

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	NAPP2225752449
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) nAPP2225752449
Contact mailing address: 1111 Travis St. Houston, TX 77471	

Location of Release Source

Latitude 36.439591 _____ Longitude -107.975285 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Canyon 1 SWD	Site Type: Saltwater Disposal Facility
Date Release Discovered: 9/1/2022	API# (if applicable) 30-045-34454

Unit Letter	Section	Township	Range	County
N	35	026N	011W	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) 200	Volume Recovered (bbls) 200
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input 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) Unknown hydrocarbon	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release


Leak from a hole near the bottom of a fully insulated water storage tank, due to corrosion. 200 bbls was released to secondary containment and recovered. Approximately 4 gallons was released to the ground outside containment. This soil was removed and transported offsite for disposal. Tank was isolated and emptied for inspection and repair.

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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? Release volume greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notification was made by Kate Kaufman to Nelson Velez (NMOCD) and Emmanuel Adeloye (BLM) via email on September 2, 2022.	

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>9/14/2022</u> email: <u>kk Kaufman@hilcorp.com</u> Telephone: <u>346-237-2275</u>
<u>OCD Only</u> Received by: <u>Jocelyn Harimon</u> Date: <u>11/14/2022</u>

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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>>100</u> (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 type="checkbox"/> Yes <input checked="" 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 not 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.

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: 11-14-2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/14/2022

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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Clara Cardoza Title: Environmental Specialist

Signature: _____ Date: 7/15/2019

email: ccardoza@hilcorp.com Telephone: 505.564.0733

OCD Only

Received by: Jocelyn Harimon Date: 11/14/2022

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	NAPP2225752449
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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: 11-14-2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/14/2022

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: Nelson Velez Date: 12/08/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

Executive Summary – Incident #nAPP2225752449

On September 1, 2022, approximately 200 bbls of produced water was released from a water storage tank at the Canyon 1 SWD Facility. The release was via a hole near the bottom of the water storage tank, likely due to corrosion. The release was discovered at 12:00 PM MST on Thursday, September 1 and was reported to NMOCD and BLM at 8:10 AM MST on Friday, September 2, 2022.

The tank is fully insulated with a capacity of 500 bbls. Approximately 200 bbls was released to the containment area comprised of a steel berm and concrete pad. Approximately 4 gallons impacted gravel outside the berm, via a bolt hole missing a bolt in the steel sidewall. The tank was isolated, and the remaining fluids removed. A vac truck was used to recover fluid from the containment area, and the impacted soil was removed and disposed of offsite.

One 5-point composite sample was collected on October 4, 2022. Analytical results from this sampling event were below NMOCD action criteria noted in NMAC 19.15.29 Table 1. Sample results are included.

Scaled Site Map

Lat: 36.439591
Long: -107.975285

Canyon 1 SWD
API: 30-045-34454

 Release Area











Data table of soil contaminant concentrations

Sample Name	Sample Date	Field VOCs by PID (ppm)	Canyon 1 SWD Laboratory Results										
			Chloride (mg/kg)	TPH as DRO (mg/kg)	TPH as GRO (mg/kg)	TPH as MRO (mg/kg)	Total TPH (mg/kg)	TPH as GRO + DRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylene (mg/kg)	Total BTEX (mg/kg)
19.15.29 Table 1 Closure Criteria			20,000	-	-	-	2,500	1,000	10	-	-	-	50
5-Pt Composite	10/4/2022	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Confirmation samples were collected on 10/4/2022 by Hilcorp personnel and all results were below NMOCD 19.15.29.12.D Table 1 closure criteria.

Depth to groundwater determination.

BGT Siting Criteria for Gallegos 13E – 0.25 miles northwest of the Canyon 1 SWD.

Estimated depth to groundwater is greater than 100'.

