### REVIEWED By NVelez at 1:14 pm, Jul 17, 2025



- 1. Continue monthly O&M schedule as stated in the recommendations section of report.
- 2. Submit next bi-annual report by January 15, 2026.

July 9, 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: First Half 2025 – SVE System Update

OH Randel #5
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NVF1602039091

### To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *First Half 2025* – *SVE System Update* report summarizing the soil vapor extraction (SVE) system performance at the OH Randel #5 natural gas production well (Site), located in Unit D of Section 10, Township 26 North, and Range 11 West in San Juan County, New Mexico (Figure 1). Specifically, this report summarizes Site activities performed in January, February, March, April, May, and June of 2025 to the New Mexico Oil Conservation Division (NMOCD).

### **SVE SYSTEM SPECIFICATIONS**

The current operation at the Site consists of two SVE systems, each with a dedicated blower, knockout tank, and control panel. The original SVE system ("SVE Skid 1") was installed at the Site in 2016 by XTO Energy (the previous owner and operator of the Site) and subsequently upgraded by Hilcorp in 2019. This SVE system consists of a 2 horsepower Atlantic Blower AB-301 blower capable of producing 110 standard cubic feet per minute (scfm) of flow and 72 inches of water column (IWC) vacuum. A second SVE system ("SVE Skid 2") was installed at the Site and became operational on March 11, 2022, in order to more efficiently address residual soil impacts at the Site. Specifically, the new system was built with a 3.4 horsepower Republic Manufacturing HRC501 blower capable of producing 221 scfm of flow and 72 IWC vacuum. When operated concurrently, the two SVE systems are able to induce the necessary flow and vacuum on all SVE wells at the Site simultaneously without the need to cycle extraction on subsets of wells.

SVE wells are located and screened in the "Secondary" and "Tertiary" Source Zones, as identified in the WSP USA Inc. *Site Summary Report*, dated October 1, 2021. Once the new SVE Skid 2 was installed at the Site, new manifolds were constructed so SVE Skid 1 operated wells located in the Secondary Source Zone (SVE-5, SVE-8, and SVE-9) and Tertiary Zone (SVE-7, SVE-10, and SVE-12). SVE Skid 2 operated wells located in the Tertiary Source Zone (SVE-13, SVE-14, SVE-15, SVE-16, SVE-17, SVE-18, SVE-19, SVE-20, SVE-21, and SVE-22). SVE wells SVE-6 and SVE-11 are screened at depths shallower than the remaining soil impacts at the Site and have been turned off in order for the SVE system to induce a higher flow and vacuum on the remaining open wells. However, in the first quarter of 2024, the number of wells operating on each of the two skids were balanced and wells SVE-5,

Hilcorp Energy Company First Half 2025 – SVE System Update OH Randel #5

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SVE-7, SVE-8, SVE-9, SVE-10, and SVE-12 were taken offline. The SVE well locations are shown on Figure 2.

#### **FIRST HALF 2025 ACTIVITIES**

During the first half of 2025, Ensolum and Hilcorp personnel performed bi-weekly operation and maintenance (O&M) visits to verify the system was operating as designed and to perform any required maintenance. Field notes taken during O&M visits are presented in Appendix A.

Between December 16, 2024, and June 24, 2025, SVE Skid 1 operated for 4,494 hours with a runtime efficiency of 100.0 percent (%) and Skid 2 operated for 4,552 hours with a runtime efficiency of 99.8%. Table 1 presents the SVE system operational hours and percentage runtime. Appendix B presents photographs of the runtime meter for calculating the first half of 2025 runtime efficiency.

Vapor samples were collected quarterly from sample ports located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the vapor samples were field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The first half of 2025 vapor samples were collected from both SVE skids on February 8 and May 19, 2025. The vapor samples were collected directly into two 1-Liter Tedlar® bags and submitted to Eurofins Environment Testing in Albuquerque, New Mexico for analysis of total volatile petroleum hydrocarbons (TVPH – also known as total petroleum hydrocarbons – gasoline range organics (TPH-GRO)) following United States Environmental Protection Agency (EPA) Method 8015D, volatile organic compounds (VOCs) following EPA Method 8260B, and fixed gas analysis of oxygen and carbon dioxide following Gas Processors Association (GPA) Method 2261. Table 2 presents a summary of analytical data collected during the first half of 2025 sampling events and from historical sampling events, with the full laboratory analytical reports included as Appendix C.

Vapor sample data and measured stack flow rates are used to estimate total mass recovered and estimated total emissions generated by the SVE systems (Tables 3 and 4). Based on these estimates, a total of 780,665 pounds (390 tons) of TVPH have been removed by the systems to date.

#### RECOMMENDATIONS

Monthly O&M visits, at a minimum, will continue to be performed by Ensolum and/or Hilcorp personnel to verify the SVE systems are operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following semiannual report, per the conditions issued by the NMOCD on April 9, 2024. Hilcorp will continue operating the SVE systems until asymptotic mass removal rates are observed. At that time, an evaluation of residual petroleum hydrocarbons will be assessed and further recommendations for remedial actions, if any, will be provided to NMOCD.



Hilcorp Energy Company First Half 2025 – SVE System Update OH Randel #5

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

Sincerely, **Ensolum**, **LLC** 

Stuart Hyde, LG (licensed in WY, 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

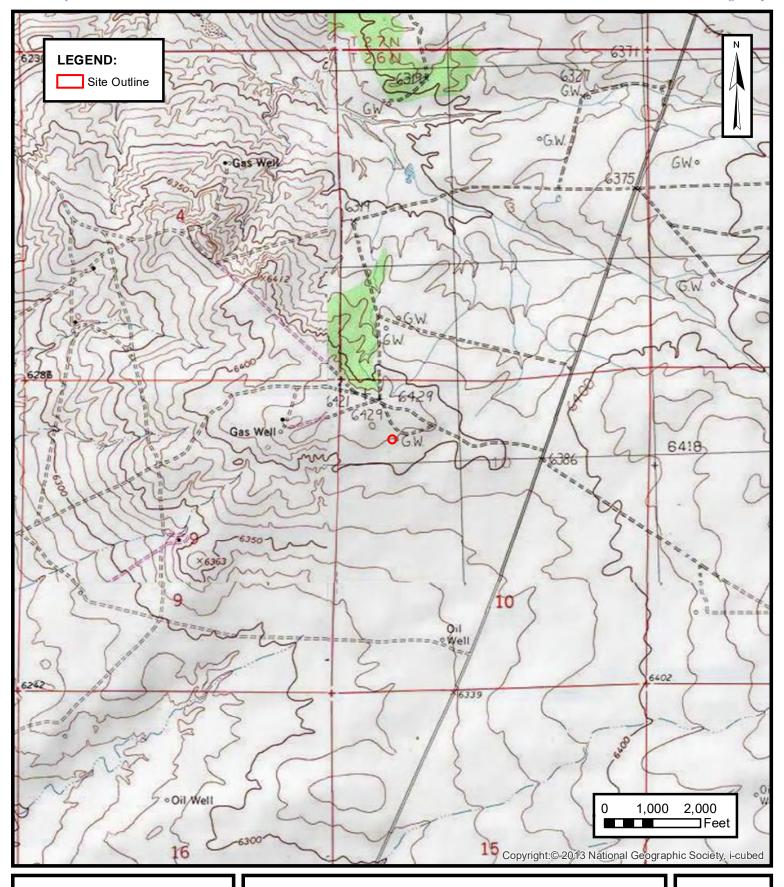
#### Attachments:

Figure 1	Site Location Map
Figure 2	SVE System Layout
Table 1	Soil Vapor Extraction System Runtime Calculations
Table 2	Soil Vapor Extraction System Emissions Analytical Results
Table 3	Soil Vapor Extraction System Mass Removal and Emissions – Skid 1
Table 4	Soil Vapor Extraction System Mass Removal and Emissions – Skid 2
Appendix A	Field Notes
Appendix B	Project Photographs
Appendix C	Laboratory Analytical Reports





**Figures** 





### **SITE LOCATION MAP**

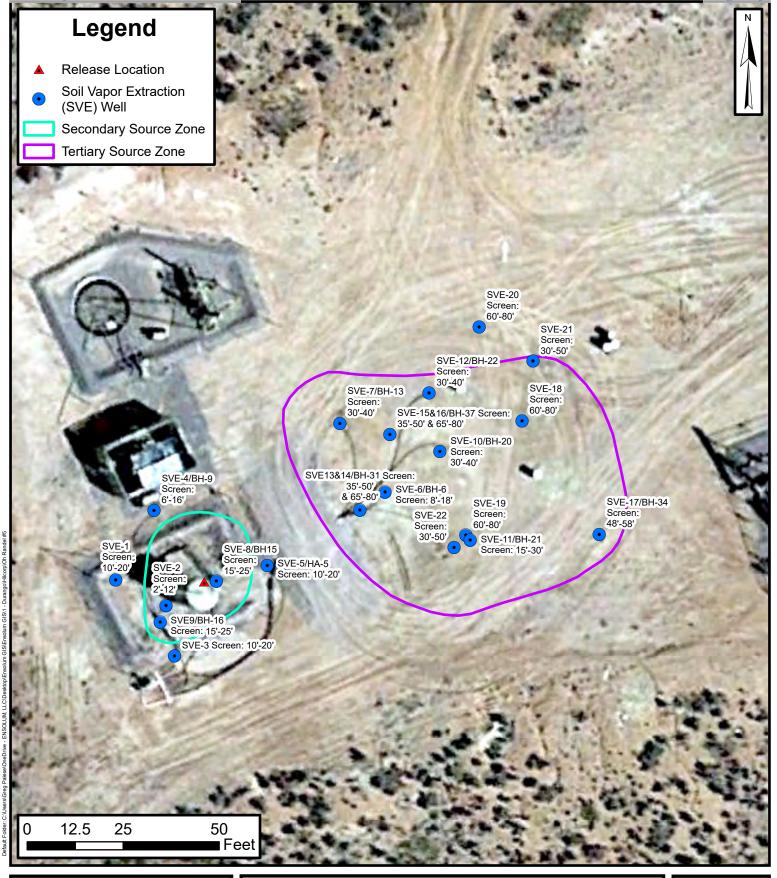
HILCORP ENERGY COMPANY OH RANDEL #5

NWNW SEC 10 T26N R11W, San Juan County, New Mexico 36.506504° N, 107.996993° W

PROJECT NUMBER: 07A1988025

FIGURE

1





### **SVE System Layout**

HILCORP ENERGY COMPANY OH RANDEL #5

NWNW SEC 10 T26N R11W, San Juan County, New Mexico 36.506504° N, 107.996993° W

FIGURE 2



**Tables** 



### TABLE 1 SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS

OH Randel #5 Hilcorp Energy Company San Juan County, New Mexico

### **SVE Skid 1 - Original System Runtime Operation**

Date	Total Operational Hours	Delta Hours	Available Runtime Days	Percent Runtime
12/16/2024	55,073.97	1	1	
6/24/2025	59,567.83	4,494	187	100.0%

### **SVE Skid 2 - New System Runtime Operation**

Date	Total Operational Hours	Delta Hours	Available Runtime Days	Percent Runtime
12/16/2024	23,603.3	-	1	
6/24/2025	28,155.2	4,552	190	99.8%

Ensolum 1 of 1



### TABLE 2

### SOIL VAPOR EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS OH Randel #5

Hilcorp Energy Company San Juan County, New Mexico

SVE Skid 1 - Original System Analytical Results

			SVL SKIU I - C	riginal System Ana	aryticai Nesuits			
Date	PID (ppm)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (μg/L)	TVPH/GRO (μg/L)	Oxygen (%)	Carbon Dioxide (%)
8/11/2016	4,072	160	1,700	61	500	46,000		
8/17/2018	719	130	230	10	110	8,900		
6/28/2019	1,257	7,200	15,000	360	3,000	460,000		
12/16/2019	1,685	1,800	4,400	83	660	170,000		
3/10/2020	897	1,700	3,300	89	700	130,000		
4/30/2020	1,853	2,440	4,737	128	1,005	186,592		-
6/24/2020 <sup>(1)</sup>	-					-		
11/10/2020	1,385	320	1,100	43	380	43,000	21.45%	0.35%
2/10/2021	865	360	950	35	250	32,000		-
6/11/2021	400	170	390	11	110	18,000	22.05%	0.15%
9/29/2021	505	99	190	7.0	55	8,200		-
12/15/2021	1,163	130	290	6.9	62	37,137	22.21%	0.092%
3/21/2022	274	6.5	23	0.98	11	550	22.38%	0.041%
6/17/2022	88	5.5	19	0.69	7.0	650	21.83%	0.060%
9/22/2022	55	9.0	42	1.9	20	670	21.84%	0.10%
12/7/2022	28	5.2	34	1.5	15	480	21.92%	0.05%
3/10/2023	87	2.5	8.2	<1.0	4.2	260	21.85%	0.06%
6/23/2023	290	4.8	31	2.0	24	670	21.82%	0.07%
8/21/2023	92	22	63	3.1	31	1,900	21.54%	0.13%
11/21/2023	235	2.6	9.6	< 0.50	4.8	380	21.61%	0.12%
3/4/2024	1,897	330	600	45	350	43,000	20.65%	0.73%
6/11/2024	1,783	270	880 E	23	200	30,000	20.98%	0.70%
9/16/2024	1,316	1,500	3,300	140	1,100	15,000	18.79%	0.63%
11/18/2024	1,721	160	430	22	89	16,000	21.43%	0.46%
2/8/2025	1	76	190	8.3	73	8,600	21.50%	0.30%
5/19/2025	1,229	87	240	7.2	59	16,000	21.62%	0.33%

#### SVE Skid 2 - New System Analytical Results

				rion Cyclem ranan				
Date	PID (ppm)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (μg/L)	TVPH (μg/L)	Oxygen (%)	Carbon Dioxide (%)
3/21/2022	1,354	310	510	13	120	35,000	21.81%	0.31%
6/17/2022	1,058	200	410	<10	66	33,000	21.27%	0.39%
9/8/2022	1,258	479	1,190	26	1,041	31,900	20.10%	0.50%
12/7/2022	918	230	370	9.1	65	18,000	21.53%	0.36%
3/10/2023	1,790	140	230	7.5	60	12,000	21.71%	0.17%
6/23/2023	1,450	160	430	12	100	18,000	21.29%	0.39%
8/21/2023	1,477	180	400	9.6	78	15,000	21.00%	0.40%
11/21/2023	1,352	160	420	9.5	72	15,000	21.21%	0.35%
3/4/2024	605	39	100	<5.0	18	3,400	21.82%	0.11%
6/11/2024	403	20	63	<5.0	14	2,000	21.27%	0.12%
9/16/2024	354	390	820	44	400	3,900	19.51%	0.15%
11/18/2024	841	48	140	<5.0	25	4,900	21.75%	0.15%
2/8/2025		29	84	<5.0	18	2,900	21.92%	0.12%
5/19/2025	415	26	69	<5.0	14	4,700	21.90%	0.13%

#### Notes:

(1) - blower not operational for sampling in May and June 2020

GRO: gasoline range organics

μg/L: microgram per liter

PID: photoionization detector

ppm: parts per million

TVPH: total volatile petroleum hydrocarbons

%: percent

--: not sampled/analyzed

< : gray indicates result less than the stated laboratory reporting limit (RL)

E: result exceeded calibration range



### TABLE 3 SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS - SKID 1 OH Randel #5 Hilcorp Energy Company San Juan County, New Mexico

Date	PID (ppm)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (μg/L)	TVPH (μg/L)
8/11/2016	4,072	160	1,700	61	500	46,000
8/17/2018	719	130	230	10	110	8,900
12/16/2019	1,902	1,800	4,400	83	660	170,000
3/10/2020	897	1,700	3,300	89	700	130,000
4/30/2020	1,853	2,440	4,737	128	1,005	186,592
6/24/2020 <sup>(1)</sup>			Blower No	t Operational		
11/10/2021	1,385	320	1,100	43	380	43,000
2/10/2021	865	360	950	35	250	32,000
6/11/2021	400	170	390	11	110	18,000
9/29/2021	505	99	190	7.0	55	8,200
12/15/2021	1,163	130	290	6.9	62	37,137
3/21/2022	274	6.5	23	1.0	11	550
6/17/2022	88	5.5	19	0.7	7.0	650
9/22/2022	55	9.0	42	1.9	20	670
12/7/2022	28	5.2	34	1.5	15	480
3/10/2023	87	2.5	8.2	1.0	4.2	260
6/23/2023	290	4.8	31	2.0	24	670
8/21/2023	92	22	63	3.1	31	1,900
11/21/2023	235	2.6	9.6	0.50	4.8	380
3/4/2024	1,897	330	600	45	350	43,000
6/11/2024 <sup>(2)</sup>	1,783	270	880	23	200	30,000
9/16/2024	1,316	1,500	3,300	140	1,100	15,000
11/18/2024	1,721	160	430	22	89	16,000
2/8/2025		76	190	8.3	73	8,600
5/19/2025	1,229	87	240	7	59	16,000
Average	994	408	965	30	243	33,916

Vapor Extraction Summary

Date	Flow Rate (cfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
8/11/2016	105	31,500	31,500	0.063	0.67	0.024	0.20	18
8/17/2018	100	59,647,500	59,616,000	0.054	0.36	0.013	0.11	10
12/16/2019	110	109,635,900	49,988,400	0.40	0.95	0.019	0.16	37
3/10/2020	110	121,707,300	12,071,400	0.72	1.6	0.035	0.28	62
4/30/2020 (1)	105	130,917,900	9,210,600	0.81	1.6	0.043	0.33	62
6/24/2020 (1)				Blower Not	Operational			
11/10/2021	105	130,917,900	0	0	0	0	0	0
2/10/2021	92	143,580,780	12,662,880	0.12	0.35	0.013	0.11	13
6/11/2021	90	158,657,580	15,076,800	0.0892	0.2255	0.00774	0.0606	8.4
9/29/2021	69	168,249,960	9,592,380	0.0347	0.0748	0.00232	0.0213	3.4
12/15/2021	90	178,207,560	9,957,600	0.0385	0.0808	0.00234	0.0197	7.6
3/16/2022	70	187,343,904	9,136,344	0.0179	0.0410	0.00103	0.0096	4.9
6/17/2022	70	196,703,520	9,359,616	0.0016	0.0055	0.00022	0.0024	0.2
9/21/2022	65	205,627,890	8,924,370	0.0018	0.0074	0.00031	0.0033	0.2
12/7/2022	70	213,411,456	7,783,566	0.0019	0.0099	0.00045	0.0046	0.2
3/10/2023	73	223,160,241	9,748,785	0.0011	0.0058	0.00034	0.0026	0.1
6/23/2023	60	231,228,093	8,067,852	0.0008	0.0044	0.00034	0.0032	0.1
8/21/2023	62	236,382,227	5,154,134	0.0031	0.0109	0.00059	0.0064	0.3
11/21/2023	50	242,847,707	6,465,480	0.0023	0.0068	0.00034	0.0033	0.2
3/4/2024 (3)	24	246,402,333	3,554,626	0.0149	0.0274	0.00204	0.0159	1.9
6/11/2024 (3)	24	249,670,370	3,268,037	0.0269	0.0664	0.00305	0.0247	3.3
9/16/2024	31	253,412,113	3,741,743	0.1026	0.2423	0.00945	0.0754	2.6
11/18/2024	43	256,188,348	2,776,235	0.1335	0.2999	0.01303	0.0956	2.5
2/8/2025	52	262,207,546	6,019,198	0.0229	0.0603	0.00295	0.0158	2.4
5/19/2025	46	268,726,334	6,518,789	0.0140	0.0370	0.00133	0.0114	2.1
			Average	0.11	0.28	0.0082	0.065	10

Mass Recovery

				Mass Recovery				
Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
8/11/2016	5	5	0.31	3.3	0.12	1.0	90	0.045
8/17/2018	9,941	9,936	539	3,586	132	1,133	102,008	51
12/16/2019	17,515	7,574	3,007	7,214	145	1,200	278,728	139
3/10/2020	19,344	1,829	1,317	2,897	65	512	112,870	56
4/30/2020	20,806	1,462	1,188	2,307	62	489	90,884	45
6/24/2020 (1)				Blower Not	Operational			
11/10/2021	20,806	0	0	0	0	0	0	0
2/10/2021	23,100	2,294	268	809	31	249	29,600	15
6/11/2021	25,892	2,792	249	630	22	169	23,495	12
9/29/2021	28,209	2,317	80	173	5.4	49	7,833	3.9
12/15/2021	30,053	1,844	71	149	4.3	36	14,070	7.0
3/16/2022	32,228	2,175	39	89	2.2	21	10,732	5.4
6/17/2022	34,457	2,228	3.5	12	0.49	5.3	350	0.18
9/21/2022	36,745	2,288	4.0	17	0.72	7.5	367	0.18
12/7/2022	38,598	1,853	3.4	18	0.82	8.5	279	0.14
3/10/2023	40,824	2,226	2.3	13	0.76	5.8	225	0.11
6/23/2023	43,065	2,241	1.8	10	0.75	7.1	234	0.12
8/21/2023	44,451	1,386	4.3	15	0.82	8.8	413	0.21
11/21/2023	46,606	2,155	5.0	15	0.73	7.2	459	0.23
3/4/2024	49,074	2,468	36.8	68	5.04	39.3	4,806	2.40
6/11/2024	51,344	2,269	61.1	151	6.93	56.0	7,436	3.72
9/16/2024	53,355	2,012	206.4	487	19.01	151.6	5,248	2.62
11/18/2024	54,432	1,076	143.6	323	14.02	102.9	2,682	1.34
2/8/2025	56,361	1,929	44.3	116	5.68	30.4	4,615	2.31
5/19/2025	58,723	2,362	33.1	87	3.15	26.8	4,998	2.50
	Total Mass	Recovery to Date	7,309	19,190	527	4,317	702,423	351

- Notes:

  (1): bb:

  (2): toluene result exceeded calibration range
  (3): flow rate estimated based on previous data following reconfiguration cl: cubic feet

  clim: cubic feet per minute

  µg1: micrograms per liter

  lb/hr: pounds per hour

- --- not sampled
  PID: photoionization detector
  ppm: parts per million
  TVPH: total volatile petroleum hydrocarbons
  gray: Indicates result less than the stated laboratory reporting limit (RL); RL used for calculating emissions.



