

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

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

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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) nAPP2319251025
Contact mailing address: 1111 Travis St. Houston, TX 77471	

### Location of Release Source

Latitude 36.623602 \_\_\_\_\_ Longitude -107.562403 \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: San Juan 28-7 Unit 131N	Site Type: Well Site
Date Release Discovered: 7/5/2023	API# (if applicable) 30-039-30663

Unit Letter	Section	Township	Range	County
C	34	028N	007W	Rio Arriba

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) 0
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 60	Volume Recovered (bbls) 0
	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) 0
<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

While conducting routine wellsite inspections, operator discovered evidence of a produced water release inside a bermed area. Release was via a hole in the bottom of a tank that formed due to corrosion. The remaining fluid in the tank was drained and the tank will be repaired prior to being put back into service. No fluids were recovered. Samples will be collected to determine remediation requirements.


State of New Mexico  
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <b>Released volume was greater than 25 bbls.</b>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A <b>Notification was given by Clara Cardoza to Nelson Velez and Emmanuel Adeloje via email on 7/5/2023.</b>	

### 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:  
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> 7/11/2023 </u> email: <u> kkaufman@hilcorp.com </u> Telephone: <u> 346-237-2275 </u>
<b><u>OCD Only</u></b> Received by: _____ Date: _____

Incident ID	
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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?	<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.

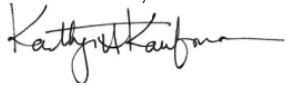
State of New Mexico  
Oil Conservation Division

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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: 9/27/2023 \_\_\_\_\_

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

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
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## Closure

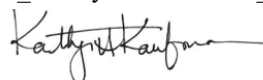
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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: 9/27/2023

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

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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.

Closure Approved by:  Date: 01/22/2024

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

## Executive Summary – Incident #nAPP2319251025

While conducting routine wellsite inspections, a Hilcorp operator discovered evidence of a produced water release inside a bermed area at the San Juan 28-7 #131N wellsite (API 30-039-30663) on 7/5/2023. The release was via a hole in the bottom of a tank that formed due to corrosion. Approximately 60 barrels of produced water was released to a bermed containment area. Remaining fluid in the tank was drained and the tank was repaired prior to being put back into service. No released fluids were recovered. There was no immediate danger to the public and no fire occurred because of this release.

Ten (10) grab samples were collected at two locations and varying depths in the release area on 7/12/2023 to delineate the extent of impacts on the pad. Analytical results from this sampling event were below NMOCD action criteria outlined in NMAC 19.15.29 Table 1. Based on analytical results, no soil was removed from the location, other than stained soil at the surface.

Sample results are included at the end of this summary report.

# Scaled Site Map

Lat: 36.623602  
Long: -1007.562403

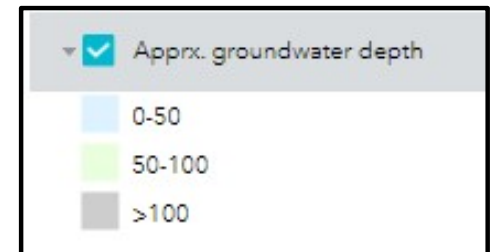
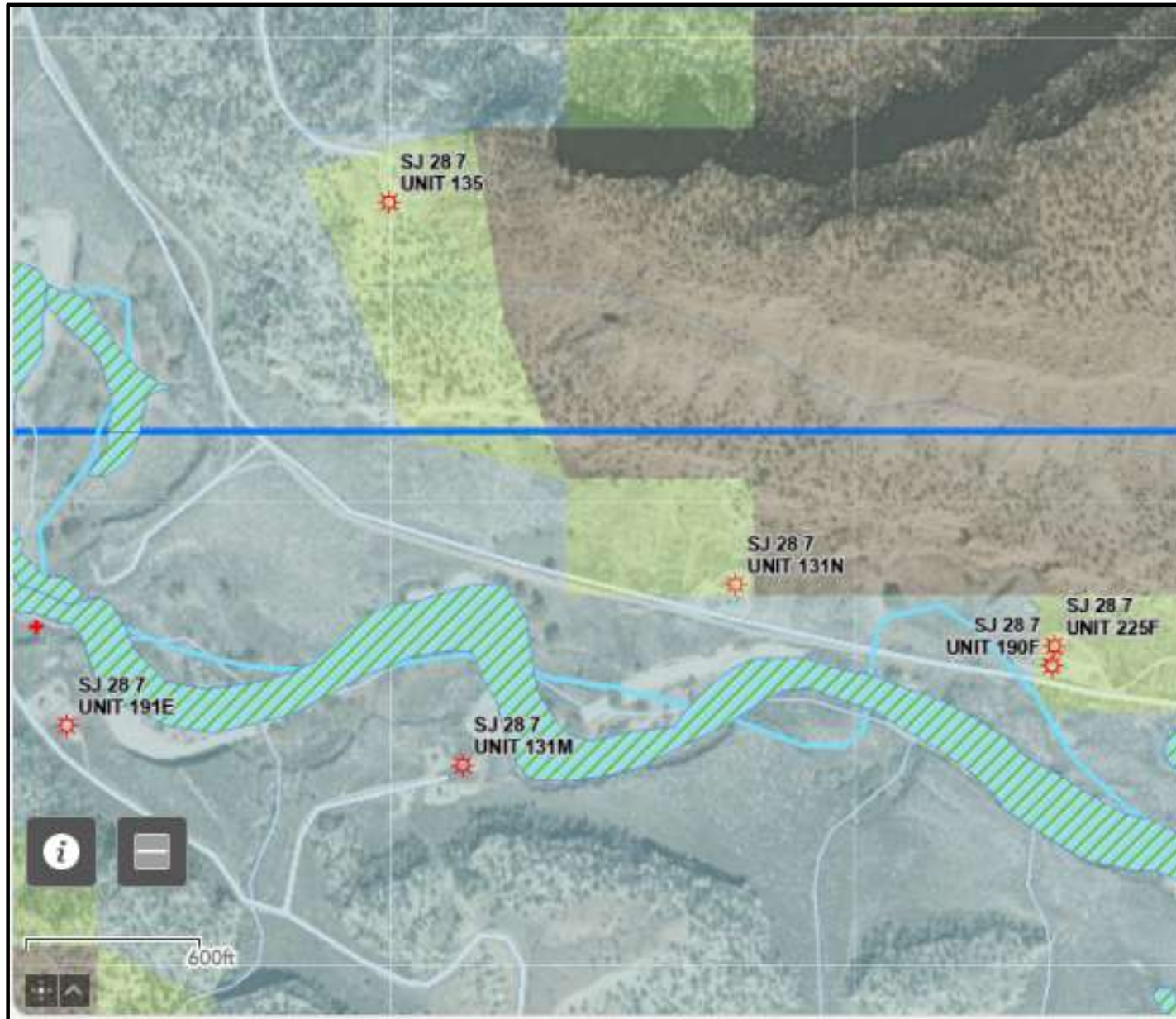
San Juan 28-7 #131 N Wellsite  
API: 30-039-30663