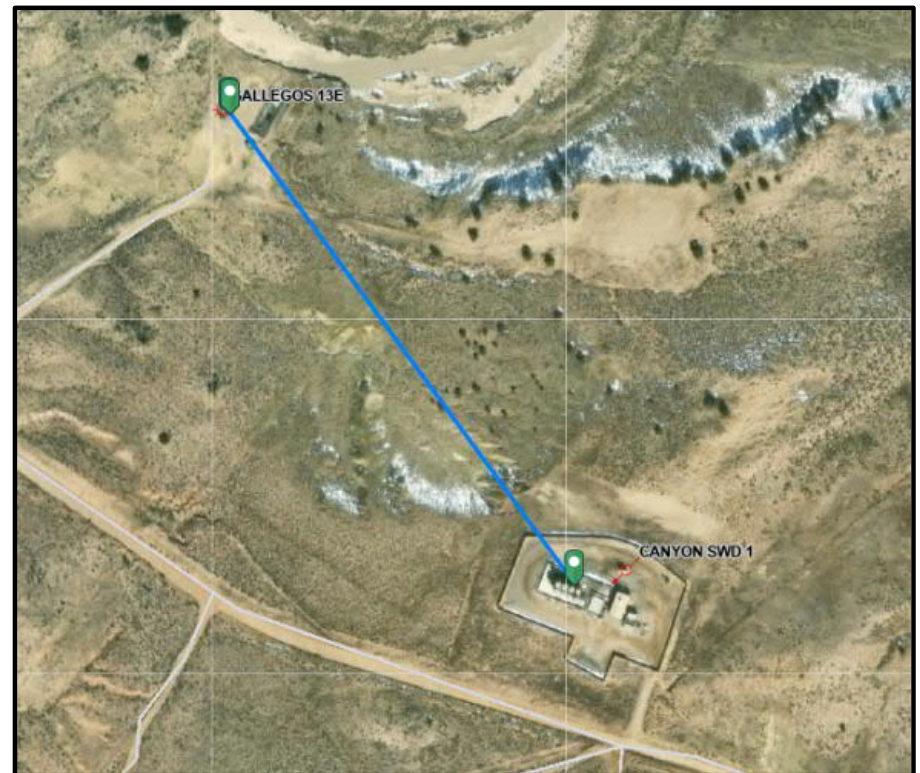
Site Specific Hydrogeology

Depth to groundwater is estimated to be greater than 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.

Beds of water-yielding sandstone are present in the Nacimiento Formation, which are fluvial in origin and are interbedded with siltstone, shale and coal. Porous sandstones form the principal aquifers, while relatively impermeable shales form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the Nacimiento Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to 3500 feet (USGS, Groundwater Atlas of the US).

The site in question is located at an elevation of approximately 6,346 feet and approximately 1.24 miles east of the Gallegos Canyon. Broad shaley hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are evident on the attached aerial image. Groundwater is expected to be shallow within Gallegos Canyon. The floor of Gallegos Canyon is at an elevation of approximately 6,179 feet approximately 180 feet lower in elevation.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the locations of wells in reference to the proposed pit location is also attached. Water drops show locations of wells and the labels for each water drop indicate depth to groundwater in feet. The closest well to the site is an elevation of approximately of 6,355 feet and is located 3,225 feet to the southeast this well puts groundwater at 165 feet below the surface. The observations made within this report suggest that groundwater is greater than 100 feet deep at the proposed location.



Depth to groundwater determination.

BGT Siting Criteria for Gallegos 13 – 0.5 miles east of the Canyon 1 SWD.

Estimated depth to groundwater is greater than 100'.

Site Specific Hydrogeology

Depth to groundwater is estimated to be greater than 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.


Beds of water-yielding sandstone are present in the Nacimiento Formation, which are fluvial in origin and are interbedded with siltstone, shale and coal. Porous sandstones form the principal aquifers, while relatively impermeable shales form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the Nacimiento Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to 3500 feet (USGS, Groundwater Atlas of the US).

The site in question is located at an elevation of approximately 6,356 feet and approximately 1.32 miles east of Gallegos Canyon. Broad shaley hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are evident on the attached aerial image. Groundwater is expected to be shallow within Gallegos Canyon. The floor of the Gallegos Canyon is at an elevation of approximately 6,217 approximately 130 feet lower in elevation.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the locations of wells in reference to the proposed pit location is also attached. Water drops show locations of wells and the labels for each water drop indicate depth to groundwater in feet. The closest well to the site is an elevation of approximately of 6,356 feet and is located 786 feet to the northwest this well puts groundwater at 165 feet below the surface. The observations made within this report suggest that groundwater is greater than 100 feet at the proposed location.



Depth to groundwater determination.