#### **TABLE 4**

SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS - SKID 2
OH Randel #5

Hilcorp Energy Company San Juan County, New Mexico

Laboratory Analysis

			Laboratory Analys	IS		
Date	PID (ppm)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (μg/L)	TVPH (μg/L)
3/21/2022	1,354	310	510	13	120	35,000
6/17/2022	1,058	200	410	10	66	33,000
9/8/2022	1,258	479	1,190	26	1,041	31,900
12/7/2022	918	230	370	9.0	65	18,000
3/10/2023	1,790	140	230	7.5	60	12,000
6/23/2023	1,450	160	430	12	100	18,000
8/21/2023	1,477	180	400	9.6	78	15,000
11/21/2023	1,352	160	420	9.5	72	15,000
3/4/2024	605	39	100	5.0	18	3,400
6/11/2024	403	20	63	5.0	14	2,000
9/16/2024	354	390	820	44	400	3,900
11/18/2024	841	48	140	5.0	25	4,900
2/8/2025		29	84	5.0	18	2,900
5/19/2025	415	26	69	<5.0	14	4,700
Average	1,021	172	374	12	149	14,264

**Vapor Extraction Summary** 

Date	Flow Rate (cfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
3/16/2022	70	499,800	499,800	0.081	0.134	0.0034	0.031	9.2
6/17/2022	60	8,533,560	8,033,760	0.057	0.103	0.0026	0.021	7.6
9/8/2022	56	15,138,648	6,605,088	0.071	0.168	0.0038	0.116	6.8
12/7/2022 <sup>(1)</sup>	56	22,499,736	7,361,088	0.074	0.163	0.0037	0.116	5.2
3/10/2023	58	30,214,896	7,715,160	0.040	0.065	0.0018	0.014	3.3
6/23/2023	64	37,670,256	7,455,360	0.036	0.079	0.0023	0.019	3.6
8/21/2023	51	42,004,746	4,334,490	0.032	0.079	0.0021	0.017	3.1
11/21/2023	52	48,892,458	6,887,712	0.033	0.080	0.0019	0.015	2.9
3/4/2024 (2)	43	55,189,464	6,297,006	0.016	0.042	0.0012	0.007	1.5
6/11/2024 <sup>(2)</sup>	43	61,302,774	6,113,310	0.005	0.013	0.0008	0.003	0.4
9/16/2024	48	67,983,222	6,680,448	0.037	0.079	0.0044	0.037	0.5
11/18/2024	44	71,982,822	3,999,600	0.036	0.079	0.0040	0.035	0.7
2/8/2025	44	77,165,142	5,182,320	0.006	0.018	0.0008	0.004	0.6
5/19/2025	50	85,640,742	8,475,600	0.005	0.014	0.0009	0.003	0.7
			Average	0.038	0.08	0.0024	0.031	3.3

Mass Recovery

				Mass Recovery				
Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
3/16/2022	119	119	10	16	0.41	3.7	1,090	0.55
6/17/2022	2,351	2,232	128	230	5.8	47	17,027	8.5
9/8/2022	4,316	1,966	140	329	7.4	228	13,361	6.7
12/7/2022 <sup>(1)</sup>	6,507	2,191	163	358	8.0	254	11,448	5.7
3/10/2023	8,724	2,217	89	144	4.0	30	7,214	3.6
6/23/2023	10,666	1,942	70	153	4.5	37	6,971	3.5
8/21/2023	12,082	1,417	46	112	2.9	24	4,458	2.2
11/21/2023	14,290	2,208	73	176	4.1	32	6,440	3.2
3/4/2024	16,731	2,441	39	102	2.8	18	3,611	1.8
6/11/2024	19,100	2,370	11	31	1.9	6	1,029	0.5
9/16/2024	21,420	2,320	85	184	10.2	86	1,228	0.6
11/18/2024	22,935	1,515	55	120	6.1	53	1,097	0.5
2/8/2025	24,898	1,963	12	36	1.6	7	1,260	0.6
5/19/2025	27,723	2,825	15	40	2.6	8	2,008	1.0
•	Total Mass	Recovery to Date	935	2,033	62	834	78,242	39

#### Notes

(1): rotameter float frozen in place, flow rate based on 11/16/2022 site visit flow rate and similar applied vacuum recorded during 11/16/2022 and 12/7/2022 site visits

(2): flow rate estimated based on previous data following reconfiguration

cf: cubic feet

cfm: cubic feet per minute

μg/L: micrograms per liter

lb/hr: pounds per hour

PID: photoionization detector ppm: parts per million

TVPH: total volatile petroleum hydrocarbons

gray: indicates result less than the stated laboratory reporting limit (RL); RL used for calculating emissions.



**APPENDIX A** 

Field Notes

## OH RANDEL #5 SVE SYSTEM

SVE SYSTEM - QUARTERL SAMP Cs (8260), Fixed Gas (CO/CO2/O2	SKID 2 READING  2 4031.9  61  99  1113  1619  2 Z	G TIME
SVE SYSTEM - QUARTERL SAMP	2 4031.9 9 4 - 79 1113 1614 2 Z Y SAMPLING LE TIME:	
SVE SYSTEM - QUARTERL SAMP	Y SAMPLING  LE TIME:	
SAMP	79   1113   1614   2 Z   Y SAMPLING   LE TIME:	
SAMP	79   1113   1614   2 Z   Y SAMPLING   LE TIME:	
SAMP	Y SAMPLING LE TIME:	
SAMP	Y SAMPLING LE TIME:	
SAMP	LE TIME:	
SAMP	LE TIME:	
SAMP	LE TIME:	
SAMP	LE TIME:	
Cs (8260), Fixed Gas (CO/CO2/O2		
IWC) PID HEADSPACE	E (PPM) FLOW (CFM)	ADJUSTMENTS
IWC) PID HEADSPACE	E (PPM) FLOW (CFM)	ADJUSTMENTS
		The second secon
1 2119		
1779		
3 24/3		
1464		
289	5	
	3	
	IWC) PID HEADSPACE  2 1 9 1802 1979 1979 2795.	IWC) PID HEADSPACE (PPM) FLOW (CFM)  7 2 1 9 1 8 0 2 1 9 9 1 7 9 9 1 7 9 9 1 7 9 9 1 7 9 9 1 7 9 9 1 7 9 9 9 1 7 9 9 9 1 7 9 9 9 1 7 9 9 9 1 7 9 9 9 1 7 9 9 9 1 7 9 9 9 9

DATE:	1-20	O&M PERSONNEL: TIME OFFSITE:	B Sinclair	
SVE ALARMS:	SVI	E SYSTEM - MONTHLY O&M  KO TANK HIGH LEVEL		
		INO TANK HIGH LEVEL		
SVE SYSTEM	SKID 1 READING	TIME	SKID 2 READING	TIME
Blower Hours (take photo)	53909.99	1343	24442.5	1373
Inlet Vacuum (IWC)	82		6	
Inlet Flow from Rotometer (SCFM)	50		44	
Exhaust Vacuum (IWC)	~ 77		-80	
Inlet PID	1154		514.4	
Exhaust PID	1944		301.6	
K/O Tank Liquid Level				
K/O Liquid Drained (gallons)	10.5		23	
	SVE SY	STEM - QUARTERLY SAMPLI	ING	
SAMPLE ID:		SAMPLE TIME:		
	TVPH (8015), VOCs (8260),	Fixed Gas (CO/CO2/O2)		
OPERATING WELLS				
ZONES				
Change in Well Operation:				
Zone A - Secondary Impacts				
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-5				
SVE-8				
Z D Tartiary Impacts				
Zone B - Tertiary Impacts  LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-6				
SVE-7				
SVE-10				
SVE-11				
SVE-12	53.6	1469		
SVE-13 SVE-14	57.7	1794		
SVE-15	52.3	1384		
SVE-16	61.6	834.1		
SVE-17	50.3	379.8		AND THE PARTY OF T
SVE-18	59.6	2232		
SVE-19	61.5	1378		
SVE-20	52.3	489.3		
SVE-21 SVE-22	44.4	1233		
The second secon	- COT			
COMMENTS/OTHER MAINTENA	NCE:			
IL SECTION OF THE SEC				

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	E SYSTEM - MONTHLY O&M		
	KO TANK HIGH LEVEL		
SKID 1 READING	TIME	SKID 2 READING	TIME
67		7-	
50		45	
- 68		-80	
1101		579.1	
2218		639.2	
O.		10	
SVE SY	STEM - QUARTERLY SAMPLIN	G	
SYESI	SAMPLE TIME:		
H (8015), VOCs (8260),	Fixed Gas (CO/CO2/O2)		
VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADILICTA (Extrag
111000111(111)	N STATE OF THE STA	(	
THE STATE OF THE S	A STATE OF THE PARTY OF THE PAR		ADJUSTMENTS
			ADJUSTMENTS
			ADJUSTMENTS
			ADJUSTMENTS
51.4	1775		ADJUSTMENTS
57.2	1907		ADJUSTMENTS
57.2' 50.7 57.6	1558		ADJUSTMENTS
57.2	1907 1558 2037 576.3		ADJUSTMENTS
57.2' 50.7 57.6	1907 1558 2037 576.3 526.5		ADJUSTWIENTS
57.2 50.7 57.6 99.2 99.4 54.4	1907 1558 2037 576.3 526.5 2019		ADJUSTMENTS
57.2 50.7 57.6 99.2 99.4 54.4	1907 1558 2037 576.3 526.5		ADJUSTWIENTS
	50 - 68 - 1101 - 2218 - 4 - SVE SY H (8015), VOCs (8260), 1	SVE SYSTEM - QUARTERLY SAMPLIN SAMPLE TIME: H (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)  VACUUM (IWC) PID HEADSPACE (PPM)	1233   25 58,2   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   60   95   95   60   95   95   95   95   95   95   95   9

DATE:	3-5	O&M PERSONNEL: TIME OFFSITE:	B Sinclair	
	SVI	E SYSTEM - MONTHLY O&M		
SVE ALARMS:		KO TANK HIGH LEVEL		]
SVE SYSTEM	CVID 1 DE 1 DD10		SKID 2 READING	TIME
Blower Hours (take photo)	SKID I READING	TIME	SKID Z READING	1140
Inlet Vacuum (IWC)	36755.47	1190	59	
Inlet Flow from Rotometer (SCFM)	46		46	
Exhaust Vacuum (IWC)	-70		- 80	
Inlet PID	1385		708.2	
Exhaust PID	3113		731.4	
K/O Tank Liquid Level				
K/O Liquid Drained (gallons)				
	SVE SY	STEM - QUARTERLY SAMPLIN	NG	
SAMPLE ID:		SAMPLE TIME:		
	TVPH (8015), VOCs (8260),	Fixed Gas (CO/CO2/O2)		
OPERATING WELLS				
ZONES				
Change in Well Operation:				
Zone A - Secondary Impacts	TAY CAMP ( (DAYC)	DED THE A DODA OF ODDA O		
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-8				
Zone B - Tertiary Impacts	THE COURT (TIME)	DID HE ADODA CE (DD) O		
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-6				
SVE-7 -SVE-10				
SVE-10 SVE-11				
SVE-12				
SVE-13	50.9	2326		
SVE-14	56.9	1812		
SVE-15	50.9	1843		
SVE-16	48.4	675.0		THE SAME IN COLUMN TWO IS NOT THE PARTY OF T
SVE-17	53.6	429.4		COLORS INC.
SVE-18	39.4	1973		
SVE-19 SVE-20	56.9	1375		
SVE-20 SVE-21	51,6	411.9		
SVE-22	47.8	817.2		
	NCE:			
COMMENTS/OTHER MAINTENA	INCL.			
			1-14-1-19-19-19-19-19-19-19-19-19-19-19-19-1	

SVE-5   SVE-8     SVE-8     SVE-8     SVE-8     SVE-6     SVE-10   SVE-13   SVE-14   SVE-15   SVE-16   SVE-16   SVE-16   SVE-17   SVE-18   SVE-18   SVE-19   SVE-18   SVE-19   SVE-18   SVE-19   SVE-19   SVE-19   SVE-19   SVE-19   SVE-19   SVE-19   SVE-19   SVE-19   SVE-10   SVE-10   SVE-11   SVE-12   SVE-13   SVE-14   SVE-15   SVE-16   SVE-17   SVE-18   SVE-19   SVE-19   SVE-19   SVE-19   SVE-19   SVE-20   SUE-7   SVE-20   SUE-7   SVE-20   SUE-7   SVE-20	SVE ALARMS:   KO TANK HIGH LEVEL	TIME ONSITE:	5-25	O&M PERSONNEL: _ TIME OFFSITE: _	P Dindoir	
SVE SYSTEM	SVE SYSTEM		SVE	SYSTEM - MONTHLY O&M		
Blower Hours (take photo)   57 4 3 4 9 5 13 0	Blower Hours (take photo)	SVE ALARMS:		KO TANK HIGH LEVEL		
Secondary Impacts   Seco	Single Vacuum (IWC)   S 7 4 3 4 9 6   130 0   2 5 9 7 3 2   13 0 0	SVE SYSTEM	SKID 1 READING	TIME	SKID 2 READING	TIME
Inlet Vacuum (IWC)	Inlet Vacuum (IWC)	Blower Hours (take photo)	5743496			
Exhaust Vacuum (IWC)	Exhaust Vacuum (IWC)	Inlet Vacuum (IWC)	82	1300	10	10.00
Exhaust Vacuum (IWC)	Exhaust Vacuum (IWC)	et Flow from Rotometer (SCFM)	43		48	
Inlet PID   13 4 7	Inlet PID		-70		- 79	
K/O Tank Liquid Level	SVE SYSTEM - QUARTERLY SAMPLING	Inlet PID	1340		507.4	
SVE SYSTEM - QUARTERLY SAMPLING   SAMPLE ID: Analytes: OPERATING WELLS	SVE SYSTEM - QUARTERLY SAMPLING   SAMPLE ID: Analytes:   TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)		1626		(98.1	
SVE SYSTEM - QUARTERLY SAMPLING   SAMPLE TIME:   Analytes:   TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	SVE SYSTEM - QUARTERLY SAMPLING   SAMPLE TIME: Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	K/O Tank Liquid Level				
SAMPLE ID:	SAMPLE ID:   Analytes:   TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	NO Liquid Drained (gallons)				
SAMPLE ID:   Analytes:   TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	SAMPLE ID:					
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)  OPERATING WELLS  ZONES  Change in Well Operation:  LOCATION	Analytes   TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	CAMPLE ID.	SVE SYS		IG	
Cone A - Secondary Impacts	Cone A - Secondary Impacts		VPH (8015) VOCs (8260) 1			
Continue	Continue		VIII (0013), VOCS (0200), I	TACC Gas (CO/COZ/OZ)		
Change in Well Operation:   Cone A - Secondary Impacts	Change in Well Operation:					
Cone A - Secondary Impacts	Cone A - Secondary Impacts	ZONES				
Cone A - Secondary Impacts	Cone A - Secondary Impacts   I.OCATION		The state of the s			
LOCATION	LOCATION	Change in Well Operation:			STATE OF THE STATE OF	
LOCATION	LOCATION					
SVE-5    SVE-8      SVE-8      SVE-8      SVE-8      SVE-6      SVE-16      SVE-16      SVE-16      SVE-16      SVE-16      SVE-16      SVE-16      SVE-17    SVE-18    SVE-19    SVE-19    SVE-19    SVE-19    SVE-19    SVE-19    SVE-22    SVE-21    SVE-22    SVE-24    SVE-24	SVE-5    SVE-8      SVE-8      SVE-8      SVE-6      SVE-16      SVE-17      SVE-18    SVE-18    SVE-19    SVE-19    SVE-20    SVE-21    SVE-22    SVE-22    SVE-22    SVE-22    SVE-21    SVE-22    SVE-24    SVE-24    SVE-25    SVE-26    SVE-26    SVE-26    SVE-26    SVE-27    SVE-28	one A - Secondary Impacts	VACIJUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-8   Zone B - Tertiary Impacts   VACUUM (IWC)   PID HEADSPACE (PPM)   FLOW (CFM)   ADJUSTMENT	SVE-8   Zone B - Tertiary Impacts   VACUUM (IWC)   PID HEADSPACE (PPM)   FLOW (CFM)   ADJUSTMENTS		VII.000111 (2111)			
LOCATION	LOCATION					
LOCATION   VACCOUNTINE   Table   Tab	LOCATION					
SVE-16 SVE-10 SVE-11 SVE-12 SVE-13 SVE-14 SVE-15 SVE-16 SVE-16 SVE-16 SVE-17 SVE-18 SVE-18 SVE-19 SVE-19 SVE-20 SV	SVE-6  SVE-10  SVE-10  SVE-11  SVE-12  SVE-13  SVE-14  SVE-15  SVE-16  SVE-16  SVE-17  SVE-16  SVE-17  SVE-17  SVE-18  SVE-18  SVE-19  SVE-20  SVE-20	Zone B - Tertiary Impacts	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-7         SVE-10         SVE-11         SVE-12       SO. 7       2030         SVE-13       SS. 2       1731         SVE-14       Y9. 8       1247         SVE-15       SVE-16       57. 6       1782         SVE-16       Y9. 1       591. 6         SVE-17       53. 9       573. 2         SVE-18       58. 1       21/3         SVE-19       57. 3       154. 7         SVE-20       51. 7       938. 3         SVE-21       77. 7       847. 7	SVE-7         SVE-10         SVE-11         SVE-12       \$0.7       2.030         SVE-13       \$8.2       1.731         SVE-14       \$9.8       1.247         SVE-15       \$7.6       1.782         SVE-16       \$91.6       \$91.6         SVE-17       \$3.9       \$73.2         SVE-18       \$5.1       2.13         SVE-19       \$7.3       1.547         SVE-20       \$1.7       \$47.7         SVE-21       \$77.7       \$47.7					
SVE-10         SVE-11         SVE-12       SO-7       2030         SVE-13       SS-2       1731         SVE-14       1247       1247         SVE-15       57. (1782)       1782         SVE-16       49.1       591.6         SVE-17       53.9       573.2         SVE-18       58.1       2113         SVE-19       57.3       1547         SVE-20       51.7       438.3         SVE-21       47.7       847.7	SVE-10         SVE-11         SVE-12       50.7       2030         SVE-13       58.2       1731         SVE-14       49.8       124.7         SVE-15       57.6       178.2         SVE-16       49.1       591.6         SVE-17       53.9       573.7         SVE-18       58.1       2113         SVE-19       57.3       1547         SVE-20       51.7       438.3         SVE-21       77.7       847.7					
SVE-12     SO. 7     2030       SVE-13     SVE-14     173         SVE-14     124 ×       SVE-15     57. 6     178 2       SVE-16     49. 1     591. 6       SVE-17     53. 9     573. 7       SVE-18     58. 1     2113       SVE-19     57. 3     1547       SVE-20     51. 7     438.3       SVE-21     77. 7     847. 7	SVE-12       SO. 7       2030         SVE-13       SS. 2       173         SVE-14       YG. 8       1247         SVE-15       SVE-16       57. 4       178.2         SVE-16       YG. 1       SG. 1       SG. 1         SVE-17       SJ. 9       573.7       SG. 1         SVE-18       SS. 1       2113         SVE-19       57. 3       1547         SVE-20       S1. 7       Y38.3         SVE-21       Y7. 7       SY7. 7					
SVE-13       \$8.2       173         SVE-14       \$9.8       124×         SVE-15       \$7.6       1782         SVE-16       \$91.6       \$91.6         SVE-17       \$3.9       \$73.7         SVE-18       \$8.1       \$13         SVE-19       \$7.3       1547         SVE-20       \$1.7       \$438.3         SVE-21       \$7.7       \$47.7	SVE-13       \$8.2       173         SVE-14       \$9.8       1247         SVE-15       \$7.6       1782         SVE-16       \$91.6       \$91.6         SVE-17       \$3.9       \$73.7         SVE-18       \$8.1       \$113         SVE-19       \$7.3       1547         SVE-20       \$1.7       \$438.3         SVE-21       \$7.7       \$47.7					
SVE-14       98       129         SVE-15       57.6       1782         SVE-16       99.6       39.6         SVE-17       53.9       573.7         SVE-18       58.1       2113         SVE-19       57.3       1597         SVE-20       51.7       938.3         SVE-21       77.7       847.7	SVE-14       SVE-15       SVE-16       SVE-17       SVE-18       SVE-19       SVE-22         1247       1247       1247       1247       1247       1247       1242		50.7			
SVE-15     57.6     178.2       SVE-16     49.1     591.6       SVE-17     53.9     573.7       SVE-18     58.1     2113       SVE-19     57.3     154.7       SVE-20     51.7     438.3       SVE-21     47.7     847.7	SVE-15     57.6     178.2       SVE-16     49.1     591.6       SVE-17     53.9     573.7       SVE-18     58.1     2113       SVE-19     57.3     154.7       SVE-20     51.7     938.3       SVE-21     47.7     847.7		58.7			
SVE-16     Y9.1     \$91.6       SVE-17     \$3.9     \$73.7       SVE-18     \$8.1     \$113       SVE-19     \$7.3     \$1547       SVE-20     \$1.7     \$438.3       SVE-21     \$7.7     \$47.7	SVE-16     49.1     591.6       SVE-17     53.9     573.2       SVE-18     58.1     2113       SVE-19     57.3     1547       SVE-20     51.7     438.3       SVE-21     47.7     847.7		99.8	1702		
SVE-17     \$3.9     \$73.7       SVE-18     \$8.1     \$113       SVE-19     \$7.3     \$15.7       SVE-20     \$1.7     \$438.3       SVE-21     \$7.7     \$47.7       SVE-22     \$7.7     \$47.7	SVE-17     53.9       SVE-18     58.1       SVE-19     57.3       SVE-20     51.7       SVE-21     77.7       SVE-22     77.7	SVE-16	44.1	591.6		
SVE-19 SVE-20 SVE-21 SVE-21 SVE-22 SVE-22	SVE-19     57.3     1597       SVE-20     51.7     938.3       SVE-21     97.7     847.7	SVE-17	~	573.2		
SVE-20 SVE-21 SVE-22 SVE-22	SVE-20 SVE-21 SVE-22 SVE-22 SVE-22	SVE-18		2113		
SVE-21 47.7 847.7	SVE-21 47.7 847.7		57.3	4262		
SVE-22	SVE-22			847.7		
TANCE:	COMMENTS/OTHER MAINTENANCE:	SVE-22	47.7	1 1111		
TATITENANCE.	COMMENTS/OTHER MAINTENATION	DITENA	NCE:			
COMMENTS/OTHER MAINTENATION	COND	COMMENTS/OTHER MAINTENA				
		The state of the state of				
				A STATE OF THE PERSON NAMED IN COLUMN		

DATE: 4-23	O&M PERSONNEL:	B	Sincla	ir
TIME ONSITE:	TIME OFFSITE:			

	SVE S	YSTEM - MONTHLY O&	·M	
SVE ALARMS:	I K	O TANK HIGH LEVEL		
SVE SYSTEM	SKID 1 READING	TIME	SKID 2 READING	TIME
Blower Hours (take photo) Inlet Vacuum (IWC)	58098.49	1200	26668.0	
nlet Flow from Rotometer (SCFM)	48		50	
Exhaust Vacuum (IWC) Inlet PID	-,69		-80	
Exhaust PID	1347		918.9	
K/O Tank Liquid Level K/O Liquid Drained (gallons)				

	SVE SYSTEM - QUARTERLY SAMPLING
SAMPLE ID:	SAMPLE TIME:
Analytes:	TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS	

ZONES	
LUILD	

Change in Well Operation:

Zone A - Secondary Impacts				
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-5				
SVE-8				

3 - Tertiary Impacts LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-6				
-SVE-7				S P AV SE
-SVE-10	Cyclin Standard St.			
SVE-11				
-SVE-12		1007		
SVE-13	50.6	1987		
SVE-14	58.7	1122		
SVE-15	50.2	1746		
SVE-16	57.8	504.1		
SVE-17	50.2	386.6		
SVE-18	58.3	2050		
SVE-19	60 9	1362		
SVE-20	38.3	600.1		
SVE-21	20:7	264.4		
SVE-22	47.2	201.		

