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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: Second Quarter 2025 – SVE System Update**
Sullivan GC D #1E
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS1518952648

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Second Quarter 2025 – SVE System Update* report summarizing the soil vapor extraction (SVE) system performance at the Sullivan GC D #1E natural gas production well (Site), located in Unit F of Section 26, Township 29 North, Range 11 West in San Juan County, New Mexico (Figure 1). Specifically, this report summarizes Site activities performed in April, May, and June of 2025 to the New Mexico Oil Conservation Division (NMOCD).

## SVE SYSTEM SPECIFICATIONS

The original SVE system was installed at the Site in April 2016 by XTO Energy, the previous Site owner, in response to a release originating from a broken fiberglass line used to transfer natural gas condensate. The original SVE system was purchased from Geotech Environmental Equipment, Inc. (Geotech) and operated successfully until the summer of 2018. Due to a broken SVE blower motor, the Site's SVE system did not operate between 2018 and March of 2022; however, a rental SVE system was brought onto the Site and began operation on December 2, 2021. The blower motor from the original Geotech system was replaced on March 21, 2022, and the Geotech SVE system was put back into service.

The current Geotech SVE system is configured with vacuum applied to wells PR-1, MW-01, MW-02, MW-05, and MW-06 (shown on Figure 2). The SVE system consists of a 3 horsepower Rotron Model EN656 regenerative blower capable of producing 212 standard cubic feet per minute (scfm) of flow and 73 inches of water column (IWC) vacuum. The layout of the SVE system and piping is shown on Figure 2.

## SECOND QUARTER 2025 ACTIVITIES

During the second quarter 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. During the second quarter of 2025, all SVE wells (PR-1, MW-01, MW-02, MW-05, and MW-06) were operated in order to induce air flow through impacted soil within the source area. Between March 31 and June 24, 2025, the SVE system operated for 2,182 hours, with a runtime efficiency of 100 percent (%). Appendix B presents

photographs of the runtime meter for calculating the runtime efficiency. Table 1 presents the SVE system operational hours and percent runtime based on the field notes collected during the quarter.

A second quarter 2025 vapor sample was collected on May 19, 2025, from a sample port located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the vapor sample was field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The vapor sample was collected directly into two 1-Liter Tedlar® bags and submitted to Eurofins Environment Testing (Formerly Hall Environmental Analysis Laboratory), located in Albuquerque, New Mexico, for analysis of total volatile petroleum hydrocarbons (TVPH, also referred to 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 Processor Association (GPA) Method 2261. Table 2 presents a summary of analytical data collected during this sampling event and previous sampling events, with the full laboratory analytical report included in Appendix C.

Vapor sample data and measured stack flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 3). Based on these estimates, 93,293 pounds (47 tons) of TVPH have been removed by the system to date.

## RECOMMENDATIONS

Bi-weekly O&M visits will continue to be performed by Ensolum and/or Hilcorp personnel to verify the SVE system is 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 quarterly report.