New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
SJ 02734		2	3	4	35	26N	11W	233750	4036858*

Driller License: 717 **Driller Company:** WESTERN WATER WELLS
Driller Name: TERRY HOOD

Drill Start Date: 02/13/1997 **Drill Finish Date:** 02/15/1997 **Plug Date:**
Log File Date: 02/20/1997 **PCW Rcv Date:** **Source:** Shallow
Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 8 GPM
Casing Size: **Depth Well:** 275 feet **Depth Water:** 165 feet

Water Bearing Stratifications:	Top	Bottom	Description
	165	275	Sandstone/Gravel/Conglomerate

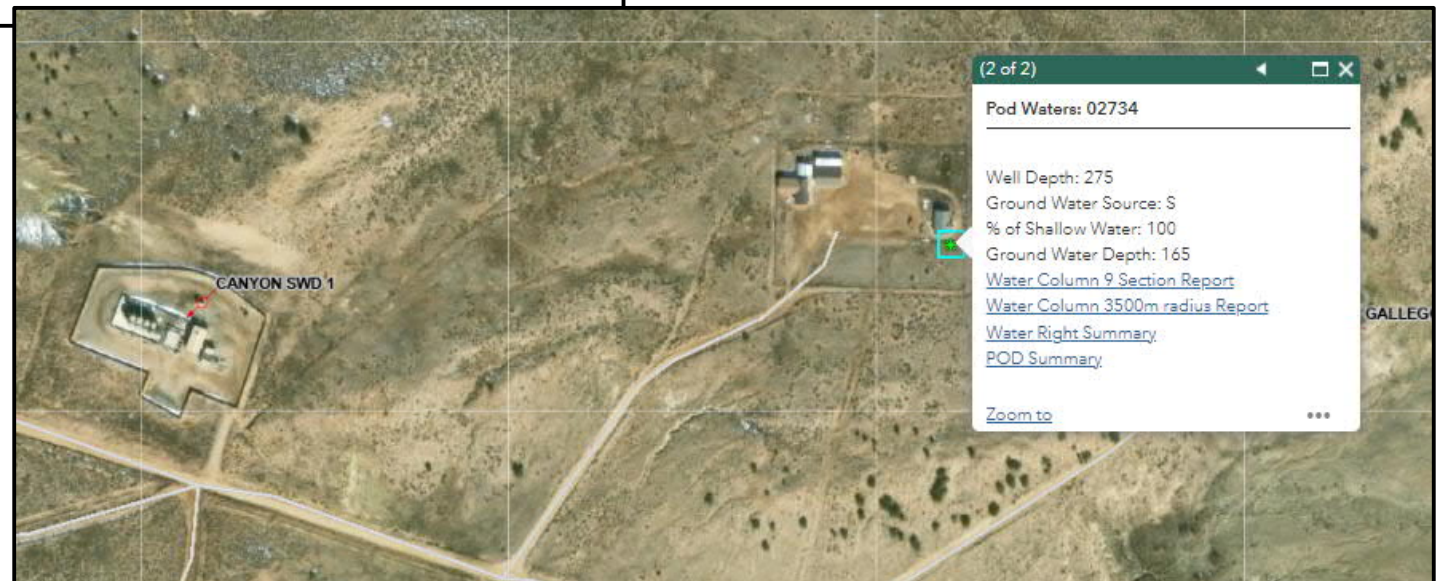
Casing Perforations:	Top	Bottom
	165	275