COMMENTS/OTHER	MAINTENANCE:
COMMENTS/OTHER	IVE EE

Date 5/6/25 Received by OCD: 7/15/2025 9:50:30 AM Location OH Randel # 5 Project / Client H: Con @ 40° Rany (1,,4+) 10:45 - RH on Sile For 0+M - Both blowers curry Skid #1 Hows = 58,409.55 Skid #2 Hows = 26,979.3 - colibera PID w/ 100 pm Brobation From both blowers "WC SCFM 5 4:0 # 1 Vac How PID 76 40 59 48 1,258 5 K.J # 2 1,675 51xx #1 wells open: 18, 14, 16, 19, 7 This # 2 upen: 17, 15, 17, 21, 22 Torn off both blowers to druk KO tentes - No leganide in either 12:00 - RIT AP 5:Fe Released to Imaging: 7/17/2025 1:16:25 PM

# Received by OCD: 7/15/2025 9:50:30 AM

	- 1	0	D	(	4	1 1 10
DATE:	5-1	9	O&M PERSONNEL: 15	0	110	lair
TIME ONSITE:			TIME OFFSITE:			1000

SVE SYSTEM - MONTHLY O&M						
SVE ALARMS:	KO TANK HIGH LEVEL					
SVE SYSTEM	SKID 1 READING	TIME	SKID 2 READING	TIME		
Blower Hours (take photo)	58722,65	1233	27292.5	1233		
Inlet Vacuum (IWC)	73		58			
nlet Flow from Rotometer (SCFM)	46		50			
Exhaust Vacuum (IWC)	-70		-80			
Inlet PID	1229		919.7			
Exhaust PID	588	The state of the s	373./			
K/O Tank Liquid Level				- No.		
K/O Liquid Drained (gallons)		THE RESERVE				

SVE SYSTEM - QUARTERLY SAMPLING	
SAMPLE ID: 5 kid 1, 5 kid 2 SAMPLE TIME: 12 45, 1250  Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	
OPERATING WELLS	

ZONES				
ZOITE	- 1 - 17 L - EX	And the second		
Change in Well Operation:	. 6 3 7 16			

Zono A Secondary Impacts				I ADDITION TENTS
Zone A - Secondary Impacts LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-5				
CVE 8	E-B-MORNING STREET			

e B - Tertiary Impacts	T TO COMP ( (TVC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
LOCATION	VACUUM (IWC)	FID HEADSTACE (FFIM)		
SVE-6				
SVE-7				
-SVE-10				
SVE-11				
SVE-12		1011		
SVE-13	51.1	1509	VALUE HARRIST OF SANCES	A STATE OF THE STA
SVE-14	54,3			
SVE-15	51.0	1363		
SVE-16	59.7	394.5		THE RESERVE THE PROPERTY OF THE PERSON NAMED IN COLUMN TWO IN COLUMN TO THE PERSON NAMED IN COLU
SVE-17	50.6	378.1		
SVE-18	55,0			
SVE-19	58.5	2016		
SVE-20	59.6	1502		The second second
SVE-21	50.9	393.8		
SVE-22	47.5	387.2	75-757-74-10	100 Per 100 S 70-10

COMMENTS/OTHER MAINTENANCE:	

DATE:	6-6	O&M PERSONNEL: TIME OFFSITE:		<u>i</u> /
	SVE	SYSTEM - MONTHLY O&M		
SVE ALARMS:		KO TANK HIGH LEVEL		
SVE SYSTEM	SKID 1 READING	TIME	SKID 2 READING	TIME
Blower Hours (take photo)	59157 67	1051	77717 X	1051
Inlet Vacuum (IWC)	75	1821	58	
Inlet Flow from Rotometer (SCFM)	47		50	
Exhaust Vacuum (IWC)	-69		-80	
Inlet PID			389.4	
Exhaust PID	1292		391,5	AND RESERVED THE RESERVED TO SERVED THE RESERVED TO SERVED THE RESERVED TO SERVED THE RESERVED TO SERVED THE RESERVED THE
K/O Tank Liquid Level				
K/O Liquid Drained (gallons)				
	SVE SY	STEM - QUARTERLY SAMPLI	NG	
SAMPLE ID:		SAMPLE TIME:		
	TVPH (8015), VOCs (8260), 1	Fixed Gas (CO/CO2/O2)		
OPERATING WELLS				
ZONES				
ZONES				
Change in Well Operation:				
Zone A - Secondary Impacts				
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-5				
SVE-8				
Zone B - Tertiary Impacts				
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-6				
SVE-7		of Top County of		
SVE-10 SVE-11			Service Servic	
SVE-12		1906		
SVE-13	49.4	1592		
SVE-14	49.4	1344		
SVE-15 SVE-16	57.3	1868	CONTRACTOR OF THE PARTY OF THE	
SVE-10 SVE-17	49.8	567.7		
SVE-18	53.6	1944		
SVE-19	57.5	1506		
SVE-20 SVE-21	50.0	547,7		
SVE-22	46.8	4171		
	JANCE:			
COMMENTS/OTHER MAINTEN				
			The state of the s	
		DE LE CONTRACTOR		

TIME ONSITE:	6-24	O&M PERSONNEL: TIME OFFSITE:	B Sinclair	
		E SYSTEM - MONTHLY O&M		
SVE ALARMS:		KO TANK HIGH LEVEL		
SVE SYSTEM	SKID 1 READING			
Blower Hours (take photo)	5017 20	TIME	SKID 2 READING	TIME
Inlet Vacuum (IWC)	65		18135.2	111/
nlet Flow from Rotometer (SCFM)	57			
Exhaust Vacuum (IWC)			50	
Inlet PID			-80	Maria Caralleria Caralleria
Exhaust PID			974.0	
K/O Tank Liquid Level	0201		867.8	
K/O Liquid Drained (gallons)				
SAMPLE ID.	SVE SY	STEM - QUARTERLY SAMPLIN	NG	
SAMPLE ID: Analytes:	TVPH (8015) VOCa (92(0)	SAMPLE TIME:		
OPERATING WELLS	TVPH (8015), VOCs (8260),	Fixed Gas (CO/CO2/O2)		
ZONES  Change in Well Operation:				
one A - Secondary Impacts				
LOCATION SVE-5	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-8				
ne B - Tertiary Impacts  LOCATION	VACUUM (IWC)	DID HE ADODA OF CONTROL		
SVE-6	VACOUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-7				
-SVE-10				
SVE-11				
SVE-12	110			
SVE-13 SVE-14	50.0	1895		
	49.6	1932		
SVE-13	110	1760		
SVE-15 SVE-16	582	1933		
SVE-15 SVE-16 SVE-17	58.2 47.9	592.1		
SVE-16		592.1 368-3		
SVE-16 SVE-17	47.9 47.2 51.1	368-3 1927		
SVE-16 SVE-17 SVE-18 SVE-19 SVE-20	47.9 47.2 51.1 50.8	368-3		
SVE-16 SVE-17 SVE-18 SVE-19	47.9 47.2 51.1	368-3 1927		
SVE-16 SVE-17 SVE-18 SVE-19 SVE-20 SVE-21	47.9 47.2 51.1 99.9	591.1 368.3 1927 886.9 291.3		



**APPENDIX B** 

**Project Photographs** 

### **PROJECT PHOTOGRAPHS**

OH Randel #5 San Juan County, New Mexico Hilcorp Energy Company

### Photograph 1

Runtime meter taken on December 16, 2024 from SVE Skid 1 (original SVE system) at 1:16 PM Hours = 55,073.97



### Photograph 2

Runtime meter taken on December 16, 2024 from SVE Skid 2 (new SVE system) at 1:17 PM Hours = 23,603.3



### **PROJECT PHOTOGRAPHS**

OH Randel #5
San Juan County, New Mexico
Hilcorp Energy Company

### Photograph 3

Runtime meter taken on June 24, 2025 from SVE Skid 1 (original SVE system) at 11:17 AM Hours = 59,567.83



### Photograph 4

Runtime meter taken on June 24, 2025 from SVE Skid 2 (new SVE system) at 11:17 AM Hours = 28,155.2





### **APPENDIX C**

**Laboratory Analytical Reports** 

**Environment Testing** 

### **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Samantha Grabert Hilcorp Energy PO BOX 4700 Farmington, New Mexico 87499

Generated 3/6/2025 1:28:42 PM

### **JOB DESCRIPTION**

**OH Randel 5** 

### **JOB NUMBER**

885-19771-1

Eurofins Albuquerque 4901 Hawkins NE Albuquerque NM 87109

See page two for job notes and contact information

### **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 3/6/2025 1:28:42 PM

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

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Laboratory Job ID: 885-19771-1

Client: Hilcorp Energy Project/Site: OH Randel 5

### **Table of Contents**

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### **Definitions/Glossary**

Job ID: 885-19771-1 Client: Hilcorp Energy

**Qualifiers** 

**GC/MS VOA** 

Qualifier **Qualifier Description** 

Project/Site: OH Randel 5

Surrogate recovery exceeds control limits, high biased.

**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

Percent Recovery %R CFL Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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)

Estimated Detection Limit (Dioxin) EDL LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL 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

Eurofins Albuquerque

### **Case Narrative**

Client: Hilcorp Energy Job ID: 885-19771-1 Project: OH Randel 5

Job ID: 885-19771-1 **Eurofins Albuquerque** 

> Job Narrative 885-19771-1

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 2/12/2025 7:20 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 1.5°C.

#### Subcontract Work

Method Fixed Gases: This method was subcontracted to Energy Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

#### **Gasoline Range Organics**

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

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: OH Randel 5

Client Sample ID: Skid 1

Lab Sample ID: 885-19771-1

Job ID: 885-19771-1

Matrix: Air

Date Collected: 02/08/25 15:00 Date Received: 02/12/25 07:20 Sample Container: Tedlar Bag 1L

Released to Imaging: 7/17/2025 1:16:25 PM

Method: SW846 8015M/D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	8600		250	ug/L			02/21/25 13:19	50
Surrements	9/ <b>D</b> anayamı	Ovelifier	Limita			Duamanad	Amalumad	Dil 500

Surrogate Limits Analyzed Dil Fac %Recovery Qualifier Prepared 95 52 - 172 02/21/25 13:19 50 4-Bromofluorobenzene (Surr)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			02/20/25 16:21	5
1,1,1-Trichloroethane	ND		0.50	ug/L			02/20/25 16:21	5
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			02/20/25 16:21	5
1,1,2-Trichloroethane	ND		0.50	ug/L			02/20/25 16:21	5
1,1-Dichloroethane	ND		0.50	ug/L			02/20/25 16:21	5
1,1-Dichloroethene	ND		0.50	ug/L			02/20/25 16:21	5
1,1-Dichloropropene	ND		0.50	ug/L			02/20/25 16:21	5
1,2,3-Trichlorobenzene	ND		0.50	ug/L			02/20/25 16:21	5
1,2,3-Trichloropropane	ND		1.0	ug/L			02/20/25 16:21	5
1,2,4-Trichlorobenzene	ND		0.50	ug/L			02/20/25 16:21	5
1,2,4-Trimethylbenzene	0.87		0.50	ug/L			02/20/25 16:21	5
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L			02/20/25 16:21	5
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			02/20/25 16:21	5
1,2-Dichlorobenzene	ND		0.50	ug/L			02/20/25 16:21	5
1,2-Dichloroethane (EDC)	ND		0.50	ug/L			02/20/25 16:21	5
1,2-Dichloropropane	ND		0.50	ug/L			02/20/25 16:21	5
1,3,5-Trimethylbenzene	1.2		0.50	ug/L			02/20/25 16:21	5
1,3-Dichlorobenzene	ND		0.50	ug/L			02/20/25 16:21	5
1,3-Dichloropropane	ND		0.50	ug/L			02/20/25 16:21	5
1,4-Dichlorobenzene	ND		0.50	ug/L			02/20/25 16:21	5
1-Methylnaphthalene	ND		2.0	ug/L			02/20/25 16:21	5
2,2-Dichloropropane	ND		1.0	ug/L			02/20/25 16:21	5
2-Butanone	ND		5.0	ug/L			02/20/25 16:21	5
2-Chlorotoluene	ND		0.50	ug/L			02/20/25 16:21	5
2-Hexanone	ND		5.0	ug/L			02/20/25 16:21	5
2-Methylnaphthalene	ND		2.0	ug/L			02/20/25 16:21	5
4-Chlorotoluene	ND		0.50	ug/L			02/20/25 16:21	5
4-Isopropyltoluene	ND		0.50	ug/L			02/20/25 16:21	5
4-Methyl-2-pentanone	ND		5.0	ug/L			02/20/25 16:21	5
Acetone	ND		5.0	ug/L			02/20/25 16:21	5
Benzene	76		5.0	ug/L			02/21/25 13:19	50
Bromobenzene	ND		0.50	ug/L			02/20/25 16:21	5
Bromodichloromethane	ND		0.50	ug/L			02/20/25 16:21	5
Dibromochloromethane	ND		0.50	ug/L			02/20/25 16:21	5
Bromoform	ND		0.50	ug/L			02/20/25 16:21	5
Bromomethane	ND		1.5	ug/L			02/20/25 16:21	5
Carbon disulfide	ND		5.0	ug/L			02/20/25 16:21	5
Carbon tetrachloride	ND		0.50	ug/L			02/20/25 16:21	5
Chlorobenzene	ND		0.50	ug/L			02/20/25 16:21	5
Chloroethane	ND		1.0	ug/L			02/20/25 16:21	5
Chloroform	ND		0.50	ug/L			02/20/25 16:21	5

Eurofins Albuquerque

### **Client Sample Results**

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

Client Sample ID: Skid 1

Date Collected: 02/08/25 15:00

Lab Sample ID: 885-19771-1

Matrix: Air

Date Received: 02/12/25 07:20 Sample Container: Tedlar Bag 1L

Analyte	Result Qua	lifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND ND	1.5	ug/L			02/20/25 16:21	5
cis-1,2-Dichloroethene	ND	0.50	ug/L			02/20/25 16:21	5
cis-1,3-Dichloropropene	ND	0.50	ug/L			02/20/25 16:21	5
Dibromomethane	ND	0.50	ug/L			02/20/25 16:21	5
Dichlorodifluoromethane	ND	0.50	ug/L			02/20/25 16:21	5
Ethylbenzene	8.3	0.50	ug/L			02/20/25 16:21	5
Hexachlorobutadiene	ND	0.50	ug/L			02/20/25 16:21	5
Isopropylbenzene	0.77	0.50	ug/L			02/20/25 16:21	5
Methyl-tert-butyl Ether (MTBE)	ND	0.50	ug/L			02/20/25 16:21	5
Methylene Chloride	ND	1.5	ug/L			02/20/25 16:21	5
n-Butylbenzene	ND	1.5	ug/L			02/20/25 16:21	5
N-Propylbenzene	0.54	0.50	ug/L			02/20/25 16:21	5
Naphthalene	ND	1.0	ug/L			02/20/25 16:21	5
sec-Butylbenzene	ND	0.50	ug/L			02/20/25 16:21	5
Styrene	ND	0.50	ug/L			02/20/25 16:21	5
tert-Butylbenzene	ND	0.50	ug/L			02/20/25 16:21	5
Tetrachloroethene (PCE)	ND	0.50	ug/L			02/20/25 16:21	5
Toluene	190	5.0	ug/L			02/21/25 13:19	50
trans-1,2-Dichloroethene	ND	0.50	ug/L			02/20/25 16:21	5
trans-1,3-Dichloropropene	ND	0.50	ug/L			02/20/25 16:21	5
Trichloroethene (TCE)	ND	0.50	ug/L			02/20/25 16:21	5
Trichlorofluoromethane	ND	0.50	ug/L			02/20/25 16:21	5
Vinyl chloride	ND	0.50	ug/L			02/20/25 16:21	5
Xylenes, Total	73	0.75	ug/L			02/20/25 16:21	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		02/20/25 16:21	5
1,2-Dichloroethane-d4 (Surr)	78		70 - 130		02/21/25 13:19	50
Toluene-d8 (Surr)	150	S1+	70 - 130		02/20/25 16:21	5
Toluene-d8 (Surr)	110		70 - 130		02/21/25 13:19	50
4-Bromofluorobenzene (Surr)	112		70 - 130		02/20/25 16:21	5
4-Bromofluorobenzene (Surr)	93		70 - 130		02/21/25 13:19	50
Dibromofluoromethane (Surr)	99		70 - 130		02/20/25 16:21	5
Dibromofluoromethane (Surr)	90		70 - 130		02/21/25 13:19	50

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# **Client Sample Results**

Client: Hilcorp Energy Project/Site: OH Randel 5

Job ID: 885-19771-1

Client Sample ID: Skid 2

Lab Sample ID: 885-19771-2 Date Collected: 02/08/25 15:00

Matrix: Air

Date Received: 02/12/25 07:20 Sample Container: Tedlar Bag 1L

Released to Imaging: 7/17/2025 1:16:25 PM

Method: SW846 8015M/D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)										
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Gasoline Range Organics [C6 - C10]	2900		250	ug/L			02/20/25 16:45	50		

Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed

Guiroguic	Miccovery	Qualifici	Lilling			rrepared	Analyzea	Diriac
4-Bromofluorobenzene (Surr)	97		52 - 172		-		02/20/25 16:45	50
 Method: SW846 8260B - Volat	ile Organic Comp	ounds (GC	MS)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	ug/L			02/20/25 16:45	50
1,1,1-Trichloroethane	ND		5.0	ug/L			02/20/25 16:45	50
1,1,2,2-Tetrachloroethane	ND		10	ug/L			02/20/25 16:45	50
1,1,2-Trichloroethane	ND		5.0	ug/L			02/20/25 16:45	50
1,1-Dichloroethane	ND		5.0	ug/L			02/20/25 16:45	50
1,1-Dichloroethene	ND		5.0	ug/L			02/20/25 16:45	50
1,1-Dichloropropene	ND		5.0	ug/L			02/20/25 16:45	50
1,2,3-Trichlorobenzene	ND		5.0	ug/L			02/20/25 16:45	50
1,2,3-Trichloropropane	ND		10	ug/L			02/20/25 16:45	50
1,2,4-Trichlorobenzene	ND		5.0	ug/L			02/20/25 16:45	50
1,2,4-Trimethylbenzene	ND		5.0	ug/L			02/20/25 16:45	50
1,2-Dibromo-3-Chloropropane	ND		10	ug/L			02/20/25 16:45	50
1,2-Dibromoethane (EDB)	ND		5.0	ug/L			02/20/25 16:45	50
1,2-Dichlorobenzene	ND		5.0	ug/L			02/20/25 16:45	50
4 0 D: 11 (FDO)							00/00/05 40 45	

