



December 11, 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: 2024 Annual Groundwater Monitoring Report**

San Juan 30-6 Unit 31A  
Rio Arriba County, New Mexico  
Hilcorp Energy Company  
NMOCD Incident Number: nAPP2301160771

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2024 Annual Groundwater Monitoring Report* associated with a release discovered at the San Juan 30-6 Unit 31A natural gas production well pad (Site). The Site is located on private land in Unit F, Section 33, Township 30 North, Range 6 West in Rio Arriba County, New Mexico (Figure 1).

**SITE BACKGROUND**

On December 27, 2022, Hilcorp personnel discovered a release of 92 barrels (bbls) of condensate originating from corrosion holes on the “J Leg” piping of the oil dump line. The release volume was determined based on the operator’s monthly tank gauging data. Fluids stayed within the secondary containment berm, but none were recovered. Upon discovery, the tank was immediately emptied. Hilcorp reported the release via email to the New Mexico Oil Conservation Division (NMOCD) on December 28, 2022, and subsequently submitted a Form C-141, *Release Notification* to the NMOCD on January 11, 2023. The release was assigned NMOCD Incident Number nAPP2301160771.

**SITE CLOSURE CRITERIA**

The NMOCD requires groundwater quality standards be met as presented by the NMWQCC and listed in Title 20, Chapter 6, Part 2, Section 3103 (20.6.2.3103) of the New Mexico Administrative Code (NMAC). The following standards are presented for the COCs at the Site in micrograms per liter (µg/L).

- Benzene: 5.0 µg/L
- Toluene: 1,000 µg/L
- Ethylbenzene: 700 µg/L
- Total Xylenes: 620 µg/L

In addition, NMWQCC standards state light non-aqueous phase liquids (LNAPLs) or phase-separated hydrocarbons (PSH), as referenced in this report, shall not be present floating on the groundwater table.

## SITE INVESTIGATION SUMMARY

To investigate potential impacts resulting from the release, Hilcorp performed delineation activities at the Site beginning in January 2023. Initial investigation efforts were conducted using an excavator to advance three potholes at the Site. Based on the initial field screening and sampling results from these pothole locations, additional vertical and horizontal delineation with a drill rig was required. Drilling activities took place in May 2023 to advance a total of seven boreholes (BH01 through BH07), with additional boreholes BH08 through BH12 drilled in January 2024. Groundwater was encountered during drilling activities at depths ranging from approximately 38 feet to 42 feet below ground surface (bgs). Due to the presence of groundwater at the Site, permanent groundwater monitoring wells were subsequently installed in all open boreholes (labeled MW01 through MW012) and were screened across the water table for groundwater assessment and monitoring. Wells were identified to match the numbering of the boreholes so that monitoring well MW01 was installed in borehole BH01 and so on. Wells were constructed using 2-inch Schedule 40 polyvinyl chloride (PVC) well screen and riser. Wells were completed with 10 to 20 feet of 0.010 well screen, depending on the PID field screening observations collected during drilling. Well locations are shown on Figure 2.

Additionally, boreholes BH01 and BH02 were completed with additional nested wells constructed with screens in the shallow vadose zone based on elevated PID values. These wells were installed to serve as test well for potential Soil Vapor Extraction (SVE) for the treatment of shallow soil impacts. A shallow and deep well was nested within the same borehole and initially labelled BH01 S (shallow), BH01 D (deep), BH02 S (shallow), and BH02 D (deep). BH01 D and BH02 D were subsequently labeled MW01 and MW02, respectively, for future groundwater monitoring. Well locations were surveyed with a handheld Global Positioning System (GPS) unit and Top of Casing (TOC) elevations were surveyed using a laser level to the nearest hundredth of a foot.

Additional information regarding soil investigation and remediation activities has been provide in a separate report, as requested by the NMOCD.

## GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater conditions were first assessed at the Site on June 2, 2023. Quarterly groundwater sampling began in December 2023 and samples were collected in December 2023, January 2024, May 2024, and July 2024. All Site wells were ultimately plugged and abandoned prior to and during remedial excavation activities that occurred in September 2024. As such, groundwater samples were not collected during the fourth quarter of 2024.

Prior to sampling, depth to PSH and depth to groundwater were measured in all wells using an oil/water interface probe in order to calculate groundwater elevations and assess the inferred groundwater flow direction. During all sampling events, wells MW01, MW02, MW03, MW04, and MW12 contained trace to measurable volumes of PSH. When PSH was present, a correction factor of 0.8 was applied to the elevation to account for the depression of the water column caused by the presence of overlying PSH. Additionally, monitoring well MW05 had been dry during all sampling events and not sampled. As noted in previous reports, the total depth of well MW05 is approximately 5 feet higher in elevation than indicated on the borehole log. It appears the borehole caved in as the drill augers were removed and the well screen was unable to be installed at the terminus of the borehole. Table 1 presents a summary of groundwater elevations and thickness of PSH measured at the Site. PSH thicknesses ranged from 0.12 feet to 1.85 feet during 2024 sampling events. Potentiometric surface maps with calculated groundwater elevations and inferred groundwater flow direction for 2024 are shown on Figures 3, 4, and 5.

Groundwater from each monitoring well was purged and sampled using a disposable bailer. Purging was accomplished by removing three casing volumes of stagnant groundwater from the monitoring well prior to collecting a sample. Field measurements of groundwater quality parameters, including temperature, pH, and electrical conductivity, were collected during the purging process and recorded in

Hilcorp Energy Company  
2024 Annual Groundwater Monitoring Report  
San Juan 30-6 Unit 31A

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the attached field logs (Appendix A). During each sampling event, groundwater samples were collected for laboratory analysis from wells MW06 through MW11. Groundwater samples were placed directly into laboratory-provided preserved vials and immediately placed on ice. Samples were submitted to Eurofins for analysis of BTEX following EPA Methods 8021 or 8260. Analytical results from groundwater samples indicated benzene concentrations exceeded the NMWQCC standard in well MW06 during all 2024 sampling events. Toluene, ethylbenzene, and total xylene concentrations did not exceed the applicable NMWQCC standards during any of the sampling events in well MW06. Additionally, BTEX concentrations were compliant with NMWQCC standards during all events from wells MW07, MW08, MW09, MW10, and MW11. A summary of groundwater analytical results is presented in Table 2 and on Figure 6, with groundwater laboratory analytical reports attached as Appendix B.

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\*  
PG\*Senior Managing Geologist  
shyde@ensolum.com  
(\*licensed in TX, WA, & WY)

**Attachments:**

Figure 1: Site Receptor Map  
Figure 2: Site Map  
Figure 3: Groundwater Potentiometric Surface Map (January 2024)  
Figure 4: Groundwater Potentiometric Surface Map (May 2024)  
Figure 5: Groundwater Potentiometric Surface Map (July 2024)  
Figure 6: Groundwater Analytical Results

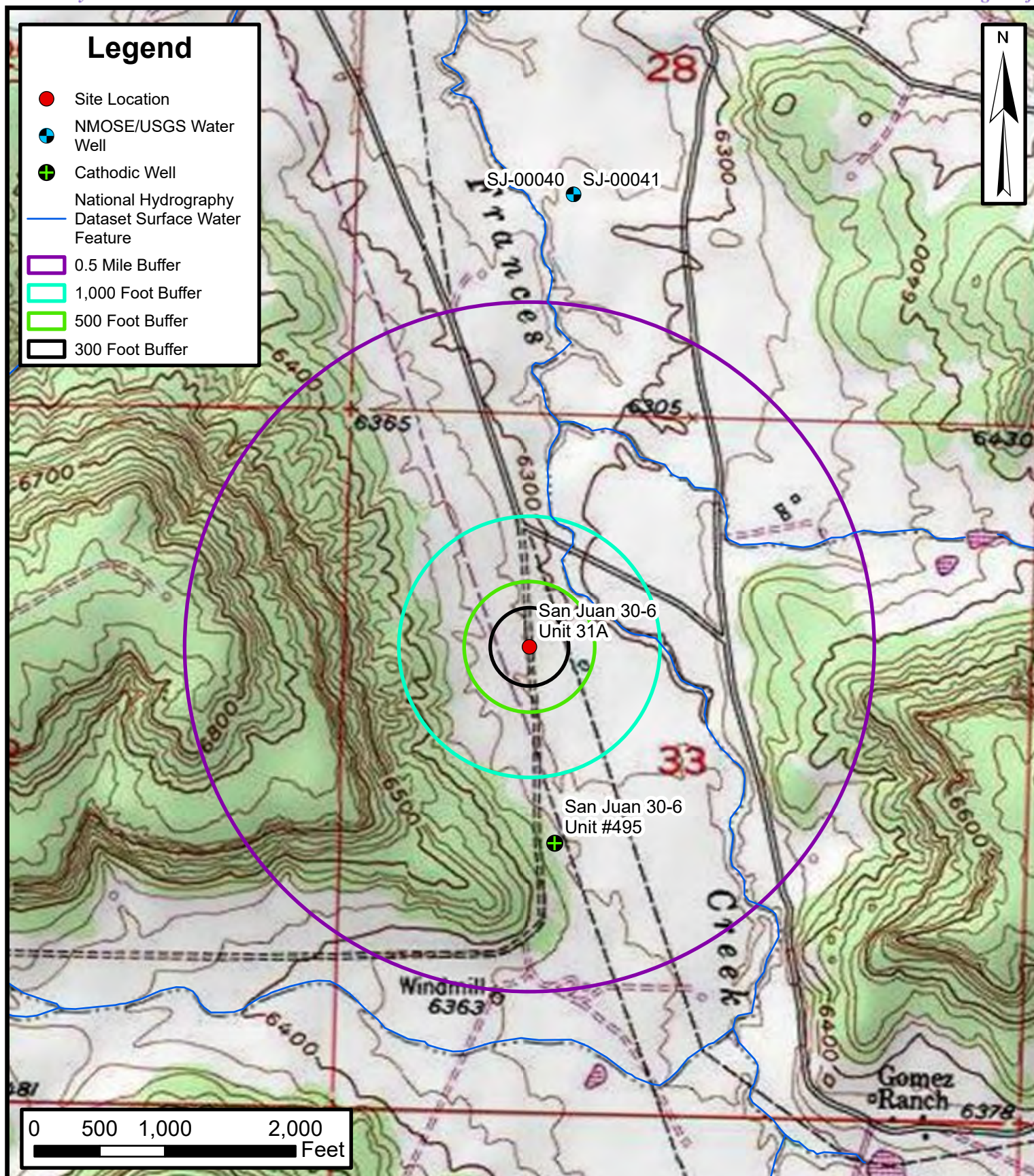
Table 1: Groundwater Elevation Summary  
Table 2: Groundwater Analytical Results