*UTM location was derived from PLSS - see Help

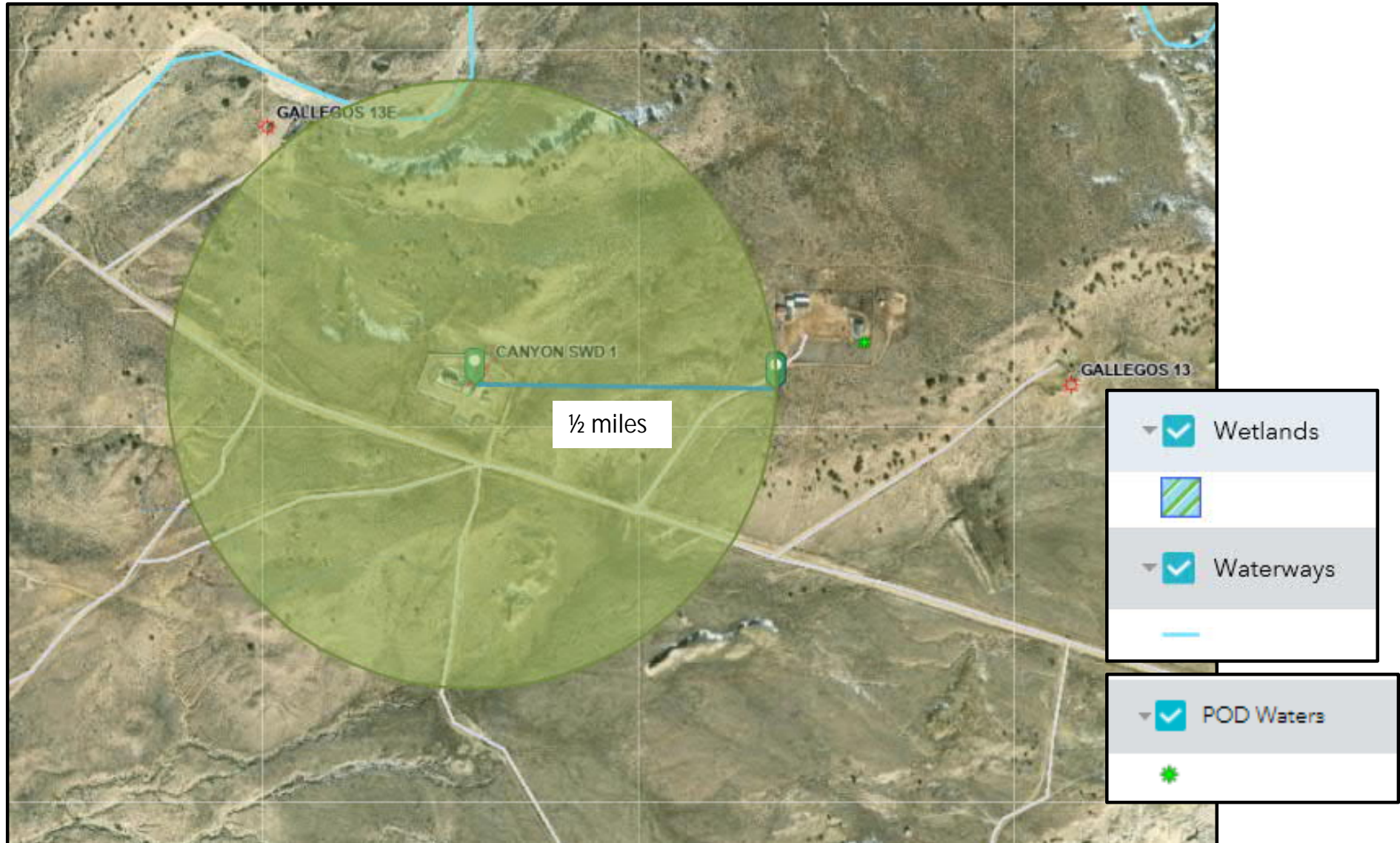
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/14/22 1:25 PM POINT OF DIVERSION SUMMARY

POD water well #02734 is approximately 1,700 feet east of the Canyon 1 SWD. NMSE database shows groundwater depth is 165 feet at this location.



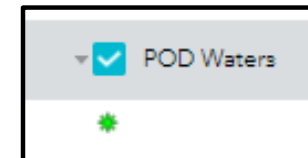
Determination of water sources and significant watercourses within ½ mile of the lateral extent of the release



Note 1: Release point is not shown to be within 300 ft of any continuously flowing watercourse or any 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.



