorp.com  
 Mailing Address:

Turn-Around Time:  
 Standard  Rush

Project Name:  
 Ballard 9

Project #:

Phone #:

email or Fax#:

QA/QC Package:  Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance  NELAC  Other

EDD (Type)

Project Manager: Stuart Hyde  
 shyde@ensolum.com

Sampler: Zach Myers  
 On Ice:  Yes  No  Yes  No

# of Coolers: 1  
 Cooler Temp (including CP): 4.8-8.4.8 (°C)

Container Type and #  
 Preservative Type  
 HEAL No.  
 2307258

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
7-6	11:30	soil	HA01@2'	Hozjar	cool	001
7-6	11:32	soil	HA01@3'			002
7-6	11:34	soil	HA01@4'			003
7-6	11:49		HA02@1'			004
7-6	11:52		HA02@2'			005
7-6	11:54		HA03@4'			006
7-6	12:20		HA03@1'			007
7-6	12:23		HA03@2'			009
7-6	12:26		HA03@4'			009
7-6	12:40		HA04@1'			010
7-6	12:42		HA04@2'			011
7-6	12:45		HA04@4'			012

Relinquished by: [Signature]  
 Date: 7/7/23 1615  
 Relinquished by: [Signature]  
 Date: 7/7/23 1804

Received by: [Signature]

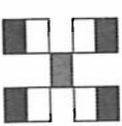
Via: [Signature]  
 Date: 7/7/23 1615  
 Received by: [Signature]  
 Date: 7/6/23 9:00

Remarks:  
 cc: zmyers@ensolum.com

### Analysis Request

TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl <sup>-</sup> , Br <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , PO <sub>4</sub> <sup>3-</sup> , SO <sub>4</sub> <sup>2-</sup>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

Hold



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

### Chain-of-Custody Record

Client: Hilcorp, Kate Kaufman

kkaufman@hilcorp.com

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance

NELAC  Other

EDD (Type)

Turn-Around Time:  Standard  Rush

Project Name: Ballard J

Project #: Stuart Hyde

shyde@ensolum.com

Project Manager:

Sampler:

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including CF): 4.8 - 0 = 4.8 (°C)

Container Type and #	Preservative Type	HEAL No.
4oz jar	cool	2307258
		013
		014
		015
		016
		017
		018

Date	Time	Matrix	Sample Name
7-6	13:00	Soil	HA05@1
7-6	13:03		HA05@2
7-6	13:07		HA05@4
7-6	13:24		HA06@1
7-6	13:28		HA06@2
7-6	13:31		HA06@4

Date: 7/7/23

Time: 1415

Date: 7/7/23

Time: 1804

Received by: [Signature]

Date: 7/7/23

Received by: [Signature]

Date: 7/8/23

Time: 9:02

### HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

#### Analysis Request

<input checked="" type="checkbox"/> BTEX / MTBE / TMBs (8021)	<input checked="" type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input checked="" type="checkbox"/> EDB (Method 504.1)	<input checked="" type="checkbox"/> PAHs by 8310 or 8270SIMS	<input checked="" type="checkbox"/> RCRA 8 Metals	<input checked="" type="checkbox"/> (C)F, Br, NO <sub>2</sub> , NO <sub>x</sub> , PO <sub>x</sub> , SO <sub>x</sub>	<input checked="" type="checkbox"/> 8260 (VOA)	<input checked="" type="checkbox"/> 8270 (Semi-VOA)	<input checked="" type="checkbox"/> Total Coliform (Present/Absent)
---	--	--	--	--	---	---	--	---	---

Remarks:

cc: zmyers@ensolum.com



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

August 18, 2023

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

RE: Ballard 4

OrderNo.: 2308724

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/12/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2308724**

Date Reported: **8/18/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** FS01

**Project:** Ballard 4

**Collection Date:** 8/11/2023 9:45:00 AM

**Lab ID:** 2308724-001

**Matrix:** SOIL

**Received Date:** 8/12/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	180	9.9		mg/Kg	1	8/15/2023 6:00:55 PM
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	8/15/2023 6:00:55 PM
Surr: DNOP	84.6	69-147		%Rec	1	8/15/2023 6:00:55 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/16/2023 4:53:00 PM
Surr: BFB	102	15-244		%Rec	1	8/16/2023 4:53:00 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	8/16/2023 4:53:00 PM
Toluene	ND	0.050		mg/Kg	1	8/16/2023 4:53:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2023 4:53:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/16/2023 4:53:00 PM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	8/16/2023 4:53:00 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>RBC</b>
Chloride	ND	60		mg/Kg	20	8/16/2023 8:40:35 PM

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

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

**Analytical Report**

Lab Order **2308724**

Date Reported: **8/18/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** FS02