Appendix A: Groundwater Sampling Forms  
Appendix B: Groundwater Sample Laboratory Analytical Reports



FIGURES





## Site Receptor Map

San Juan 30-6 Unit 31A  
 Hilcorp Energy Company  
 Unit F, Sec 33, T30N, R06W  
 36.77139, -107.47258  
 Rio Arriba County, New Mexico

FIGURE  
 1





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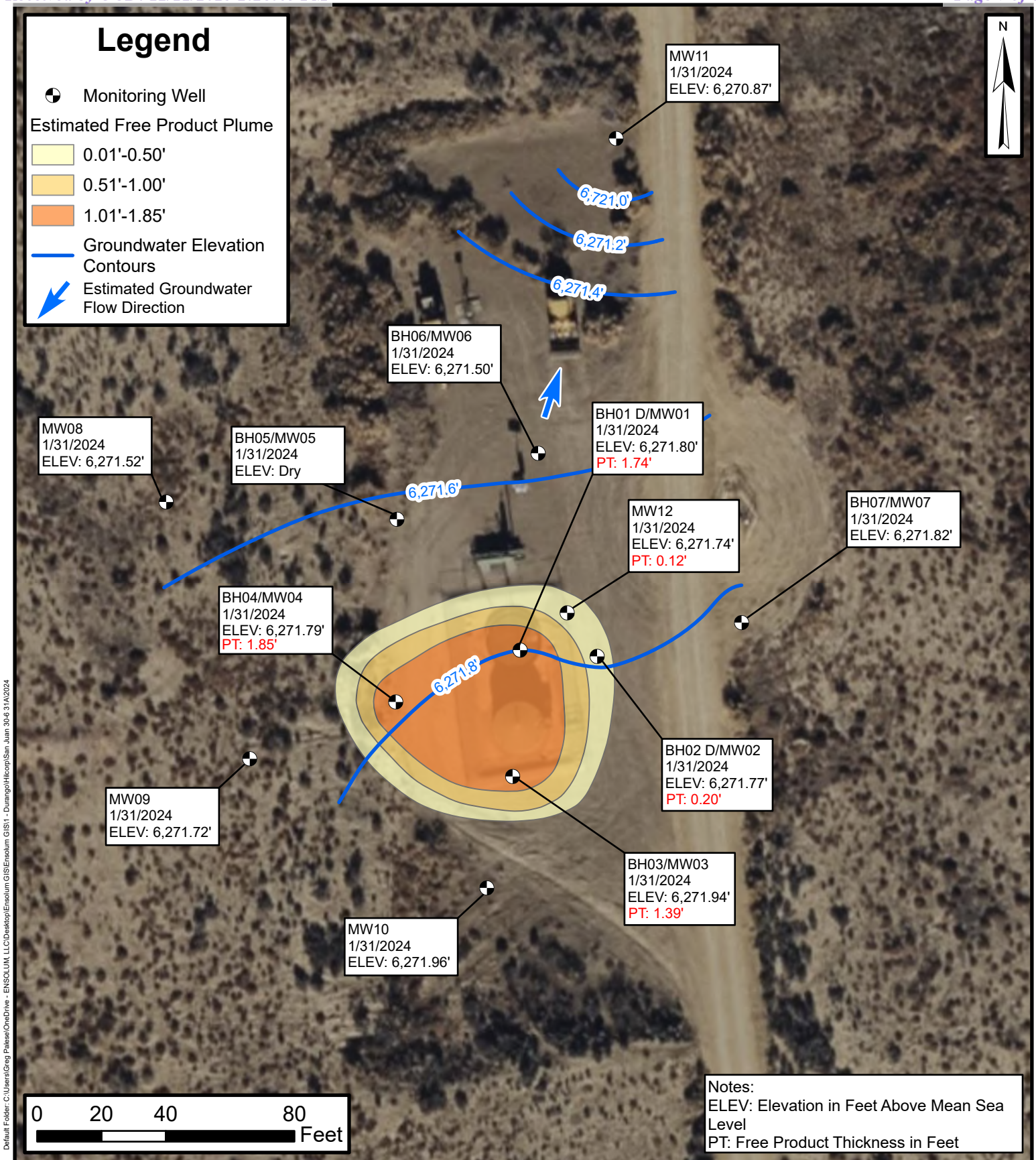


## Site Map

San Juan 30-6 #31A  
Hilcorp Energy Company  
Unit F, Sec 33, T30N, R06W  
36.77139, -107.47258  
Rio Arriba County, New Mexico

**FIGURE**  
**2**



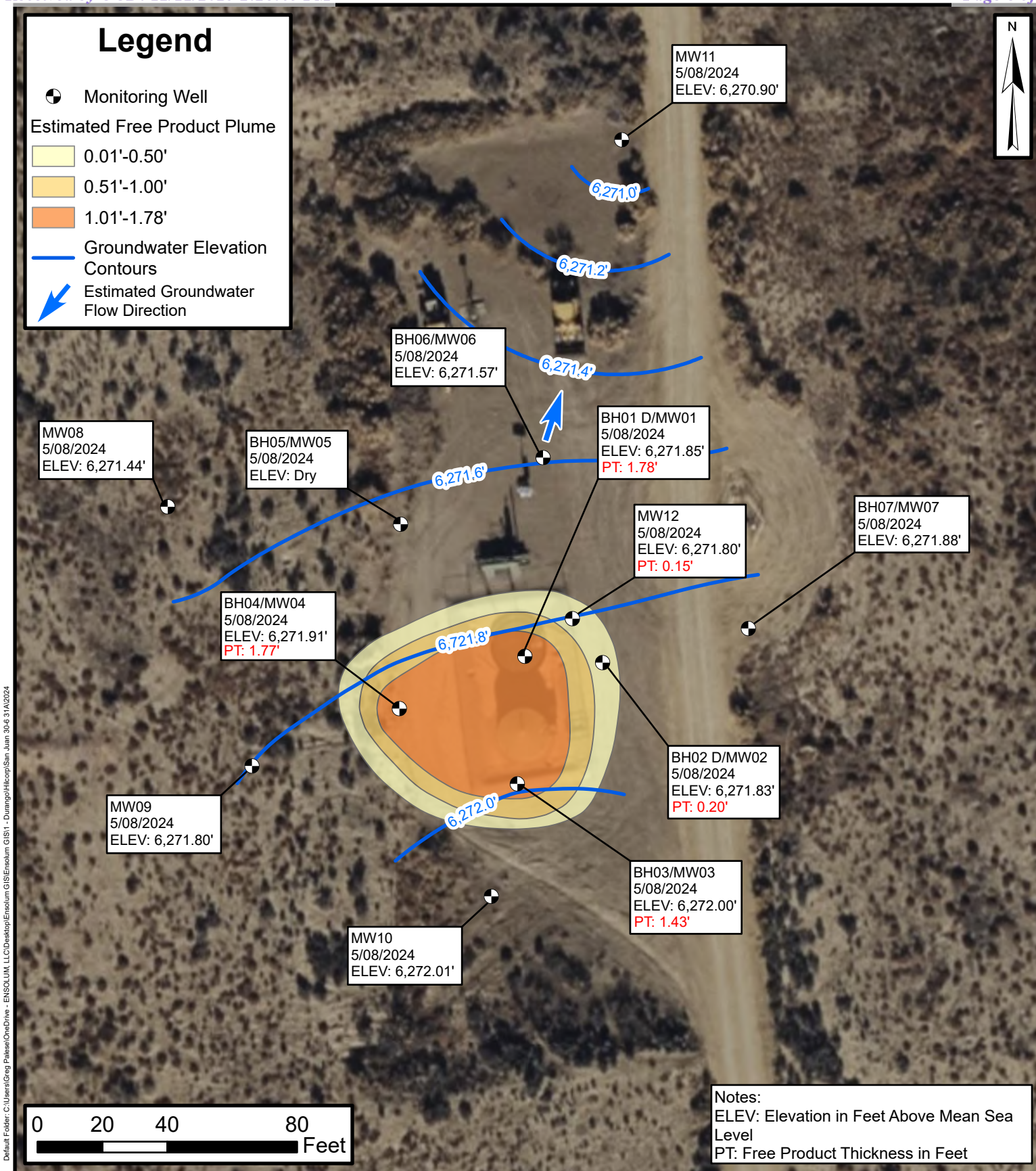


## Groundwater Potentiometric Surface Map (January 2024)

San Juan 30-6 #31A  
Hilcorp Energy Company  
Unit F, Sec 33, T30N, R06W  
36.77139, -107.47258  
Rio Arriba County, New Mexico