1, 1-Diomoroculone	ND	0.0	ug/L	02/20/20 10.40 00
1,1-Dichloropropene	ND	5.0	ug/L	02/20/25 16:45 50
1,2,3-Trichlorobenzene	ND	5.0	ug/L	02/20/25 16:45 50
1,2,3-Trichloropropane	ND	10	ug/L	02/20/25 16:45 50
1,2,4-Trichlorobenzene	ND	5.0	ug/L	02/20/25 16:45 50
1,2,4-Trimethylbenzene	ND	5.0	ug/L	02/20/25 16:45 50
1,2-Dibromo-3-Chloropropane	ND	10	ug/L	02/20/25 16:45 50
1,2-Dibromoethane (EDB)	ND	5.0	ug/L	02/20/25 16:45 50
1,2-Dichlorobenzene	ND	5.0	ug/L	02/20/25 16:45 50
1,2-Dichloroethane (EDC)	ND	5.0	ug/L	02/20/25 16:45 50
1,2-Dichloropropane	ND	5.0	ug/L	02/20/25 16:45 50
1,3,5-Trimethylbenzene	ND	5.0	ug/L	02/20/25 16:45 50
1,3-Dichlorobenzene	ND	5.0	ug/L	02/20/25 16:45 50
1,3-Dichloropropane	ND	5.0	ug/L	02/20/25 16:45 50
1,4-Dichlorobenzene	ND	5.0	ug/L	02/20/25 16:45 50
1-Methylnaphthalene	ND	20	ug/L	02/20/25 16:45 50
2,2-Dichloropropane	ND	10	ug/L	02/20/25 16:45 50
2-Butanone	ND	50	ug/L	02/20/25 16:45 50
2-Chlorotoluene	ND	5.0	ug/L	02/20/25 16:45 50
2-Hexanone	ND	50	ug/L	02/20/25 16:45 50
2-Methylnaphthalene	ND	20	ug/L	02/20/25 16:45 50
4-Chlorotoluene	ND	5.0	ug/L	02/20/25 16:45 50
4-Isopropyltoluene	ND	5.0	ug/L	02/20/25 16:45 50
4-Methyl-2-pentanone	ND	50	ug/L	02/20/25 16:45 50
Acetone	ND	50	ug/L	02/20/25 16:45 50
Benzene	29	5.0	ug/L	02/20/25 16:45 50
Bromobenzene	ND	5.0	ug/L	02/20/25 16:45 50
Bromodichloromethane	ND	5.0	ug/L	02/20/25 16:45 50
Dibromochloromethane	ND	5.0	ug/L	02/20/25 16:45 50
Bromoform	ND	5.0	ug/L	02/20/25 16:45 50
Bromomethane	ND	15	ug/L	02/20/25 16:45 50
Carbon disulfide	ND	50	ug/L	02/20/25 16:45 50
Carbon tetrachloride	ND	5.0	ug/L	02/20/25 16:45 50
Chlorobenzene	ND	5.0	ug/L	02/20/25 16:45 50
Chloroethane	ND	10	ug/L	02/20/25 16:45 50
Chloroform	ND	5.0	ug/L	02/20/25 16:45 50

Job ID: 885-19771-1

Client: Hilcorp Energy Project/Site: OH Randel 5

Client Sample ID: Skid 2

Lab Sample ID: 885-19771-2

Matrix: Air

Date Collected: 02/08/25 15:00 Date Received: 02/12/25 07:20 Sample Container: Tedlar Bag 1L

Analyte	Result Qualifier	RL	Unit	D Prepared	Analyzed	Dil Fac
Chloromethane	ND ND	15	ug/L		02/20/25 16:45	50
cis-1,2-Dichloroethene	ND	5.0	ug/L		02/20/25 16:45	50
cis-1,3-Dichloropropene	ND	5.0	ug/L		02/20/25 16:45	50
Dibromomethane	ND	5.0	ug/L		02/20/25 16:45	50
Dichlorodifluoromethane	ND	5.0	ug/L		02/20/25 16:45	50
Ethylbenzene	ND	5.0	ug/L		02/20/25 16:45	50
Hexachlorobutadiene	ND	5.0	ug/L		02/20/25 16:45	50
Isopropylbenzene	ND	5.0	ug/L		02/20/25 16:45	50
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/L		02/20/25 16:45	50
Methylene Chloride	ND	15	ug/L		02/20/25 16:45	50
n-Butylbenzene	ND	15	ug/L		02/20/25 16:45	50
N-Propylbenzene	ND	5.0	ug/L		02/20/25 16:45	50
Naphthalene	ND	10	ug/L		02/20/25 16:45	50
sec-Butylbenzene	ND	5.0	ug/L		02/20/25 16:45	50
Styrene	ND	5.0	ug/L		02/20/25 16:45	50
tert-Butylbenzene	ND	5.0	ug/L		02/20/25 16:45	50
Tetrachloroethene (PCE)	ND	5.0	ug/L		02/20/25 16:45	50
Toluene	84	5.0	ug/L		02/20/25 16:45	50
trans-1,2-Dichloroethene	ND	5.0	ug/L		02/20/25 16:45	50
trans-1,3-Dichloropropene	ND	5.0	ug/L		02/20/25 16:45	50
Trichloroethene (TCE)	ND	5.0	ug/L		02/20/25 16:45	50
Trichlorofluoromethane	ND	5.0	ug/L		02/20/25 16:45	50
Vinyl chloride	ND	5.0	ug/L		02/20/25 16:45	50
Xylenes, Total	18	7.5	ug/L		02/20/25 16:45	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		02/20/25 16:45	50
Toluene-d8 (Surr)	105		70 - 130		02/20/25 16:45	50
4-Bromofluorobenzene (Surr)	97		70 - 130		02/20/25 16:45	50
Dibromofluoromethane (Surr)	98		70 - 130		02/20/25 16:45	50

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Job ID: 885-19771-1 Client: Hilcorp Energy

Project/Site: OH Randel 5

Method: 8015M/D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Lab Sample ID: MB 885-21167/5 Client Sample ID: Method Blank Matrix: Air Prep Type: Total/NA

**Analysis Batch: 21167** 

мв мв Analyte Result Qualifier RLUnit D Prepared Analyzed Dil Fac Gasoline Range Organics [C6 - C10] ND 5.0 ug/L 02/20/25 13:52

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 98 52 - 172 02/20/25 13:52

Lab Sample ID: LCS 885-21167/4 Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Air

**Analysis Batch: 21167** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 500 542 ug/L 108 Gasoline Range Organics [C6 -70 - 130

C10]

LCS LCS

%Recovery Qualifier Limits Surrogate 52 - 172 4-Bromofluorobenzene (Surr) 103

Lab Sample ID: MB 885-21215/5 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Air

Analysis Batch: 21215

MB MB

Analyte Result Qualifier RLUnit D Prepared Analyzed Dil Fac 5.0 Gasoline Range Organics [C6 - C10] ND ug/L 02/21/25 12:06

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 98 52 - 172 02/21/25 12:06 4-Bromofluorobenzene (Surr)

Lab Sample ID: LCS 885-21215/4 Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Air

**Analysis Batch: 21215** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics [C6 -500 536 ug/L

C10]

LCS LCS

Surrogate %Recovery Qualifier Limits

4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 885-21168/4 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Air **Analysis Batch: 21168** 

Released to Imaging: 7/17/2025 1:16:25 PM

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	ug/L			02/20/25 13:52	1
1,1,1-Trichloroethane	ND		0.10	ug/L			02/20/25 13:52	1
1,1,2,2-Tetrachloroethane	ND		0.20	ug/L			02/20/25 13:52	1
1,1,2-Trichloroethane	ND		0.10	ug/L			02/20/25 13:52	1
	1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	Analyte         Result           1,1,1,2-Tetrachloroethane         ND           1,1,1-Trichloroethane         ND           1,1,2,2-Tetrachloroethane         ND	Analyte         Result         Qualifier           1,1,1,2-Tetrachloroethane         ND           1,1,1-Trichloroethane         ND           1,1,2,2-Tetrachloroethane         ND	Analyte         Result         Qualifier         RL           1,1,1,2-Tetrachloroethane         ND         0.10           1,1,1-Trichloroethane         ND         0.10           1,1,2,2-Tetrachloroethane         ND         0.20	Analyte         Result         Qualifier         RL         Unit           1,1,1,2-Tetrachloroethane         ND         0.10         ug/L           1,1,1-Trichloroethane         ND         0.10         ug/L           1,1,2,2-Tetrachloroethane         ND         0.20         ug/L	Analyte         Result         Qualifier         RL         Unit         D           1,1,1,2-Tetrachloroethane         ND         0.10         ug/L           1,1,1-Trichloroethane         ND         0.10         ug/L           1,1,2,2-Tetrachloroethane         ND         0.20         ug/L	Analyte         Result         Qualifier         RL         Unit         D         Prepared           1,1,1,2-Tetrachloroethane         ND         0.10         ug/L           1,1,1-Trichloroethane         ND         0.10         ug/L           1,1,2,2-Tetrachloroethane         ND         0.20         ug/L	Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed           1,1,1,2-Tetrachloroethane         ND         0.10         ug/L         02/20/25 13:52           1,1,1-Trichloroethane         ND         0.10         ug/L         02/20/25 13:52           1,1,2,2-Tetrachloroethane         ND         0.20         ug/L         02/20/25 13:52

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

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

мв мв

Lab Sample ID: MB 885-21168/4

Matrix: Air

**Analysis Batch: 21168** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

		5
Analyzed	Dil Fac	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.10	ug/L			02/20/25 13:52	1
1,1-Dichloroethene	ND		0.10	ug/L			02/20/25 13:52	1
1,1-Dichloropropene	ND		0.10	ug/L			02/20/25 13:52	1
1,2,3-Trichlorobenzene	ND		0.10	ug/L			02/20/25 13:52	1
1,2,3-Trichloropropane	ND		0.20	ug/L			02/20/25 13:52	1
1,2,4-Trichlorobenzene	ND		0.10	ug/L			02/20/25 13:52	1
1,2,4-Trimethylbenzene	ND		0.10	ug/L			02/20/25 13:52	1
1,2-Dibromo-3-Chloropropane	ND		0.20	ug/L			02/20/25 13:52	
1,2-Dibromoethane (EDB)	ND		0.10	ug/L			02/20/25 13:52	1
1,2-Dichlorobenzene	ND		0.10	ug/L			02/20/25 13:52	•
1,2-Dichloroethane (EDC)	ND		0.10	ug/L			02/20/25 13:52	
1,2-Dichloropropane	ND		0.10	ug/L			02/20/25 13:52	,
1,3,5-Trimethylbenzene	ND		0.10	ug/L			02/20/25 13:52	,
1,3-Dichlorobenzene	ND		0.10	ug/L			02/20/25 13:52	
1,3-Dichloropropane	ND		0.10	ug/L			02/20/25 13:52	1
1,4-Dichlorobenzene	ND		0.10	ug/L			02/20/25 13:52	1
1-Methylnaphthalene	ND		0.40	ug/L			02/20/25 13:52	1
2,2-Dichloropropane	ND		0.20	ug/L			02/20/25 13:52	1
2-Butanone	ND		1.0	ug/L			02/20/25 13:52	,
2-Chlorotoluene	ND		0.10	ug/L			02/20/25 13:52	1
2-Hexanone	ND		1.0	ug/L			02/20/25 13:52	,
2-Methylnaphthalene	ND		0.40	ug/L			02/20/25 13:52	1
4-Chlorotoluene	ND		0.10	ug/L			02/20/25 13:52	1
4-Isopropyltoluene	ND		0.10	ug/L			02/20/25 13:52	
4-Methyl-2-pentanone	ND		1.0	ug/L			02/20/25 13:52	1
Acetone	ND		1.0	ug/L			02/20/25 13:52	1
Benzene	ND		0.10	ug/L			02/20/25 13:52	1
Bromobenzene	ND		0.10	ug/L			02/20/25 13:52	1
Bromodichloromethane	ND		0.10	ug/L			02/20/25 13:52	
Dibromochloromethane	ND		0.10	ug/L			02/20/25 13:52	,
Bromoform	ND		0.10	ug/L			02/20/25 13:52	
Bromomethane	ND		0.30	ug/L			02/20/25 13:52	,
Carbon disulfide	ND		1.0	ug/L			02/20/25 13:52	1
Carbon tetrachloride	ND		0.10	ug/L			02/20/25 13:52	1
Chlorobenzene	ND		0.10	ug/L			02/20/25 13:52	,
Chloroethane	ND		0.20	ug/L			02/20/25 13:52	
Chloroform	ND		0.10	ug/L			02/20/25 13:52	1
Chloromethane	ND		0.30	ug/L			02/20/25 13:52	1
cis-1,2-Dichloroethene	ND		0.10	ug/L			02/20/25 13:52	
cis-1,3-Dichloropropene	ND		0.10	ug/L			02/20/25 13:52	1
Dibromomethane	ND		0.10	ug/L			02/20/25 13:52	1
Dichlorodifluoromethane	ND ND		0.10	ug/L ug/L			02/20/25 13:52	1
Ethylbenzene	ND ND		0.10	ug/L ug/L			02/20/25 13:52	1
Hexachlorobutadiene	ND ND		0.10	ug/L ug/L			02/20/25 13:52	1
Isopropylbenzene	ND ND		0.10	ug/L ug/L			02/20/25 13:52	
Methyl-tert-butyl Ether (MTBE)	ND ND		0.10	ug/L ug/L			02/20/25 13:52	1
Methylene Chloride	ND ND		0.10	=			02/20/25 13:52	1
	ND ND		0.30	ug/L			02/20/25 13:52	
n-Butylbenzene				ug/L			02/20/25 13:52	
N-Propylbenzene	ND		0.10	ug/L			02/20/25 13:52	1

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

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

Lab Sample ID: MB 885-21168/4

Matrix: Air

**Analysis Batch: 21168** 

Client Sample ID: Method Blank

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Naphthalene ND 0.20 02/20/25 13:52 ug/L sec-Butylbenzene ND 0.10 ug/L 02/20/25 13:52 ND 0.10 02/20/25 13:52 Styrene ug/L tert-Butylbenzene ND 0.10 ug/L 02/20/25 13:52 02/20/25 13:52 ND 0.10 Tetrachloroethene (PCE) ug/L Toluene ND 0.10 ug/L 02/20/25 13:52 trans-1,2-Dichloroethene ND 0.10 ug/L 02/20/25 13:52 trans-1,3-Dichloropropene ND 0.10 ug/L 02/20/25 13:52 Trichloroethene (TCE) ND 0.10 ug/L 02/20/25 13:52 ND Trichlorofluoromethane 0.10 ug/L 02/20/25 13:52 Vinyl chloride ND 0.10 ug/L 02/20/25 13:52 02/20/25 13:52 Xylenes, Total ND 0.15 ug/L

мв мв

Surrogate	%Recovery	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111	70 - 130		02/20/25 13:52	1
Toluene-d8 (Surr)	96	70 - 130		02/20/25 13:52	1
4-Bromofluorobenzene (Surr)	96	70 - 130		02/20/25 13:52	1
Dibromofluoromethane (Surr)	103	70 - 130		02/20/25 13:52	1

Lab Sample ID: LCS 885-21168/3

Matrix: Air

**Analysis Batch: 21168** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	20.1	18.0		ug/L		90	70 - 130	
Benzene	20.1	19.7		ug/L		98	70 - 130	
Chlorobenzene	20.1	18.8		ug/L		94	70 - 130	
Toluene	20.2	18.4		ug/L		91	70 - 130	
Trichloroethene (TCE)	20.2	18.9		ug/L		94	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
Toluene-d8 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	103		70 - 130

Lab Sample ID: MB 885-21216/5 Client Sample ID: Method Blank Matrix: Air Prep Type: Total/NA

**Analysis Batch: 21216** 

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	ug/L			02/21/25 12:06	1
1,1,1-Trichloroethane	ND		0.10	ug/L			02/21/25 12:06	1
1,1,2,2-Tetrachloroethane	ND		0.20	ug/L			02/21/25 12:06	1
1,1,2-Trichloroethane	ND		0.10	ug/L			02/21/25 12:06	1
1,1-Dichloroethane	ND		0.10	ug/L			02/21/25 12:06	1
1,1-Dichloroethene	ND		0.10	ug/L			02/21/25 12:06	1
1,1-Dichloropropene	ND		0.10	ug/L			02/21/25 12:06	1

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Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

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

Lab Sample ID: MB 885-21216/5 Matrix: Air

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

		MB				_	_	
Analyte		Qualifier	RL	Unit	<u>D</u> _	Prepared	Analyzed	Dil Fa
1,2,3-Trichlorobenzene	ND		0.10	ug/L			02/21/25 12:06	
,2,3-Trichloropropane	ND		0.20	ug/L			02/21/25 12:06	
,2,4-Trichlorobenzene	ND		0.10	ug/L			02/21/25 12:06	
,2,4-Trimethylbenzene	ND		0.10	ug/L			02/21/25 12:06	
I,2-Dibromo-3-Chloropropane	ND		0.20	ug/L			02/21/25 12:06	
I,2-Dibromoethane (EDB)	ND		0.10	ug/L			02/21/25 12:06	
I,2-Dichlorobenzene	ND		0.10	ug/L			02/21/25 12:06	
,2-Dichloroethane (EDC)	ND		0.10	ug/L			02/21/25 12:06	
1,2-Dichloropropane	ND		0.10	ug/L			02/21/25 12:06	
1,3,5-Trimethylbenzene	ND		0.10	ug/L			02/21/25 12:06	
1,3-Dichlorobenzene	ND		0.10	ug/L			02/21/25 12:06	
,3-Dichloropropane	ND		0.10	ug/L			02/21/25 12:06	
1,4-Dichlorobenzene	ND		0.10	ug/L			02/21/25 12:06	
1-Methylnaphthalene	ND		0.40	ug/L			02/21/25 12:06	
2,2-Dichloropropane	ND		0.20	ug/L			02/21/25 12:06	
2-Butanone	ND		1.0	ug/L			02/21/25 12:06	
2-Chlorotoluene	ND		0.10	ug/L			02/21/25 12:06	
?-Hexanone	ND		1.0	ug/L			02/21/25 12:06	
2-Methylnaphthalene	ND		0.40	ug/L			02/21/25 12:06	
-Chlorotoluene	ND		0.10	ug/L			02/21/25 12:06	
l-Isopropyltoluene	ND		0.10	ug/L			02/21/25 12:06	
-Methyl-2-pentanone	ND		1.0	ug/L			02/21/25 12:06	
Acetone	ND		1.0	ug/L			02/21/25 12:06	
Benzene	ND		0.10	ug/L			02/21/25 12:06	
Bromobenzene	ND		0.10	ug/L			02/21/25 12:06	
Bromodichloromethane	ND		0.10	ug/L			02/21/25 12:06	
Dibromochloromethane	ND		0.10	ug/L			02/21/25 12:06	
Bromoform	ND		0.10	ug/L			02/21/25 12:06	
Bromomethane	ND		0.30	ug/L			02/21/25 12:06	
Carbon disulfide	ND		1.0	ug/L			02/21/25 12:06	
Carbon tetrachloride	ND		0.10	ug/L			02/21/25 12:06	
Chlorobenzene	ND		0.10	ug/L			02/21/25 12:06	
Chloroethane	ND		0.20	ug/L			02/21/25 12:06	
Chloroform	ND		0.10	ug/L			02/21/25 12:06	
Chloromethane	ND		0.30	ug/L			02/21/25 12:06	
sis-1,2-Dichloroethene	ND		0.10	ug/L			02/21/25 12:06	
sis-1,3-Dichloropropene	ND		0.10	ug/L			02/21/25 12:06	
Dibromomethane	ND		0.10	ug/L			02/21/25 12:06	
Dichlorodifluoromethane	ND		0.10	ug/L			02/21/25 12:06	
Ethylbenzene	ND		0.10	ug/L			02/21/25 12:06	
Hexachlorobutadiene	ND		0.10	ug/L			02/21/25 12:06	
sopropylbenzene	ND		0.10	ug/L			02/21/25 12:06	
Nethyl-tert-butyl Ether (MTBE)	ND		0.10	ug/L			02/21/25 12:06	
Methylene Chloride	ND		0.30	ug/L			02/21/25 12:06	
I-Butylbenzene	ND		0.30				02/21/25 12:06	
•				ug/L				
N-Propylbenzene	ND		0.10	ug/L			02/21/25 12:06	
Naphthalene	ND		0.20	ug/L			02/21/25 12:06	
sec-Butylbenzene	ND		0.10	ug/L			02/21/25 12:06	
Styrene	ND		0.10	ug/L			02/21/25 12:06	

Client: Hilcorp Energy Job ID: 885-19771-1

0.10

0.15

Limits

70 - 130

70 - 130

70 - 130

70 - 130

Project/Site: OH Randel 5

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

Lab Sample ID: MB 885-21216/5

Matrix: Air

tert-Butylbenzene

Tetrachloroethene (PCE)

trans-1,2-Dichloroethene

Trichloroethene (TCE)

Trichlorofluoromethane

Vinyl chloride

Xylenes, Total

Surrogate

Toluene-d8 (Surr)

trans-1,3-Dichloropropene

Analyte

Toluene

Analysis Batch: 21216

Client Sample ID: Method Blank

02/21/25 12:06

02/21/25 12:06

Analyzed

02/21/25 12:06

02/21/25 12:06

02/21/25 12:06

02/21/25 12:06

Prep Type: Total/NA

MB MB Result Qualifier RL Unit D Dil Fac Prepared Analyzed ND 0.10 02/21/25 12:06 ug/L ND 0.10 ug/L 02/21/25 12:06 ND 0.10 ug/L 02/21/25 12:06

ug/L

ug/L

Dil Fac

Lab Sample ID: LCS 885-21216/4

Matrix: Air

Analysis Batch: 21216

1,2-Dichloroethane-d4 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prepared

)
)
)
)
)

ND

ND

108

96

96

104

%Recovery

мв мв

Qualifier

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
Toluene-d8 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130

# **QC Association Summary**

Client: Hilcorp Energy

Job ID: 885-19771-1

Project/Site: OH Randel 5

# GC/MS VOA

Analysi	s Batc	h: 21	1167
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L	ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
8	85-19771-2	Skid 2	Total/NA	Air	8015M/D	
M	MB 885-21167/5	Method Blank	Total/NA	Air	8015M/D	
L	.CS 885-21167/4	Lab Control Sample	Total/NA	Air	8015M/D	

### **Analysis Batch: 21168**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-19771-1	Skid 1	Total/NA	Air	8260B	
885-19771-2	Skid 2	Total/NA	Air	8260B	
MB 885-21168/4	Method Blank	Total/NA	Air	8260B	
LCS 885-21168/3	Lab Control Sample	Total/NA	Air	8260B	

### **Analysis Batch: 21215**

Lab Sample ID 885-19771-1	Client Sample ID Skid 1	Prep Type Total/NA	Matrix Air	Method 8015M/D	Prep Batch
MB 885-21215/5	Method Blank	Total/NA	Air	8015M/D	
LCS 885-21215/4	Lab Control Sample	Total/NA	Air	8015M/D	

### **Analysis Batch: 21216**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-19771-1	Skid 1	Total/NA	Air	8260B	
MB 885-21216/5	Method Blank	Total/NA	Air	8260B	
LCS 885-21216/4	Lab Control Sample	Total/NA	Air	8260B	

#### **Lab Chronicle**

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

Date Received: 02/12/25 07:20

Client Sample ID: Skid 1 Lab Sample ID: 885-19771-1 Date Collected: 02/08/25 15:00