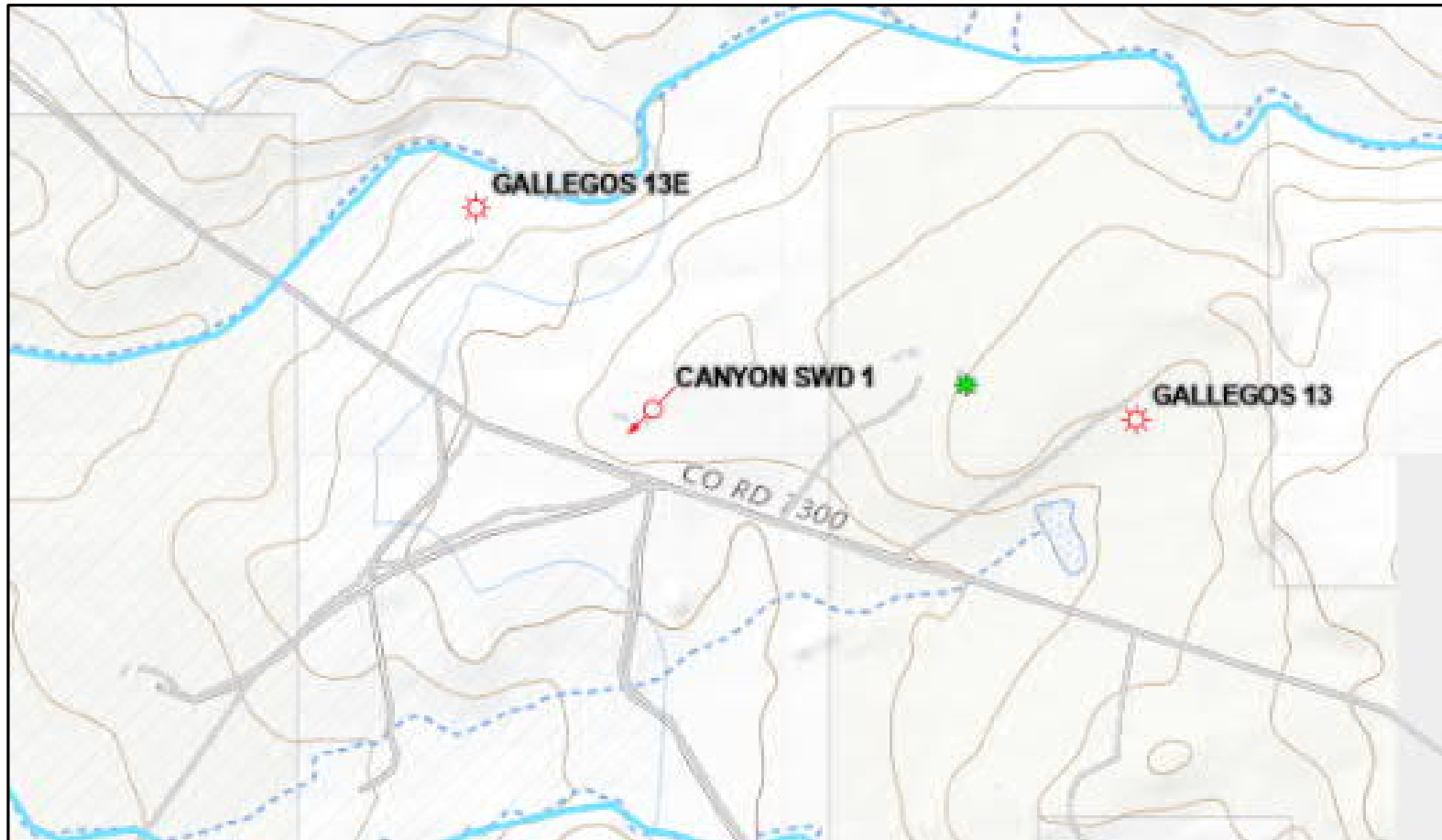
Note: The lateral extents of the release point are not shown to be within 500 ft of a spring or domestic freshwater well used by less than 5 households (or stock watering) or within 1,000 ft of any freshwater water well or spring.

Sample Locations/Field Notes - 10/4/2011

- Impacted area approximately 16' L x 1' W x 5" D
- Total area: 16 sq. ft.
- One 5-pt composite sample collected



Topographic Map



Analytical Data, Sample Collected 10/4/2022.

See attached Lab Report.