 Release Area



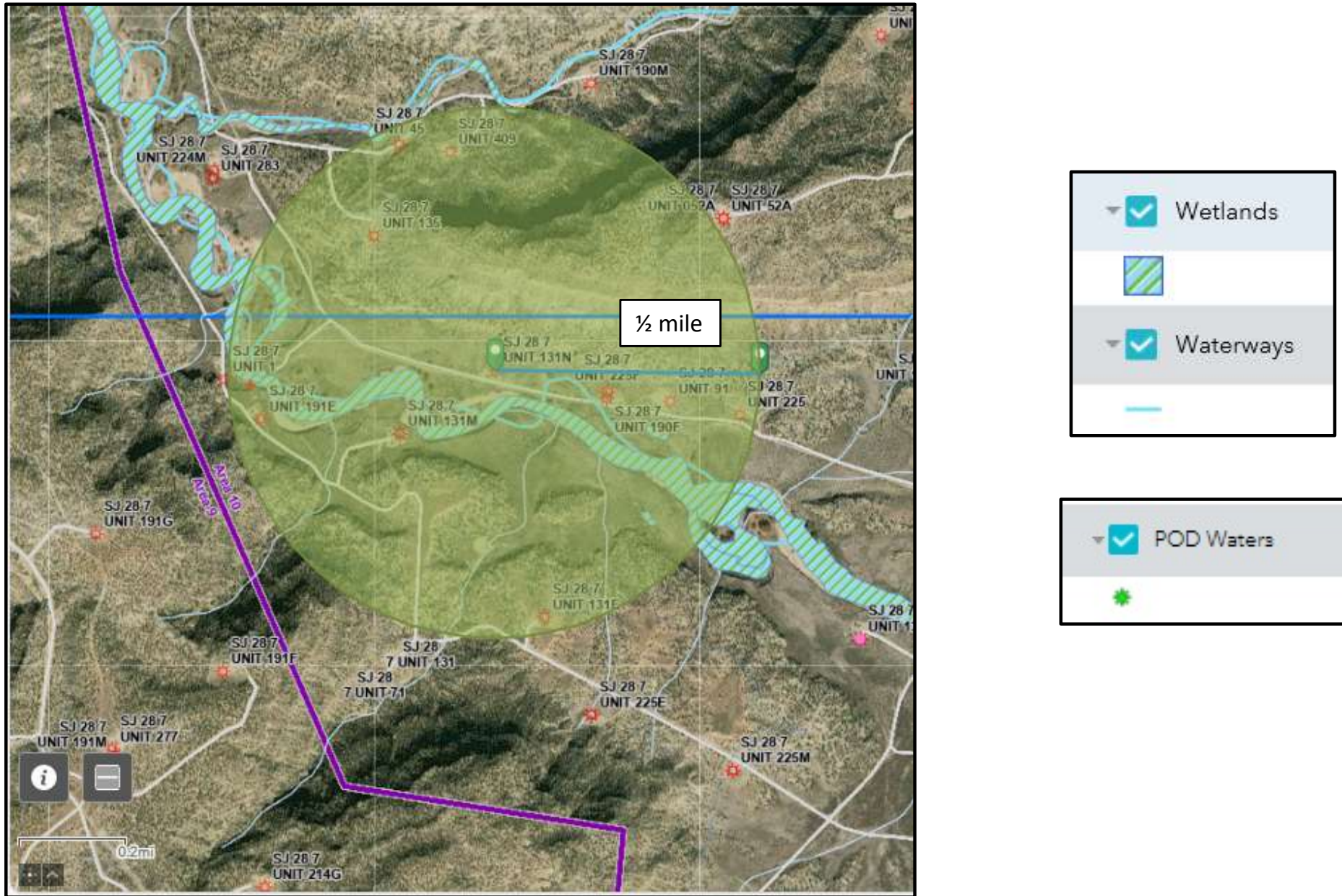
# Depth to groundwater determination.

San Juan 28-7 #131N; estimated depth to groundwater is <100'.