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**

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**Attachments:**

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

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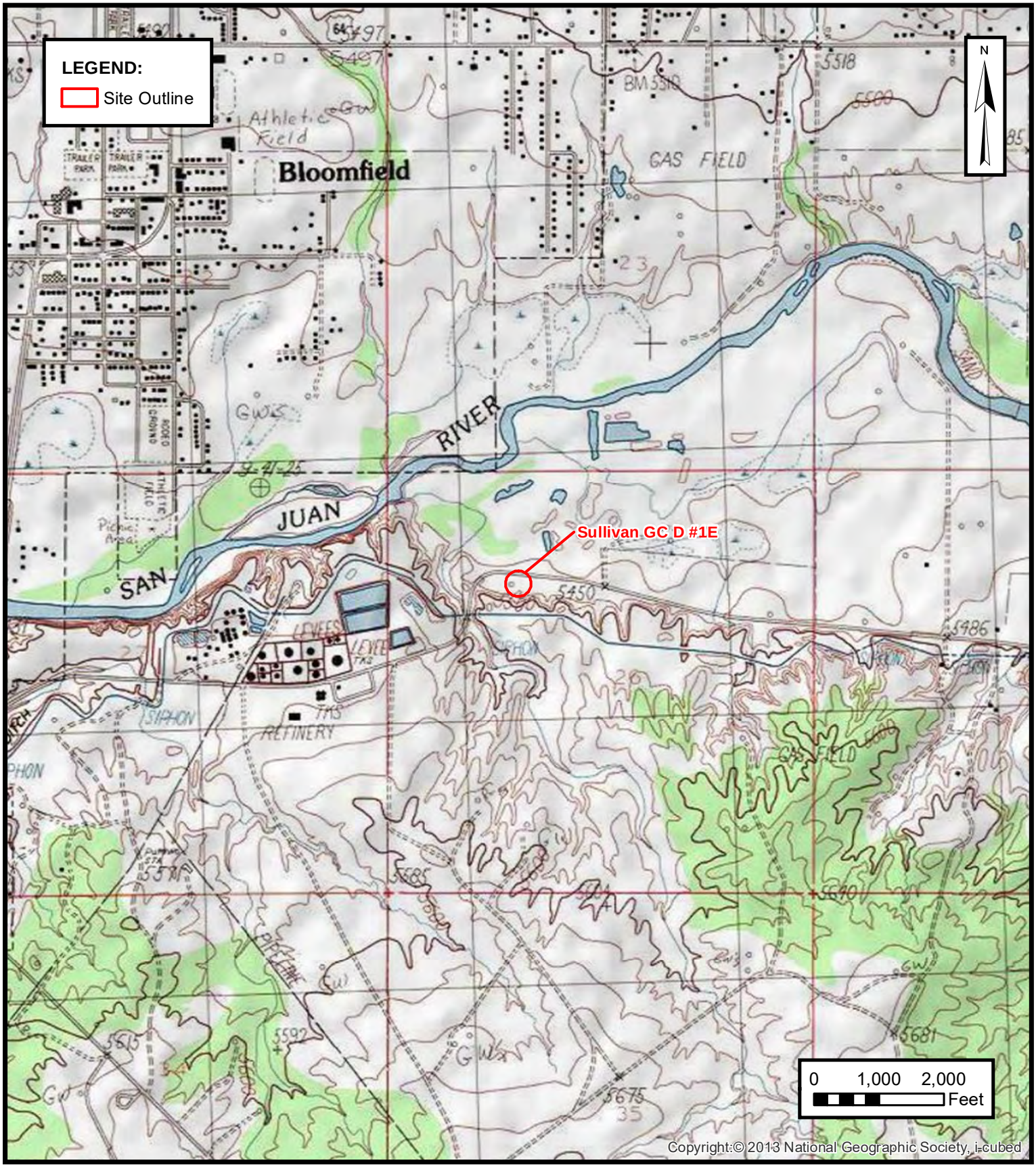
# Figures