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

October 14, 2022

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

RE: Canyon SWD

OrderNo.: 2210140

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/5/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2210140**

Date Reported: **10/14/2022**

CLIENT: HILCORP ENERGY

Client Sample ID: S-1

Project: Canyon SWD

Collection Date: 10/4/2022 9:15:00 AM

Lab ID: 2210140-001

Matrix: SOIL

Received Date: 10/5/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/6/2022 1:03:56 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/6/2022 1:03:56 PM
Surr: DNOP	84.3	21-129		%Rec	1	10/6/2022 1:03:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/6/2022 8:25:34 PM
Surr: BFB	86.3	37.7-212		%Rec	1	10/6/2022 8:25:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 8:25:34 PM
Toluene	ND	0.048		mg/Kg	1	10/6/2022 8:25:34 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/6/2022 8:25:34 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/6/2022 8:25:34 PM
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	10/6/2022 8:25:34 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/6/2022 10:37:53 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	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 range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2210140

14-Oct-22

Client: HILCORP ENERGY**Project:** Canyon SWD

Sample ID: MB-70667	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBS	Batch ID: 70667			RunNo: 91598						
Prep Date: 10/6/2022	Analysis Date: 10/6/2022			SeqNo: 3281949		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70667		SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch ID: 70667		RunNo: 91598						
Prep Date: 10/6/2022		Analysis Date: 10/6/2022		SeqNo: 3281950		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

Page 2 of 5

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2210140

14-Oct-22

Client: HILCORP ENERGY**Project:** Canyon SWD

Sample ID: LCS-70635	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70635	RunNo: 91599								
Prep Date: 10/5/2022	Analysis Date: 10/6/2022	SeqNo: 3281585	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	15	50.00	0	71.2	64.4	127			
Surr: DNOP	3.5		5.000		71.0	21	129			

Sample ID: MB-70635	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70635	RunNo: 91599								
Prep Date: 10/5/2022	Analysis Date: 10/6/2022	SeqNo: 3281587	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.1	21	129			

Sample ID: LCS-70611	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70611	RunNo: 91599								
Prep Date: 10/5/2022	Analysis Date: 10/6/2022	SeqNo: 3284851	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		74.2	21	129			

Sample ID: MB-70611	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70611	RunNo: 91599								
Prep Date: 10/5/2022	Analysis Date: 10/6/2022	SeqNo: 3284852	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.4		10.00		83.6	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2210140

14-Oct-22

Client: HILCORP ENERGY**Project:** Canyon SWD

Sample ID: LCS-70625	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 70625	RunNo: 91616								
Prep Date: 10/5/2022	Analysis Date: 10/6/2022	SeqNo: 3282365	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	72.3	137			
Surr: BFB	1900		1000		187	37.7	212			

Sample ID: mb-70625	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 70625	RunNo: 91616								
Prep Date: 10/5/2022	Analysis Date: 10/6/2022	SeqNo: 3282366	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.0	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2210140

14-Oct-22

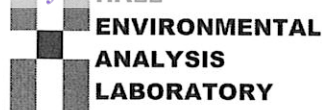
Client: HILCORP ENERGY**Project:** Canyon SWD

Sample ID: lcs-70625	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 70625		RunNo: 91616							
Prep Date: 10/5/2022	Analysis Date: 10/6/2022		SeqNo: 3282419		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	81.0	80	120			
Toluene	0.87	0.050	1.000	0	86.7	80	120			
Ethylbenzene	0.88	0.050	1.000	0	87.8	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.7	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	70	130			

Sample ID: mb-70625	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 70625		RunNo: 91616							
Prep Date: 10/5/2022	Analysis Date: 10/6/2022		SeqNo: 3282420		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		



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: 2210140

RcptNo: 1

Received By: Juan Rojas 10/5/2022 7:00:00 AM

Completed By: Sean Livingston 10/5/2022 8:35:21 AM

Reviewed By: JN 10/5/22

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 $>0^{\circ}\text{C}$ 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: KPA 10-05-22

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good				

Chain-of-Custody Record

Client:

Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclaire@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:

Canyon SWD

Project #:

Project Manager:

Kate Kantman

Sampler:

Brandon Sinclair

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CF): 0.5000-0.8 (°C)

Date Time Matrix Sample Name

10-4 915 Soil S-1

Container Type and #

4 oz jar cool

Preservative Type

HEAL No. ZZ10140

001

Analysis Request

BTEX, MTBE / TMB's (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Remarks:

Received by: Jim Was Date: 10/4/22 Time: 1431Received by: Jim Was Date: 10/5/22 Time: 7:00

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 158642

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 158642
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	12/8/2022