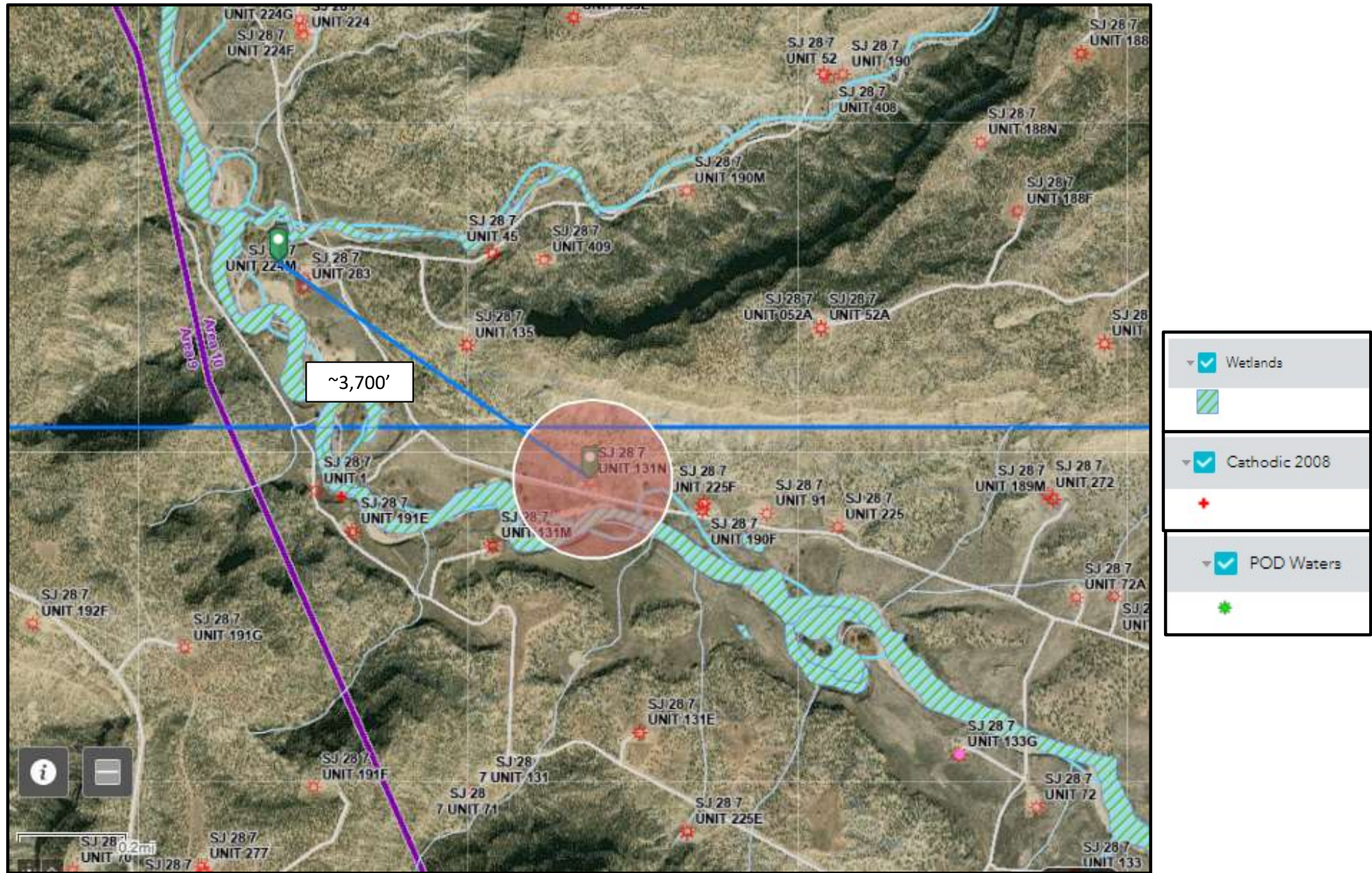
# Determination of water sources and significant watercourses within 1/2 mile of the lateral extent of the release



