ENSOLUM

April 7, 2025

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

Re: Site Summary Report and Closure Request
Allison #110S
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nAPP2502828537

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Site Summary Report and Closure Request* associated with a produced water release at Allison #110S natural gas production well (Site, Figure 1). The Site is located on surface managed by the Bureau of Land Management (BLM) in Unit O, Section 17, Township 32 North, Range 6 West, San Juan County, New Mexico (36.975409°, -107.478648°).

SITE BACKGROUND

On January 25, 2025, a Hilcorp operator discovered the transfer pump suction filter had frozen and broken inside the transfer building, resulting in the release of 8 barrels (bbls) of produced water. Upon discovery, the source of the release was stopped, and the impacted area was secured. Released fluids were contained within the raised berm and no fluids were recovered (Figure 2). Hilcorp notified the New Mexico Oil Conservation Division (NMOCD) and submitted an initial *Notification of Release* on January 28, 2025. NMOCD assigned the release incident number nAPP2502828537.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

The Site is located within the San Jose Geologic Formation. In the report titled "*Geologic framework of pre-Cretaceous rocks in the Southern Ute Indian Reservation and adjacent areas, southwestern Colorado and northwestern New Mexico*" (Condon, S.M., 1992), the San Jose Formation is comprised primarily of sandstone, shale, and minor conglomerate. Sandstone is brown to greyish-yellow, fine-grained, medium to thickly bedded, arkosic, cross-bedded, and conglomeratic. Gray, red, and brown sandy shales and white and gray tuff are interbedded. The unit results from a fluvial and lacustrine depositional environment, and ranges in thickness from 1,100 feet to 2,500 feet. The hydrogeologic properties of the San Jose Formation display variable hydrogeologic properties dependent on location. Where sufficient yield is present, the primary use of water from this formation is for domestic and/or livestock supply. The San Jose Formation is underlain by the Ojo Alamo sandstone.

The closest significant watercourse is an unnamed dry wash located 780 feet south of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and is approximately 780 feet from a wetland (Figure 1, shown to the south of Site). The nearest fresh-water well is New Mexico Office of the State Engineer (NMOSE) permitted well SJ-03055 (Appendix A), located approximately 1,650 feet southwest of the Site. The recorded depth to water on the NMOSE database is 100 feet below ground surface (bgs). The ground surface at well SJ-03055 is approximately 32 feet lower in elevation than the Site, therefore groundwater at the Site is estimated to be greater than 100 feet bgs. No wellhead protection areas, springs, or domestic/stock wells are located within a ½-mile radius from the Site. The Site is not within a 100-year floodplain, overlying a subsurface mine, or located within an area underlain by unstable geology (area designated as low potential karst by the BLM). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site.

SITE CLOSURE CRITERIA

Based on the information presented above and in accordance with *Table I, Closure Criteria for Soils Impacted by a Release* (19.15.29.12 NMAC), the following Closure Criteria for constituents of concern (COCs) should be applied to the Site:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 2,500 mg/kg
- TPH as a combination of GRO+DRO: 1,000 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

To assess potential soil impacts from the release, Ensolum advanced six hand auger borings (HA01 through HA06) on February 26, 2025 (Figure 2). The NMOCD was notified at least two business days prior to commencing on-Site activities (Appendix B). Hand auger borings were advanced to depths between 4 feet and 4.75 feet bgs, with soil field screened for petroleum hydrocarbon staining, odors, and chloride crusting during advancement. Soil samples were additionally field screened for the presence of organic vapors using a calibrated photoionization detector (PID) and chloride using Hach® QuanTab® test strips, with results recorded in the field notes and chloride results summarized in Table 1.

Two soil samples were collected from each boring for laboratory analysis: one sample from the depth interval indicating the highest field screening results and one from the terminus of the boring. Samples were collected directly into laboratory-provided jars, immediately placed on ice, and submitted to Green Analytical Laboratories for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-MRO following EPA Method 8015, and chloride following EPA Method 300.0. Field indications of petroleum hydrocarbons and/or chloride, including staining, odors, elevated PID readings and/or chloride crusting, were not observed in any of the samples during the field work. Photographs taken during field activities are attached as Appendix C.

Laboratory analytical results indicated BTEX, TPH, and chloride were not detected above the NMOCD Table I Closure Criteria in any of the soil samples collected during the February 2025 assessment. Soil sample analytical results are summarized in Table 1 and Figure 2, with complete laboratory analytical reports attached as Appendix D.

CONCLUSIONS AND CLOSURE REQUEST

Based on the soil sampling activities and analytical results described above, petroleum hydrocarbon and/or chloride contaminants were not detected in any of the samples collected at the Site above the NMOCD Table I Closure Criteria. The Site appears to be absent of soil impacts and waste-containing soil. As such, Site conditions appear to be protective of human health, the environment, and groundwater, and Hilcorp respectfully requests closure for Incident Number nAPP2502828537.

REFERENCES

Condon, S.M., 1992, Geologic framework of pre-Cretaceous rocks in the Southern Ute Indian Reservation and adjacent areas, southwestern Colorado and northwestern New Mexico, U.S. Geological Survey, Professional Paper 1505-A, 1:100,000.