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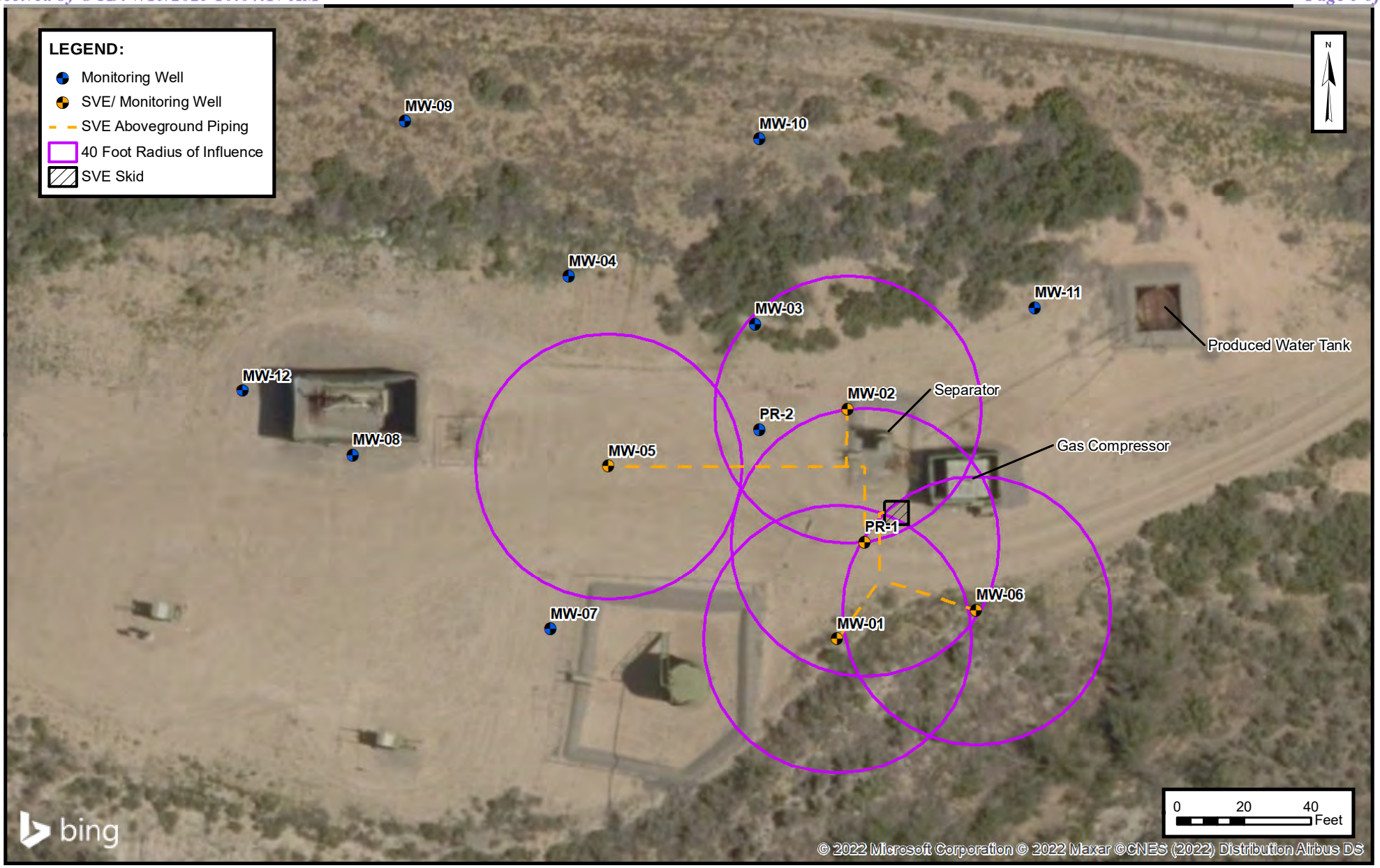
**SITE LOCATION**

HILLCORP ENERGY COMPANY
SULLIVAN GC D #1E
San Juan County, New Mexico
36.885855° N, 107.899525° W

PROJECT NUMBER: 07A1988029

**FIGURE**
**1**

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**SVE SYSTEM LAYOUT**

HILCORP ENERGY COMPANY
SULLIVAN GC D #1E
San Juan County, New Mexico
36.885855° N, 107.899525° W

PROJECT NUMBER:07A1988029

**FIGURE**

**2**

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# Tables

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# TABLE 1
## SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
**Sullivan GC D#1E**
**Hilcorp Energy Company**
**San Juan County, New Mexico**

**Permanent Geotech SVE Skid Runtime Operation**

| Date | Total Operational Hours | Delta Hours | Days | % Runtime |
|---|---|---|---|---|
| 3/25/2025 | 1,775 | -- | -- | -- |
| 6/24/2025 | 3,957 | 2,182 | 91 | 100% |