**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 shown to be within 300 feet of a mapped wetland.

# 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.

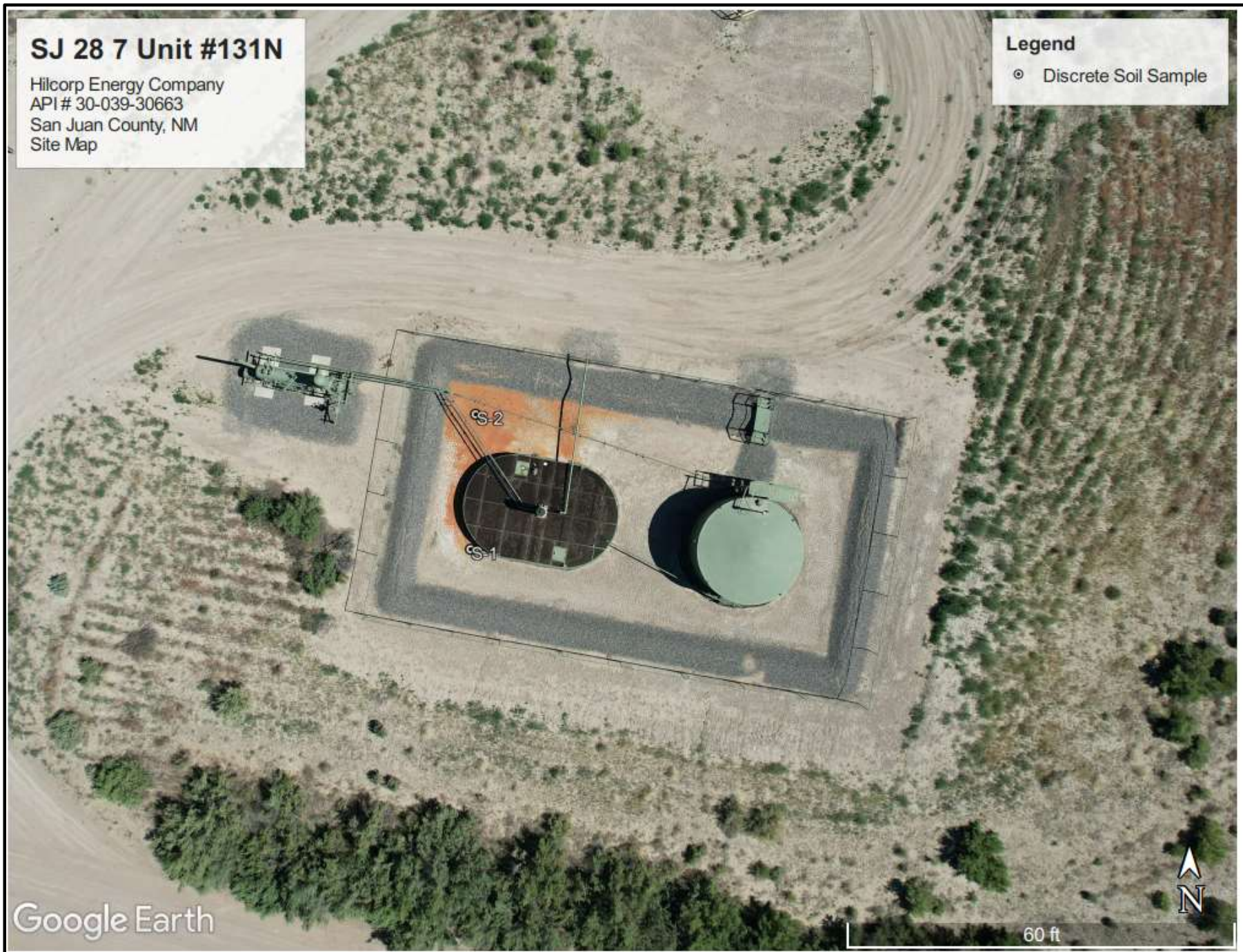
## Data table of soil contaminant concentrations

Sample Name	Sample Date	San Juan 28-7 #131N 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>19.15.29 Table 1 Closure Criteria</b>		<b>600</b>	-	-	-	<b>100</b>	<b>10</b>	-	-	-	<b>50</b>
S-1 (0-6")	7/12/2023	150	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-1 (1')	7/12/2023	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-1 (2')	7/12/2023	97	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-1 (3')	7/12/2023	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-1 (4')	7/12/2023	250	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-2 (0-6")	7/12/2023	220	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-2 (1')	7/12/2023	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-2 (2')	7/12/2023	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-2 (3')	7/12/2023	98	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-2 (4')	7/12/2023	120	ND	ND	ND	ND	ND	ND	ND	ND	ND