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

Sincerely,
Ensolum, LLC

Stuart Hyde, PG (licensed in WA & TX)
Senior Managing Geologist
(970) 903-1607
shyde@ensolum.com

Daniel R. Moir, PG (licensed in WY & TX)
Senior Managing Geologist
(303) 887-2946
dmoir@ensolum.com

Attachments:

Figure 1: Site Receptor Map
Figure 2: Soil Sample Location Map

Table 1: Soil Sample Analytical Results

Appendix A: NMOSE Point of Diversion Summary
Appendix B: Agency Sampling Notification
Appendix C: Photographic Log
Appendix D: Laboratory Analytical Reports

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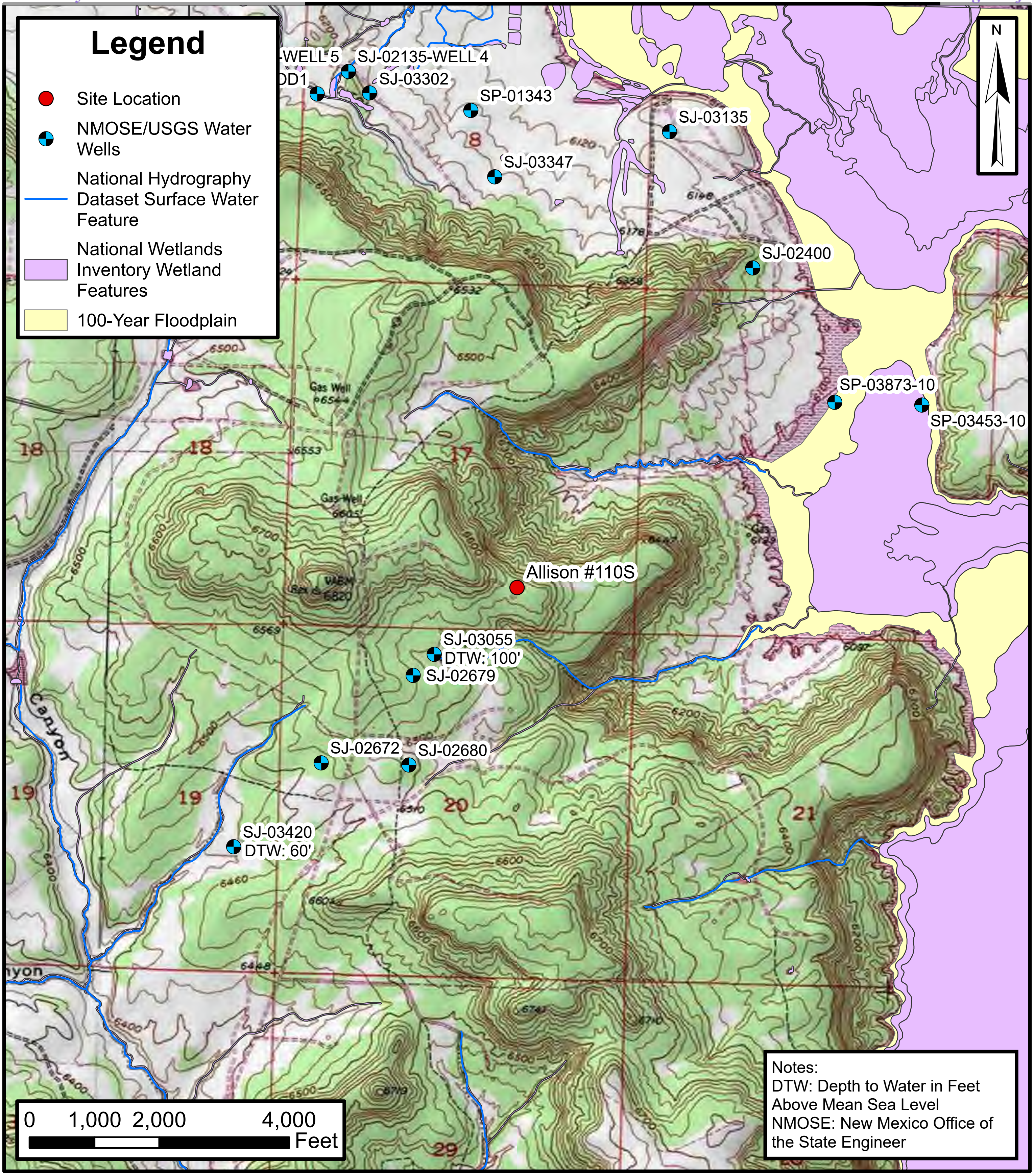
FIGURES



Default Folder: C:\Users\Greg Palese\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\Ensolum GIS\1 - Durango\Hilcorp\Allison #110S