**FIGURE**  
**3**



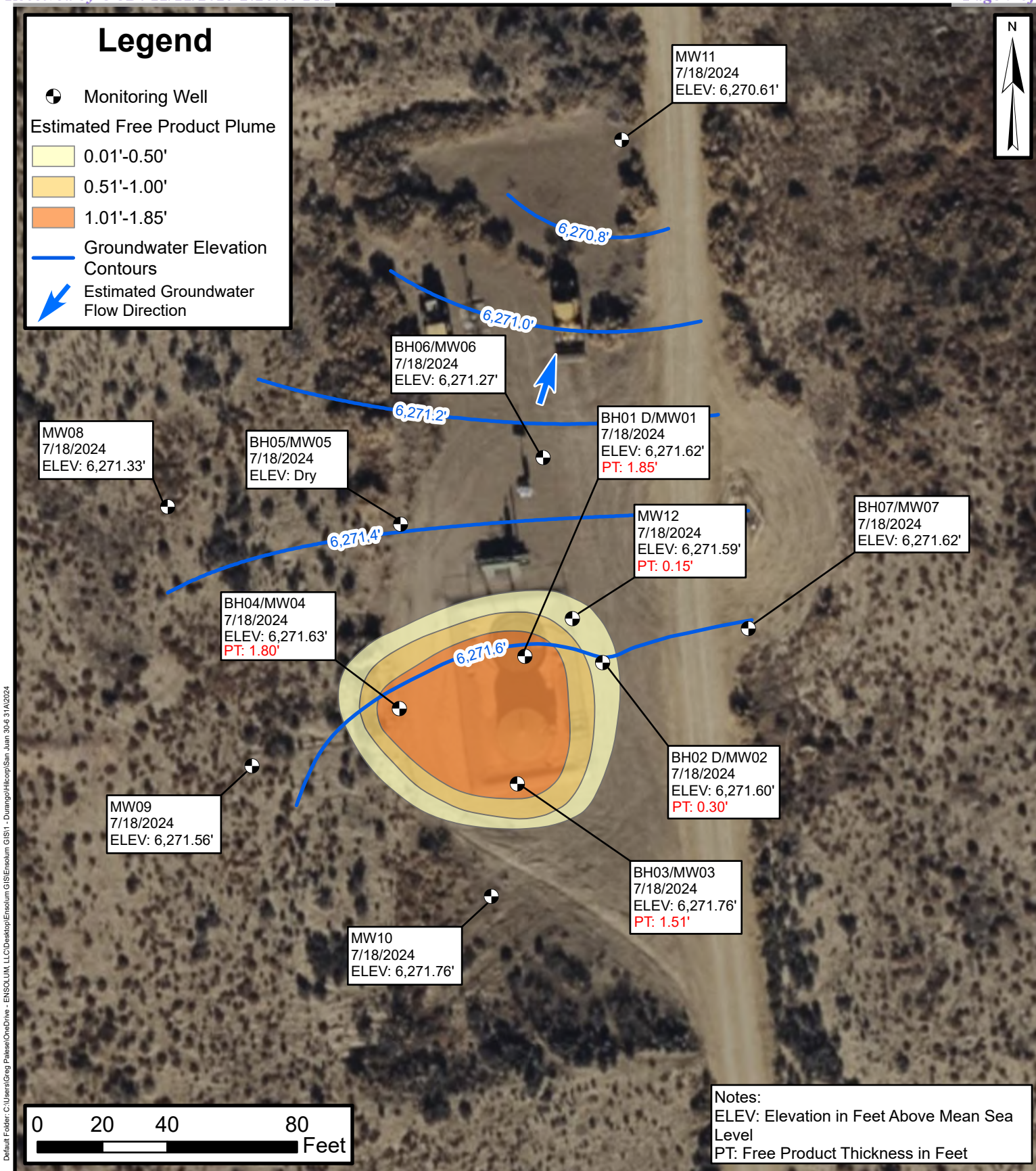


## Groundwater Potentiometric Surface Map (May 2024)

San Juan 30-6 #31A  
Hilcorp Energy Company  
Unit F, Sec 33, T30N, R06W  
36.77139, -107.47258  
Rio Arriba County, New Mexico

**FIGURE**  
**4**





## Groundwater Potentiometric Surface Map (July 2024)

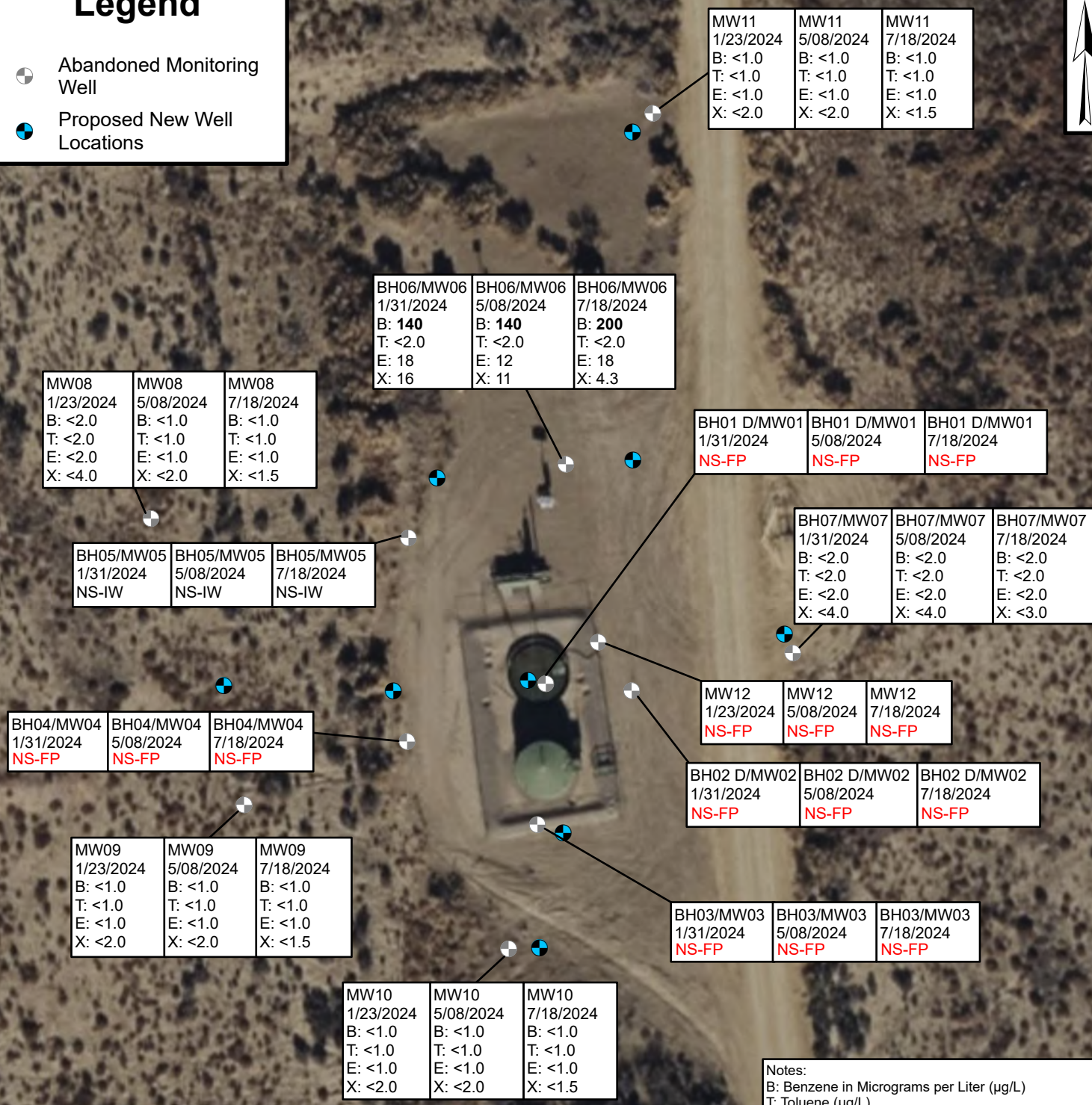
San Juan 30-6 #31A  
Hilcorp Energy Company  
Unit F, Sec 33, T30N, R06W  
36.77139, -107.47258  
Rio Arriba County, New Mexico

**FIGURE**  
**5**



# Legend

- Abandoned Monitoring Well
- Proposed New Well Locations



## Notes:

B: Benzene in Micrograms per Liter (µg/L)

T: Toluene (µg/L)

E: Ethylbenzene (µg/L)

X: Total Xylenes (µg/L)

NS-FP: Not sampled due to presence of free product

NS-IW: Not sampled due to insufficient water volume

&lt; Indicates result is below laboratory reporting limit

**Bold:** Indicates result exceeds NMWQCC Standards

NMWQCC: New Mexico Water Quality Conservation Commission

0 20 40 80  
Feet

## Groundwater Analytical Results

San Juan 30-6 #31A  
Hilcorp Energy Company

Unit F, Sec 33, T30N, R06W  
36.77139, -107.47258  
Rio Arriba County, New Mexico

FIGURE

6





TABLES



**TABLE 1**  
**GROUNDWATER ELEVATION SUMMARY**  
 San Juan 30-6 31A  
 Hilcrop Energy Company  
 Rio Arriba County, New Mexico

Well ID	Top of Casing Elevation (feet amsl)	Total Depth (feet)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
BH01D/MW01	6,313.24	51.06	6/2/2023	42.67	40.62	2.05	6,272.21
			12/19/2023	42.75	41.02	1.73	6,271.87
			1/31/2024	42.83	41.09	1.74	6,271.80
			5/8/2024	42.81	41.03	1.78	6,271.85
			7/18/2024	43.10	41.25	1.85	6,271.62
BH02D/MW02	6,312.40	44.90	6/2/2023	40.25	40.24	0.01	6,272.16
			12/19/2023	40.64	40.51	0.13	6,271.86
			1/31/2024	40.79	40.59	0.20	6,271.77
			5/8/2024	40.73	40.53	0.20	6,271.83
			7/18/2024	41.04	40.74	0.30	6,271.60
BH03/MW03	6,315.61	46.66	6/2/2023	43.35	TRACE	---	6,272.26
			12/19/2023	44.74	43.32	1.42	6,272.01
			1/31/2024	44.78	43.39	1.39	6,271.94
			5/8/2024	44.75	43.32	1.43	6,272.00
			7/18/2024	45.06	43.55	1.51	6,271.76
BH04/MW04	6,315.56	47.19	6/2/2023	44.82	42.93	1.89	6,272.25
			12/19/2023	45.22	43.35	1.87	6,271.84
			1/31/2024	45.25	43.40	1.85	6,271.79
			5/8/2024	45.07	43.30	1.77	6,271.91
			7/18/2024	45.37	43.57	1.80	6,271.63
BH05/MW05	6,313.93	40.50	6/2/2023	DRY	---	---	DRY
			12/19/2023	DRY	---	---	DRY
			1/31/2024	DRY	---	---	DRY
			5/8/2024	DRY	---	---	DRY
			7/18/2024	DRY	---	---	DRY
BH06/MW06	6,314.59	47.50	6/2/2023	42.70	---	---	6,271.89
			12/19/2023	43.01	---	---	6,271.58
			1/31/2024	43.09	---	---	6,271.50
			5/8/2024	43.02	---	---	6,271.57
			7/18/2024	43.32	---	---	6,271.27
BH07/MW07	6,316.43	52.00	6/2/2023	44.25	---	---	6,272.18
			12/19/2023	44.52	---	---	6,271.91
			1/31/2024	44.61	---	---	6,271.82
			5/8/2024	44.55	---	---	6,271.88
			7/18/2024	44.81	---	---	6,271.62
MW08	6,322.75	54.39	1/31/2024	51.23	---	---	6,271.52
			5/8/2024	51.31	---	---	6,271.44
			7/18/2024	51.42	---	---	6,271.33
MW09	6,321.62	54.40	1/31/2024	49.90	---	---	6,271.72
			5/8/2024	49.82	---	---	6,271.80
			7/18/2024	50.06	---	---	6,271.56
MW10	6,312.99	48.20	1/31/2024	41.03	---	---	6,271.96
			5/8/2024	40.98	---	---	6,272.01
			7/18/2024	41.23	---	---	6,271.76
MW11	6312.3	49.70	1/31/2024	41.43	---	---	6,270.87
			5/8/2024	41.40	---	---	6,270.90
			7/18/2024	41.69	---	---	6,270.61
MW12	6,312.68	48.95	1/31/2024	41.04	40.92	0.12	6,271.74
			5/8/2024	41.00	40.85	0.15	6,271.80
			7/18/2024	41.78	40.92	0.86	6,271.59