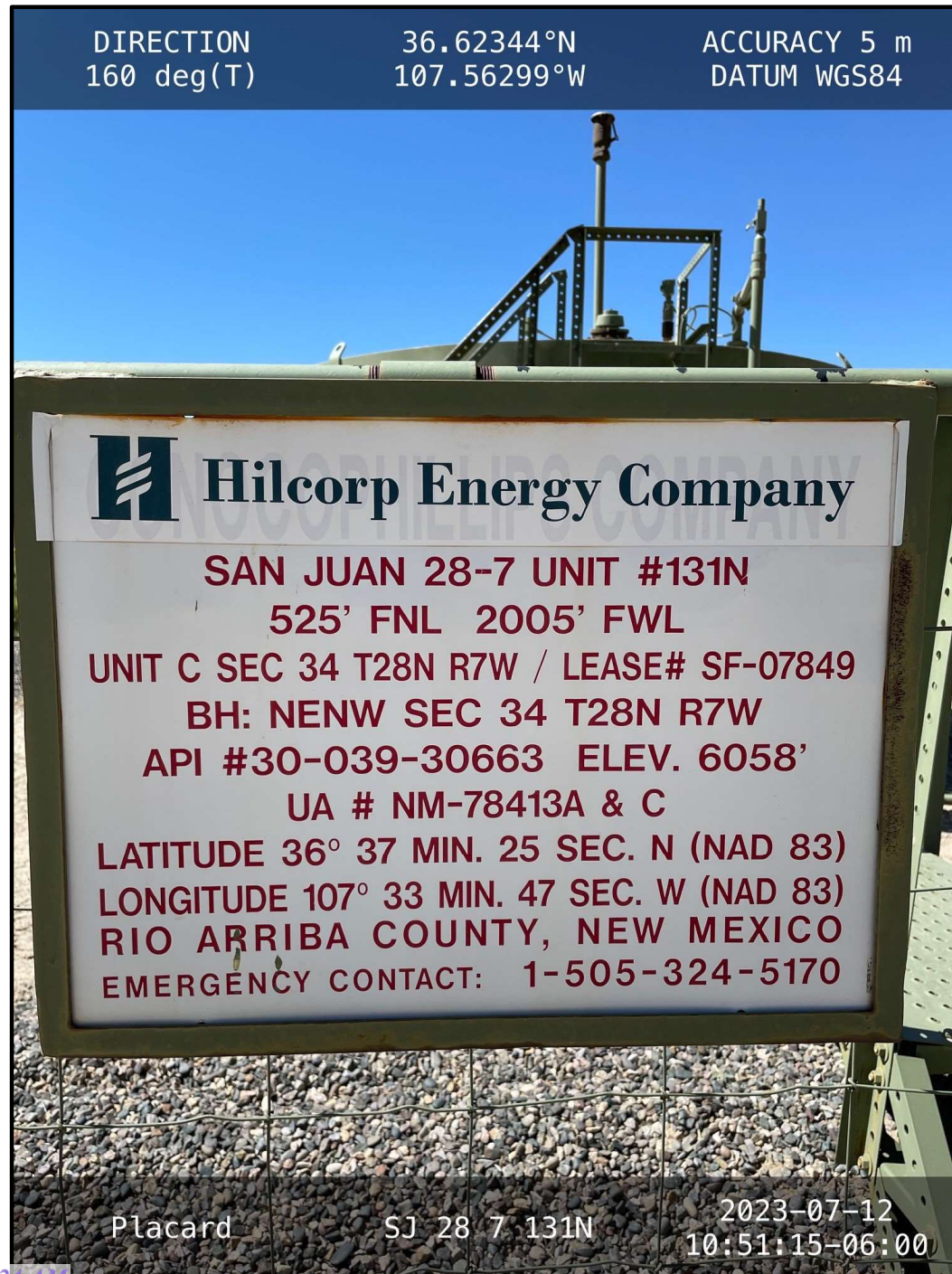
ND = Not Detected

Confirmation samples were collected on 7/12/2023 by Hilcorp personnel and all results were below NMOCD 19.15.29.12.D Table 1 closure criteria.

# Field Sample Diagram



# Sample Photos



# Sample Photos



# Sample Photos



# Sample Photos

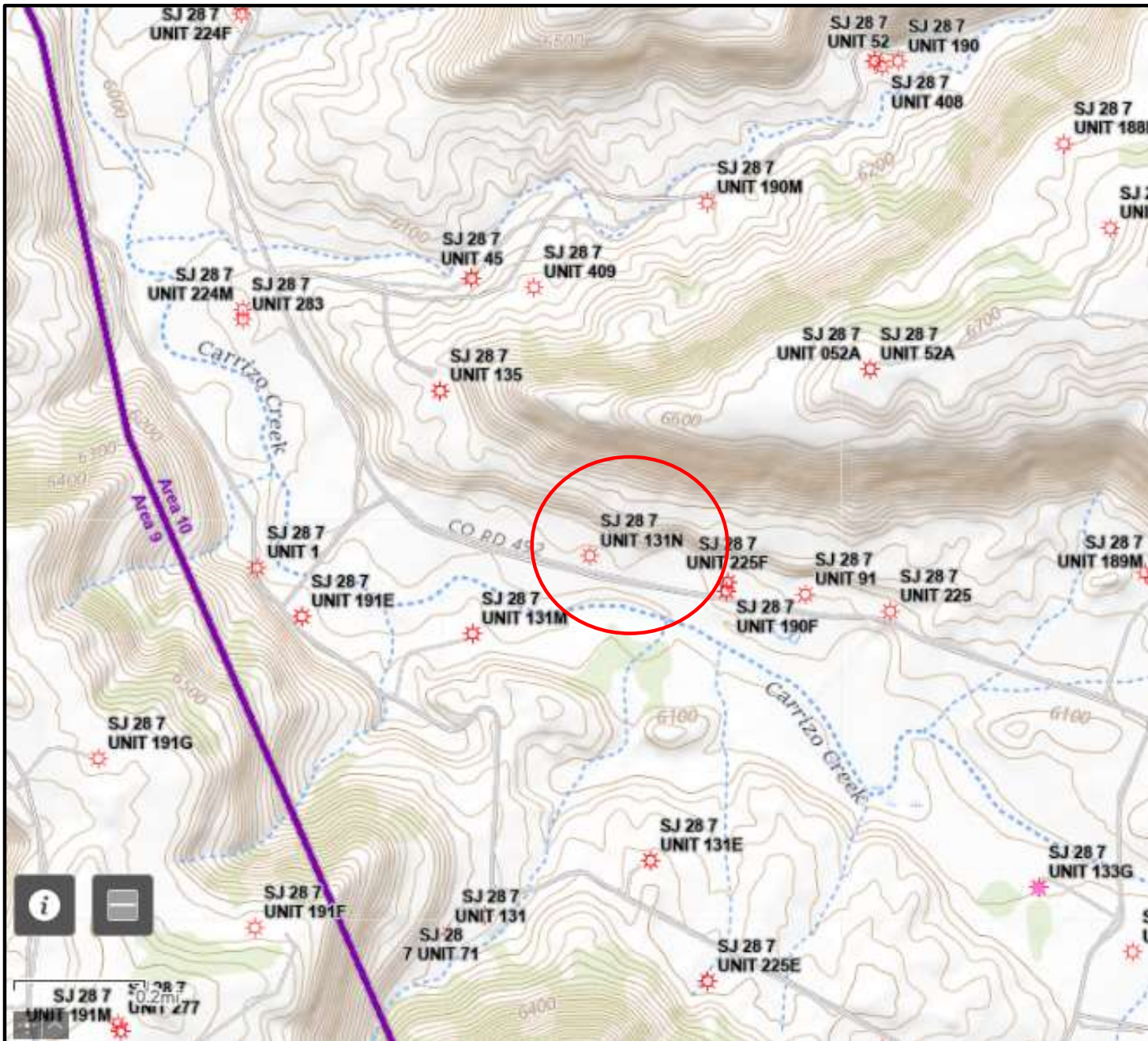




# Sample Photos

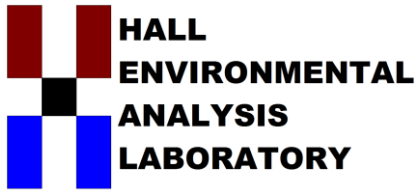


# Topographic Map



Analytical Data, Sample Collected 7/12/2023.