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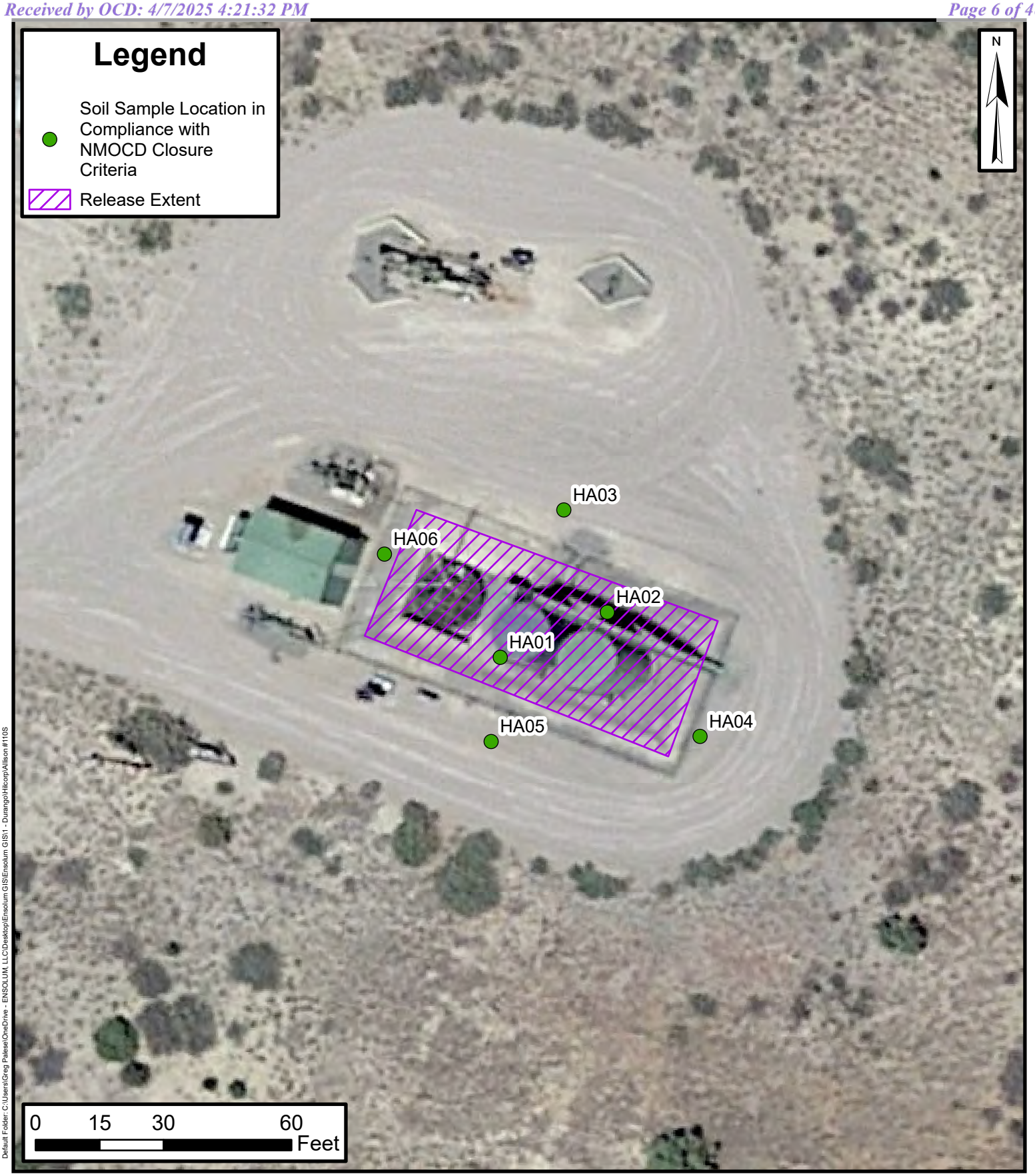
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Allison #110S
Hilcorp Energy Company
36.975409, -107.478648
San Juan County, New Mexico

FIGURE
1

Sources: Environmental Systems Research Institute (ESRI), United States Geologic Survey (USGS), United States Fish and Wildlife Service (USFWS), National Geographic Society, i-cubed



Default Folder: C:\Users\Greg Palese\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\Ensolum GIS\1 - Durango\Hilcorp\Allison #110S

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Soil Sample Location Map

Allison #110S
Hilcorp Energy Company
36.975409, -107.478648
San Juan County, New Mexico

FIGURE
2

Sources: Google Earth (2022)

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Allison #110S
Hilcorp Energy Company
San Juan County, New Mexico

Sample Identification	Date	Depth (feet bgs)	Chloride Field Screening (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release			NE	**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
HA01 @ 1'	2/26/2025	1	436	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA01 @ 2'	2/26/2025	2	356	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA01 @ 3'	2/26/2025	3	356	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA01 @ 4'	2/26/2025	4	576	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	687
HA01 @ 4.75'	2/26/2025	4.75	480	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	944
HA02 @ 1'	2/26/2025	1	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA02 @ 2'	2/26/2025	2	112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA02 @ 3'	2/26/2025	3	164	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	214
HA02 @ 3.5'	2/26/2025	3.5	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	277
HA02 @ 4'	2/26/2025	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA03 @ 1'	2/26/2025	1	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	72.7
HA03 @ 2'	2/26/2025	2	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	52.3
HA03 @ 3'	2/26/2025	3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA03 @ 4'	2/26/2025	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA04 @1'	2/26/2025	1	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA04 @ 2'	2/26/2025	2	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	18.4
HA04 @ 3'	2/26/2025	3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA04 @ 4'	2/26/2025	4	NS	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	60.8
HA05 @1'	2/26/2025	1	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA05 @ 2'	2/26/2025	2	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA05 @ 3'	2/26/2025	3	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<10.9
HA05 @ 4'	2/26/2025	4	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA05 @ 5'	2/26/2025	5	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	66.0
HA06 @ 1'	2/26/2025	1	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<11.3
HA06 @ 2'	2/26/2025	2	<112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<11.4
HA06 @ 3'	2/26/2025	3	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HA06 @ 4'	2/26/2025	4	<112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

bgs: Below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: Milligrams per kilogram
NE: Not Established
NS: Not Sampled
NMOCD: New Mexico Oil Conservation Division
ppm: Parts per million
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil/Lube Oil Range Organics
TPH: Total Petroleum Hydrocarbon
': Feet
< : Indicates result less than the stated laboratory reporting limit (RL)

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APPENDIX A

NMOSE Point of Diversion Summary

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	SJ 03055	NE	NE	NW	20	32N	06W	278939.0	4094657.0 *	