**Notes:**

AMSL: Above mean sea level

BTOC: Below top of casing

---: Indicates no PSH measured

Groundwater elevation is adjusted using a density correction factor of 0.8 when product is present





**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**

San Juan 30-6 31A  
Hilcorp Energy Company  
Rio Arriba County, New Mexico

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
BH01/MW01	6/2/2023	No Sample Collected, PSH Present			
	12/19/2023	No Sample Collected, PSH Present			
	1/31/2024	No Sample Collected, PSH Present			
	5/8/2024	No Sample Collected, PSH Present			
	7/18/2024	No Sample Collected, PSH Present			
BH02/MW02	6/2/2023	No Sample Collected, PSH Present			
	12/19/2023	No Sample Collected, PSH Present			
	1/31/2024	No Sample Collected, PSH Present			
	5/8/2024	No Sample Collected, PSH Present			
	7/18/2024	No Sample Collected, PSH Present			
BH03/MW03	6/2/2023	No Sample Collected, PSH Present			
	12/19/2023	No Sample Collected, PSH Present			
	1/31/2024	No Sample Collected, PSH Present			
	5/8/2024	No Sample Collected, PSH Present			
	7/18/2024	No Sample Collected, PSH Present			
BH04/MW04	6/2/2023	No Sample Collected, PSH Present			
	12/19/2023	No Sample Collected, PSH Present			
	1/31/2024	No Sample Collected, PSH Present			
	5/8/2024	No Sample Collected, PSH Present			
	7/18/2024	No Sample Collected, PSH Present			
BH05/MW05	6/2/2023	Well Dry			
	12/19/2023	Well Dry			
	1/31/2024	Well Dry			
	5/8/2024	Well Dry			
	7/18/2024	Well Dry			
BH06/MW06	6/2/2023	<2.0	<2.0	<2.0	<4.0
	12/19/2023	140	<2.0	21	51
	1/31/2024	140	<2.0	18	16
	5/8/2024	140	<2.0	12	11
	7/18/2024	200	<2.0	18	4.3
BH07/MW07	6/2/2023	<2.0	<2.0	<2.0	<4.0
	12/19/2023	<2.0	<2.0	<2.0	<4.0
	1/31/2024	<2.0	<2.0	<2.0	<4.0
	5/8/2024	<2.0	<2.0	<2.0	<4.0
	7/18/2024	<2.0	<2.0	<2.0	<3.0
MW08	1/23/2024	<2.0	<2.0	<2.0	<4.0
	5/8/2024	<1.0	<1.0	<1.0	<2.0
	7/18/2024	<1.0	<1.0	<1.0	<1.5



**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
 San Juan 30-6 31A  
 Hilcorp Energy Company  
 Rio Arriba County, New Mexico

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
<b>NMWQCC Standards</b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>620</b>
<b>MW09</b>	1/23/2024	<1.0	<1.0	<1.0	<2.0
	5/8/2024	<1.0	<1.0	<1.0	<2.0
	7/18/2024	<1.0	<1.0	<1.0	<1.5
<b>MW10</b>	1/23/2024	<1.0	<1.0	<1.0	<2.0
	5/8/2024	<1.0	<1.0	<1.0	<2.0
	7/18/2024	<1.0	<1.0	<1.0	<1.5
<b>MW11</b>	1/23/2024	<1.0	<1.0	<1.0	<2.0
	5/8/2024	<1.0	<1.0	<1.0	<2.0
	7/18/2024	<1.0	<1.0	<1.0	<1.5
<b>MW12</b>	1/23/2024	<b>No Sample Collected, PSH Present</b>			
	5/8/2024	<b>No Sample Collected, PSH Present</b>			
	7/18/2024	<b>No Sample Collected, PSH Present</b>			

**Notes:**

µg/L: Micrograms per liter

NMWQCC: New Mexico Water Quality Control Commission

PSH: Phase separated hydrocarbons

&lt;: Indicates result less than the stated laboratory reporting limit (PQL)

Concentrations in **bold** and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code



## APPENDIX A

### Groundwater Sampling Forms

Date: 1-31-24

Date: 1-31-24



### Groundwater Sample Collection Form

Project Name: San Juan 30-6-31AProject Location: San Juan 30-6-31AProject Number: 07A1988062Sampler: RH/PASample ID: MW-08Matrix: GroundwaterSample Date: 1/23/2024Sample Time: 10:45Laboratory: Eurofins AlbuquerqueShipping Method: Hand DeliveryAnalyses: BTEXDepth to Water: 51.19Total Depth of Well: 54.39

Time: \_\_\_\_\_

Depth to Product: —Vol. of Water to Purge: 1.57 gal

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: BailerMethod of Sampling: Bailer

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (°C)	Conductivity (us/cm)	Comments
1034	0.25	0.25	6.66	12.7	5.63	mostly clear No smell/taste
1036	0.25	.5	7.05	12.9	5.46	slt. murky tan No S/O
1039	0.5	1.0	7.37	13.2	5.40	SAA
1041	0.5	1.5	7.47	13.3	5.40	SAA
1042	0.5	2.0	7.61	13.3	5.39	more silt SAA

Comments: Good recharge

Describe Deviations from SOP: \_\_\_\_\_

Signature: RickDate: 1/23/24





### Groundwater Sample Collection Form

Project Name: San Juan 30-6-31AProject Location: San Juan 30-6-31AProject Number: 07A1988062Sampler: RH/PASample ID: MW09Matrix: GroundwaterSample Date: 1/23/2024Sample Time: 11:22Laboratory: Eurofins AlbuquerqueShipping Method: Hand DeliveryAnalyses: BTEXDepth to Water: 49.86Total Depth of Well: 54.40Time: 1109Depth to Product:       Vol. of Water to Purge: 2.22

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: BailerMethod of Sampling: Bailer

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
11:11	0.5	0.5	6.6	12.5	5.71	Silty Brown N Scan/Gdr
11:13	0.5	1.0	7.18	13.2	5.74	
11:18	0.5	1.5	7.33	13.3	5.75	↓
11:20	0.5	2.0	7.53	13.3	5.75	↓

Comments: re-charged w/ clearish water for sampling

Describe Deviations from SOP:

Well began to bail Dry @ 2galSignature: PADate: 1/23/24



ENSOLUM

## Groundwater Sample Collection Form

Project Name: San Juan 30-6-31A

Project Location: San Juan 30-6-31A

Project Number: 07A1988062

Sampler: RH/PA

Sample ID: MW10

Matrix: Groundwater

Sample Date: 1/23/2024

Sample Time: 1200

Laboratory: Eurofins Albuquerque

Shipping Method: Hand Delivery

Analyses: BTEX

Depth to Water: 41.03

Total Depth of Well: 48.20

Time: 1200

Depth to Product: \_\_\_\_\_

Vol. of Water to Purge: 3.5

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: Baller

Method of Sampling: Baller

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
11:45	1.0	1.0	6.12	12.0	5.25	Brown Silty No odor/seen
11:51	1.0	2.0	7.21	12.8	5.26	SAA
11:55	0.5	2.5	7.56	12.8	5.28	SAA
11:57	0.5	3.0	7.66	12.8	5.27	Slight less silty SAA
11:58	0.5	3.5	7.69	12.7	5.28	SAA

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: PA

Date: 1/23/24





Date: 1/23/24

Groundwater Sample Collection FormProject Name: San Juan 30-6-31AProject Location: San Juan 30-6-31AProject Number: 07A1988062Sampler: PASample ID: MW006Matrix: GroundwaterSample Date: 5/8/2024Sample Time: 1335Laboratory: Eurofins AlbuquerqueShipping Method: Hand DeliveryAnalyses: BTEXDepth to Water: 43.02Total Depth of Well: 47.50Time: 1320

Depth to Product: \_\_\_\_\_

Vol. of Water to Purge: 2.2 gal

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: BailerMethod of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	1.0	1.0	6.98	57.6	5.25	first bailer clear then silty brown
	0.5	1.5	6.96	56.4	5.24	silty brown
	0.5	2.0	6.97	56.5	5.12	
	0.25	2.25	6.97	56.8	5.09	↓

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: PADate: 5/8/24





### Groundwater Sample Collection Form

Project Name: San Juan 30-6-31A  
 Project Number: 07A1988062  
 Sample ID: MW07  
 Sample Date: 5/8/2024  
 Laboratory: Eurofins Albuquerque  
 Analyses: BTEX  
 Depth to Water: 44.55  
 Time: \_\_\_\_\_  
 Project Location: San Juan 30-6-31A  
 Sampler: PA  
 Matrix: Groundwater  
 Sample Time: 1515  
 Shipping Method: Hand Delivery  
 Total Depth of Well: 52.00  
 Depth to Product: \_\_\_\_\_  
 Vol. of Water to Purge: 3.6 gal  
 Method of Purging: Bailer  
 Method of Sampling: Grab

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	1.0	1	7.25	57.4	5.10	
	1.0	2	<del>7.06</del> 6.99	56.1	5.06	
	1.0	3	7.13	55.9	4.99	
	0.5	3.5	7.05	56.0	4.92	
	0.25	3.75	7.07	55.8	4.90	
	<del>0.25</del> <u>PA</u>					

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: PA

Date: 5/8/24



## Groundwater Sample Collection Form

Project Name: San Juan 30-6-31A

Project Number: 07A1988062

Project Location: San Juan 30-6-31A

Sampler: PA

Sample ID: MW08

Sample Date: 5/8/2024

Matrix: Groundwater

Laboratory: Eurofins Albuquerque

Sample Time: 1205

Analyses: BTEX

Shipping Method: Hand Delivery

Depth to Water: 51.13

Time: 1130

Total Depth of Well: 54.39

Depth to Product:

Vol. of Water to Purge: 1.6 gal

Method of Purging: Bailer

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	0.25	0.25	6.21	61.1	5.48	NO S/O Some Silts
	0.25	0.5	6.70	58.1	5.39	SAA
	0.25	0.75	6.83	57.2	5.44	SAA
	0.25	1.0	6.94	57.0	5.42	↓
	0.5	1.5	6.97	56.4	5.41	
	0.25	1.75	6.99	56.1	5.39	
	0.2	1.95	7.00	55.8	5.42	

Comments:

Describe Deviations from SOP:

Signature:

Date: 5/8/24





### Groundwater Sample Collection Form

Project Name: San Juan 30-6-31A  
 Project Number: 07A1988062  
 Sample ID: MW09  
 Sample Date: 5/8/2024  
 Laboratory: Eurofins Albuquerque  
 Analyses: BTEX  
 Depth to Water: 49.82  
 Time: 1210  
 Project Location: San Juan 30-6-31A  
 Sampler: PA  
 Matrix: Groundwater  
 Sample Time: 1230  
 Shipping Method: Hand Delivery  
 Total Depth of Well: 54.40  
 Depth to Product: \_\_\_\_\_  
 Vol. of Water to Purge: 2.25 gal  
 Method of Purging: Bailer  
 Method of Sampling: Grab

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	0.5	0.5	6.66	56.9	6.57	NO S/O
	0.5	1.0	6.93	56.1	5.90	Silty Brown
	0.5	1.5	7.03	56.0	5.88	SAA
	0.5	2.0	7.05	56.2	5.88	
	0.25	2.25	7.09	56.3	5.88	

Comments: \_\_\_\_\_  
 Describe Deviations from SOP: \_\_\_\_\_  
 Signature: PA \_\_\_\_\_  
 Date: 5/8/24



### Groundwater Sample Collection Form

Project Name: San Juan 30-6-31AProject Location: San Juan 30-6-31AProject Number: 07A1988062Sampler: PASample ID: MW10Matrix: GroundwaterSample Date: 5/8/2024Sample Time: 1305Laboratory: Eurofins AlbuquerqueShipping Method: Hand DeliveryAnalyses: BTEXDepth to Water: 40.98Total Depth of Well: 48.20Time: 1243

Depth to Product: \_\_\_\_\_

Vol. of Water to Purge: 3.5 gal

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: BailerMethod of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	1.0	1.0	7.3	57.0	5.22	NO S/O Some Silts Brown
	1.0	2.0	7.0	56.2	5.29	SAA
	1.0	3.0	7.03	56.3	5.25	↓
	0.5	3.5	7.02	55.9	5.28	↓

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: RADate: 5/8/24





Total Depth of Well: 49.70  
Depth to Product:           

Vol. of Water to Purge: 4.0 (height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: Bailer

Method of Sampling: Grab

[illegible]

**Comments:** \_\_\_\_\_

**Describe Deviations from SOP:**

Signature: [Signature]

Date: 5/8/24



### Groundwater Sample Collection Form

Project Name: SJ 30-6 31A Project Location: Rio Arriba County, NM  
 Project Number: \_\_\_\_\_ Sampler: PA  
 Sample ID: MW- 06 Matrix: Groundwater  
 Sample Date: 7/18/2024 Sample Time: 1225  
 Laboratory: Eurofins Albuquerque Shipping Method: Hand Delivery  
 Analyses: BTEX  
 Depth to Water: 43.32 Total Depth of Well: 47.5  
 Time: 1200 Depth to Product: \_\_\_\_\_  
 WC: 4.18 2.00 gal  
 Vol. of Water to Purge: \_\_\_\_\_ (height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols  
 Method of Purging: Bailer  
 Method of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	0.5	0.5	7.08	59.9	4.94	1st Clear NO S/S
	0.5	1.0	6.85	58.5	5.01	Silty Brown
	0.5	1.5	7.09	58.1	5.01	SAA
	0.5	2.0	6.96	58.4	4.96	SAA

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

7/18/24





### Groundwater Sample Collection Form

Project Name: SJ 30-6 31A  
 Project Number: \_\_\_\_\_  
 Sample ID: MW- 07  
 Sample Date: 7/18/2024  
 Laboratory: Eurofins Albuquerque  
 Analyses: BTEX

Project Location: Rio Arriba County, NM  
 Sampler: PA  
 Matrix: Groundwater  
 Sample Time: 1315  
 Shipping Method: Hand Delivery

Depth to Water: 44.81  
 Time: 1240

Total Depth of Well: 52.00  
 Depth to Product: \_\_\_\_\_

Vol. of Water to Purge: 3.5 gal  
 Method of Purging: Bailer  
 Method of Sampling: Grab

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	1.0	1	7.16	59.7	4.86	No S/O silty Brown
	1.0	2	7.04	57.7	4.76	
	1.0	3	7.03	57.5	4.52	
	0.5	3.5	7.08	57.9	4.56	

Comments: Casing seems to be bent a weighted bailer may make it easier to drop bailer down to GW

Describe Deviations from SOP: \_\_\_\_\_

Signature: Pd

Date: 7/18/2024



### Groundwater Sample Collection Form

Project Name: SI 30-6 31A  
 Project Number: \_\_\_\_\_  
 Sample ID: MW- 08  
 Sample Date: 7/18/2024  
 Laboratory: Eurofins Albuquerque  
 Analyses: BTEX

Project Location: Rio Arriba County, NM  
 Sampler: PA  
 Matrix: Groundwater  
 Sample Time: 1000  
 Shipping Method: Hand Delivery

Depth to Water: 51.42  
 Time: 935

Total Depth of Well: 54.39  
 Depth to Product: \_\_\_\_\_

WC: 2.97  
1.45

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Vol. of Water to Purge: \_\_\_\_\_  
 Method of Purging: Bailer  
 Method of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	0.5	0.5	7.04 5.54	60.9	5.54	1st bailer Clear all following very silty Brown
	0.5	1.0	7.18	59.3	4.34	Brown, Silty
	0.25	1.25	7.12	58.4	5.31	
	0.25	1.5	7.19	58.2	5.28	↓

Comments: 5 Vol\*

Describe Deviations from SOP: \_\_\_\_\_

Signature: PA

Date: 7/18/2024



### Groundwater Sample Collection Form

Project Name: SJ 30-6 31A Project Location: Rio Arriba County, NM  
 Project Number: \_\_\_\_\_ Sampler: PA  
 Sample ID: MW- 09 Matrix: Groundwater  
 Sample Date: 7/18/2024 Sample Time: 1045  
 Laboratory: Eurofins Albuquerque Shipping Method: Hand Delivery  
 Analyses: BTEX  
 Depth to Water: 50.06 Total Depth of Well: 54.4  
 Time: 1045 Depth to Product: \_\_\_\_\_  
 WC: 4.34  
 Vol. of Water to Purge: 2.12 gal (height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols  
 Method of Purging: Bailer  
 Method of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	0.5	0.5	7.14	60.4	6.05	
	0.5	1.0	7.28	60.0	5.81	
<del>0.5</del>	<del>1.5</del>		Well Bailing Dry GRAB Sample @ 1 gal removed			
<del>0.5</del>	<del>2.0</del>					

Comments: \_\_\_\_\_  
 Describe Deviations from SOP: See Above Comments

Signature: PA

Date: 7/18/2024





### Groundwater Sample Collection Form

Project Name: SJ 30-6 31A  
Project Number: \_\_\_\_\_

Project Location: Rio Arriba County, NM  
Sampler: PA

Sample ID: MW- 10  
Sample Date: 7/18/2024  
Laboratory: Eurofins Albuquerque  
Analyses: BTEX

Matrix: Groundwater  
Sample Time: \_\_\_\_\_  
Shipping Method: Hand Delivery

Depth to Water: 41.23  
Time: 1650

Total Depth of Well: 48.20 ~~54~~  
Depth to Product: \_\_\_\_\_

Vol. of Water to Purge: WC: 6.97  
3.4 gal

(height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: Bailer

Method of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	1.0 <del>2</del> → 1.0	1.0	7.09	58.8	5.16	NO S/O Silt brown
	2.0	1.0	7.37	56.9	5.14	
	3.0	1.0	7.05	56.5	5.11	
	3.25 50	0.5	7.07	56.6	5.10	✓

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: PA

Date: 7/18/2024



### Groundwater Sample Collection Form

Project Name: SJ 30-6 31A Project Location: Rio Arriba County, NM  
 Project Number: \_\_\_\_\_ Sampler: PA  
 Sample ID: MW- 11 Matrix: Groundwater  
 Sample Date: 7/18/2024 Sample Time: 1150  
 Laboratory: Eurofins Albuquerque Shipping Method: Hand Delivery  
 Analyses: BTEX

Depth to Water: 41.69 Total Depth of Well: 49.7  
 Time: 1125 Depth to Product:                     

Vol. of Water to Purge: WC: 8.01 3.9 gal (height of water column \* 0.1631 for 2" well or 0.6524 for 4" well) \* 3 well vols

Method of Purging: Bailer

Method of Sampling: Grab

Time	Vol. Removed	Total Vol. Removed (gallons)	pH (std. units)	Temp. (F)	Conductivity (us or ms)	Comments
	1.5	1.5	7.32	61.0	4.73	NO S/O
	1.0	2.5	6.85	57.8	4.69	S14/ BOW
	1.0	3.50	7.09	57.7	4.70	SAT
	0.5	4.0	6.95	57.8	4.69	Bailers 1/2 Full
	0.5	3.75				↓

Comments: \_\_\_\_\_

Describe Deviations from SOP: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: 7/18/2024



## APPENDIX B

### Groundwater Sample Laboratory Analytical Reports

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Environment Testing

Eurofins Environment Testing South  
Central, LLC  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

January 30, 2024

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

RE: San Juan 30 6 31A

OrderNo.: 2401944

Dear Kate Kaufman:

Eurofins Environment Testing South Central, LLC received 4 sample(s) on 1/24/2024 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque 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

CLIENT: HILCORP ENERGY

Client Sample ID: MW08

Project: San Juan 30 6 31A

Collection Date: 1/23/2024 10:45:00 AM

Lab ID: 2401944-001

Matrix: GROUNDWA

Received Date: 1/24/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	2.0	D	µg/L	2	1/25/2024 12:37:41 AM
Toluene	ND	2.0	D	µg/L	2	1/25/2024 12:37:41 AM
Ethylbenzene	ND	2.0	D	µg/L	2	1/25/2024 12:37:41 AM
Xylenes, Total	ND	4.0	D	µg/L	2	1/25/2024 12:37:41 AM
Surr: 4-Bromofluorobenzene	83.3	52.4-148	D	%Rec	2	1/25/2024 12:37:41 AM