Matrix: Air

Batch Batch Dilution Batch Prepared Method Prep Type Туре Run Factor **Number Analyst** Lab or Analyzed Total/NA 8015M/D 02/21/25 13:19 Analysis 50 21215 CM EET ALB Total/NA Analysis 8260B 5 21168 CM **EET ALB** 02/20/25 16:21 Total/NA Analysis 8260B 50 21216 CM **EET ALB** 02/21/25 13:19

Client Sample ID: Skid 2 Lab Sample ID: 885-19771-2

Date Collected: 02/08/25 15:00 Matrix: Air

Date Received: 02/12/25 07:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8015M/D		50	21167	СМ	EET ALB	02/20/25 16:45
Total/NA	Analysis	8260B		50	21168	CM	EET ALB	02/20/25 16:45

### Laboratory References:

= , 1120 South 27th Street, Billings, MT 59101, TEL (406)252-6325

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

# **Accreditation/Certification Summary**

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

### **Laboratory: Eurofins Albuquerque**

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

uthority	Prograr	n	Identification Number	Expiration Dat
ew Mexico	State		NM9425, NM0901	02-26-25
The following analytes are in for which the agency does no		the laboratory is not certif	ied by the governing authority. This lis	st may include analy
Analysis Method	Prep Method	Matrix	Analyte	
8015M/D		Air	Gasoline Range Organics	[C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane	
8260B		Air	1,1,1-Trichloroethane	
8260B		Air	1,1,2,2-Tetrachloroethane	
8260B		Air	1,1,2-Trichloroethane	
8260B		Air	1,1-Dichloroethane	
8260B		Air	1,1-Dichloroethene	
8260B		Air	1,1-Dichloropropene	
8260B		Air	1,2,3-Trichlorobenzene	
8260B		Air	1,2,3-Trichloropropane	
8260B		Air	1,2,4-Trichlorobenzene	
8260B		Air	1,2,4-Trimethylbenzene	
8260B		Air	1,2-Dibromo-3-Chloroprop	oane
8260B		Air	1,2-Dibromoethane (EDB)	)
8260B		Air	1,2-Dichlorobenzene	
8260B		Air	1,2-Dichloroethane (EDC)	)
8260B		Air	1,2-Dichloropropane	
8260B		Air	1,3,5-Trimethylbenzene	
8260B		Air	1,3-Dichlorobenzene	
8260B		Air	1,3-Dichloropropane	
8260B		Air	1,4-Dichlorobenzene	
8260B		Air	1-Methylnaphthalene	
8260B		Air	2,2-Dichloropropane	
8260B		Air	2-Butanone	
8260B		Air	2-Chlorotoluene	
8260B		Air	2-Hexanone	
8260B		Air	2-Methylnaphthalene	
8260B		Air	4-Chlorotoluene	
8260B		Air	4-Isopropyltoluene	
8260B		Air	4-Methyl-2-pentanone	
8260B		Air	Acetone	
8260B		Air	Benzene	
8260B		Air	Bromobenzene	
8260B		Air	Bromodichloromethane	
8260B		Air	Bromoform	
8260B		Air	Bromomethane	
8260B		Air	Carbon disulfide	
8260B		Air	Carbon tetrachloride	
8260B		Air	Chlorobenzene	
8260B		Air	Chloroethane	
8260B			Chloroform	
		Air		
8260B		Air	Chloromethane	
8260B		Air	cis-1,2-Dichloroethene	
8260B		Air	cis-1,3-Dichloropropene	

# **Accreditation/Certification Summary**

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

### **Laboratory: Eurofins Albuquerque (Continued)**

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

ithority	Progra	am	Identification Number	Expiration Date
• •	are included in this report, bu	t the laboratory is not certif	fied by the governing authority. This I	st may include analyte
Analysis Method	Prep Method	Matrix	Analyte	
8260B		Air	 Dibromomethane	
8260B		Air	Dichlorodifluoromethane	
8260B		Air	Ethylbenzene	
8260B		Air	Hexachlorobutadiene	
8260B		Air	Isopropylbenzene	
8260B		Air	Methylene Chloride	
8260B		Air	Methyl-tert-butyl Ether (M	ITBE)
8260B		Air	Naphthalene	
8260B		Air	n-Butylbenzene	
8260B		Air	N-Propylbenzene	
8260B		Air	sec-Butylbenzene	
8260B		Air	Styrene	
8260B		Air	tert-Butylbenzene	
8260B		Air	Tetrachloroethene (PCE)	
8260B		Air	Toluene	
8260B		Air	trans-1,2-Dichloroethene	
8260B		Air	trans-1,3-Dichloropropen	е
8260B		Air	Trichloroethene (TCE)	
8260B		Air	Trichlorofluoromethane	
8260B		Air	Vinyl chloride	
8260B		Air	Xylenes, Total	
egon	NELAI	<b>o</b>	NM100001	02-25-25

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
8015M/D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene

Eurofins Albuquerque

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# **Accreditation/Certification Summary**

Client: Hilcorp Energy Job ID: 885-19771-1

Project/Site: OH Randel 5

### **Laboratory: Eurofins Albuquerque (Continued)**

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

ority	Progra	am	Identification Number Expiration	Date
	are included in this report, bu	ut the laboratory is not certif	ied by the governing authority. This list may include a	nalyte
Analysis Method	Prep Method	Matrix	Analyte	
8260B		Air	1-Methylnaphthalene	
8260B		Air	2,2-Dichloropropane	
8260B		Air	2-Butanone	
8260B		Air	2-Chlorotoluene	
8260B		Air	2-Hexanone	
8260B		Air	2-Methylnaphthalene	
8260B		Air	4-Chlorotoluene	
8260B		Air	4-Isopropyltoluene	
8260B		Air	4-Methyl-2-pentanone	
8260B		Air	Acetone	
8260B		Air	Benzene	
8260B		Air	Bromobenzene	
8260B		Air	Bromodichloromethane	
8260B		Air	Bromoform	
8260B		Air	Bromomethane	
8260B		Air	Carbon disulfide	
8260B		Air	Carbon tetrachloride	
8260B		Air	Chlorobenzene	
8260B		Air	Chloroethane	
8260B		Air	Chloroform	
8260B		Air	Chloromethane	
8260B		Air	cis-1,2-Dichloroethene	
8260B		Air	cis-1,3-Dichloropropene	
8260B		Air	Dibromochloromethane	
8260B		Air	Dibromomethane	
8260B		Air	Dichlorodifluoromethane	
8260B		Air		
8260B		Air	Ethylbenzene Hexachlorobutadiene	
8260B		Air	Isopropylbenzene	
8260B 8260B		Air	Methyl tert butyl Ether (MTRE)	
		Air	Methyl-tert-butyl Ether (MTBE)	
8260B		Air	Naphthalene n-Butylbenzene	
8260B		Air	•	
8260B		Air	N-Propylbenzene	
8260B		Air	sec-Butylbenzene	
8260B		Air	Styrene	
8260B		Air	tert-Butylbenzene	
8260B		Air	Tetrachloroethene (PCE)	
8260B		Air	Toluene	
8260B		Air	trans-1,2-Dichloroethene	
8260B		Air	trans-1,3-Dichloropropene	
8260B		Air	Trichloroethene (TCE)	
8260B		Air	Trichlorofluoromethane	
8260B		Air	Vinyl chloride	
8260B		Air	Xylenes, Total	

Eurofins Albuquerque

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Released to Imaging: 7/17/2025 1:16:25 PM

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February 19, 2025

Eurofins TestAmerica - Albuquerque 4901 Hawkins St NE Ste D Albuquerque, NM 87109-4372

B25020700 Quote ID: B15626 Work Order:

Project Name: 88501698, OH Randel 5

Energy Laboratories Inc Billings MT received the following 2 samples for Eurofins TestAmerica - Albuquerque on 2/13/2025 for analysis.

ANALYTICAL SUMMARY REPORT

Lab ID	Client Sample ID	Collect Date R	eceive Date	Matrix	Test
B25020700-001	Skid 1 (885-19771-1)	02/08/25 15:00	02/13/25	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60
B25020700-002	Skid 2 (885-19771-2)	02/08/25 15:00	02/13/25	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 So. 27th Street, Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

Billings, MT 406.252.6325 . Casper, WY 307.235.0515

Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Eurofins TestAmerica - Albuquerque

Project:

**Report Date:** 02/19/25 88501698, OH Randel 5 Collection Date: 02/08/25 15:00 Lab ID: B25020700-001 DateReceived: 02/13/25 Client Sample ID: Skid 1 (885-19771-1) Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.50	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Nitrogen	78.02	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Carbon Dioxide	0.30	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Methane	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Isopentane	0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
n-Pentane	0.01	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Hexanes plus	0.16	Mol %		0.01		GPA 2261-13	02/14/25 08:38 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
Isopentane	0.004	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
n-Pentane	0.004	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
Hexanes plus	0.067	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
GPM Total	0.075	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
GPM Pentanes plus	0.075	gpm		0.001		GPA 2261-13	02/14/25 08:38 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	8			1		GPA 2261-13	02/14/25 08:38 / jrj
Net BTU per cu ft @ std cond. (LHV)	8			1		GPA 2261-13	02/14/25 08:38 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-13	02/14/25 08:38 / jrj
Pseudo-critical Temperature, deg R	241			1		GPA 2261-13	02/14/25 08:38 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	02/14/25 08:38 / jrj
Air, % - The analysis was not corrected for air.	98.25			0.01		GPA 2261-13	02/14/25 08:38 / jrj
0011151170							

**COMMENTS** 

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

RL - Analyte Reporting Limit Report **Definitions:** 

QCL - Quality Control Limit

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

02/14/25 08:38 / jrj

Billings, MT 406.252.6325 . Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Eurofins TestAmerica - Albuquerque Client:

Project: 88501698, OH Randel 5

Lab ID: B25020700-002 Client Sample ID: Skid 2 (885-19771-2)

**Report Date:** 02/19/25 Collection Date: 02/08/25 15:00 DateReceived: 02/13/25

Matrix: Air

02/14/25 09:27 / jrj

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.92	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Nitrogen	77.91	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Carbon Dioxide	0.12	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Hydrogen Sulfide	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Methane	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Ethane	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Propane	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
n-Butane	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
n-Pentane	< 0.01	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Hexanes plus	0.05	Mol %		0.01		GPA 2261-13	02/14/25 09:27 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
Hexanes plus	0.021	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
GPM Total	0.021	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
GPM Pentanes plus	0.021	gpm		0.001		GPA 2261-13	02/14/25 09:27 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-13	02/14/25 09:27 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-13	02/14/25 09:27 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-13	02/14/25 09:27 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-13	02/14/25 09:27 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	02/14/25 09:27 / jrj
Air, % - The analysis was not corrected for air.	100.16			0.01		GPA 2261-13	02/14/25 09:27 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

**COMMENTS** 

RL - Analyte Reporting Limit Report **Definitions:** 

QCL - Quality Control Limit

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)



Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

# **QA/QC Summary Report**

Prepared by Billings, MT Branch

**Work Order:** B25020700 **Report Date:** 02/19/25

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-13									Batch:	R436876
Lab ID:	B25020706-001ADUP	12 Sai	mple Duplic	ate			Run: GC789	90_250214A		02/14/	25 12:43
Oxygen			21.8	Mol %	0.01				0.4	20	
Nitrogen			78.1	Mol %	0.01				0.1	20	
Carbon D	ioxide		0.12	Mol %	0.01				8.0	20	
Hydrogen	Sulfide		<0.01	Mol %	0.01					20	
Methane			<0.01	Mol %	0.01					20	
Ethane			<0.01	Mol %	0.01					20	
Propane			<0.01	Mol %	0.01					20	
Isobutane			<0.01	Mol %	0.01					20	
n-Butane			<0.01	Mol %	0.01					20	
Isopentan	е		<0.01	Mol %	0.01					20	
n-Pentane	e		<0.01	Mol %	0.01					20	
Hexanes <sub>l</sub>	plus		<0.01	Mol %	0.01					20	
Lab ID:	LCS021825	11 Lat	ooratory Co	ntrol Sample			Run: GC789	90_250214A		02/14/	/25 02:42
Oxygen			0.61	Mol %	0.01	122	70	130			
Nitrogen			6.02	Mol %	0.01	100	70	130			
Carbon D	ioxide		0.98	Mol %	0.01	99	70	130			
Methane			74.8	Mol %	0.01	100	70	130			
Ethane			5.99	Mol %	0.01	100	70	130			
Propane			5.00	Mol %	0.01	101	70	130			
Isobutane			1.84	Mol %	0.01	92	70	130			
n-Butane			1.98	Mol %	0.01	99	70	130			
Isopentan	е		1.00	Mol %	0.01	100	70	130			
n-Pentane	e		0.99	Mol %	0.01	99	70	130			
Hexanes <sub>l</sub>	plus		0.79	Mol %	0.01	99	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

# **Work Order Receipt Checklist**

# Eurofins TestAmerica - Albuquerque B25020700

Login completed by:	Crystal M. Jones		Date	e Received: 2/13/2025	
Reviewed by:	Icadreau		R	eceived by: DNH	
Reviewed Date:	2/13/2025		Ca	rrier name: FedEx NDA	
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present	
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present ✓	
Chain of custody present?		Yes 🔽	No 🗌		
Chain of custody signed wh	en relinquished and received?	Yes 🗸	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🗸	No 🗌		
Samples in proper container	/bottle?	Yes 🔽	No 🗌		
Sample containers intact?		Yes 🔽	No 🗌		
Sufficient sample volume for	r indicated test?	Yes 🔽	No 🗌		
All samples received within (Exclude analyses that are c such as pH, DO, Res Cl, Su	considered field parameters	Yes √	No 🗌		
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temp	erature:	5.3°C No Ice			
Containers requiring zero he bubble that is <6mm (1/4").	eadspace have no headspace or	Yes	No 🗌	No VOA vials submitted	
Water - pH acceptable upon	receipt?	Yes	No 🗌	Not Applicable 🗹	

# **Standard Reporting Procedures:**

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

#### **Contact and Corrective Action Comments:**

None

**ENERGY** 

Billings, MT 406.252.6325 . Casper, WY 307.235.0515 Gillette, WY 307.686.7175 . Helena, MT 406.442.0711

Number

Agency Alaska 17-023 California 3087 Colorado MT00005 Department of Defense (DoD)/ISO17025 ADE-2588 Billings, MT Florida (Primary NELAP) E87668 Idaho MT00005 Louisiana 05079 Montana CERT0044 Nebraska NE-OS-13-04 NV-C24-00250 Nevada North Dakota R-007 National Radon Proficiency 109383-RMP Oregon 4184 South Dakota ARSD 74:04:07 Texas TX-C24-00302 US EPA Region VIII Reciprocal **USDA Soil Permit** P330-20-00170 Washington C1039 Alaska 20-006 California 3021 Colorado WY00002 Florida (Primary NELAP) E87641 Idaho WY00002 Louisiana 05083 Casper, WY Montana CERT0002 NE-OS-08-04 Nebraska NV-C24-00245 Nevada North Dakota R-125 Oregon WY200001 South Dakota WY00002 T104704181-23-21 Texas US EPA Region VIII WY00002 **USNRC** License 49-26846-01 Washington C1012 Gillette, WY US EPA Region VIII WY00006 Colorado MT00945 Helena, MT Montana CERT0079 Nevada NV-C24-00119 US EPA Region VIII Reciprocal **USDA Soil Permit** P330-20-00090

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

**Environment Testing** 

🔆 eurofins

Received by OCD: 7/15/2025 9:50:30 AM

# **Eurofins Albuquerque**

# rd

01 Hawkins NE	Chain of Custody Recor
uguerque. NM 87109	Chain of Guotouy Mood.

Client Information (Sub Contract Lab)	Sampler: N/A									Carrier Tracking No(s): N/A				COC No: 885-3868.1		
Client Information (Sub Contract Lab)	Phone:					State of			ate of Origin: ew Mexico				Page: Page 1 of 1			
Shipping/Receiving	N/A						Required (S			ive	VIVICAIC	lexico			Job#:	
Company: Energy Laboratories, Inc.							egon; Sta			00					885-19771-1	
Address: 1120 South 27th Street,	Due Date Requeste 2/19/2025	Due Date Requested: 2/19/2025						Anal	ysis R	Reque	sted				Preservation Co	des:
City: Billings	TAT Requested (d.	iys): N/A														
State, Zip: MT, 59101																
Phone: 406-252-6325(Tel)	PO#: N/A				<u>(o</u>											
Email: N/A	WO#: N/A				S or N	NO)					Ш			Sie		
Project Name: OH Randel 5	Project #: 88501698				ered Sample (Yes or No	xed G								containers		
Site: N/A	SSOW#: N/A				Samp	es)/Fi							III	of cc	Other: N/A	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time		Matrix (W=water, 8=solid, 0=waste/oil, BT=Tissue, A=Air)	old Filtered	SUB (Fixed Gases)/ Fixed Gases		Ministra Marcoll						Total Number of	Special I	nstructions/Note:
		$\sim$	Preserva	ition Code:	XV)	$\triangleleft$								X	See Attached Ins	tauctions
Skid 1 (885-19771-1)	2/8/25	15:00 Mountain	G	Air		X								1		
Skid 2 (885-19771-2)	2/8/25	15:00 Mountain	G	Air		X								1	See Attached Ins	
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			- 46 5 5 5 5 5 5 5		Ш		tation	linear	00.00	ubanata	at laborat	vine T	nie some!	a object	ent is forwarded and	er chain-of-custody If th
Note: Since laboratory accreditations are subject to change, Eurofins En laboratory does not currently maintain accreditation in the State of Origin accreditation status should be brought to Eurofins Environment Testing \$																
Possible Hazard Identification															ed longer than	
Unconfirmed						272	eturn To C	1000	L		osal By	Lab	L	Arch	ive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2		S	Special I	nstruction	s/QC F	Require	ments:						
Empty Kit Relinquished by:		Date:			Time	e:					Method	of Ship	ment:			
Relinquished by: May Malaka	Date/Time/12/3	5 /	315	Company		Rece	ved by:					Dat	ie/Time:			Company
Relinquished by:	Date/Time:			Company		Rece	ived by:	Received by:		4	Date/Time:				Company	
				Company		Received by:			Date/Time:							









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Received by OCD: 7/15/2025 9:50:30 AM

ICOC No: 885-3868

Containers

Count 2

Container Type Tedlar Bag 1L

<u>Preservative</u> None

Subcontract Method Instructions

Sample IDs Method I		Method Description	Method Comments	
1.2	SUBCONTRACT	SUB (Fixed Gases)/ Fixed Gases	Fixed Gases	

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Chain-of-Custody Record	Turn-Around Time:  Standard	HALL ENVIRONMENTAL ANALYSIS LABOR  www.hallenvironmental.com  4901 Hawkins NE - Albuquerque, NM 87109 885-19771 coc Tel. 505-345-3975 Fax 505-345-4107  Analysis Request
Mailing Address:	OH Randel 5 Project #:	4901 Hawkins NE - Albuquerque, NM 87109 885-19771 COC Tel. 505-345-3975 Fax 505-345-4107
Phone #:		
email or Fax#: brandoh. Sinclair Dhilearp.com  QA/QC Package:  □ Standard □ Level 4 (Full Validation)  Accreditation: □ Az Compliance	Samantha Grabert	TMB's (8021) 1/ DRO / MRO) 8082 PCB's 4.1) 1/ R270SIMS NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> 1/ Pt+ 1/ Dt+ 1/ D
Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other ☐ EDD (Type)	Sampler: Brandon Sindair On Ice: Yes No	TBE / TMB  TGRO / DR  cides/8082  cides/8082  and 504.1)  310 or 827  NO <sub>3</sub> , NO <sub>2</sub> ,  NO <sub>3</sub> , NO <sub>2</sub> ,  TM (Preser
Date Time Matrix Sample Name	# of Coolers: 1	BTEX / MTBE / TMB's (8021)  TPH:8015D(GRO / DRO / MRO)  8081 Pesticides/8082 PCB's  EDB (Method 504.1)  PAH's by 8310 or 8270SIMS  RCRA 8 Metals  CI, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> 8260 (VOA)  8270 (Semi-VOA)  Total Coliform (Present/Absent)  \$\frac{\frac{8D}{2}}{\frac{7}{2}} \frac{\frac{7}{2}}{\frac{7}{2}} \frac{7}{2} \frac{7}{2} \frac{7}{2} \frac{7}{2}} \frac{7}{2} \frac{7}{2} \frac{7}{2} \frac{7}{2} \frac{7}{2} \frac{7}{2}} \frac{7}{2} 7
2-8 1500 gir skid 1	Type and # Type  2 Tedlar	
2-8 1500 air Skid 2	2 Teller	
Date Time Relinquished by  Yulzs 1228 Production	Received by Via Date Time  What Li Cular 7/11/25 / 228	Remarks:
Date Time Relinquished by    Z/u/x NW (MA)	Received by Via. Date Time  Time  Time  Time	Page 57
	bcontracted to other accredited laboratories This serves as notice of the	is possibility Any sub-contracted data will be clearly notated on the analytical report.