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 24, 2023

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

RE: SJ 28 7 Unit 131N

OrderNo.: 2307537

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 10 sample(s) on 7/13/2023 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-1 0-6"

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:05:00 AM

**Lab ID:** 2307537-001

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	9.2		mg/Kg	1	7/15/2023 5:35:00 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/15/2023 5:35:00 AM
Surr: DNOP	169	69-147	S	%Rec	1	7/15/2023 5:35:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>RBC</b>
Chloride	150	60		mg/Kg	20	7/18/2023 2:39:37 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.023		mg/Kg	1	7/14/2023 4:44:50 PM
Toluene	ND	0.046		mg/Kg	1	7/14/2023 4:44:50 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/14/2023 4:44:50 PM
Xylenes, Total	ND	0.093		mg/Kg	1	7/14/2023 4:44:50 PM
Surr: 1,2-Dichloroethane-d4	104	64.8-147		%Rec	1	7/14/2023 4:44:50 PM
Surr: 4-Bromofluorobenzene	96.5	62.1-144		%Rec	1	7/14/2023 4:44:50 PM
Surr: Dibromofluoromethane	121	73-145		%Rec	1	7/14/2023 4:44:50 PM
Surr: Toluene-d8	98.5	70-130		%Rec	1	7/14/2023 4:44:50 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/14/2023 4:44:50 PM
Surr: BFB	104	70-130		%Rec	1	7/14/2023 4:44:50 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-1 1'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:12:00 AM

**Lab ID:** 2307537-002

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	7/15/2023 5:58:50 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/15/2023 5:58:50 AM
Surr: DNOP	162	69-147	S	%Rec	1	7/15/2023 5:58:50 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	110	61		mg/Kg	20	7/18/2023 2:49:59 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/14/2023 5:15:40 PM
Toluene	ND	0.049		mg/Kg	1	7/14/2023 5:15:40 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2023 5:15:40 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/14/2023 5:15:40 PM
Surr: 1,2-Dichloroethane-d4	106	64.8-147		%Rec	1	7/14/2023 5:15:40 PM
Surr: 4-Bromofluorobenzene	97.0	62.1-144		%Rec	1	7/14/2023 5:15:40 PM
Surr: Dibromofluoromethane	121	73-145		%Rec	1	7/14/2023 5:15:40 PM
Surr: Toluene-d8	101	70-130		%Rec	1	7/14/2023 5:15:40 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2023 5:15:40 PM
Surr: BFB	107	70-130		%Rec	1	7/14/2023 5:15:40 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-1 2'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:15:00 AM

**Lab ID:** 2307537-003

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	7/15/2023 6:46:23 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/15/2023 6:46:23 AM
Surr: DNOP	164	69-147	S	%Rec	1	7/15/2023 6:46:23 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	97	60		mg/Kg	20	7/18/2023 3:02:23 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.023		mg/Kg	1	7/14/2023 5:46:45 PM
Toluene	ND	0.047		mg/Kg	1	7/14/2023 5:46:45 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/14/2023 5:46:45 PM
Xylenes, Total	ND	0.093		mg/Kg	1	7/14/2023 5:46:45 PM
Surr: 1,2-Dichloroethane-d4	106	64.8-147		%Rec	1	7/14/2023 5:46:45 PM
Surr: 4-Bromofluorobenzene	97.3	62.1-144		%Rec	1	7/14/2023 5:46:45 PM
Surr: Dibromofluoromethane	122	73-145		%Rec	1	7/14/2023 5:46:45 PM
Surr: Toluene-d8	101	70-130		%Rec	1	7/14/2023 5:46:45 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/14/2023 5:46:45 PM
Surr: BFB	107	70-130		%Rec	1	7/14/2023 5:46:45 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-1 3'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:20:00 AM

**Lab ID:** 2307537-004

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	7/15/2023 7:10:08 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/15/2023 7:10:08 AM
Surr: DNOP	89.0	69-147		%Rec	1	7/15/2023 7:10:08 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	110	60		mg/Kg	20	7/18/2023 3:14:48 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/14/2023 6:17:40 PM
Toluene	ND	0.047		mg/Kg	1	7/14/2023 6:17:40 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/14/2023 6:17:40 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/14/2023 6:17:40 PM
Surr: 1,2-Dichloroethane-d4	111	64.8-147		%Rec	1	7/14/2023 6:17:40 PM
Surr: 4-Bromofluorobenzene	96.2	62.1-144		%Rec	1	7/14/2023 6:17:40 PM
Surr: Dibromofluoromethane	124	73-145		%Rec	1	7/14/2023 6:17:40 PM
Surr: Toluene-d8	99.5	70-130		%Rec	1	7/14/2023 6:17:40 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/14/2023 6:17:40 PM
Surr: BFB	104	70-130		%Rec	1	7/14/2023 6:17:40 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-1 4'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:25:00 AM

**Lab ID:** 2307537-005

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	7/15/2023 7:33:52 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/15/2023 7:33:52 AM
Surr: DNOP	88.2	69-147		%Rec	1	7/15/2023 7:33:52 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	250	60		mg/Kg	20	7/18/2023 3:52:02 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.023		mg/Kg	1	7/15/2023 1:53:56 AM
Toluene	ND	0.047		mg/Kg	1	7/15/2023 1:53:56 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/15/2023 1:53:56 AM
Xylenes, Total	ND	0.093		mg/Kg	1	7/15/2023 1:53:56 AM
Surr: 1,2-Dichloroethane-d4	108	64.8-147		%Rec	1	7/15/2023 1:53:56 AM
Surr: 4-Bromofluorobenzene	95.5	62.1-144		%Rec	1	7/15/2023 1:53:56 AM
Surr: Dibromofluoromethane	117	73-145		%Rec	1	7/15/2023 1:53:56 AM
Surr: Toluene-d8	95.8	70-130		%Rec	1	7/15/2023 1:53:56 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/15/2023 1:53:56 AM
Surr: BFB	106	70-130		%Rec	1	7/15/2023 1:53:56 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-2 0-6"