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

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



CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: San Juan 30 6 31A

Collection Date: 1/23/2024 11:22:00 AM

Lab ID: 2401944-002

Matrix: GROUNDWA

Received Date: 1/24/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	1.0		µg/L	1	1/25/2024 1:01:44 AM
Toluene	ND	1.0		µg/L	1	1/25/2024 1:01:44 AM
Ethylbenzene	ND	1.0		µg/L	1	1/25/2024 1:01:44 AM
Xylenes, Total	ND	2.0		µg/L	1	1/25/2024 1:01:44 AM
Surr: 4-Bromofluorobenzene	86.4	52.4-148		%Rec	1	1/25/2024 1:01:44 AM

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

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

Page 2 of 5

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: San Juan 30 6 31A

Collection Date: 1/23/2024 12:00:00 PM

Lab ID: 2401944-003

Matrix: GROUNDWA

Received Date: 1/24/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	1.0		µg/L	1	1/24/2024 5:05:48 PM
Toluene	ND	1.0		µg/L	1	1/24/2024 5:05:48 PM
Ethylbenzene	ND	1.0		µg/L	1	1/24/2024 5:05:48 PM
Xylenes, Total	ND	2.0		µg/L	1	1/24/2024 5:05:48 PM
Surr: 4-Bromofluorobenzene	83.3	52.4-148		%Rec	1	1/24/2024 5:05:48 PM

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

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

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CLIENT: HILCORP ENERGY

Client Sample ID: MW11

Project: San Juan 30 6 31A

Collection Date: 1/23/2024 12:35:00 PM

Lab ID: 2401944-004

Matrix: GROUNDWA

Received Date: 1/24/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	1.0		µg/L	1	1/24/2024 5:29:31 PM
Toluene	ND	1.0		µg/L	1	1/24/2024 5:29:31 PM
Ethylbenzene	ND	1.0		µg/L	1	1/24/2024 5:29:31 PM
Xylenes, Total	ND	2.0		µg/L	1	1/24/2024 5:29:31 PM
Surr: 4-Bromofluorobenzene	85.2	52.4-148		%Rec	1	1/24/2024 5:29:31 PM

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

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

Page 4 of 5

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

WO#: 2401944

30-Jan-24

**Client:** HILCORP ENERGY**Project:** San Juan 30 6 31A

Sample ID: <b>2401944-001ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>MW08</b>	Batch ID: <b>BW102647</b>		RunNo: <b>102647</b>							
Prep Date:	Analysis Date: <b>1/25/2024</b>		SeqNo: <b>3792812</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	35	2.0	40.00	0.4000	86.1	70	130			D
Toluene	35	2.0	40.00	0	88.4	70	130			D
Ethylbenzene	36	2.0	40.00	0	89.3	70	130			D
Xylenes, Total	110	4.0	120.0	0.6920	88.8	70	130			D
Surr: 4-Bromofluorobenzene	36		40.00		89.0	52.4	148			D

Sample ID: <b>2401944-001amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>MW08</b>	Batch ID: <b>BW102647</b>		RunNo: <b>102647</b>							
Prep Date:	Analysis Date: <b>1/25/2024</b>		SeqNo: <b>3792813</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	34	2.0	40.00	0.4000	83.1	70	130	3.45	20	D
Toluene	34	2.0	40.00	0	85.4	70	130	3.48	20	D
Ethylbenzene	35	2.0	40.00	0	86.6	70	130	3.08	20	D
Xylenes, Total	110	4.0	120.0	0.6920	87.6	70	130	1.31	20	D
Surr: 4-Bromofluorobenzene	35		40.00		87.6	52.4	148	0	0	D

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>BW102647</b>		RunNo: <b>102647</b>							
Prep Date:	Analysis Date: <b>1/24/2024</b>		SeqNo: <b>3792819</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.9	70	130			
Toluene	18	1.0	20.00	0	91.2	70	130			
Ethylbenzene	18	1.0	20.00	0	92.2	70	130			
Xylenes, Total	56	2.0	60.00	0	92.8	70	130			
Surr: 4-Bromofluorobenzene	18		20.00		91.2	52.4	148			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBW</b>	Batch ID: <b>BW102647</b>		RunNo: <b>102647</b>							
Prep Date:	Analysis Date: <b>1/24/2024</b>		SeqNo: <b>3792820</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		89.0	52.4	148			

**Qualifiers:**

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

## Sample Log-In Check List

Client Name: Hilcorp Energy

Work Order Number: 2401944

RcptNo: 1

Received By: Tracy Casarrubias

1/24/2024 7:15:00 AM

Completed By: Tracy Casarrubias

1/24/2024 8:42:34 AM

Reviewed By:

7-1/24/24

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  $6.0^{\circ}\text{C}$ ? 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?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
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?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by

SCM 1/24/24

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:

Mailing address and phone number are missing on COC- TMC 1/24/24

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes	yogi		







Environment Testing

Eurofins Environment Testing South  
Central, LLC  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

February 14, 2024

Mitch Killough

HILCORP ENERGY

PO Box 4700

Farmington, NM 87499

TEL: (505) 564-0733

FAX:

RE: San Juan 30 6 31A

OrderNo.: 2402012

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 2 sample(s) on 2/1/2024 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque 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", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: San Juan 30 6 31A

Collection Date: 1/31/2024 1:08:00 PM

Lab ID: 2402012-001

Matrix: AQUEOUS

Received Date: 2/1/2024 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	140	2.0		µg/L	2	2/6/2024 5:47:45 PM
Toluene	ND	2.0		µg/L	2	2/6/2024 5:47:45 PM
Ethylbenzene	18	2.0		µg/L	2	2/6/2024 5:47:45 PM
Xylenes, Total	16	4.0		µg/L	2	2/6/2024 5:47:45 PM
Surr: 4-Bromofluorobenzene	93.2	52.4-148		%Rec	2	2/6/2024 5:47:45 PM

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

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

CLIENT: HILCORP ENERGY

Client Sample ID: MW07

Project: San Juan 30 6 31A

Collection Date: 1/31/2024 1:40:00 PM

Lab ID: 2402012-002

Matrix: AQUEOUS

Received Date: 2/1/2024 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	2.0	D	µg/L	2	2/6/2024 6:11:39 PM
Toluene	ND	2.0	D	µg/L	2	2/6/2024 6:11:39 PM
Ethylbenzene	ND	2.0	D	µg/L	2	2/6/2024 6:11:39 PM
Xylenes, Total	ND	4.0	D	µg/L	2	2/6/2024 6:11:39 PM
Surr: 4-Bromofluorobenzene	89.7	52.4-148	D	%Rec	2	2/6/2024 6:11:39 PM

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

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



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2402012  
14-Feb-24

Client: HILCORP ENERGY  
Project: San Juan 30 6 31A

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBW	Batch ID: BA102890	RunNo: 102890								
Prep Date:	Analysis Date: 2/6/2024	SeqNo: 3801983 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	17		20.00		84.8	52.4	148			

Qualifiers:

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

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



Environment Testin

Eurofins Environment Testing South  
Central, LLC

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: 2402012

RcptNo: 1

Received By: Tracy Casarrubias 2/1/2024 6:55:00 AM

Completed By: Tracy Casarrubias 2/1/2024 9:04:24 AM

Reviewed By: *JH 2-1-24*

### Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☒ Not Present ☐
2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☒ NA ☐
5. Sample(s) in proper container(s)? Samples not Frozen  
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?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
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?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: *JH 2/1/24*

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-0.8	Good	Yes	Yogi		

## Chain-of-Custody Record

Client: Hilcorp attn: Kate Kaufman  
kkaufman@hilcorp.com  
Mailing Address:

**Turn-Around Time:**

☒ Standard ☐ Rush

Project Name:

Project Number: San Juan 30-9 314

Project #:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC      ☐ Other

□ EDD (Type)

Cooler Temp (including CFI):  $-0.3-0.1 = -0.8 (^{\circ}\text{C})$ 

Date	Time	Matrix	Sample Name
------	------	--------	-------------

1/21/24	1308	water	MW06
1/31/24	1340	water	MW07

Container Type and #	Preservative Type
-------------------------	----------------------

3x VOA	001
3x VOA	002

HEAL No.

2402012

Date:	Time:	Relinquished by:
-------	-------	------------------

1/31/

Relinquished by:

1

Date:	Time:	Relinquished by:
-------	-------	------------------

Date:	Time:
-------	-------

Relinquished by:

1

Relinquished by:

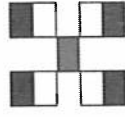
Relinquished by: \_\_\_\_\_

Remarks:

cc: zmyers@ensolum.com

if necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Released to Imaging: 12/11/2025 3:24:06 PM



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

Remarks:	cc: Zuryers@ensolum.com
----------	-------------------------



Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Kate Kaufman  
Hilcorp Energy  
PO BOX 4700  
Farmington, New Mexico 87499

Generated 5/24/2024 11:20:56 AM

## JOB DESCRIPTION

San Juan 30-6 31A

## JOB NUMBER

885-4277-1

Eurofins Albuquerque  
4901 Hawkins NE  
Albuquerque NM 87109



# Eurofins Albuquerque

## Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



Generated  
5/24/2024 11:20:56 AM

Authorized for release by  
Andy Freeman, Business Unit Manager  
[andy.freeman@et.eurofinsus.com](mailto:andy.freeman@et.eurofinsus.com)  
(505)345-3975

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Laboratory Job ID: 885-4277-1

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Definitions/Glossary

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count



## Case Narrative

Client: Hilcorp Energy  
Project: San Juan 30-6 31A

Job ID: 885-4277-1

**Job ID: 885-4277-1**

**Eurofins Albuquerque**

### Job Narrative 885-4277-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 5/10/2024 7:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.9°C.