# **Login Sample Receipt Checklist**

Client: Hilcorp Energy Job Number: 885-19771-1

Login Number: 19771 List Source: Eurofins Albuquerque

List Number: 1

Creator: McQuiston, Steven

Creator: McQuiston, Steven		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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.	False	Thermal preservation not required.
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	

# PREPARED FOR

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

Generated 6/2/2025 4:58:42 PM

# **JOB DESCRIPTION**

OH Randel 5

# **JOB NUMBER**

885-25198-1

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 6/2/2025 4:58:42 PM

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

Page 2 of 27 6/2/2025

3

4

5

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8

1 4

Laboratory Job ID: 885-25198-1

Client: Hilcorp Energy Project/Site: OH Randel 5

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# **Definitions/Glossary**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

00 20 100 1

## **Glossary**

MDA

MDC

Abbreviation	These commonly used abbreviations may or may not be present in this report.
<del>\( \phi \)</del>	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"

MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Coloulated

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

Minimum Detectable Activity (Radiochemistry)

Minimum Detectable Concentration (Radiochemistry)

 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 Job ID: 885-25198-1 Project: OH Randel 5

Job ID: 885-25198-1 **Eurofins Albuquerque** 

> Job Narrative 885-25198-1

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 5/20/2025 6:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

#### Subcontract Work

Method Fixed Gases: This method was subcontracted to Energy Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

#### GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 885-26885 recovered above the upper control limit for 2,2-Dichloropropane and Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

### **Gasoline Range Organics**

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

# **Client Sample Results**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

Dichlorodifluoromethane

Released to Imaging: 7/17/2025 1:16:25 PM

Hexachlorobutadiene

Ethylbenzene

Client Sample ID: Skid 1

Lab Sample ID: 885-25198-1 Date Collected: 05/19/25 12:45

Matrix: Air

Date Received: 05/20/25 06:50 Sample Container: Tedlar Bag 1L

Analyte	Result Qualifier	RL	Unit	D Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L		05/23/25 16:51	50
1,1,1-Trichloroethane	ND	5.0	ug/L		05/23/25 16:51	50
1,1,2,2-Tetrachloroethane	ND	10	ug/L		05/23/25 16:51	50
1,1,2-Trichloroethane	ND	5.0	ug/L		05/23/25 16:51	50
1,1-Dichloroethane	ND	5.0	ug/L		05/23/25 16:51	50
1,1-Dichloroethene	ND	5.0	ug/L		05/23/25 16:51	50
1,1-Dichloropropene	ND	5.0	ug/L		05/23/25 16:51	50
1,2,3-Trichlorobenzene	ND	5.0	ug/L		05/23/25 16:51	50
1,2,3-Trichloropropane	ND	10	ug/L		05/23/25 16:51	50
1,2,4-Trichlorobenzene	ND	5.0	ug/L		05/23/25 16:51	50
1,2,4-Trimethylbenzene	ND	5.0	ug/L		05/23/25 16:51	50
1,2-Dibromo-3-Chloropropane	ND	10	ug/L		05/23/25 16:51	50
1,2-Dibromoethane (EDB)	ND	5.0	ug/L		05/23/25 16:51	50
1,2-Dichlorobenzene	ND	5.0	ug/L		05/23/25 16:51	50
1,2-Dichloroethane (EDC)	ND	5.0	ug/L		05/23/25 16:51	50
1,2-Dichloropropane	ND	5.0	ug/L		05/23/25 16:51	50
1,3,5-Trimethylbenzene	ND	5.0	ug/L		05/23/25 16:51	50
1,3-Dichlorobenzene	ND	5.0	ug/L		05/23/25 16:51	50
1,3-Dichloropropane	ND	5.0	ug/L		05/23/25 16:51	50
1,4-Dichlorobenzene	ND	5.0	ug/L		05/23/25 16:51	50
1-Methylnaphthalene	ND	20	ug/L		05/23/25 16:51	50
2,2-Dichloropropane	ND	10	ug/L		05/23/25 16:51	50
2-Butanone	ND	50	ug/L		05/23/25 16:51	50
2-Chlorotoluene	ND	5.0	ug/L		05/23/25 16:51	50
2-Hexanone	ND	50	ug/L		05/23/25 16:51	50
2-Methylnaphthalene	ND	20	ug/L		05/23/25 16:51	50
4-Chlorotoluene	ND	5.0	ug/L		05/23/25 16:51	50
4-Isopropyltoluene	ND	5.0	ug/L		05/23/25 16:51	50
4-Methyl-2-pentanone	ND	50	ug/L		05/23/25 16:51	50
Acetone	ND	50	ug/L		05/23/25 16:51	50
Benzene	87	5.0	ug/L		05/23/25 16:51	50
Bromobenzene	ND	5.0	ug/L		05/23/25 16:51	50
Bromodichloromethane	ND	5.0	ug/L		05/23/25 16:51	50
Dibromochloromethane	ND	5.0	ug/L		05/23/25 16:51	50
Bromoform	ND	5.0	ug/L		05/23/25 16:51	50
Bromomethane	ND	15	ug/L		05/23/25 16:51	50
Carbon disulfide	ND	50	ug/L		05/23/25 16:51	50
Carbon tetrachloride	ND	5.0	ug/L		05/23/25 16:51	50
Chlorobenzene	ND	5.0	ug/L		05/23/25 16:51	50
Chloroethane	ND	10	ug/L		05/23/25 16:51	50
Chloroform	ND	5.0	ug/L		05/23/25 16:51	50
Chloromethane	ND	15	ug/L		05/23/25 16:51	50
cis-1,2-Dichloroethene	ND	5.0	ug/L ug/L		05/23/25 16:51	
cis-1,3-Dichloropropene	ND ND	5.0	ug/L ug/L		05/23/25 16:51	50
			_			
Dibromomethane	ND	5.0	ug/L		05/23/25 16:51	50

Eurofins Albuquerque

05/23/25 16:51

05/23/25 16:51

05/23/25 16:51

5.0

5.0

5.0

ug/L

ug/L

ug/L

ND

7.2

ND

50

50

Job ID: 885-25198-1

### **Client Sample Results**

Client: Hilcorp Energy

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Result Qualifier

ND

240

ND

ND

ND

ND

ND

Project/Site: OH Randel 5

Analyte

Isopropylbenzene

Methylene Chloride

n-Butylbenzene

Naphthalene

Styrene

**Toluene** 

N-Propylbenzene

sec-Butylbenzene

tert-Butylbenzene

Tetrachloroethene (PCE)

trans-1,2-Dichloroethene

Trichloroethene (TCE)

Trichlorofluoromethane

Vinyl chloride

trans-1,3-Dichloropropene

Methyl-tert-butyl Ether (MTBE)

Client Sample ID: Skid 1 Lab Sample ID: 885-25198-1 Date Collected: 05/19/25 12:45 Matrix: Air

RL

5.0

5.0

15

15

5.0

10

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.0

Unit

ug/L

Date Received: 05/20/25 06:50 Sample Container: Tedlar Bag 1L

) 	Prepared	Analyzed	Dil Fac
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50
		05/23/25 16:51	50

05/23/25 16:51

05/23/25 16:51

05/23/25 16:51

05/23/25 16:51

05/23/25 16:51

05/23/25 16:51

05/23/25 16:51

Xylenes, Total	59	7.5	ug/L		05/23/25 16:51	50
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79	70 - 130			05/23/25 16:51	50
Toluene-d8 (Surr)	115	70 - 130			05/23/25 16:51	50
4-Bromofluorobenzene (Surr)	88	70 - 130			05/23/25 16:51	50
Dibromofluoromethane (Surr)	82	70 130			05/23/25 16:51	50

Method: SW846 8015D - Gasolir	ne Range Organ	nics (GRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	16000		250	ug/L			05/22/25 11:35	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135		15 - 150		=		05/22/25 11:35	50

Eurofins Albuquerque

50

50

50

50

50

# **Client Sample Results**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

Client Sample ID: Skid 2

Date Collected: 05/19/25 12:50

Date Received: 05/20/25 06:50 Sample Container: Tedlar Bag 1L Lab Sample ID: 885-25198-2

Matrix: Air

Method: SW846 8260B - Vola	atile Organic Compo	unds (GC/MS)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND ND		5.0	ug/L			05/23/25 17:16	5
1,1,1-Trichloroethane	ND		5.0	ug/L			05/23/25 17:16	5
1,1,2,2-Tetrachloroethane	ND		10	ug/L			05/23/25 17:16	5
1,1,2-Trichloroethane	ND		5.0	ug/L			05/23/25 17:16	5
1,1-Dichloroethane	ND		5.0	ug/L			05/23/25 17:16	5
1,1-Dichloroethene	ND		5.0	ug/L			05/23/25 17:16	5
1,1-Dichloropropene	ND		5.0	ug/L			05/23/25 17:16	5
1,2,3-Trichlorobenzene	ND		5.0	ug/L			05/23/25 17:16	5
1,2,3-Trichloropropane	ND		10	ug/L			05/23/25 17:16	į
1,2,4-Trichlorobenzene	ND		5.0	ug/L			05/23/25 17:16	
1,2,4-Trimethylbenzene	ND		5.0	ug/L			05/23/25 17:16	į
1,2-Dibromo-3-Chloropropane	ND		10	ug/L			05/23/25 17:16	
1,2-Dibromoethane (EDB)	ND		5.0	ug/L			05/23/25 17:16	
1,2-Dichlorobenzene	ND		5.0	ug/L			05/23/25 17:16	
1,2-Dichloroethane (EDC)	ND		5.0	ug/L			05/23/25 17:16	
1,2-Dichloropropane	ND		5.0	ug/L			05/23/25 17:16	
1,3,5-Trimethylbenzene	ND		5.0	ug/L			05/23/25 17:16	
1,3-Dichlorobenzene	ND		5.0	ug/L			05/23/25 17:16	
1,3-Dichloropropane	ND		5.0	ug/L			05/23/25 17:16	
1,4-Dichlorobenzene	ND		5.0	ug/L			05/23/25 17:16	
1,4-Dichlorobenzene 1-Methylnaphthalene	ND ND		20	ug/L			05/23/25 17:16	·
2,2-Dichloropropane	ND ND		10				05/23/25 17:16	
2-Butanone	ND ND		50	ug/L			05/23/25 17:16	,
2-Chlorotoluene	ND ND		5.0	ug/L ug/L			05/23/25 17:16	,
2-Hexanone	ND		50	ug/L			05/23/25 17:16	
2-Methylnaphthalene	ND		20	ug/L			05/23/25 17:16	
4-Chlorotoluene	ND		5.0	ug/L			05/23/25 17:16	
4-Isopropyltoluene	ND		5.0	ug/L			05/23/25 17:16	
4-Methyl-2-pentanone	ND		50	ug/L			05/23/25 17:16	
Acetone	ND		50	ug/L			05/23/25 17:16	
Benzene -	26		5.0	ug/L			05/23/25 17:16	
Bromobenzene	ND		5.0	ug/L			05/23/25 17:16	
Bromodichloromethane	ND		5.0	ug/L			05/23/25 17:16	
Dibromochloromethane	ND		5.0	ug/L			05/23/25 17:16	
Bromoform	ND		5.0	ug/L			05/23/25 17:16	;
Bromomethane	ND		15	ug/L			05/23/25 17:16	
Carbon disulfide	ND		50	ug/L			05/23/25 17:16	
Carbon tetrachloride	ND		5.0	ug/L			05/23/25 17:16	!
Chlorobenzene	ND		5.0	ug/L			05/23/25 17:16	į
Chloroethane	ND		10	ug/L			05/23/25 17:16	
Chloroform	ND		5.0	ug/L			05/23/25 17:16	!
Chloromethane	ND		15	ug/L			05/23/25 17:16	
cis-1,2-Dichloroethene	ND		5.0	ug/L			05/23/25 17:16	
cis-1,3-Dichloropropene	ND		5.0	ug/L			05/23/25 17:16	
Dibromomethane	ND		5.0	ug/L			05/23/25 17:16	
Dichlorodifluoromethane	ND		5.0	ug/L			05/23/25 17:16	
Ethylbenzene	ND		5.0	ug/L			05/23/25 17:16	į
Hexachlorobutadiene	ND		5.0	ug/L			05/23/25 17:16	

## **Client Sample Results**

Client: Hilcorp Energy

ND

ND

14

Project/Site: OH Randel 5

Trichloroethene (TCE)

Trichlorofluoromethane

Vinyl chloride

**Xylenes, Total** 

Client Sample ID: Skid 2

Lab Sample ID: 885-25198-2

05/23/25 17:16

05/23/25 17:16

05/23/25 17:16

Matrix: Air

Date Collected: 05/19/25 12:50 Date Received: 05/20/25 06:50 Sample Container: Tedlar Bag 1L

Job ID: 885-25198-1

Sample Container: Tedlar Bag 1L								
Method: SW846 8260B - Volatile	Organic Compounds	s (GC/MS) (Continued)						5
Analyte	Result Qualif		Unit	D	Prepared	Analyzed	Dil Fac	
Isopropylbenzene	ND ND	5.0	ug/L			05/23/25 17:16	50	
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/L			05/23/25 17:16	50	
Methylene Chloride	ND	15	ug/L			05/23/25 17:16	50	
n-Butylbenzene	ND	15	ug/L			05/23/25 17:16	50	
N-Propylbenzene	ND	5.0	ug/L			05/23/25 17:16	50	8
Naphthalene	ND	10	ug/L			05/23/25 17:16	50	
sec-Butylbenzene	ND	5.0	ug/L			05/23/25 17:16	50	a
Styrene	ND	5.0	ug/L			05/23/25 17:16	50	9
tert-Butylbenzene	ND	5.0	ug/L			05/23/25 17:16	50	
Tetrachloroethene (PCE)	ND	5.0	ug/L			05/23/25 17:16	50	
Toluene	69	5.0	ug/L			05/23/25 17:16	50	
trans-1,2-Dichloroethene	ND	5.0	ug/L			05/23/25 17:16	50	
trans-1,3-Dichloropropene	ND	5.0	ug/L			05/23/25 17:16	50	
Trichloroethene (TCE)	ND	5.0	ug/L			05/23/25 17:16	50	

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90	70 - 130		05/23/25 17:16	50
Toluene-d8 (Surr)	108	70 - 130		05/23/25 17:16	50
4-Bromofluorobenzene (Surr)	85	70 - 130		05/23/25 17:16	50
Dibromofluoromethane (Surr)	88	70 - 130		05/23/25 17:16	50

5.0

5.0

7.5

ug/L

ug/L

ug/L

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	4700		250	ug/L			05/22/25 12:22	50	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	112	-	15 - 150		-		05/22/25 12:22	50	