*** UTM location was derived from PLSS - see Help**

Driller License:	1345	**Driller Company:**	TIERRA CORROSION CONTROL, INC.		
Driller Name:					
Drill Start Date:	2001-10-01	**Drill Finish Date:**	2001-10-01	**Plug Date:**	
Log File Date:	2002-03-28	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	1
Casing Size:	5.00	**Depth Well:**	290	**Depth Water:**	100

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APPENDIX B

Agency Sampling Notificaiton

Outlook

FW: The Oil Conservation Division (OCD) has accepted the application, Application ID: 433462

From Stuart Hyde <shyde@ensolum.com>
Date Thu 3/27/2025 1:25 PM
To Tracy Dembrowski <tdembrowski@ensolum.com>

Stuart Hyde, PG
(Licensed in WA/TX)
Senior Managing Geologist
970-903-1607
Ensolum, LLC

"If you want to go fast, go alone. If you want to go far, go together." – African Proverb

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Wednesday, February 19, 2025 10:21 AM
To: Stuart Hyde <shyde@ensolum.com>
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 433462

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Stuart Hyde for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2502828537.

The sampling event is expected to take place:

When: 02/26/2025 @ 09:00
Where: O-17-32N-06W 785 FSL 1895 FEL (36.97521,-107.47861)

Additional Information: Contact PM Stuart Hyde: 970-903-1607

Additional Instructions: Allison #110S well pad: Site Coordinates 36.97500, -107.47911

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

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APPENDIX C

Photographic Log

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Photographic Log
Hilcorp Energy Company
Allison #110S
San Juan County, New Mexico

Photograph: 1 Date: 2/26/2025
Description: HA01, directly West of release source
View: Northeast

Photograph: 2 Date: 2/26/2025
Description: HA02, ~30 feet East of HA01
View: Southwest

Photograph: 3 Date: 2/26/2025
Description: HA05, ~30 feet South of HA01
View: North

Photograph: 4 Date: 2/26/2025
Description: Source of release, inside shed in berm
View: N/A

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APPENDIX D

Laboratory Analytical Reports

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
jeremy.allen@greenanalytical.com

07 March 2025

Kate Kaufman
Hilcorp
382 CR 3100
Aztec, NM 87410

RE: Allison Unit #110S

Enclosed are the results of analyses for samples received by the laboratory on 02/26/25 16:06. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

Jeremy D Allen
Laboratory Director

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at http://greenanalytical.com/certifications/

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: TX-C25-00012

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: TX-C24-00112

Table of Contents

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
HA01 @ 4'	2502251-01	Solid	02/26/25 10:50	02/26/25 16:06	
HA01 @ 4.75'	2502251-02	Solid	02/26/25 10:50	02/26/25 16:06	
HA02 @ 3'	2502251-03	Solid	02/26/25 11:45	02/26/25 16:06	
HA02 @ 3.5'	2502251-04	Solid	02/26/25 11:48	02/26/25 16:06	
HA03 @ 2'	2502251-05	Solid	02/26/25 12:05	02/26/25 16:06	
HA03 @ 1'	2502251-06	Solid	02/26/25 11:59	02/26/25 16:06	
HA04 @ 2'	2502251-07	Solid	02/26/25 13:00	02/26/25 16:06	
HA04 @ 4'	2502251-08	Solid	02/26/25 13:05	02/26/25 16:06	
HA05 @ 3'	2502251-09	Solid	02/26/25 13:35	02/26/25 16:06	
HA05 @ 5"	2502251-10	Solid	02/26/25 13:40	02/26/25 16:06	
HA06 @ 1	2502251-11	Solid	02/26/25 13:50	02/26/25 16:06	
HA06 @ 2	2502251-12	Solid	02/26/25 13:53	02/26/25 16:06	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA01 @ 4'

2502251-01 (Soil)
Sampled Date: 02/26/25 10:50
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**687**	12.6	6.25	mg/kg dry	10	03/06/25 12:35	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**79.5**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:39	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:39	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:39	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:39	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:39	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*123 %*	*71.5-134*		*03/04/25 11:39*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 23:34	8015B		ms
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 23:34	8015B		ms
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 23:34	8015B		ms
Surrogate: 1-Chlorooctadecane			*110 %*	*63.9-155*		*03/03/25 23:34*	*8015B*		ms
Surrogate: 1-Chlorooctane			*105 %*	*71.8-148*		*03/03/25 23:34*	*8015B*		ms

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA01 @ 4.75'

2502251-02 (Soil)
Sampled Date: 02/26/25 10:50
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**944**	12.0	5.98	mg/kg dry	10	03/06/25 13:48	EPA 300.0	M5	AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**83.1**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 05:29	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 05:29	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 05:29	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 05:29	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 05:29	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*110 %*	*71.5-134*		*03/04/25 05:29*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 16:29	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 16:29	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 16:29	8015B		MS
Surrogate: 1-Chlorooctadecane			*110 %*	*63.9-155*		*03/03/25 16:29*	*8015B*		MS
Surrogate: 1-Chlorooctane			*96.0 %*	*71.8-148*		*03/03/25 16:29*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA02 @ 3'

2502251-03 (Soil)
Sampled Date: 02/26/25 11:45
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**214**	11.7	5.81	mg/kg dry	10	03/06/25 15:01	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**85.6**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 05:41	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 05:41	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 05:41	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 05:41	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 05:41	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*03/04/25 05:41*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 16:52	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 16:52	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 16:52	8015B		MS
Surrogate: 1-Chlorooctadecane			*130 %*	*63.9-155*		*03/03/25 16:52*	*8015B*		MS
Surrogate: 1-Chlorooctane			*113 %*	*71.8-148*		*03/03/25 16:52*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA02 @ 3.5'