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:30:00 AM

**Lab ID:** 2307537-006

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	9.6		mg/Kg	1	7/15/2023 7:57:41 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/15/2023 7:57:41 AM
Surr: DNOP	87.3	69-147		%Rec	1	7/15/2023 7:57:41 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	220	60		mg/Kg	20	7/18/2023 4:04:26 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/15/2023 2:24:08 AM
Toluene	ND	0.047		mg/Kg	1	7/15/2023 2:24:08 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/15/2023 2:24:08 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/15/2023 2:24:08 AM
Surr: 1,2-Dichloroethane-d4	104	64.8-147		%Rec	1	7/15/2023 2:24:08 AM
Surr: 4-Bromofluorobenzene	96.8	62.1-144		%Rec	1	7/15/2023 2:24:08 AM
Surr: Dibromofluoromethane	120	73-145		%Rec	1	7/15/2023 2:24:08 AM
Surr: Toluene-d8	96.1	70-130		%Rec	1	7/15/2023 2:24:08 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/15/2023 2:24:08 AM
Surr: BFB	107	70-130		%Rec	1	7/15/2023 2:24:08 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-2 1'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:35:00 AM

**Lab ID:** 2307537-007

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	7/15/2023 8:21:30 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/15/2023 8:21:30 AM
Surr: DNOP	82.7	69-147		%Rec	1	7/15/2023 8:21:30 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	110	60		mg/Kg	20	7/18/2023 4:41:39 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/15/2023 2:54:26 AM
Toluene	ND	0.048		mg/Kg	1	7/15/2023 2:54:26 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/15/2023 2:54:26 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/15/2023 2:54:26 AM
Surr: 1,2-Dichloroethane-d4	109	64.8-147		%Rec	1	7/15/2023 2:54:26 AM
Surr: 4-Bromofluorobenzene	94.8	62.1-144		%Rec	1	7/15/2023 2:54:26 AM
Surr: Dibromofluoromethane	116	73-145		%Rec	1	7/15/2023 2:54:26 AM
Surr: Toluene-d8	103	70-130		%Rec	1	7/15/2023 2:54:26 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/15/2023 2:54:26 AM
Surr: BFB	113	70-130		%Rec	1	7/15/2023 2:54:26 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-2 2'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:38:00 AM

**Lab ID:** 2307537-008

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	7/15/2023 8:45:17 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/15/2023 8:45:17 AM
Surr: DNOP	86.3	69-147		%Rec	1	7/15/2023 8:45:17 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	110	60		mg/Kg	20	7/18/2023 4:54:03 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.025		mg/Kg	1	7/15/2023 3:24:34 AM
Toluene	ND	0.050		mg/Kg	1	7/15/2023 3:24:34 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2023 3:24:34 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/15/2023 3:24:34 AM
Surr: 1,2-Dichloroethane-d4	107	64.8-147		%Rec	1	7/15/2023 3:24:34 AM
Surr: 4-Bromofluorobenzene	99.3	62.1-144		%Rec	1	7/15/2023 3:24:34 AM
Surr: Dibromofluoromethane	119	73-145		%Rec	1	7/15/2023 3:24:34 AM
Surr: Toluene-d8	95.3	70-130		%Rec	1	7/15/2023 3:24:34 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2023 3:24:34 AM
Surr: BFB	106	70-130		%Rec	1	7/15/2023 3:24:34 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 **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-2 3'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:41:00 AM

**Lab ID:** 2307537-009

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	9.3		mg/Kg	1	7/15/2023 9:09:07 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/15/2023 9:09:07 AM
Surr: DNOP	88.4	69-147		%Rec	1	7/15/2023 9:09:07 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	98	60		mg/Kg	20	7/18/2023 5:06:28 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/14/2023 11:23:04 PM
Toluene	ND	0.048		mg/Kg	1	7/14/2023 11:23:04 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/14/2023 11:23:04 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/14/2023 11:23:04 PM
Surr: 1,2-Dichloroethane-d4	111	64.8-147		%Rec	1	7/14/2023 11:23:04 PM
Surr: 4-Bromofluorobenzene	97.4	62.1-144		%Rec	1	7/14/2023 11:23:04 PM
Surr: Dibromofluoromethane	119	73-145		%Rec	1	7/14/2023 11:23:04 PM
Surr: Toluene-d8	94.9	70-130		%Rec	1	7/14/2023 11:23:04 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/14/2023 11:23:04 PM
Surr: BFB	108	70-130		%Rec	1	7/14/2023 11:23:04 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.	

**Analytical Report**

Lab Order **2307537**

Date Reported: **7/24/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** HILCORP ENERGY

**Client Sample ID:** S-2 4'

**Project:** SJ 28 7 Unit 131N

**Collection Date:** 7/12/2023 11:45:00 AM

**Lab ID:** 2307537-010

**Matrix:** SOIL

**Received Date:** 7/13/2023 7:05:00 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	9.9		mg/Kg	1	7/15/2023 9:32:53 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/15/2023 9:32:53 AM
Surr: DNOP	89.2	69-147		%Rec	1	7/15/2023 9:32:53 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>CAS</b>
Chloride	120	60		mg/Kg	20	7/18/2023 5:18:52 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>JR</b>
Benzene	ND	0.024		mg/Kg	1	7/14/2023 11:53:09 PM
Toluene	ND	0.049		mg/Kg	1	7/14/2023 11:53:09 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/14/2023 11:53:09 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/14/2023 11:53:09 PM
Surr: 1,2-Dichloroethane-d4	109	64.8-147		%Rec	1	7/14/2023 11:53:09 PM
Surr: 4-Bromofluorobenzene	101	62.1-144		%Rec	1	7/14/2023 11:53:09 PM
Surr: Dibromofluoromethane	120	73-145		%Rec	1	7/14/2023 11:53:09 PM
Surr: Toluene-d8	95.8	70-130		%Rec	1	7/14/2023 11:53:09 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>JR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/14/2023 11:53:09 PM
Surr: BFB	109	70-130		%Rec	1	7/14/2023 11:53:09 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#: 2307537