#### GC VOA

Method 8021B: The following sample was diluted due to the nature of the sample matrix: MW06 (885-4277-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Albuquerque

Client Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Client Sample ID: MW06

Date Collected: 05/08/24 13:35

Date Received: 05/10/24 07:45

Lab Sample ID: 885-4277-1

Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	140		2.0	ug/L			05/13/24 22:45	2	
Ethylbenzene	12		2.0	ug/L			05/13/24 22:45	2	
Toluene	ND		2.0	ug/L			05/13/24 22:45	2	
Xylenes, Total	11		4.0	ug/L			05/13/24 22:45	2	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		43 - 158				05/13/24 22:45	2	

Client Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Client Sample ID: MW07

Date Collected: 05/08/24 15:15

Date Received: 05/10/24 07:45

Lab Sample ID: 885-4277-2

Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		2.0	ug/L			05/14/24 00:19	2	
Ethylbenzene	ND		2.0	ug/L			05/14/24 00:19	2	
Toluene	ND		2.0	ug/L			05/14/24 00:19	2	
Xylenes, Total	ND		4.0	ug/L			05/14/24 00:19	2	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		43 - 158				05/14/24 00:19	2	



Client Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Client Sample ID: MW08

Date Collected: 05/08/24 12:05

Date Received: 05/10/24 07:45

Lab Sample ID: 885-4277-3

Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			05/14/24 00:42	1	
Ethylbenzene	ND		1.0	ug/L			05/14/24 00:42	1	
Toluene	ND		1.0	ug/L			05/14/24 00:42	1	
Xylenes, Total	ND		2.0	ug/L			05/14/24 00:42	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		43 - 158				05/14/24 00:42	1	

Client Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Client Sample ID: MW09

Date Collected: 05/08/24 12:30

Date Received: 05/10/24 07:45

Lab Sample ID: 885-4277-4

Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			05/14/24 01:06	1	
Ethylbenzene	ND		1.0	ug/L			05/14/24 01:06	1	
Toluene	ND		1.0	ug/L			05/14/24 01:06	1	
Xylenes, Total	ND		2.0	ug/L			05/14/24 01:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		43 - 158				05/14/24 01:06	1	

Client Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Client Sample ID: MW10

Date Collected: 05/08/24 13:05

Date Received: 05/10/24 07:45

Lab Sample ID: 885-4277-5

Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			05/14/24 01:29	1	
Ethylbenzene	ND		1.0	ug/L			05/14/24 01:29	1	
Toluene	ND		1.0	ug/L			05/14/24 01:29	1	
Xylenes, Total	ND		2.0	ug/L			05/14/24 01:29	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		43 - 158				05/14/24 01:29	1	



Client Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Client Sample ID: MW11

Lab Sample ID: 885-4277-6

Date Collected: 05/08/24 14:10

Matrix: Water

Date Received: 05/10/24 07:45

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			05/14/24 01:53	1	
Ethylbenzene	ND		1.0	ug/L			05/14/24 01:53	1	
Toluene	ND		1.0	ug/L			05/14/24 01:53	1	
Xylenes, Total	ND		2.0	ug/L			05/14/24 01:53	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		43 - 158				05/14/24 01:53	1	

## QC Sample Results

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

## Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-4925/37

Matrix: Water

Analysis Batch: 4925

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			05/13/24 11:48	1
Ethylbenzene	ND		1.0	ug/L			05/13/24 11:48	1
Toluene	ND		1.0	ug/L			05/13/24 11:48	1
Xylenes, Total	ND		2.0	ug/L			05/13/24 11:48	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		43 - 158				05/13/24 11:48	1

Lab Sample ID: MB 885-4925/38

Matrix: Water

Analysis Batch: 4925

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			05/13/24 23:55	1
Ethylbenzene	ND		1.0	ug/L			05/13/24 23:55	1
Toluene	ND		1.0	ug/L			05/13/24 23:55	1
Xylenes, Total	ND		2.0	ug/L			05/13/24 23:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		43 - 158				05/13/24 23:55	1

Lab Sample ID: LCS 885-4925/35

Matrix: Water

Analysis Batch: 4925

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	18.7		ug/L		93	70 - 130
Ethylbenzene	20.0	18.3		ug/L		91	70 - 130
Toluene	20.0	18.0		ug/L		90	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	97		43 - 158				

Lab Sample ID: LCS 885-4925/36

Matrix: Water

Analysis Batch: 4925

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	17.7		ug/L		89	70 - 130
Ethylbenzene	20.0	17.2		ug/L		86	70 - 130
Toluene	20.0	16.8		ug/L		84	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	96		43 - 158				

Eurofins Albuquerque

QC Association Summary

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

GC VOA

Analysis Batch: 4925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-4277-1	MW06	Total/NA	Water	8021B	
885-4277-2	MW07	Total/NA	Water	8021B	
885-4277-3	MW08	Total/NA	Water	8021B	
885-4277-4	MW09	Total/NA	Water	8021B	
885-4277-5	MW10	Total/NA	Water	8021B	
885-4277-6	MW11	Total/NA	Water	8021B	
MB 885-4925/37	Method Blank	Total/NA	Water	8021B	
MB 885-4925/38	Method Blank	Total/NA	Water	8021B	
LCS 885-4925/35	Lab Control Sample	Total/NA	Water	8021B	
LCS 885-4925/36	Lab Control Sample	Total/NA	Water	8021B	

Lab Chronicle

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

**Client Sample ID: MW06**  
**Date Collected: 05/08/24 13:35**  
**Date Received: 05/10/24 07:45**

**Lab Sample ID: 885-4277-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8021B		2	4925	JP	EET ALB	05/13/24 22:45

**Client Sample ID: MW07**  
**Date Collected: 05/08/24 15:15**  
**Date Received: 05/10/24 07:45**

**Lab Sample ID: 885-4277-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8021B		2	4925	JP	EET ALB	05/14/24 00:19

**Client Sample ID: MW08**  
**Date Collected: 05/08/24 12:05**  
**Date Received: 05/10/24 07:45**

**Lab Sample ID: 885-4277-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8021B		1	4925	JP	EET ALB	05/14/24 00:42

**Client Sample ID: MW09**  
**Date Collected: 05/08/24 12:30**  
**Date Received: 05/10/24 07:45**

**Lab Sample ID: 885-4277-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8021B		1	4925	JP	EET ALB	05/14/24 01:06

**Client Sample ID: MW10**  
**Date Collected: 05/08/24 13:05**  
**Date Received: 05/10/24 07:45**

**Lab Sample ID: 885-4277-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8021B		1	4925	JP	EET ALB	05/14/24 01:29

**Client Sample ID: MW11**  
**Date Collected: 05/08/24 14:10**  
**Date Received: 05/10/24 07:45**

**Lab Sample ID: 885-4277-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8021B		1	4925	JP	EET ALB	05/14/24 01:53

**Laboratory References:**  
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975



Accreditation/Certification Summary

Client: Hilcorp Energy  
Project/Site: San Juan 30-6 31A

Job ID: 885-4277-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8021B		Water	Benzene
8021B		Water	Ethylbenzene
8021B		Water	Toluene
8021B		Water	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25



## HALL ENVIRONM ANALYSIS LABOR

885-4277 COC

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Chain-of-Custody Record

Client: 45-2

Client: HEC

Attn: Kate Kaufman

Mailing Address:

Phone #:

email or Fax#: K.Kubacki@hilcorp.com

**QA/QC Package:**

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

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5/24/2024

<b>Chain-of-Custody Record</b>						
Turn-Around Time: <span style="float:right"><input checked="" type="checkbox"/> Standard    <input type="checkbox"/> Rush</span>						
Project Name: <span style="float:right">30-G 31A</span>						
Project #:						
Project Manager: <span style="float:right">Stuart Hyde Shyde@Ensolium.com</span>						
Sampler:						
On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
# of Coolers: <span style="float:right">4 7-510/24 40g</span>						
Cooler Temp(Including CF): <span style="float:right">4.9-0 = 4.9 (°C)</span>						
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5/8/24	1335	GIC	MW06	VDA 3	HCA/Cool	1
	1515		MW07	3		2
	1205		MW08	3		3
	1230		MW09	3		4
	1305		MW10	S		5
	1410		MW11	3		6
Date:	Time:	Relinquished by: Peter Anderson		Received by:	Via:	Date      Time
5/8/24	1800				AWB	5/8/24 1800
Date:	Time:	Relinquished by: C. Andrews		Received by:	Via:	Date      Time
5/8/24	1730				Courier	5/10/24 7:45

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

## Analysis Request

[illegible]

Remarks:

CC: [Parabson@Eusolum.com](mailto:Parabson@Eusolum.com)

## Login Sample Receipt Checklist

Client: Hilcorp Energy

Job Number: 885-4277-1

Login Number: 4277

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Stuart Hyde  
Ensolum LLC  
776 E 2nd Avenue  
Durango, Colorado 81301  
Generated 8/1/2024 11:41:51 AM

## JOB DESCRIPTION

San Juan 30-6 31A

## JOB NUMBER

885-8312-1

Eurofins Albuquerque  
4901 Hawkins NE  
Albuquerque NM 87109



# Eurofins Albuquerque

## Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



Generated  
8/1/2024 11:41:51 AM

Authorized for release by  
Michelle Garcia, Project Manager  
[michelle.garcia@et.eurofinsus.com](mailto:michelle.garcia@et.eurofinsus.com)  
(505)345-3975

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Laboratory Job ID: 885-8312-1

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Definitions/Glossary

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum LLC  
Project: San Juan 30-6 31A

Job ID: 885-8312-1

Job ID: 885-8312-1Eurofins Albuquerque

Job Narrative  
885-8312-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/19/2024 6:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Albuquerque



Client Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Client Sample ID: MW06      Lab Sample ID: 885-8312-1  
Date Collected: 07/18/24 12:25      Matrix: Water  
Date Received: 07/19/24 06:30

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	200		20	ug/L			07/30/24 14:28	20	
Ethylbenzene	18		2.0	ug/L			07/30/24 01:27	2	
Toluene	ND		2.0	ug/L			07/30/24 01:27	2	
Xylenes, Total	4.3		3.0	ug/L			07/30/24 01:27	2	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				07/30/24 01:27	2	
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				07/30/24 14:28	20	
4-Bromofluorobenzene (Surr)	95		70 - 130				07/30/24 01:27	2	
4-Bromofluorobenzene (Surr)	99		70 - 130				07/30/24 14:28	20	
Dibromofluoromethane (Surr)	100		70 - 130				07/30/24 01:27	2	
Dibromofluoromethane (Surr)	102		70 - 130				07/30/24 14:28	20	
Toluene-d8 (Surr)	99		70 - 130				07/30/24 01:27	2	
Toluene-d8 (Surr)	97		70 - 130				07/30/24 14:28	20	

Client Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Client Sample ID: MW07