50

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

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

Lab Sample ID: MB 885-26885/5

Matrix: Air Analysis Batch: 26885

Hexachlorobutadiene

Released to Imaging: 7/17/2025 1:16:25 PM

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

Many		MB	MB						
1.1.1-Tickhoroenthane         ND         0.10         ugl.         BB2226 1245         1           1.1.2-Tickhoroenthane         ND         0.20         ugl.         082326 1245         1           1.1.2-Cinchoroenthane         ND         0.10         ugl.         082326 1245         1           1.1.1-Chichioroenthane         ND         0.10         ugl.         082326 1245         1           1.1.1-Chichioroenthane         ND         0.10         ugl.         082326 1245         1           1.1.1-Chichioroenthane         ND         0.10         ugl.         082325 1245         1           1.2.3-Tichichoroenthane         ND         0.10         ugl.         082325 1245         1           1.2.3-Tichichoroenthane         ND         0.10         ugl.         082325 1245         1           1.2.4-Tirneithylbenzene         ND         0.10         ugl.         082325 1245         1           1.2-Chichoroenthane (EDB)         ND         0.10         ugl.         082325 1245         1           1.2-Chichoroenthane (EDB)         ND         0.10         ugl.         082325 1245         1           1.2-Chichoroenthane (EDB)         ND         0.10         ugl.         082325 1245	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-2-Frachinocethane         ND         0.20         ugl.         052225 1245         1           1,1,2-Trichinocethane         ND         0.10         ugl.         052325 1245         1           1,1-Dichiorethane         ND         0.10         ugl.         052325 1245         1           1,1-Dichiorethane         ND         0.10         ugl.         052325 1245         1           1,2-3-Trichiorebarrane         ND         0.10         ugl.         052325 1245         1           1,2-4-Trichiorebarrane         ND         0.10         0.10         ugl.         052325 1245         1           1,2-Dichiorosethane (EDD)         ND         0.10         0.10         ugl.         052325 1245         1           1,2-Dichiorosethane (EDC)         ND         0.10         ugl. <t< td=""><td>1,1,1,2-Tetrachloroethane</td><td>ND</td><td></td><td>0.10</td><td>ug/L</td><td></td><td></td><td>05/23/25 12:45</td><td>1</td></t<>	1,1,1,2-Tetrachloroethane	ND		0.10	ug/L			05/23/25 12:45	1
1,12-Tickhiroseblane         ND         0,10         ug/L         682228 1245         1           1,1-Dichloroseblane         ND         0,10         ug/L         082328 1245         1           1,1-Dichloroseblane         ND         0,10         ug/L         062328 1245         1           1,1-Dichloroseblane         ND         0,10         ug/L         062328 1245         1           1,2-3-Tickhorosepane         ND         0,10         ug/L         062328 1245         1           1,2-4-Tickhorosepane         ND         0,10         ug/L         062328 1245         1           1,2-Dichlorosebrane (EDB)         ND         0,10         ug/L         062328 1245         1           1,2-Dichlorosebrane (EDB)         ND         0,10         ug/L         062328 1245         1           1,2-Dichlorosebrane (EDD)         ND         0,10         ug/L         062328 1245         1	1,1,1-Trichloroethane	ND		0.10	ug/L			05/23/25 12:45	1
1.1-Dichloroethane	1,1,2,2-Tetrachloroethane	ND		0.20	ug/L			05/23/25 12:45	1
1,1-Dichloroethene         ND         0.10         ug/L         05/32/5 12/45         1           1,1-Dichloropropene         ND         0.10         ug/L         05/32/5 12/45         1           1,2-3-Trichloropropane         ND         0.10         ug/L         05/32/5 12/45         1           1,2-3-Trichloropropane         ND         0.10         ug/L         05/32/5 12/45         1           1,2-4-Trinhorboropropane         ND         0.10         ug/L         05/32/5 12/45         1           1,2-Dibromoe-Schloropropane         ND         0.10         ug/L         05/32/5 12/45         1           1,2-Dibromoe-Schloropropane         ND         0.10         ug/L         05/32/5 12/45         1           1,2-Dichlorobarzene         ND         0.10         ug/L         05/32/5 12/45         1           1,2-Dichlorobarzene         ND         0.10         ug/L         05/32/5 12/45         1           1,2-Dichlorobarzene         ND         0.10         ug/L         05/32/5 12/45         1           1,2-Dichloropropane         ND         0.10         ug/L         05/32/5 12/45         1           1,3-Simmelly Genzae         ND         0.10         ug/L         05/32/35 12/45	1,1,2-Trichloroethane	ND		0.10	ug/L			05/23/25 12:45	1
1.1-Dichloropropene ND 0.10 0.10 0.10 0.10 0.10 0.10 0.52325 12.45 1.1 1.2.3-Trichliropropane ND 0.20 0.10 0.10 0.10 0.10 0.10 0.10 0.10	1,1-Dichloroethane	ND		0.10	ug/L			05/23/25 12:45	1
1.2.3-Trichloroberzene         ND         0.10         uglt         0523251245         1           1.2.3-Trichloropropane         ND         0.20         uglt         0523251245         1           1.2.4-Trichloroberzene         ND         0.10         uglt         0523251245         1           1.2.4-Trimethylbenzene         ND         0.10         uglt         0523251245         1           1.2-Dibrono-Chloropropane         ND         0.10         uglt         0523251245         1           1.2-Dibrionoethane (EDB)         ND         0.10         uglt         0523251245         1           1.2-Dichloroberzene         ND         0.10         uglt         0523251245         1           1.2-Dichloropropane         ND         0.10         uglt         0523251245         1           1.2-Dichloropropane         ND         0.10         uglt         0523251245         1           1.3-Dichloropropane         ND         0.10         uglt         0523251245         1           1.3-Dichloropropane         ND         0.10         uglt         0523251245         1           1.3-Dichloropropane         ND         0.10         uglt         0523251245         1	1,1-Dichloroethene	ND		0.10	ug/L			05/23/25 12:45	1
1.2.3-Trichloropropane         ND         0.20         ugl.         0523/25 1245         1           1.2.4-Trinchlorobenzene         ND         0.10         ugl.         0523/25 1245         1           1.2.4-Trinchlorobenzene         ND         0.10         ugl.         0523/25 1245         1           1.2-Dibrono-3-Chloropropane         ND         0.10         ugl.         0523/25 1245         1           1.2-Dichloroberzene         ND         0.10         ugl.         0523/25 1245         1           1.2-Dichloroberzene         ND         0.10         ugl.         0523/25 1245         1           1.2-Dichloropenzene         ND         0.10         ugl.         0523/25 1245         1           1.3-Dichloropenzene         ND         0.10         ugl.         0523/25 1245         1           1.3-Dichloropenzene         ND         0.10         ugl.         0523/25 1245         1           1.4-Dichloropenzene         ND         0.10         ugl.         0523/25 1245         1           1.4-Dichloropenzene         ND         0.10         ugl.         0523/25 1245         1           1.4-Dichloropenzene         ND         0.10         ugl.         0523/25 1245         1 <td>1,1-Dichloropropene</td> <td>ND</td> <td></td> <td>0.10</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	1,1-Dichloropropene	ND		0.10	ug/L			05/23/25 12:45	1
1,2,4-Trichloroberurene         ND         0.10         ugl.         05/23/25 1245         1           1,2,4-Trimethylbenzene         ND         0.10         ugl.         05/23/25 1245         1           1,2-Dibromo-Chilogropane         ND         0.20         ugl.         05/23/25 1245         1           1,2-Dibromoethane (EDB)         ND         0.10         ugl.         05/23/25 1245         1           1,2-Dichlorobertane (EDC)         ND         0.10         ugl.         05/23/25 1245         1           1,2-Dichloropropane         ND         0.10         ugl.         05/23/25 1245         1           1,2-Dichloropropane         ND         0.10         ugl.         05/23/25 1245         1           1,3-Dichloropropane         ND         0.10         ugl.         05/23/25 1245         1           1,3-Dichloropropane         ND         0.10         ugl.         05/23/25 1245         1           1,4-Dichloropropane         ND         0.10         ugl.         05/23/25 1245         1           1,4-Methylnaphthalene         ND         0.10         ugl.         05/23/25 1245         1           2-Dichoropropane         ND         0.10         ugl.         05/23/25 1245	1,2,3-Trichlorobenzene	ND		0.10	ug/L			05/23/25 12:45	1
1,2,4-Trimethylbenzene         ND         0.10         ug/L         05/23/25 12:45         1           1,2-Dibromo-3-Chloropropane         ND         0.20         ug/L         05/23/25 12:45         1           1,2-Dibromo-Brane (EDB)         ND         0.10         ug/L         05/23/25 12:45         1           1,2-Dichlorobernane         ND         0.10         ug/L         05/23/25 12:45         1           1,2-Dichloroperpane         ND         0.10         ug/L         05/23/25 12:45         1           1,3-Dichloroperpane         ND         0.10         ug/L         05/23/25 12:45         1           1,3-Dichloroperpane         ND         0.10         ug/L         05/23/25 12:45         1           1,3-Dichloroperpane         ND         0.10         ug/L         05/23/25 12:45         1           1,4-Dichloroperpane         ND         0.10         ug/L         05/23/25 12:45	1,2,3-Trichloropropane	ND		0.20	ug/L			05/23/25 12:45	1
1,2-Dibromo-3-Chioropropane         ND         0,20         ug/L         0523/25 12:45         1           1,2-Dibromoethane (EDB)         ND         0.10         ug/L         0523/25 12:45         1           1,2-Dichloroberane         ND         0.10         ug/L         0523/25 12:45         1           1,2-Dichloroperane         ND         0.10         ug/L         0523/25 12:45         1           1,2-Dichloroperane         ND         0.10         ug/L         0523/25 12:45         1           1,3-Dichloroperane         ND         0.10         ug/L         0523/25 12:45         1           1,3-Dichloroperane         ND         0.10         ug/L         0523/25 12:45         1           1,3-Dichloroperane         ND         0.10         ug/L         0523/25 12:45         1           1,4-Dichloroperane         ND         0.10         ug/L         0523/25 12:45         1	1,2,4-Trichlorobenzene	ND		0.10	ug/L			05/23/25 12:45	1
1,2-Dibromoethane (EDB)         ND         0.10         ug/L         05/23/25 12.45         1           1,2-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,2-Dichlorobrane (EDC)         ND         0.10         ug/L         05/23/25 12.45         1           1,2-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorobracene         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           2,2-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           2,2-Dichloropropane         ND         0.0         ug/L         05/23/25 12.45         1           2,2-Dichloropropane         ND         0.0         ug/L         05/23/25 12.45         1 </td <td>1,2,4-Trimethylbenzene</td> <td>ND</td> <td></td> <td>0.10</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	1,2,4-Trimethylbenzene	ND		0.10	ug/L			05/23/25 12:45	1
1,2-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,2-Dichlorocethane (EDC)         ND         0.10         ug/L         05/23/25 12.45         1           1,2-Dichlorocepoane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorocepoane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorocepoane         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichlorobenzene         ND         0.40         ug/L         05/23/25 12.45         1           1,4-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2-Butanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1	1,2-Dibromo-3-Chloropropane	ND		0.20	ug/L			05/23/25 12:45	1
1,2-Dichloroethane (EDC)         ND         0.10         ug/L         05/23/25 12.45         1           1,2-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichlorobenzene         ND         0.40         ug/L         05/23/25 12.45         1           1,4-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2,2-Dichloropropane         ND         0.40         ug/L         05/23/25 12.45         1           2,2-Dichloropropane         ND         0.0         ug/L         05/23/25 12.45         1	1,2-Dibromoethane (EDB)	ND		0.10	ug/L			05/23/25 12:45	1
1,2-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,3,5-Trimethylbenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2-Bulanone         ND         0.0         ug/L         05/23/25 12.45         1           2-Bulanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone	1,2-Dichlorobenzene	ND		0.10	ug/L			05/23/25 12:45	1
1,3,5-Trimethylbenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2,-Dichloropropane         ND         0.20         ug/L         05/23/25 12.45         1           2,-Bultanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           4-Horyanphthalene         ND         0.10         ug/L         05/23/25 12.45         1           4-Horyanphthalene         ND         0.10         ug/L         05/23/25 12.45         1           4-Horya	1,2-Dichloroethane (EDC)	ND		0.10	ug/L			05/23/25 12:45	1
1,3-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1,3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1,4-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1-Methyhaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2-Butanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Butanone         ND         0.10         ug/L         05/23/25 12.45         1           2-Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           4-Hexanone         ND	1,2-Dichloropropane	ND		0.10	ug/L			05/23/25 12:45	1
1.3-Dichloropropane         ND         0.10         ug/L         05/23/25 12.45         1           1.4-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1Methylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2Dichloropropane         ND         0.20         ug/L         05/23/25 12.45         1           2Butanone         ND         1.0         ug/L         05/23/25 12.45         1           2Butanone         ND         0.10         ug/L         05/23/25 12.45         1           2Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           2Hexanone         ND         0.40         ug/L         05/23/25 12.45         1           2Hexanone         ND         0.40         ug/L         05/23/25 12.45         1           4Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           4Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           4Hexanone         ND         0.10         ug/L         05/23/25 12.45         1           4Hexanone         ND	1,3,5-Trimethylbenzene	ND		0.10	ug/L			05/23/25 12:45	1
1,4-Dichlorobenzene         ND         0.10         ug/L         05/23/25 12.45         1           1Methynaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           2Dichloropropane         ND         0.20         ug/L         05/23/25 12.45         1           2-Butanone         ND         1.0         ug/L         05/23/25 12.45         1           2-Chlorotoluene         ND         0.10         ug/L         05/23/25 12.45         1           2-Hextanone         ND         0.40         ug/L         05/23/25 12.45         1           2-Hextylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           4-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12.45         1           4-Methyl-2-pentanone         ND         0.10         ug/L         05/23/25 12.45         1	1,3-Dichlorobenzene	ND		0.10	ug/L			05/23/25 12:45	1
1-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12:45         1           2.2-Dichloropropane         ND         0.20         ug/L         05/23/25 12:45         1           2-Butanone         ND         0.10         ug/L         05/23/25 12:45         1           2-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           2-Hexanone         ND         1.0         ug/L         05/23/25 12:45         1           2-Hexthylnaphthalene         ND         0.40         ug/L         05/23/25 12:45         1           4-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Sopropyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Seporpyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Sepor	1,3-Dichloropropane	ND		0.10	ug/L			05/23/25 12:45	1
2.2-Dichloropropane         ND         0.20         ug/L         05/3/25 12:45         1           2-Butanone         ND         1.0         ug/L         05/3/25 12:45         1           2-Chlorotoluene         ND         0.10         ug/L         05/3/25 12:45         1           2-Hexanone         ND         1.0         ug/L         05/3/25 12:45         1           2-Methylnaphthalene         ND         0.0         ug/L         05/3/25 12:45         1           4-Chlorotoluene         ND         0.10         ug/L         05/3/25 12:45         1           4-Hesthyl-2-pentanone         ND         0.10         ug/L         05/3/25 12:45         1           4-Methyl-2-pentanone         ND         0.10         ug/L         05/3/25 12:45         1           4-Methyl-2-pentanone         ND         0.10         ug/L         05/3/25 12:45         1           Acetone         ND         0.10         ug/L         05/3/25 12:45         1           Benzene         ND         0.10         ug/L         05/3/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/3/25 12:45         1           Bromodichloromethane	1,4-Dichlorobenzene	ND		0.10	ug/L			05/23/25 12:45	1
2-Butanone         ND         1.0         ug/L         05/23/25 12:45         1           2-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           2-Hexanone         ND         1.0         ug/L         05/23/25 12:45         1           2-Hexthylapthalene         ND         0.40         ug/L         05/23/25 12:45         1           4-Methylapthalene         ND         0.10         ug/L         05/23/25 12:45         1           4-Hotorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           A-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           Becarea         ND         0.1         ug/L         05/23/25 12:45         1           Bromobehane <td>1-Methylnaphthalene</td> <td>ND</td> <td></td> <td>0.40</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	1-Methylnaphthalene	ND		0.40	ug/L			05/23/25 12:45	1
2-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           2-Hexanone         ND         1.0         ug/L         05/23/25 12:45         1           2-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12:45         1           4-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Sopropyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           Acetone         ND         1.0         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Carbon disulfide <td>2,2-Dichloropropane</td> <td>ND</td> <td></td> <td>0.20</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	2,2-Dichloropropane	ND		0.20	ug/L			05/23/25 12:45	1
2-Hexanone         ND         1.0         ug/L         05/23/25 12:45         1           2-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12:45         1           4-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Isopropyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           Acetone         ND         1.0         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromoformethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoformethane         ND         0.10         ug/L         05/23/25 12:45         1           Carbon disutfide         ND         0.10         ug/L         05/23/25 12:45         1           Chlorotehane         ND <td>2-Butanone</td> <td>ND</td> <td></td> <td>1.0</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	2-Butanone	ND		1.0	ug/L			05/23/25 12:45	1
2-Methylnaphthalene         ND         0.40         ug/L         05/23/25 12:45         1           4-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Lsopropyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           A-cetone         ND         0.10         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromoformethane         ND         0.10         ug/L         05/23/25 12:45         1           Carbon disulfide </td <td>2-Chlorotoluene</td> <td>ND</td> <td></td> <td>0.10</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	2-Chlorotoluene	ND		0.10	ug/L			05/23/25 12:45	1
4-Chlorotoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Isopropyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           Acetone         ND         1.0         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroform	2-Hexanone	ND		1.0	ug/L			05/23/25 12:45	1
4-Isopropyltoluene         ND         0.10         ug/L         05/23/25 12:45         1           4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           Acetone         ND         1.0         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromochloromethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         0.10         ug/L         05/23/25 12:45         1           Carbon detrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobetha	2-Methylnaphthalene	ND		0.40	ug/L			05/23/25 12:45	1
4-Methyl-2-pentanone         ND         1.0         ug/L         05/23/25 12:45         1           Acetone         ND         1.0         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromofethane         ND         0.10         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         0.30         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chlorotethane         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         N	4-Chlorotoluene	ND		0.10	ug/L			05/23/25 12:45	1
Acetone         ND         1.0         ug/L         05/23/25 12:45         1           Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromothane         ND         0.10         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         0.30         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chlorothane         ND         0.20         ug/L         05/23/25 12:45         1           Chlorothane         ND         0.10         ug/L         05/23/25 12:45         1           Cis-1,2-Dichlorothene         ND <td>4-Isopropyltoluene</td> <td>ND</td> <td></td> <td>0.10</td> <td>ug/L</td> <td></td> <td></td> <td>05/23/25 12:45</td> <td>1</td>	4-Isopropyltoluene	ND		0.10	ug/L			05/23/25 12:45	1
Benzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromomethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroform         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,2-Dichloropropene         <	4-Methyl-2-pentanone	ND		1.0	ug/L			05/23/25 12:45	1
Bromobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromomethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.10         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloroprope	Acetone	ND		1.0	ug/L			05/23/25 12:45	1
Bromodichloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromomethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chlorothane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromometh	Benzene	ND		0.10	ug/L			05/23/25 12:45	1
Dibromochloromethane         ND         0.10         ug/L         05/23/25 12:45         1           Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromomethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoro	Bromobenzene	ND		0.10	ug/L			05/23/25 12:45	1
Bromoform         ND         0.10         ug/L         05/23/25 12:45         1           Bromomethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Bromodichloromethane	ND		0.10	ug/L			05/23/25 12:45	1
Bromomethane         ND         0.30         ug/L         05/23/25 12:45         1           Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Dibromochloromethane	ND		0.10	ug/L			05/23/25 12:45	1
Carbon disulfide         ND         1.0         ug/L         05/23/25 12:45         1           Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Bromoform	ND		0.10	ug/L			05/23/25 12:45	1
Carbon tetrachloride         ND         0.10         ug/L         05/23/25 12:45         1           Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Bromomethane	ND		0.30	ug/L			05/23/25 12:45	1
Chlorobenzene         ND         0.10         ug/L         05/23/25 12:45         1           Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Carbon disulfide	ND		1.0	ug/L			05/23/25 12:45	1
Chloroethane         ND         0.20         ug/L         05/23/25 12:45         1           Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Carbon tetrachloride			0.10	ug/L			05/23/25 12:45	1
Chloroform         ND         0.10         ug/L         05/23/25 12:45         1           Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Chlorobenzene	ND		0.10	ug/L			05/23/25 12:45	1
Chloromethane         ND         0.30         ug/L         05/23/25 12:45         1           cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Chloroethane	ND		0.20	ug/L			05/23/25 12:45	1
cis-1,2-Dichloroethene         ND         0.10         ug/L         05/23/25 12:45         1           cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1					ug/L				1
cis-1,3-Dichloropropene         ND         0.10         ug/L         05/23/25 12:45         1           Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	Chloromethane	ND		0.30	ug/L			05/23/25 12:45	1
Dibromomethane         ND         0.10         ug/L         05/23/25 12:45         1           Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	cis-1,2-Dichloroethene	ND		0.10	ug/L			05/23/25 12:45	1
Dichlorodifluoromethane         ND         0.10         ug/L         05/23/25 12:45         1	cis-1,3-Dichloropropene	ND		0.10	ug/L			05/23/25 12:45	1
	Dibromomethane	ND		0.10	ug/L				1
Ethylbenzene ND 0.10 ug/L 05/23/25 12:45 1	Dichlorodifluoromethane				ug/L				1
	Ethylbenzene	ND		0.10	ug/L			05/23/25 12:45	1

Eurofins Albuquerque

05/23/25 12:45

0.10

ug/L

ND

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

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

Lab Sample ID: MB 885-26885/5 Matrix: Air

Analysis Batch: 26885

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		0.10	ug/L			05/23/25 12:45	
Methyl-tert-butyl Ether (MTBE)	ND		0.10	ug/L			05/23/25 12:45	
Methylene Chloride	ND		0.30	ug/L			05/23/25 12:45	
n-Butylbenzene	ND		0.30	ug/L			05/23/25 12:45	
N-Propylbenzene	ND		0.10	ug/L			05/23/25 12:45	•
Naphthalene	ND		0.20	ug/L			05/23/25 12:45	
sec-Butylbenzene	ND		0.10	ug/L			05/23/25 12:45	
Styrene	ND		0.10	ug/L			05/23/25 12:45	
tert-Butylbenzene	ND		0.10	ug/L			05/23/25 12:45	
Tetrachloroethene (PCE)	ND		0.10	ug/L			05/23/25 12:45	
Toluene	ND		0.10	ug/L			05/23/25 12:45	
trans-1,2-Dichloroethene	ND		0.10	ug/L			05/23/25 12:45	•
trans-1,3-Dichloropropene	ND		0.10	ug/L			05/23/25 12:45	
Trichloroethene (TCE)	ND		0.10	ug/L			05/23/25 12:45	
Trichlorofluoromethane	ND		0.10	ug/L			05/23/25 12:45	
Vinyl chloride	ND		0.10	ug/L			05/23/25 12:45	
Xylenes, Total	ND		0.15	ug/L			05/23/25 12:45	

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111	70 - 130		05/23/25 12:45	1
Toluene-d8 (Surr)	87	70 - 130		05/23/25 12:45	1
4-Bromofluorobenzene (Surr)	84	70 - 130		05/23/25 12:45	1
Dibromofluoromethane (Surr)	108	70 - 130		05/23/25 12:45	1

Lab Sample ID: LCS 885-26885/4

Matrix: Air

**Analysis Batch: 26885** 

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	20.0	22.2		ug/L		111	70 - 130	
Benzene	20.0	21.8		ug/L		109	70 - 130	
Chlorobenzene	20.0	20.6		ug/L		103	70 - 130	
Toluene	20.0	19.8		ug/L		99	70 - 130	
Trichloroethene (TCE)	20.0	19.2		ug/L		96	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		70 - 130
Toluene-d8 (Surr)	88		70 - 130
4-Bromofluorobenzene (Surr)	87		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

C10]

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-26751/4 Client Sample ID: Method Blank

Matrix: Air
Analysis Batch: 26751

Prep Type: Total/NA

MB MB

Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac

Gasoline Range Organics [C6 - C10] ND 5.0 ug/L 05/22/25 11:11

 Surrogate
 %Recovery Qualifier
 Limits
 Prepared
 Analyzed
 Dil Fac

 4-Bromofluorobenzene (Surr)
 103
 15 - 150
 05/22/25 11:11
 1

Lab Sample ID: LCS 885-26751/3 Client Sample ID: Lab Control Sample

Matrix: Air

Analysis Batch: 26751

Prep Type: Total/NA

 Gasoline Range Organics [C6 50.0
 39.4
 ug/L
 79
 70 - 130

 C10]

LCS LCS
Surrogate %Recovery Qualifier Limits
4-Bromofluorobenzene (Surr) 198 15 - 150

Lab Sample ID: 885-25198-1 DU Client Sample ID: Skid 1

Matrix: Air
Analysis Batch: 26751

Prep Type: Total/NA

Sample Sample DU DU **RPD** Result Qualifier Result Qualifier RPD Limit Analyte Unit D 16000 16300 0.9 Gasoline Range Organics [C6 ug/L 20

Surrogate %Recovery Qualifier Limits

4-Bromofluorobenzene (Surr) 141 15 - 150

# **QC Association Summary**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

### **GC/MS VOA**

### Analysis Batch: 26885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25198-1	Skid 1	Total/NA	Air	8260B	
885-25198-2	Skid 2	Total/NA	Air	8260B	
MB 885-26885/5	Method Blank	Total/NA	Air	8260B	
LCS 885-26885/4	Lab Control Sample	Total/NA	Air	8260B	

### **GC VOA**

### Analysis Batch: 26751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25198-1	Skid 1	Total/NA	Air	8015D	
885-25198-2	Skid 2	Total/NA	Air	8015D	
MB 885-26751/4	Method Blank	Total/NA	Air	8015D	
LCS 885-26751/3	Lab Control Sample	Total/NA	Air	8015D	
885-25198-1 DU	Skid 1	Total/NA	Air	8015D	

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Job ID: 885-25198-1

Client: Hilcorp Energy

Project/Site: OH Randel 5

Client Sample ID: Skid 1 Lab Sample ID: 885-25198-1

Date Collected: 05/19/25 12:45

Date Received: 05/20/25 06:50

Matrix: Air

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor **Number Analyst** Lab or Analyzed Total/NA 8260B 26885 CM 05/23/25 16:51 Analysis 50 **EET ALB** Total/NA Analysis 8015D 50 26751 JP **EET ALB** 05/22/25 11:35

Client Sample ID: Skid 2 Lab Sample ID: 885-25198-2

Date Collected: 05/19/25 12:50 Matrix: Air Date Received: 05/20/25 06:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260B		50	26885	СМ	EET ALB	05/23/25 17:16
Total/NA	Analysis	8015D		50	26751	.IP	FFT ALB	05/22/25 12:22

#### Laboratory References:

= , 1120 South 27th Street, Billings, MT 59101, TEL (406)252-6325

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

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## **Accreditation/Certification Summary**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

### **Laboratory: Eurofins Albuquerque**

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

Authority	Progra	m	Identification Number	Expiration Date
New Mexico	State		NM9425, NM0901	02-27-26
• •	are included in this report, but bes not offer certification.	the laboratory is not certif	ied by the governing authority. This li	st may include analyte
Analysis Method	Prep Method	Matrix	Analyte	
8015D		Air	Gasoline Range Organics	[C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane	-
8260B		Air	1,1,1-Trichloroethane	
8260B		Air	1,1,2,2-Tetrachloroethane	
8260B		Air	1,1,2-Trichloroethane	
8260B		Air	1,1-Dichloroethane	
8260B		Air	1,1-Dichloroethene	
8260B		Air	1,1-Dichloropropene	
8260B		Air	1,2,3-Trichlorobenzene	
8260B		Air	1,2,3-Trichloropropane	
8260B		Air	1,2,4-Trichlorobenzene	
8260B		Air	1,2,4-Trimethylbenzene	
8260B		Air	1,2-Dibromo-3-Chloropro	oane
8260B		Air	1,2-Dibromoethane (EDB	
8260B		Air	1,2-Dichlorobenzene	,
8260B		Air	1,2-Dichloroethane (EDC	)
8260B		Air	1,2-Dichloropropane	
8260B		Air	1,3,5-Trimethylbenzene	
8260B		Air	1,3-Dichlorobenzene	
8260B		Air	1,3-Dichloropropane	
8260B		Air	1,4-Dichlorobenzene	
8260B		Air	1-Methylnaphthalene	
8260B		Air	2,2-Dichloropropane	
8260B		Air	2-Butanone	
8260B		Air	2-Chlorotoluene	
8260B		Air	2-Hexanone	
8260B		Air	2-Methylnaphthalene	
8260B		Air	4-Chlorotoluene	
8260B		Air	4-Isopropyltoluene	
8260B		Air	4-Methyl-2-pentanone	
8260B		Air	Acetone	
8260B		Air	Benzene	
8260B		Air	Bromobenzene	
8260B		Air	Bromodichloromethane	
8260B		Air	Bromoform	
8260B		Air	Bromomethane	
8260B		Air	Carbon disulfide	
8260B		Air	Carbon tetrachloride	
8260B		Air	Chlorobenzene	
8260B		Air	Chloroethane	
8260B 8260B			Chloroform	
		Air		
8260B		Air	Chloromethane	
8260B		Air	cis-1,2-Dichloroethene	
8260B		Air	cis-1,3-Dichloropropene	
8260B		Air	Dibromochloromethane	

Eurofins Albuquerque

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## **Accreditation/Certification Summary**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

## **Laboratory: Eurofins Albuquerque (Continued)**

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

hority		ram	Identification Number	Expiration Date				
• •	•	out the laboratory is not certif	ied by the governing authority. This lis	t may include analytes				
for which the agency doe	es not offer certification.							
Analysis Method	Prep Method	Matrix	Analyte					
8260B		Air	Dibromomethane					
8260B		Air	Dichlorodifluoromethane					
8260B		Air	Ethylbenzene					
8260B		Air	Hexachlorobutadiene					
8260B		Air	Isopropylbenzene					
8260B		Air	Methylene Chloride					
8260B		Air	Methyl-tert-butyl Ether (M7	ГВЕ)				
8260B		Air	Naphthalene					
8260B		Air	n-Butylbenzene					
8260B		Air	N-Propylbenzene					
8260B		Air	sec-Butylbenzene					
8260B		Air	Styrene					
8260B		Air	tert-Butylbenzene					
8260B		Air	Tetrachloroethene (PCE)					
8260B		Air	Toluene					
8260B		Air	trans-1,2-Dichloroethene					
8260B		Air	trans-1,3-Dichloropropene					
8260B		Air	Trichloroethene (TCE)					
8260B		Air	Trichlorofluoromethane					
8260B		Air	Vinyl chloride	Vinyl chloride				
8260B		Air	Xylenes, Total					
egon	NEL	ΔP	NM100001	02-26-26				

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
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene

Eurofins Albuquerque

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## **Accreditation/Certification Summary**

Client: Hilcorp Energy Job ID: 885-25198-1

Project/Site: OH Randel 5

## **Laboratory: Eurofins Albuquerque (Continued)**

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

ority	Progra	am	Identification Number Expiration	Date
	are included in this report, bu	ut the laboratory is not certif	ied by the governing authority. This list may include a	nalyte
Analysis Method	Prep Method	Matrix	Analyte	
8260B		Air	1-Methylnaphthalene	
8260B		Air	2,2-Dichloropropane	
8260B		Air	2-Butanone	
8260B		Air	2-Chlorotoluene	
8260B		Air	2-Hexanone	
8260B		Air	2-Methylnaphthalene	
8260B		Air	4-Chlorotoluene	
8260B		Air	4-Isopropyltoluene	
8260B		Air	4-Methyl-2-pentanone	
8260B		Air	Acetone	
8260B		Air	Benzene	
8260B		Air	Bromobenzene	
8260B		Air	Bromodichloromethane	
8260B		Air	Bromoform	
8260B		Air	Bromomethane	
8260B		Air	Carbon disulfide	
8260B		Air	Carbon tetrachloride	
8260B		Air	Chlorobenzene	
8260B		Air	Chloroethane	
8260B		Air	Chloroform	
8260B		Air	Chloromethane	
8260B		Air	cis-1,2-Dichloroethene	
8260B		Air	cis-1,3-Dichloropropene	
8260B		Air	Dibromochloromethane	
8260B		Air	Dibromomethane	
8260B		Air	Dichlorodifluoromethane	
8260B		Air		
8260B		Air	Ethylbenzene Hexachlorobutadiene	
8260B		Air	Isopropylbenzene	
8260B 8260B		Air	Methyl tert butyl Ether (MTRE)	
		Air	Methyl-tert-butyl Ether (MTBE)	
8260B		Air	Naphthalene n-Butylbenzene	
8260B		Air	•	
8260B		Air	N-Propylbenzene	
8260B		Air	sec-Butylbenzene	
8260B		Air	Styrene	
8260B		Air	tert-Butylbenzene	
8260B		Air	Tetrachloroethene (PCE)	
8260B		Air	Toluene	
8260B		Air	trans-1,2-Dichloroethene	
8260B		Air	trans-1,3-Dichloropropene	
8260B		Air	Trichloroethene (TCE)	
8260B		Air	Trichlorofluoromethane	
8260B		Air	Vinyl chloride	
8260B		Air	Xylenes, Total	

Eurofins Albuquerque

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Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

## ANALYTICAL SUMMARY REPORT

May 28, 2025

Eurofins TestAmerica - Albuquerque 4901 Hawkins St NE Ste D Albuquerque, NM 87109-4372

Work Order: B25051746 Quote ID: B15626

Project Name: OH Randel 5 88501698

Energy Laboratories Inc Billings MT received the following 2 samples for Eurofins TestAmerica - Albuquerque on 5/21/2025 for analysis.