2502251-04 (Soil)
Sampled Date: 02/26/25 11:48
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**277**	12.9	6.40	mg/kg dry	10	03/06/25 16:14	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**77.7**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 05:53	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 05:53	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 05:53	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 05:53	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 05:53	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*71.5-134*		*03/04/25 05:53*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 17:16	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 17:16	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 17:16	8015B		MS
Surrogate: 1-Chlorooctadecane			*98.2 %*	*63.9-155*		*03/03/25 17:16*	*8015B*		MS
Surrogate: 1-Chlorooctane			*87.1 %*	*71.8-148*		*03/03/25 17:16*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA03 @ 2'

2502251-05 (Soil)
Sampled Date: 02/26/25 12:05
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**52.3**	11.7	5.81	mg/kg dry	10	03/06/25 16:39	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**85.6**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:00	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:00	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:00	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:00	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:00	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*96.5 %*	*71.5-134*		*03/04/25 11:00*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 17:39	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 17:39	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 17:39	8015B		MS
Surrogate: 1-Chlorooctadecane			*114 %*	*63.9-155*		*03/03/25 17:39*	*8015B*		MS
Surrogate: 1-Chlorooctane			*102 %*	*71.8-148*		*03/03/25 17:39*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA03 @ 1'

2502251-06 (Soil)
Sampled Date: 02/26/25 11:59
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**72.7**	11.4	5.69	mg/kg dry	10	03/06/25 17:03	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**87.4**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:11	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:11	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:11	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:11	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:11	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*95.7 %*	*71.5-134*		*03/04/25 11:11*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 18:02	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 18:02	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 18:02	8015B		MS
Surrogate: 1-Chlorooctadecane			*111 %*	*63.9-155*		*03/03/25 18:02*	*8015B*		MS
Surrogate: 1-Chlorooctane			*98.6 %*	*71.8-148*		*03/03/25 18:02*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA04 @ 2'

2502251-07 (Soil)
Sampled Date: 02/26/25 13:00
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**18.4**	11.8	5.85	mg/kg dry	10	03/06/25 17:28	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**84.9**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:22	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:22	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:22	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:22	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:22	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*94.8 %*	*71.5-134*		*03/04/25 11:22*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 18:25	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 18:25	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 18:25	8015B		MS
Surrogate: 1-Chlorooctadecane			*113 %*	*63.9-155*		*03/03/25 18:25*	*8015B*		MS
Surrogate: 1-Chlorooctane			*98.6 %*	*71.8-148*		*03/03/25 18:25*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA04 @ 4'

2502251-08 (Soil)
Sampled Date: 02/26/25 13:05
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**60.8**	11.6	5.79	mg/kg dry	10	03/06/25 17:52	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**85.9**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:34	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:34	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:34	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:34	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:34	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*94.0 %*	*71.5-134*		*03/04/25 11:34*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 18:48	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 18:48	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 18:48	8015B		MS
Surrogate: 1-Chlorooctadecane			*101 %*	*63.9-155*		*03/03/25 18:48*	*8015B*		MS
Surrogate: 1-Chlorooctane			*89.6 %*	*71.8-148*		*03/03/25 18:48*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA05 @ 3'

2502251-09 (Soil)
Sampled Date: 02/26/25 13:35
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	<10.9	10.9	5.42	mg/kg dry	10	03/06/25 18:16	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**91.7**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:45	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:45	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:45	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:45	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:45	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*95.3 %*	*71.5-134*		*03/04/25 11:45*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 19:11	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 19:11	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 19:11	8015B		MS
Surrogate: 1-Chlorooctadecane			*103 %*	*63.9-155*		*03/03/25 19:11*	*8015B*		MS
Surrogate: 1-Chlorooctane			*91.8 %*	*71.8-148*		*03/03/25 19:11*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA05 @ 5''

2502251-10 (Soil)
Sampled Date: 02/26/25 13:40
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	**66.0**	10.8	5.39	mg/kg dry	10	03/06/25 18:41	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**92.2**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:57	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 11:57	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 11:57	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 11:57	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 11:57	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*97.1 %*	*71.5-134*		*03/04/25 11:57*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 19:34	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 19:34	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 19:34	8015B		MS
Surrogate: 1-Chlorooctadecane			*115 %*	*63.9-155*		*03/03/25 19:34*	*8015B*		MS
Surrogate: 1-Chlorooctane			*102 %*	*71.8-148*		*03/03/25 19:34*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA06 @ 1

2502251-11 (Soil)
Sampled Date: 02/26/25 13:50
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	<11.3	11.3	5.60	mg/kg dry	10	03/06/25 19:05	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**88.7**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 12:08	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 12:08	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 12:08	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 12:08	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 12:08	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*96.0 %*	*71.5-134*		*03/04/25 12:08*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 19:57	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 19:57	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 19:57	8015B		MS
Surrogate: 1-Chlorooctadecane			*123 %*	*63.9-155*		*03/03/25 19:57*	*8015B*		MS
Surrogate: 1-Chlorooctane			*108 %*	*71.8-148*		*03/03/25 19:57*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