Lab Sample ID: 885-8312-2

Date Collected: 07/18/24 13:25

Matrix: Water

Date Received: 07/19/24 06:30

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		2.0	ug/L			07/30/24 02:52	2	
Ethylbenzene	ND		2.0	ug/L			07/30/24 02:52	2	
Toluene	ND		2.0	ug/L			07/30/24 02:52	2	
Xylenes, Total	ND		3.0	ug/L			07/30/24 02:52	2	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				07/30/24 02:52	2	
4-Bromofluorobenzene (Surr)	93		70 - 130				07/30/24 02:52	2	
Dibromofluoromethane (Surr)	105		70 - 130				07/30/24 02:52	2	
Toluene-d8 (Surr)	97		70 - 130				07/30/24 02:52	2	

Client Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Client Sample ID: MW08

Lab Sample ID: 885-8312-3

Date Collected: 07/18/24 10:00

Matrix: Water

Date Received: 07/19/24 06:30

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			07/30/24 03:21	1	
Ethylbenzene	ND		1.0	ug/L			07/30/24 03:21	1	
Toluene	ND		1.0	ug/L			07/30/24 03:21	1	
Xylenes, Total	ND		1.5	ug/L			07/30/24 03:21	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				07/30/24 03:21	1	
4-Bromofluorobenzene (Surr)	92		70 - 130				07/30/24 03:21	1	
Dibromofluoromethane (Surr)	105		70 - 130				07/30/24 03:21	1	
Toluene-d8 (Surr)	97		70 - 130				07/30/24 03:21	1	

Client Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Client Sample ID: MW09      Lab Sample ID: 885-8312-4  
Date Collected: 07/18/24 10:45      Matrix: Water  
Date Received: 07/19/24 06:30

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			07/30/24 03:50	1	
Ethylbenzene	ND		1.0	ug/L			07/30/24 03:50	1	
Toluene	ND		1.0	ug/L			07/30/24 03:50	1	
Xylenes, Total	ND		1.5	ug/L			07/30/24 03:50	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				07/30/24 03:50	1	
4-Bromofluorobenzene (Surr)	91		70 - 130				07/30/24 03:50	1	
Dibromofluoromethane (Surr)	106		70 - 130				07/30/24 03:50	1	
Toluene-d8 (Surr)	97		70 - 130				07/30/24 03:50	1	

Client Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Client Sample ID: MW10

Date Collected: 07/18/24 11:10

Date Received: 07/19/24 06:30

Lab Sample ID: 885-8312-5

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			07/30/24 04:18	1	
Ethylbenzene	ND		1.0	ug/L			07/30/24 04:18	1	
Toluene	ND		1.0	ug/L			07/30/24 04:18	1	
Xylenes, Total	ND		1.5	ug/L			07/30/24 04:18	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	105		70 - 130				07/30/24 04:18	1	
4-Bromofluorobenzene (Surr)	92		70 - 130				07/30/24 04:18	1	
Dibromofluoromethane (Surr)	104		70 - 130				07/30/24 04:18	1	
Toluene-d8 (Surr)	94		70 - 130				07/30/24 04:18	1	



Client Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Client Sample ID: MW11

Date Collected: 07/18/24 11:50

Date Received: 07/19/24 06:30

Lab Sample ID: 885-8312-6

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		1.0	ug/L			07/30/24 04:47	1	
Ethylbenzene	ND		1.0	ug/L			07/30/24 04:47	1	
Toluene	ND		1.0	ug/L			07/30/24 04:47	1	
Xylenes, Total	ND		1.5	ug/L			07/30/24 04:47	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				07/30/24 04:47	1	
4-Bromofluorobenzene (Surr)	92		70 - 130				07/30/24 04:47	1	
Dibromofluoromethane (Surr)	106		70 - 130				07/30/24 04:47	1	
Toluene-d8 (Surr)	95		70 - 130				07/30/24 04:47	1	

## QC Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 885-9342/30

Matrix: Water

Analysis Batch: 9342

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/30/24 00:30	1
Ethylbenzene	ND		1.0	ug/L			07/30/24 00:30	1
Toluene	ND		1.0	ug/L			07/30/24 00:30	1
Xylenes, Total	ND		1.5	ug/L			07/30/24 00:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		07/30/24 00:30	1
4-Bromofluorobenzene (Surr)	91		70 - 130		07/30/24 00:30	1
Dibromofluoromethane (Surr)	103		70 - 130		07/30/24 00:30	1
Toluene-d8 (Surr)	97		70 - 130		07/30/24 00:30	1

Lab Sample ID: LCS 885-9342/29

Matrix: Water

Analysis Batch: 9342

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.1	20.2		ug/L		101	70 - 130
Toluene	20.2	20.4		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	93		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: 885-8312-1 MS

Matrix: Water

Analysis Batch: 9342

Client Sample ID: MW06

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	200	E	40.2	226	E 4	ug/L		58	70 - 130
Toluene	ND		40.3	41.8		ug/L		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Dibromofluoromethane (Surr)	102		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: 885-8312-1 MSD

Matrix: Water

Analysis Batch: 9342

Client Sample ID: MW06

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	200	E	40.2	217	E 4	ug/L		36	70 - 130	4	20
Toluene	ND		40.3	42.2		ug/L		105	70 - 130	1	20

Eurofins Albuquerque

QC Sample Results

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 885-8312-1 MSD  
Matrix: Water  
Analysis Batch: 9342

Client Sample ID: MW06  
Prep Type: Total/NA

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	99		70 - 130

QC Association Summary

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

GC/MS VOA

Analysis Batch: 9342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8312-1	MW06	Total/NA	Water	8260B	
885-8312-2	MW07	Total/NA	Water	8260B	
885-8312-3	MW08	Total/NA	Water	8260B	
885-8312-4	MW09	Total/NA	Water	8260B	
885-8312-5	MW10	Total/NA	Water	8260B	
885-8312-6	MW11	Total/NA	Water	8260B	
MB 885-9342/30	Method Blank	Total/NA	Water	8260B	
LCS 885-9342/29	Lab Control Sample	Total/NA	Water	8260B	
885-8312-1 MS	MW06	Total/NA	Water	8260B	
885-8312-1 MSD	MW06	Total/NA	Water	8260B	

Analysis Batch: 9401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8312-1	MW06	Total/NA	Water	8260B	

Lab Chronicle

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

**Client Sample ID: MW06**  
**Date Collected: 07/18/24 12:25**  
**Date Received: 07/19/24 06:30**

**Lab Sample ID: 885-8312-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		20	9401	CM	EET ALB	07/30/24 14:28
Total/NA	Analysis	8260B		2	9342	JR	EET ALB	07/30/24 01:27

**Client Sample ID: MW07**  
**Date Collected: 07/18/24 13:25**  
**Date Received: 07/19/24 06:30**

**Lab Sample ID: 885-8312-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		2	9342	JR	EET ALB	07/30/24 02:52

**Client Sample ID: MW08**  
**Date Collected: 07/18/24 10:00**  
**Date Received: 07/19/24 06:30**

**Lab Sample ID: 885-8312-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	9342	JR	EET ALB	07/30/24 03:21

**Client Sample ID: MW09**  
**Date Collected: 07/18/24 10:45**  
**Date Received: 07/19/24 06:30**

**Lab Sample ID: 885-8312-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	9342	JR	EET ALB	07/30/24 03:50

**Client Sample ID: MW10**  
**Date Collected: 07/18/24 11:10**  
**Date Received: 07/19/24 06:30**

**Lab Sample ID: 885-8312-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	9342	JR	EET ALB	07/30/24 04:18

**Client Sample ID: MW11**  
**Date Collected: 07/18/24 11:50**  
**Date Received: 07/19/24 06:30**

**Lab Sample ID: 885-8312-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	9342	JR	EET ALB	07/30/24 04:47

**Laboratory References:**  
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975



Accreditation/Certification Summary

Client: Ensolum LLC  
Project/Site: San Juan 30-6 31A

Job ID: 885-8312-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	Benzene
8260B		Water	Ethylbenzene
8260B		Water	Toluene
8260B		Water	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

## Chain-of-Custody Record

Client: HEC

Turn-Around Time: Std ☒ Standard ☐ Rush

Project Name: San Juan 80-6 31A

Project #: \_\_\_\_\_

Project Manager: Stuart Hyde

Sampler: Peter Anderson

On Ice: ☒ Yes ☐ No Yes

# of Coolers: 1

Cooler Temp (including CF): 5.1 ± 0.1 ± 5.2 (°C)

Container Type and # 3 VOA

Preservative Type Cool/ICE

HEAL No. 1

Relinquished by: [Signature]

Relinquished by: [Signature]

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
7/18	1225	GW	MW06	3	VOA	1
7/18	1325		MW07	3		2
7/18	1000		MW08	5		3
7/18	1045		MW09	3		4
7/18	1110		MW10	3		5
7/18	1150		MW11	3		6

Relinquished by: [Signature]

Relinquished by: [Signature]

Received by: W. W. W. W.

Received by: W. W. W. W.

Date: 7/18

Date: 7/18

Time: 1540

Time: 1540

Via: Courier

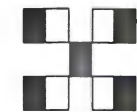
Via: Courier

Date: 7/18/24

Date: 7/18/24

Time: 0:30

Time: 0:30



# HALL ENVIRONMENTAL ANALYSIS LABORATORY



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

885-8312 COC

## Analysis Request

TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
BTEX (8021)	MTBE / TMB's (8021)							

Remarks: Piz cc Pardson@ensolum.com

## Login Sample Receipt Checklist

Client: Ensolum LLC

Job Number: 885-8312-1

Login Number: 8312

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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**

CONDITIONS

Action 534177

**CONDITIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 534177
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
shanna.smith	All groundwater samples will be analyzed according to all constituents in 20.6.2.3103 NMAC Pursuant to 19.15.30.9.B(2) NMAC. Operators may request to reduce sampling constituents based upon future results.	12/11/2025
shanna.smith	Pursuant to 19.15.30.13 NMAC Submit Quarterly groundwater progress reports. Operators may request to reduce reports based upon future results	12/11/2025
shanna.smith	OCD records indicate that an approved Stage 1/Stage 2 Abatement plan is not on file. Pursuant to 19.15.30 NMAC Hilcorp Energy Company (Hilcorp) must submit a Stage 1/Stage 2 Abatement plan no later than January 16, 2026, that meets all of the requirements of 19.15.30.13 NMAC.	12/11/2025
shanna.smith	Annual Groundwater Monitoring Reports will be due by April 1 of the following year.	12/11/2025