Lab ID	Client Sample ID	Collect Date R	eceive Date	Matrix	Test
B25051746-001	Skid 1 (885-25198-1)	05/19/25 12:45	05/21/25	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist Free Natural Gas Analysis Specific Gravity @ 60/60
B25051746-002	Skid 2 (885-25198-2)	05/19/25 12:50	05/21/25	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 So. 27th Street, Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

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Billings, MT 406.252.6325 . Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

**Report Date:** 05/28/25

## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Eurofins TestAmerica - Albuquerque Client:

Project: OH Randel 5 88501698 Lab ID:

Collection Date: 05/19/25 12:45 B25051746-001 DateReceived: 05/21/25 Client Sample ID: Skid 1 (885-25198-1) Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS R	EPORT						
Oxygen	_	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Nitrogen	77.85	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Carbon Dioxide	0.33	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Isopentane	0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
n-Pentane	0.01	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Hexanes plus	0.18	Mol %		0.01		GPA 2261-13	05/27/25 10:11 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
Isopentane	0.004	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
n-Pentane	0.004	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
Hexanes plus	0.076	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
GPM Total	0.083	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
GPM Pentanes plus	0.083	gpm		0.001		GPA 2261-13	05/27/25 10:11 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	9			1		GPA 2261-13	05/27/25 10:11 / jrj
Net BTU per cu ft @ std cond. (LHV)	9			1		GPA 2261-13	05/27/25 10:11 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-13	05/27/25 10:11 / jrj
Pseudo-critical Temperature, deg R	241			1		GPA 2261-13	05/27/25 10:11 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	05/27/25 10:11 / jrj
Air, % - The analysis was not corrected for air.	98.77			0.01		GPA 2261-13	05/27/25 10:11 / jrj
COMMENTS							

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report RL - Analyte Reporting Limit **Definitions:** 

QCL - Quality Control Limit

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

05/27/25 10:11 / jrj

Billings, MT 406.252.6325 . Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Eurofins TestAmerica - Albuquerque

Project: OH Randel 5 88501698 Lab ID: B25051746-002 Client Sample ID: Skid 2 (885-25198-2)

**Report Date:** 05/28/25 Collection Date: 05/19/25 12:50 DateReceived: 05/21/25 Matrix: Air

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.90	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Nitrogen	77.89	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Carbon Dioxide	0.13	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Hydrogen Sulfide	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Methane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Ethane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Propane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Isobutane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
n-Butane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Isopentane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
n-Pentane	< 0.01	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Hexanes plus	0.08	Mol %		0.01		GPA 2261-13	05/27/25 11:01 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
Hexanes plus	0.034	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
GPM Total	0.034	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
GPM Pentanes plus	0.034	gpm		0.001		GPA 2261-13	05/27/25 11:01 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	4			1		GPA 2261-13	05/27/25 11:01 / jrj
Net BTU per cu ft @ std cond. (LHV)	4			1		GPA 2261-13	05/27/25 11:01 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-13	05/27/25 11:01 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-13	05/27/25 11:01 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	05/27/25 11:01 / jrj
Air, % - The analysis was not corrected for air.	100.08			0.01		GPA 2261-13	05/27/25 11:01 / jrj
0014151170							

**COMMENTS** 

05/27/25 11:01 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

RL - Analyte Reporting Limit Report **Definitions:** 

QCL - Quality Control Limit

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Work Order: B25051746

Hexanes plus



Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Report Date: 05/28/25

0.0

20

05/27/25 14:26

# QA/QC Summary Report

Prepared by Billings, MT Branch

Units RL %REC Low Limit High Limit **RPD RPDLimit** Analyte Count Result Qual **GPA 2261-13** Batch: R443047 Method: Lab ID: B25051746-002ADUP 12 Sample Duplicate Run: GC7890 250527A 05/27/25 11:52 Mol % 0.01 20 Oxygen 21.7 8.0 Nitrogen 78.1 Mol % 0.01 0.2 20 Carbon Dioxide 0.13 Mol % 0.01 0.0 20 Hydrogen Sulfide < 0.01 Mol % 0.01 20 Methane <0.01 Mol % 0.01 20 0.01 Ethane <0.01 Mol % 20 Propane < 0.01 Mol % 0.01 20 < 0.01 0.01 20 Isobutane Mol % n-Butane < 0.01 Mol % 0.01 20 Isopentane <0.01 Mol % 0.01 20 0.01 20 n-Pentane <0.01 Mol %

0.01

Lab ID:	LCS052725	11 Laboratory Co	ntrol Sample			Run: GC7890	_250527A
Oxygen		0.60	Mol %	0.01	122	70	130
Nitrogen		6.12	Mol %	0.01	104	70	130
Carbon D	ioxide	1.00	Mol %	0.01	100	70	130
Methane		76.1	Mol %	0.01	100	70	130
Ethane		6.15	Mol %	0.01	102	70	130
Propane		5.04	Mol %	0.01	101	70	130
Isobutane	•	1.71	Mol %	0.01	86	70	130
n-Butane		2.02	Mol %	0.01	101	70	130
Isopentan	ie	0.51	Mol %	0.01	102	70	130
n-Pentane	Э	0.51	Mol %	0.01	102	70	130
Hexanes	plus	0.21	Mol %	0.01	102	70	130

Mol %

0.08

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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# **Work Order Receipt Checklist**

# Eurofins TestAmerica - Albuquerque B25051746

Reviewed by: darcy Reviewed Date: 5/22/2025  Carrier name: FedEx NDA  Shipping container/cooler in good condition?  Yes	_ogin completed by:	Leslie S. Cadreau		Date	Received: 5/21/2025
Shipping container/cooler in good condition?  Yes	Reviewed by:	darcy		Re	eceived by: NLA
Custody seals intact on all shipping container(s)/cooler(s)? Yes	Reviewed Date:	5/22/2025		Ca	rrier name: FedEx NDA
Custody seals intact on all sample bottles?  Yes No No Not Present   No Not Present   Chain of custody present?  Chain of custody signed when relinquished and received?  Yes No No   Chain of custody agrees with sample labels?  Yes No No   Samples in proper container/bottle?  Yes No No   Sample containers intact?  Yes No No   Sufficient sample volume for indicated test?  Yes No No   All samples received within holding time?  Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.)  Femp Blank received in all shipping container(s)/cooler(s)?  Yes No No Not Applicable   Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or Ves No No Not Applicable   Water - pH acceptable upon receipt?  Yes No No Not Applicable   No Not Applicable   No Not Applicable	Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present
Chain of custody present?  Yes No Chain of custody signed when relinquished and received?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished and received?  No Chain of custody signed when relinquished?  No Chain of custody signed when relinq	Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Present
Chain of custody signed when relinquished and received?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  Yes No Chain of custody agrees with sample labels?  No Chain of custody agrees with sample la	Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody agrees with sample labels?  Yes \ No \ \ Samples in proper container/bottle?  Yes \ No \ \ Sample containers intact?  Yes \ No \ \ Sufficient sample volume for indicated test?  Yes \ No \ \ All samples received within holding time?  Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)  Femp Blank received in all shipping container(s)/cooler(s)?  Yes \ No \ \ No \ \ No \ Not Applicable \ \ Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or pubble that is <6mm (1/4").  Water - pH acceptable upon receipt?  Yes \ No \ \ No \ Not Applicable \ \ No \ \ Not Applicable \ \ No \ \ Not Applicable \ \ Not \ \ Not Applicable \ \ \ Not \ \ Not Applicable \ \ \ Not \ \ Not Applicable \ \ \ \ Not \ \ Not Applicable \ \ \ \ Not \ \ Not Applicable \ \ \ \ \ Not \ \ Not Applicable \ \ \ \ \ \ Not \ \ Not \ \ Not \ \ Not \ \ \ Not \ \ \ Not \ \ Not \ \ \ Not \ \ \ Not \ \ \ Not \ \ Not \ \ \	Chain of custody present?		Yes √	No 🗌	
Samples in proper container/bottle?  Yes \ No \ \ Sample containers intact?  Yes \ No \ \ Sufficient sample volume for indicated test?  Yes \ No \ \ All samples received within holding time?  Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.)  Femp Blank received in all shipping container(s)/cooler(s)?  Yes \ No \ \ No \ Not Applicable \ \ Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or pubble that is <6mm (1/4").  Water - pH acceptable upon receipt?  Yes \ No \ No \ Not Applicable \ \ No \ Not Applicable \ \ No \ Not Applicable \ \ Not Applicable \ \ \ \ \ Not Applicable \ \ \ \ \ Not Applicable \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Chain of custody signed who	en relinquished and received?	Yes 🗹	No 🗌	
Sample containers intact?  Yes \[ \script{\text{No}} \\ \text{No} \\ \ \text{No} \\ \ \text{Sufficient sample volume for indicated test?} \\ Yes \[ \script{\text{V}} \\ \text{No} \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Chain of custody agrees with	h sample labels?	Yes √	No 🗌	
Sufficient sample volume for indicated test?  Yes \[ \sigma \] No \[ \]  All samples received within holding time?  Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.)  Femp Blank received in all shipping container(s)/cooler(s)?  Yes \[ \sigma \] No \[ \sigma \] Not Applicable \[ \sigma \]  Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or pubble that is <6mm (1/4").  Water - pH acceptable upon receipt?  Yes \[ \sigma \] No \[ \sigma \] Not Applicable \[ \sigma \]	Samples in proper container	/bottle?	Yes √	No 🗌	
All samples received within holding time?  Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.)  Temp Blank received in all shipping container(s)/cooler(s)?  Yes No No Not Applicable Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").  Water - pH acceptable upon receipt?  Yes No No Not Applicable Very Not Ap	Sample containers intact?		Yes √	No 🗌	
Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.)  Temp Blank received in all shipping container(s)/cooler(s)? Yes No No Not Applicable Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or pubble that is <6mm (1/4").  Water - pH acceptable upon receipt? Yes No Not Applicable   Not Appl	Sufficient sample volume for	r indicated test?	Yes √	No 🗌	
Container/Temp Blank temperature:  17.6°C No Ice  Containers requiring zero headspace have no headspace or Yes No No VOA vials submitted via bubble that is <6mm (1/4").  Water - pH acceptable upon receipt?  Yes No No Not Applicable	Exclude analyses that are c	onsidered field parameters	Yes √	No 🗌	
Containers requiring zero headspace have no headspace or Yes No No No VOA vials submitted viable that is <6mm (1/4").  Water - pH acceptable upon receipt? Yes No No Not Applicable	Гетр Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
oubble that is <6mm (1/4").  Vater - pH acceptable upon receipt?  Yes □ No □ Not Applicable ☑	Container/Temp Blank temp	erature:	17.6°C No Ice		
		adspace have no headspace or	Yes	No 🗌	No VOA vials submitted
		•		ш	Not Applicable 🗹

## **Standard Reporting Procedures:**

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

#### **Contact and Corrective Action Comments:**

None

Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

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1/2

## Laboratory Certifications and Accreditations

Current certificates are available at <a href="https://www.energylab.com">www.energylab.com</a> website:

	Agency	Number					
	Alaska	17-023					
	California	3087					
	Colorado	MT00005					
	Department of Defense (DoD)/ISO17025	ADE-2588					
Billings, MT	Florida (Primary NELAP)	E87668					
- The second second	Idaho	MT00005					
d	Louisiana	05079					
ANAB	Montana	CERT0044					
ARSI National Accidentation Where ACCREDITED	Nebraska	NE-OS-13-04					
TESTING LABORATORY	Nevada	NV-C24-00250					
a sccore.	North Dakota	R-007					
	National Radon Proficiency	109383-RMP					
700	Oregon	4184					
AGNATOR	South Dakota	ARSD 74:04:07					
	Texas	TX-C24-00302					
	US EPA Region VIII	Reciprocal					
	USDA Soil Permit	P330-20-00170					
	Washington	C1039					
	Alaska	20-006					
	California	3021					
	Colorado	WY00002					
	Florida (Primary NELAP)	E87641					
	Idaho	WY00002					
	Louisiana	05083					
Casper, WY	Montana	CERT0002					
ALS ACCORDING	Nebraska	NE-OS-08-04					
	Nevada	NV-C24-00245					
SARORINOS.	North Dakota	R-125					
	Oregon	WY200001					
	South Dakota	WY00002					
	Texas	T104704181-23-21					
	US EPA Region VIII	WY00002					
	USNRC License	49-26846-01					
	Washington	C1012					
Gillette, WY	US EPA Region VIII	WY00006					
	Colorado	MT00945					
Helena, MT	Montana	CERT0079					
PARTER ENDS	Nevada	NV-C24-00119					
	US EPA Region VIII	Reciprocal					
	USDA Soil Permit	P330-20-00090					

**Eurofins Albuquerque** 

4901 Hawkins NE

Albuquerque, NM 87109

## **Chain of Custody Record**

200	F	
•		
	-3	
	717	

🔆 eurofins

**Environment Testing** 

Prione: 505-345-3975 Fax: 505-345-4107	Sampler:			- 1	ab PM:	_						In					T	
Client Information (Sub Contract Lab)	N/A				Garcia,	arcia, Michelle						Carrier Tracking No(s): N/A					COC No: 885-5004.1	
Client Contact: Shipping/Receiving Company:	Phone: N/A							et.euro					of Origin	exico Page 1 of 1			Page: Page 1 of 1	
Energy Laboratories, Inc.								Required			lexico						Job #: 885-25198-1	
Address: 1120 South 27th Street.	Due Date Request 5/28/2025	ted:				Preservation Codes									Codes:			
City:	TAT Requested (c	days):				Analysis R						Requested						
Billings State, Zip:		N/A	4															
MT, 59101														1 1				
Phone: 406-252-6325(Tel)	PO#: N/A																	
Email:	WO #:				- S								N.					
N/A Project Name:	N/A Project #:				68.0	r No)	Gases									10		
OH Randel 5	88501698				e (Y	es or	bea 6							1		tain		
Site: N/A	SSOW#: N/A				amp	SD (Y	Gases)/ Fixed									f con	Other:	
			Commis	Matrix	, Spa	SWIS	Gase	Ш								er of	N/A	
			Sample Type	(w-water	4 8	m M	SUB (Fixed (				1	1 1				Numit		
Sample Identification - Client ID (Lab ID)		Sample	(C=comp,			Perfor	JB (F							1 1		Total		
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab)	ation Code		S.	S		II III III				_			12	Special	Instructions/Note
Skid 1 (885-25198-1)	5/19/25	12:45	G	Air			х										See Attached In	structions
Skid 2 (885-25198-2)	737, 444,	Mountain 12:50						-			-		_	$\vdash$			B250	structions Structions
Grid 2 (000-20180-2)	5/19/25	Mountain	G	Air	$\perp$		Х									1	See Attached In	structions
													-					
											+		-	1				
				-	$\dashv$	-	-	_			-		+		-			
					$\perp$													
								- 2										
Note: Since laboratory accreditations are subject to change, Eurofins Env laboratory does not currently maintain accreditation in the State of Orlgin accreditation status should be brought to Eurofins Environment Testing S	rironment Testing South Cent listed above for analysis/test outh Central, LLC attention in	tral, LLC place s/matrix being mmediately. If	s the ownersh analyzed, the all requested	nip of method samples mu accreditation	i, analyte ist be shi ns are cu	e & accipped l	credita back to to date	tion com the Eu	pliance rofins E	upon ou nvironmed Chair	ent Tes	entract la	boratorie h Centra	es. This il, LLC la said con	sample borator	shipme y or other	I nt is forwarded und er instructions will b ofins Environment 1	er chain-of-custody. If be provided. Any chang seting South Central, L
Possible Hazard Identification																	d longer than 1	
Unconfirmed								urn To				isposa	By La	ь			ve For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Delivera	able Rank: 2	2			Spec	ial In	structio	ns/QC	Requ								
Empty Kit Relinquished by:		Date:			Tim	ne:						M	ethod or	Shipme	nt;			
Relinquished by: The Mollatte	Date/Time:	- 1	400	Company		R	Receive	ed by:						Date/T	ime:			Company
Relinquished by:	Date/Time:	,	, , ,	Company	_	R	eceive	ed by:						Date/T	ime:	_		Company
Relinquished by:	Date/Time:			Company		-		5.	1-							1		
The state of the s	Date/Time.			Company		B	The	Ly.	Am	Ha	4	70		Date/Ti	me/	bo	1050	Company
Custody Seals Intact: Δ Yes Δ No							100	Tempera	ture(s) °	C and C	ther R	emarks:		10.	1 1		1000	1. I The second second
4 NO											***			100				W. Alexandria
																		Ver: 10/10/2024





Received by OCD: 7/15/2025 9:50:30 AM

ICOC No: 885-5004

Containers

Count 2 Container Type Tedlar Bag 1L Preservative None

**Subcontract Method Instructions** 

Sample IDs	Method	Method Description	Method Comments	
1, 2	SUBCONTRACT	SUB (Fixed Gases)/ Fixed Gases	Fixed Gases	

Page	
e 26	
of 2	
27	

Chain-of-Custody Record  Client: Hilcorp  Mailing Address:  Phone #:	Turn-Around Time:  Standard □ Rush  Project Name:  OH Randel 5  Project #:	HALL ENVIRONM ANALYSIS LABOF  www.hallenvironmental.com  4901 Hawkins NE - Albuquerque, NM 871 885-25198 COC  Tel. 505-345-3975 Fax 505-345-4107  Analysis Request
email or Fax#: brandon . S incle : Mahilcorp.  QA/QC Package:  Standard		BE / TMB's (8021) GRO / DRO / MRO) Ides/8082 PCB's Id 504.1) 10 or 8270SIMS tals IO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> VOA) M-(Present/Absent) \(\text{TVPH}\)
Date Time Matrix Sample Name  S-19 1245 air Skid 1  S-19 1250 air Skid 2	Container Preservative HEAL No. Type and #  Z Tedlar  Z Tedlar	BTEX / MTBE / TPH:8015D(GRC 8081 Pesticides/ 8081 Pesticides/ BDB (Method 50 PAHs by 8310 or RCRA 8 Metals CI, F, Br, NO <sub>3</sub> , 8270 (Semi-VOA 8270 (Semi-VOA) 8270 (Semi-VOA
Date. Time: Relinquished by:  5/19/25 1521  Date Time: Relinquished by  5/19/2 1736  C.J.A. J.J.A.	Received by:  Via:  5  19  25  Received by.  Via. Courre  Date Time  4: So	Remarks:

## **Login Sample Receipt Checklist**

Client: Hilcorp Energy Job Number: 885-25198-1

Login Number: 25198 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.</td <td>N/A</td> <td></td>	N/A	
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.	False	Thermal preservation not required.
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	
s 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	

Eurofins Albuquerque

Released to Imaging: 7/17/2025 1:16:25 PM

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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 485005

#### **CONDITIONS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	485005
	Action Type:
	[REPORT] Alternative Remediation Report (C-141AR)

#### CONDITIONS

Created	Condition	Condition
Ву		Date
nvelez	1. Continue monthly O&M schedule as stated in the recommendations section of report. 2. Submit next bi-annual report by January 15, 2026.	7/17/2025