**Project:** Ballard 4

**Collection Date:** 8/11/2023 9:20:00 AM

**Lab ID:** 2308724-002

**Matrix:** SOIL

**Received Date:** 8/12/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	36	9.9		mg/Kg	1	8/15/2023 6:42:15 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/15/2023 6:42:15 PM
Surr: DNOP	113	69-147		%Rec	1	8/15/2023 6:42:15 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2023 5:15:00 PM
Surr: BFB	105	15-244		%Rec	1	8/16/2023 5:15:00 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	8/16/2023 5:15:00 PM
Toluene	ND	0.049		mg/Kg	1	8/16/2023 5:15:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2023 5:15:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/16/2023 5:15:00 PM
Surr: 4-Bromofluorobenzene	94.6	39.1-146		%Rec	1	8/16/2023 5:15:00 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>RBC</b>
Chloride	ND	61		mg/Kg	20	8/16/2023 9:17:49 PM

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2308724

18-Aug-23

**Client:** HILCORP ENERGY

**Project:** Ballard 4

Sample ID: <b>MB-76911</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76911</b>	RunNo: <b>99040</b>								
Prep Date: <b>8/16/2023</b>	Analysis Date: <b>8/16/2023</b>	SeqNo: <b>3610115</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-76911</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76911</b>	RunNo: <b>99040</b>								
Prep Date: <b>8/16/2023</b>	Analysis Date: <b>8/16/2023</b>	SeqNo: <b>3610116</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308724

18-Aug-23

**Client:** HILCORP ENERGY

**Project:** Ballard 4

Sample ID: <b>LCS-76874</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76874</b>	RunNo: <b>98980</b>								
Prep Date: <b>8/15/2023</b>	Analysis Date: <b>8/15/2023</b>	SeqNo: <b>3608188</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	61.9	130			
Surr: DNOP	4.3		5.000		85.8	69	147			

Sample ID: <b>MB-76874</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76874</b>	RunNo: <b>98980</b>								
Prep Date: <b>8/15/2023</b>	Analysis Date: <b>8/15/2023</b>	SeqNo: <b>3608189</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.6		10.00		86.4	69	147			

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308724

18-Aug-23

**Client:** HILCORP ENERGY

**Project:** Ballard 4

Sample ID: <b>ics-76869</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76869</b>	RunNo: <b>99010</b>								
Prep Date: <b>8/15/2023</b>	Analysis Date: <b>8/16/2023</b>	SeqNo: <b>3608357</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.6	70	130			
Surr: BFB	2100		1000		208	15	244			

Sample ID: <b>mb-76869</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76869</b>	RunNo: <b>99010</b>								
Prep Date: <b>8/15/2023</b>	Analysis Date: <b>8/16/2023</b>	SeqNo: <b>3608358</b>	Units: <b>mg/Kg</b>							
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		104	15	244			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2308724

18-Aug-23

**Client:** HILCORP ENERGY

**Project:** Ballard 4

Sample ID: <b>ics-76869</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76869</b>		RunNo: <b>99010</b>							
Prep Date: <b>8/15/2023</b>	Analysis Date: <b>8/16/2023</b>		SeqNo: <b>3608361</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	87.7	70	130			
Toluene	0.88	0.050	1.000	0	88.1	70	130			
Ethylbenzene	0.90	0.050	1.000	0	90.4	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.5	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	39.1	146			

Sample ID: <b>mb-76869</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76869</b>		RunNo: <b>99010</b>							
Prep Date: <b>8/15/2023</b>	Analysis Date: <b>8/16/2023</b>		SeqNo: <b>3608362</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.1	39.1	146			

**Qualifiers:**

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

# Sample Log-In Check List

Client Name: HILCORP ENERGY

Work Order Number: 2308724

RcptNo: 1

Received By: Juan Rojas

8/12/2023 7:45:00 AM

Completed By: Juan Rojas

8/12/2023 8:38:27 AM

Reviewed By: *JR* 8/12/23

### Chain of Custody

1. Is Chain of Custody complete? Yes  No  Not Present

2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes  No  NA

4. Were all samples received at a temperature of >0° C to 6.0° C Yes  No  NA

5. Sample(s) in proper container(s)? Yes  No

6. Sufficient sample volume for indicated test(s)? Yes  No

7. Are samples (except VOA and ONG) properly preserved? Yes  No

8. Was preservative added to bottles? Yes  No  NA

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes  No  NA

10. Were any sample containers received broken? Yes  No

11. Does paperwork match bottle labels? Yes  No

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes  No

13. Is it clear what analyses were requested? Yes  No

14. Were all holding times able to be met? Yes  No

(If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: *JR 8/12/23*

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_ Date \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