HA06 @ 2

2502251-12 (Soil)
Sampled Date: 02/26/25 13:53
Sampled By: Peter Anderson

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Soluble (DI Water Extraction)									
Chloride	<11.4	11.4	5.66	mg/kg dry	10	03/06/25 19:30	EPA 300.0		AWG
Subcontracted -- **Cardinal Laboratories 101 East Marland Hobbs, NM 88240**									
Inorganic Compounds									
% Solids	**87.8**			%	1	03/06/25 16:32	D2216		BB
Volatile Organic Compounds by EPA Method 8021									
Benzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 12:20	8021B		JH
Ethylbenzene*	<0.050	0.050	0.011	mg/kg	50	03/04/25 12:20	8021B		JH
Toluene*	<0.050	0.050	0.009	mg/kg	50	03/04/25 12:20	8021B		JH
Total BTEX	<0.300	0.300	0.062	mg/kg	50	03/04/25 12:20	8021B		JH
Total Xylenes*	<0.150	0.150	0.032	mg/kg	50	03/04/25 12:20	8021B		JH
Surrogate: 4-Bromofluorobenzene (PID)			*95.8 %*	*71.5-134*		*03/04/25 12:20*	*8021B*		JH
Petroleum Hydrocarbons by GC FID									
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	03/03/25 20:20	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	03/03/25 20:20	8015B		MS
GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	03/03/25 20:20	8015B		MS
Surrogate: 1-Chlorooctadecane			*115 %*	*63.9-155*		*03/03/25 20:20*	*8015B*		MS
Surrogate: 1-Chlorooctane			*101 %*	*71.8-148*		*03/03/25 20:20*	*8015B*		MS

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

Soluble (DI Water Extraction) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250507 - IC- Ion Chromatograph										
Blank (B250507-BLK1)				Prepared: 03/03/25 Analyzed: 03/06/25						
Chloride	ND	10.0	mg/kg wet							
LCS (B250507-BS1)				Prepared: 03/03/25 Analyzed: 03/06/25						
Chloride	243	10.0	mg/kg wet	250		97.3	85-115			
LCS Dup (B250507-BSD1)				Prepared: 03/03/25 Analyzed: 03/06/25						
Chloride	249	10.0	mg/kg wet	250		99.4	85-115	2.14	20	

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5030640 - General Prep - Wet Chem										
Blank (5030640-BLK1)				Prepared & Analyzed: 03/06/25						
% Solids	100		%							

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5030103 - Volatiles										
Blank (5030103-BLK1)			Prepared: 03/01/25 Analyzed: 03/04/25							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0532*		mg/kg	*0.0500*		*106*	*71.5-134*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (5030103-BS1)			Prepared: 03/01/25 Analyzed: 03/04/25							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0511*		mg/kg	*0.0500*		*102*	*71.5-134*			
Benzene	2.03	0.050	mg/kg	2.00		101	82.8-130			
Ethylbenzene	2.19	0.050	mg/kg	2.00		109	85.9-128			
m,p-Xylene	4.60	0.100	mg/kg	4.00		115	89-129			
o-Xylene	2.16	0.050	mg/kg	2.00		108	86.1-125			
Toluene	2.15	0.050	mg/kg	2.00		107	86-128			
Total Xylenes	6.76	0.150	mg/kg	6.00		113	88.2-128			
LCS Dup (5030103-BSD1)			Prepared: 03/01/25 Analyzed: 03/04/25							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0505*		mg/kg	*0.0500*		*101*	*71.5-134*			
Benzene	2.00	0.050	mg/kg	2.00		100	82.8-130	1.32	15.8	
Ethylbenzene	2.12	0.050	mg/kg	2.00		106	85.9-128	3.15	16	
m,p-Xylene	4.47	0.100	mg/kg	4.00		112	89-129	2.68	16.2	
o-Xylene	2.09	0.050	mg/kg	2.00		104	86.1-125	3.54	16.7	
Toluene	2.10	0.050	mg/kg	2.00		105	86-128	2.14	15.9	
Total Xylenes	6.56	0.150	mg/kg	6.00		109	88.2-128	2.95	16.3	
Batch 5030104 - Volatiles										
Blank (5030104-BLK1)			Prepared: 03/01/25 Analyzed: 03/04/25							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*95.2*	*71.5-134*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (5030104-BS1)			Prepared: 03/01/25 Analyzed: 03/04/25							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0466*		mg/kg	*0.0500*		*93.2*	*71.5-134*			
Benzene	1.85	0.050	mg/kg	2.00		92.6	82.8-130			
Ethylbenzene	1.95	0.050	mg/kg	2.00		97.4	85.9-128			

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

Volatile Organic Compounds by EPA Method 8021 - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5030104 - Volatiles (Continued)										
LCS (5030104-BS1) (Continued)				Prepared: 03/01/25 Analyzed: 03/04/25						
m,p-Xylene	3.85	0.100	mg/kg	4.00		96.2	89-129			
o-Xylene	1.93	0.050	mg/kg	2.00		96.7	86.1-125			
Toluene	1.96	0.050	mg/kg	2.00		98.0	86-128			
Total Xylenes	5.78	0.150	mg/kg	6.00		96.4	88.2-128			
LCS Dup (5030104-BSD1)				Prepared: 03/01/25 Analyzed: 03/04/25						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0467*		mg/kg	*0.0500*		*93.4*	*71.5-134*			
Benzene	1.83	0.050	mg/kg	2.00		91.4	82.8-130	1.34	15.8	
Ethylbenzene	1.93	0.050	mg/kg	2.00		96.5	85.9-128	0.992	16	
m,p-Xylene	3.79	0.100	mg/kg	4.00		94.8	89-129	1.44	16.2	
o-Xylene	1.91	0.050	mg/kg	2.00		95.5	86.1-125	1.30	16.7	
Toluene	1.95	0.050	mg/kg	2.00		97.3	86-128	0.770	15.9	
Total Xylenes	5.70	0.150	mg/kg	6.00		95.0	88.2-128	1.39	16.3	