24-Jul-23

**Client:** HILCORP ENERGY

**Project:** SJ 28 7 Unit 131N

Sample ID: <b>MB-76271</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76271</b>	RunNo: <b>98270</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/17/2023</b>	SeqNo: <b>3576623</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-76271</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76271</b>	RunNo: <b>98270</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/17/2023</b>	SeqNo: <b>3576624</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	91.8	90	110			

Sample ID: <b>MB-76284</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76284</b>	RunNo: <b>98289</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/18/2023</b>	SeqNo: <b>3578639</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-76284</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76284</b>	RunNo: <b>98289</b>								
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/18/2023</b>	SeqNo: <b>3578640</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	92.4	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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#: 2307537

24-Jul-23

**Client:** HILCORP ENERGY

**Project:** SJ 28 7 Unit 131N

Sample ID: <b>MB-76196</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>76196</b>	RunNo: <b>98223</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/14/2023</b>	SeqNo: <b>3574287</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	9.2		10.00		92.0	69	147			

Sample ID: <b>LCS-76196</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>76196</b>	RunNo: <b>98223</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/14/2023</b>	SeqNo: <b>3574288</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	61.9	130			
Surr: DNOP	5.2		5.000		105	69	147			

Sample ID: <b>2307537-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-1 0-6"</b>	Batch ID: <b>76196</b>	RunNo: <b>98223</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/15/2023</b>	SeqNo: <b>3574329</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	9.9	49.60	0	93.8	54.2	135			
Surr: DNOP	4.5		4.960		91.3	69	147			

Sample ID: <b>2307537-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-1 0-6"</b>	Batch ID: <b>76196</b>	RunNo: <b>98223</b>								
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/15/2023</b>	SeqNo: <b>3574330</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	9.8	48.92	0	94.0	54.2	135	1.22	29.2	
Surr: DNOP	4.5		4.892		92.0	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#: 2307537

24-Jul-23

**Client:** HILCORP ENERGY

**Project:** SJ 28 7 Unit 131N

Sample ID: <b>ics-76189</b>	SampType: <b>LCS4</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>76189</b>		RunNo: <b>98224</b>							
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/14/2023</b>		SeqNo: <b>3574474</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.3	80	120			
Toluene	0.82	0.050	1.000	0	82.5	80	120			
Ethylbenzene	0.84	0.050	1.000	0	83.6	80	120			
Xylenes, Total	2.6	0.10	3.000	0	85.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		106	64.8	147			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.5	62.1	144			
Surr: Dibromofluoromethane	0.62		0.5000		123	73	145			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID: <b>mb-76189</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76189</b>		RunNo: <b>98224</b>							
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/14/2023</b>		SeqNo: <b>3574475</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	0.53		0.5000		105	64.8	147			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	62.1	144			
Surr: Dibromofluoromethane	0.55		0.5000		110	73	145			
Surr: Toluene-d8	0.47		0.5000		94.0	70	130			

**Qualifiers:**

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- 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#: 2307537

24-Jul-23

**Client:** HILCORP ENERGY

**Project:** SJ 28 7 Unit 131N

Sample ID: <b>ics-76189</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>76189</b>		RunNo: <b>98224</b>							
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/14/2023</b>		SeqNo: <b>3574507</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	92.5	70	130			
Surr: BFB	530		500.0		105	70	130			

Sample ID: <b>mb-76189</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>76189</b>		RunNo: <b>98224</b>							
Prep Date: <b>7/13/2023</b>	Analysis Date: <b>7/14/2023</b>		SeqNo: <b>3574508</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		108	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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: 2307537

RcptNo: 1

Received By: Juan Rojas

7/12/2023 2:50:00 PM

Completed By: Cheyenne Cason

7/13/2023 7:42:49 AM

Reviewed By: 7-13-23

### 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: SCM 07/13/23

### Special Handling (if applicable)

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

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

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Yes	Morty		

# Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclair@hilcorp.com

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

Accreditation:  Az Compliance  
 NELAC  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 5 day  
 Standard  Rush

Project Name:  
SJ 28 7 Unit 131N

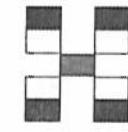
Project #:

Project Manager:  
Kate Kautman

Sampler: Brandon Sinclair  
 On Ice:  Yes  No

# of Coolers: 1  
 Cooler Temp (including CF): 3.8-4.1 = 3.7 (°C)

Container Type and #	Preservative Type	HEAL No.
<u>402 jar</u>	<u>cool</u>	<u>7307537</u>



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

### Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MIRO)	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"/>														

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
7-12	1105	SOI	S-1 0-6"	402 jar	cool	001
	1112		S-1 1'			002
	1115		S-1 2'			003
	1120		S-1 3'			004
	1125		S-1 4'			005
	1130		S-2 0-6"			006
	1135		S-2 1'			007
	1138		S-2 2'			008
	1141		S-2 3'			009
	1145		S-2 4'			010

Date: 7-12	Time: 1456	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Via: _____	Date: 7/12/23	Time: 1450
Date: 7/12/23	Time: 1826	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Via: _____	Date: 7/13/23	Time: 7:05

Remarks:

**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 269400

**CONDITIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 269400
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	None	1/22/2024