16. Additional remarks:

Client missing mailing address, phone number, and email address on COC. JR 8/12/23

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes	Morty		





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

September 12, 2023

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

RE: Ballard 9

OrderNo.: 2309006

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/1/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2309006**

Date Reported: **9/12/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** FS01a

**Project:** Ballard 9

**Collection Date:** 8/31/2023 9:30:00 AM

**Lab ID:** 2309006-001

**Matrix:** SOIL

**Received Date:** 9/1/2023 6:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	34	9.4		mg/Kg	1	9/8/2023 3:57:54 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/8/2023 3:57:54 PM
Surr: DNOP	104	69-147		%Rec	1	9/8/2023 3:57:54 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/6/2023 6:51:20 PM
Surr: BFB	99.7	15-244		%Rec	1	9/6/2023 6:51:20 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.023		mg/Kg	1	9/6/2023 6:51:20 PM
Toluene	ND	0.047		mg/Kg	1	9/6/2023 6:51:20 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/6/2023 6:51:20 PM
Xylenes, Total	ND	0.093		mg/Kg	1	9/6/2023 6:51:20 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	9/6/2023 6:51:20 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	ND	60		mg/Kg	20	9/8/2023 1:29:04 PM

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2309006

12-Sep-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>MB-77386</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>77386</b>	RunNo: <b>99555</b>								
Prep Date: <b>9/8/2023</b>	Analysis Date: <b>9/8/2023</b>	SeqNo: <b>3636065</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-77386</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>77386</b>	RunNo: <b>99555</b>								
Prep Date: <b>9/8/2023</b>	Analysis Date: <b>9/8/2023</b>	SeqNo: <b>3636066</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2309006

12-Sep-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>MB-77351</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>77351</b>	RunNo: <b>99545</b>								
Prep Date: <b>9/7/2023</b>	Analysis Date: <b>9/8/2023</b>	SeqNo: <b>3636489</b>	Units: <b>mg/Kg</b>							
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	9.5		10.00		95.4	69	147			

Sample ID: <b>LCS-77351</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>77351</b>	RunNo: <b>99545</b>								
Prep Date: <b>9/7/2023</b>	Analysis Date: <b>9/8/2023</b>	SeqNo: <b>3636492</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.7	61.9	130			
Surr: DNOP	4.6		5.000		91.9	69	147			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2309006

12-Sep-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>Ics-77293</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>77293</b>	RunNo: <b>99471</b>								
Prep Date: <b>9/5/2023</b>	Analysis Date: <b>9/6/2023</b>	SeqNo: <b>3631703</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.2	70	130			
Surr: BFB	1900		1000		194	15	244			

Sample ID: <b>MB-77293</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>77293</b>	RunNo: <b>99471</b>								
Prep Date: <b>9/5/2023</b>	Analysis Date: <b>9/6/2023</b>	SeqNo: <b>3631704</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		94.7	15	244			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2309006

12-Sep-23

**Client:** HILCORP ENERGY

**Project:** Ballard 9

Sample ID: <b>LCS-77293</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>77293</b>		RunNo: <b>99471</b>							
Prep Date: <b>9/5/2023</b>	Analysis Date: <b>9/6/2023</b>		SeqNo: <b>3631710</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	70	130			
Toluene	1.1	0.050	1.000	0	110	70	130			
Ethylbenzene	1.1	0.050	1.000	0	111	70	130			
Xylenes, Total	3.4	0.10	3.000	0	112	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	39.1	146			

Sample ID: <b>MB-77293</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>77293</b>		RunNo: <b>99471</b>							
Prep Date: <b>9/5/2023</b>	Analysis Date: <b>9/6/2023</b>		SeqNo: <b>3631711</b>		Units: <b>mg/Kg</b>					
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	1.1		1.000		106	39.1	146			

**Qualifiers:**

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



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

Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2309006 RcptNo: 1

Received By: Tracy Casarrubias 9/1/2023 6:40:00 AM

Completed By: Tracy Casarrubias 9/1/2023 8:25:56 AM

Reviewed By: SCM 9/1/23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [ ] No [x] Not Present [ ]
2. How was the sample delivered? Courier

Log In

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

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

Adjusted?

Checked by: jmal/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [x]

Person Notified: [ ] Date: [ ]
By Whom: [ ] Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person [ ]
Regarding: [ ]
Client Instructions: Mailing address, phone number, and Email/Fax are missing on COC- TMC 9/1/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 4.2, Good, Yes, Yogi, [ ], [ ]



**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

Action 277345

**CONDITIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 277345
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Application accepted for the record. Did not meet reportable event per 19.15.29.7A or 7B NMAC based on volume calculation and physically removed soil quantity (<10-12 cubic yards). Release resolved.	2/5/2024