Green Analytical Laboratories

Jeremy D. Allen

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5022846 - General Prep - Organics										
Blank (5022846-BLK1)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctadecane	*56.4*		mg/kg	*50.0*		*113*	*63.9-155*			
Surrogate: 1-Chlorooctane	*53.0*		mg/kg	*50.0*		*106*	*71.8-148*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
LCS (5022846-BS1)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctadecane	*59.1*		mg/kg	*50.0*		*118*	*63.9-155*			
Surrogate: 1-Chlorooctane	*57.2*		mg/kg	*50.0*		*114*	*71.8-148*			
DRO >C10-C28	202	10.0	mg/kg	200		101	77.7-122			
GRO C6-C10	206	10.0	mg/kg	200		103	81.5-123			
Total TPH C6-C28	408	10.0	mg/kg	400		102	80.9-121			
LCS Dup (5022846-BSD1)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctadecane	*61.4*		mg/kg	*50.0*		*123*	*63.9-155*			
Surrogate: 1-Chlorooctane	*59.9*		mg/kg	*50.0*		*120*	*71.8-148*			
DRO >C10-C28	200	10.0	mg/kg	200		100	77.7-122	1.22	15.6	
GRO C6-C10	197	10.0	mg/kg	200		98.7	81.5-123	4.14	13	
Total TPH C6-C28	397	10.0	mg/kg	400		99.3	80.9-121	2.68	18.5	
Batch 5022847 - General Prep - Organics										
Blank (5022847-BLK1)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctadecane	*65.9*		mg/kg	*50.0*		*132*	*63.9-155*			
Surrogate: 1-Chlorooctane	*57.8*		mg/kg	*50.0*		*116*	*71.8-148*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
LCS (5022847-BS1)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctadecane	*61.6*		mg/kg	*50.0*		*123*	*63.9-155*			
Surrogate: 1-Chlorooctane	*57.3*		mg/kg	*50.0*		*115*	*71.8-148*			
DRO >C10-C28	191	10.0	mg/kg	200		95.5	77.7-122			
GRO C6-C10	187	10.0	mg/kg	200		93.6	81.5-123			
Total TPH C6-C28	378	10.0	mg/kg	400		94.5	80.9-121			
LCS Dup (5022847-BSD1)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctadecane	*67.5*		mg/kg	*50.0*		*135*	*63.9-155*			

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

Petroleum Hydrocarbons by GC FID - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5022847 - General Prep - Organics (Continued)										
LCS Dup (5022847-BSD1) (Continued)				Prepared: 02/28/25 Analyzed: 03/03/25						
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*71.8-148*			
DRO >C10-C28	204	10.0	mg/kg	200		102	77.7-122	6.38	15.6	
GRO C6-C10	199	10.0	mg/kg	200		99.5	81.5-123	6.11	13	
Total TPH C6-C28	402	10.0	mg/kg	400		101	80.9-121	6.25	18.5	

Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Jeremy D. Allen

Jeremy D Allen, Laboratory Director

Hilcorp	Project: NM Oil and Gas Tests (Ensolum)	
382 CR 3100	Project Name / Number: Allison Unit #110S	**Reported:**
Aztec NM, 87410	Project Manager: Kate Kaufman	03/07/25 16:06

Qualifier Summary

LabNumber	Analysis	Analyte	Qualifier	TextBody
2502251-02	Chloride [IC]	Chloride	M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

GAL Green Analytical Laboratories
75 Suttle Street
Durango, CO 81303
(970) 247-4220

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
FORM-006, R 8.0

Note: Wite-Out™ or similar products cannot be used on the Chain of Custody

Company or Client: Hilcorp Attn: Kate Kaufman
Address:
City: State: Zip:
Phone #:
Contact Person: Stuart Hyde
Email Report to: KKaufman@hilcorp.com / Shyde@ensolum.com
Project Name(optional): Allison Unit #110S
Sampler Name (Print): Peter Anderson

Bill to (if different):
P.O. #:
Rush? Y N TAT Needed?

ANALYSIS REQUEST: BTEX 8021B per email S.H; TPH - Full; Cl

Lab I.D. (Lab Use Only) 2502-251	Sample Name or Location	Collected Date	Collected Time	Matrix (check one)	# of containers: No preservation	BTEX 8021B	TPH - Full	Cl
01	1) HA01@ 4'	2/26/25	1050	SOIL X	1	↓	↓	↓
02	2) HA01@ 4.75'	↓	1056	↓	1	↓	↓	↓
03	3) HA02@ 3'	↓	1145	↓	1	↓	↓	↓
04	4) HA02@ 3.5'	↓	1148	↓	1	↓	↓	↓
05	5) HA03@ 2'	↓	1205	↓	1	↓	↓	↓
06	6) HA03@ 1'	↓	1159	↓	1	↓	↓	↓
07	7) HA04@ 2'	↓	1300	↓	1	↓	↓	↓
08	8) HA04@ 4'	↓	1305	↓	1	↓	↓	↓
09	9) HA05@ 3'	↓	1335	↓	1	↓	↓	↓
10	10) HA05@ 5'	↓	1340	↓	1	↓	↓	↓

Matrix options: GROUNDWATER, SURFACE WATER, WASTEWATER, PRODUCED WATER, DRINKING WATER, SOIL, OTHER:
# of containers options: No preservation, Nitric Acid, Hydrochloric Acid, Sulfuric Acid, Sodium Hydroxide, OTHER:

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion of the applicable service. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	Date: 2/26/25 Time: 1606	[signature]	Date: 2/26/25 Time: 16:06
Relinquished By:	Date: Time:	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received By:	Date: Time:

ADDITIONAL REMARKS:

Temperature at receipt: 8.3/8.5 °C | Checked by: [initials] | On Ice? (Y) N | Therm. used: [illegible] #3

† GAL cannot accept verbal changes. Please email changes to receiving@greenanalytical.com
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Page 1 of 2

GREEN GAL Analytical Laboratories
75 Suttle Street
Durango, CO 81303
(970) 247-4220

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006, R 8.0

Note: Wite-Out™ or similar products cannot be used on the Chain of Custody

Company or Client:	Hilcorp Attn: Kate Kaufman
Address:	
City: State: Zip:	
Phone #:	
Contact Person:	Stuart Hyde
Email Report to:	Kate Kaufman KKaufman@hilcorp / Shyde@ensolum.com
Project Name(optional):	Allison Unit #110S
Sampler Name (Print):	Peter Anderson

Bill to (if different):

P.O. #:

Rush? Y N

TAT Needed?

ANALYSIS REQUEST

Lab I.D. (Lab Use Only)	Sample Name or Location	Collected Date	Collected Time	Matrix: GROUNDWATER	SURFACE WATER	WASTEWATER	PRODUCED WATER	DRINKING WATER	SOIL	OTHER:	# of containers: No preservation	Nitric Acid	Hydrochloric Acid	Sulfuric Acid	Sodium Hydroxide	OTHER:	BTEX 8021B MRN	TPH - Full	Cl							
2502-251																										
11	1) HA06@1	2/26/25	1350						X		1						X	X	X							
12	2) HA06@2	2/26/25	1353						X		1						X	X	X							
	3)																									
	4)																									
	5)																									
	6)																									
	7)																									
	8)																									
	9)																									
	10)																									

Relinquished By:	Date: 2/24/25 Time: 1606	Received By:	Date: 2.24.25 Time: 16:06	ADDITIONAL REMARKS:	
Relinquished By:	Date: Time:	Received By:	Date: Time:		
Relinquished By:	Date: Time:	Received By:	Date: Time:	Temperature at receipt: 8.3/8.5 °C	Checked by: Y N On Ice? Therm. used:

† GAL cannot accept verbal changes. Please email changes to receiving@greenanalytical.com

* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Date/Initials of person examining contents: 2.26.25 CDV

Labeled by initials: _____
(if different than above)

Client Name: Hilcorp

Work Order # 2502-251

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐ Kangaroo ☐ Third Party ☐Other

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No GAL Cooler #: _____

Thermometer Used: #2 Samples on ice, cooling process has begun: ☑Yes ☐ No

Type of Ice: ☑ Wet ☐ Blue ☐ None **Cooler Temp:** Observed Temp: 8.3 °C Correction Factor: +.2 °C Final Temp: 8.5 °C

*Temp should be above freezing 6°C

Compliance: ☐ Yes ☑ No

Chain of Custody Filled Out:	☑Yes ☐No	1.
COC Signed when Relinquished and Received:	☑Yes ☐No	2.
Sampler Name and Signature on COC: *Required for compliance	☑Yes ☐No	3.
Samples arrived within hold time:	☑Yes ☐No	4.
Correct Containers Used & Intact:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8. Limited volume
pH's acceptable upon receipt, where applicable: *Not including metals bottles	☐Yes ☐No ☑N/A	9.
Dissolved Testing Needed: Field Filtered: ☐Yes ☐No	☐Yes ☑No	10.
Sample Labels match COC: -Includes Date/Time/ID Matrix:	☑Yes ☐No WT ☑SL OT	11.
Trip Blank Present: Trip Blank Custody Seals Present: VOA's meet headspace requirement (<6mm bubbles)	☐Yes ☐No ☐N/A ☐Yes ☐No ☐N/A ☐Yes ☐No ☐N/A	12.
Non-Conformance(s):	☐Yes ☑No	13.

Client Notification/Resolution:

Person Contacted: Stuart Hyde Date/Time: 2-27-25 email

Comments/Resolution: upon confirmed BTEX method.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 449390

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2502828537**
Incident Name	**NAPP2502828537 ALLISON #110S @ 30-045-33272**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-045-33272] ALLISON UNIT #110S**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Allison #110S
Date Release Discovered	01/25/2025
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Freeze | Pump | Produced Water | Released: 8 BBL | Recovered: 0 BBL | Lost: 8 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 04/07/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 500 and 1000 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	None
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan		
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Requesting a remediation plan approval with this submission		Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.		
Have the lateral and vertical extents of contamination been fully delineated		Yes
Was this release entirely contained within a lined containment area		No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride	(EPA 300.0 or SM4500 Cl B)	944
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	0
GRO+DRO	(EPA SW-846 Method 8015M)	0
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence		02/26/2025
On what date will (or did) the final sampling or liner inspection occur		02/26/2025
On what date will (or was) the remediation complete(d)		02/26/2025
What is the estimated surface area (in square feet) that will be reclaimed		0
What is the estimated volume (in cubic yards) that will be reclaimed		0
What is the estimated surface area (in square feet) that will be remediated		0
What is the estimated volume (in cubic yards) that will be remediated		0
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.		
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.		

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	Yes
Other Non-listed Remedial Process. Please specify	No remediation needed
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 04/07/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
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QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**433462**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/26/2025**
What was the (estimated) number of samples that were to be gathered	**12**
What was the sampling surface area in square feet	**1000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	0
What was the total volume (cubic yards) remediated	0
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	Not applicable

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 04/07/2025

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QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 449390

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 449390
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	7/11/2025