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# TABLE 2
## SOIL VAPOR EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS
**Sullivan GC D#1E**
**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/GRO (µg/L) | Oxygen (%) | Carbon Dioxide (%) |
|---|---|---|---|---|---|---|---|---|
| 4/18/2016 | -- | 840 | 1,900 | 87 | 840 | 140,000 | -- | -- |
| 4/20/2016 | 2,375 | 840 | 1,900 | 87 | 840 | 140,000 | -- | -- |
| 4/29/2017 | 3,520 | 280 | 1,000 | 64 | 630 | 65,000 | -- | -- |
| 8/11/2016 | 4,215 | 92 | 700 | 90 | 910 | 23,000 | -- | -- |
| 1/24/2018 | 2,837 | 46 | 140 | <5.0 | 410 | 21,000 | -- | -- |
| 6/29/2018 | 3,000 | 63 | 210 | <5.0 | 410 | 27,000 | -- | -- |
| 12/2/2021 | 741 | 15 | <5.0 | <5.0 | 99 | 33,000 | -- | -- |
| 3/16/2022 | 982 | <0.10 | <0.10 | <0.10 | 1.1 | 64 | 19.40 | 1.23 |
| 6/17/2022 | 327 | <0.10 | <0.10 | <0.10 | 0.25 | 10 | 21.54 | 0.29 |
| 9/22/2022 | 266 | <0.10 | <0.10 | <0.10 | <0.15 | <5.0 | 20.57 | 1.00 |
| 12/10/2022 | 68 | 0.75 | 4.9 | 0.49 | 9.0 | 490 | 21.02 | 0.65 |
| 3/13/2023 | 69 | 0.81 | 4.4 | 0.30 | 5.7 | 300 | 21.15 | 0.51 |
| 6/23/2023 | 139 | 5.9 | 12 | 3.0 | 6.7 | 840 | 21.01 | 0.55 |
| 8/18/2023 | 76 | 2.4 | 2.9 | <1.0 | 1.8 | 340 | 20.83 | 0.68 |
| 11/21/2023 | 186 | 2.8 | 18 | 1.7 | 18 | 480 | 20.94 | 0.51 |
| 3/4/2024 | 212 | 4.0 | 29.0 | 2.7 | 31 | 580 | 21.41 | 0.51 |
| 6/14/2024 | 142 | 4.4 | 4.1 | <1.0 | 2.1 | 340 | 20.44 | 0.72 |
| 9/16/2024 | 55 | 5.8 | 24 | 1.3 | 13 | 510 | 21.32 | 0.48 |
| 11/18/2024 | 87 | 9.6 | 60 | 5.0 | 53 | 1,100 | 17.79 | 0.89 |
| 2/8/2025 | 29 | 6.1 | 6.3 | <1.0 | 3.7 | 460 | 18.43 | 1.43 |
| 5/19/2025 | 68 | 15 | 53 | 3.1 | 34 | 1,500 | 20.62 | 0.94 |

***Notes:***

*GRO: gasoline range hydrocarbons*

*µg/L: microgram per liter*

*PID: photoionization detector*

*ppm: parts per million*

*TVPH: total volatile petroleum hydrocarbons*

*%: percent*

*--: not sampled*

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

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# TABLE 3
## SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Sullivan GC D#1E
Hilcorp Energy Company
San Juan County, New Mexico

**Laboratory Analysis**

| Date | PID (ppm) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | TVPH (µg/L) |
|---|---|---|---|---|---|---|
| 4/18/2016 | -- | 840 | 1,900 | 87 | 840 | 140,000 |
| 4/20/2016 | 2,375 | 840 | 1,900 | 87 | 840 | 140,000 |
| 4/29/2017 | 3,520 | 280 | 1,000 | 64 | 630 | 65,000 |
| 8/11/2016 | 4,215 | 92 | 700 | 90 | 910 | 23,000 |
| 1/24/2018 | 2,837 | 46 | 140 | *5.0* | 410 | 21,000 |
| 6/29/2018 | 3,000 | 63 | 210 | *5.0* | 410 | 27,000 |
| 12/2/2021 | **Rental SVE System Startup** | | | | | |
| 12/2/2021 | 741 | 15 | *5.0* | *5.0* | 99 | 33,000 |
| 3/16/2022 | 982 | *0.10* | *0.10* | *0.10* | 1.1 | 64 |
| 3/21/2022 | **Permanent SVE System Startup** | | | | | |
| 6/17/2022 | 327 | *0.10* | *0.10* | *0.10* | 0.25 | 10 |
| 9/22/2022 | 266 | *0.10* | *0.10* | *0.10* | *0.15* | *5.0* |
| 12/10/2022 | 68 | 0.75 | 4.9 | 0.49 | 9.0 | 490 |
| 3/13/2023 | 69 | 0.81 | 4.4 | 0.30 | 5.7 | 300 |
| 6/23/2023 | 139 | 5.9 | 12 | 3.0 | 6.7 | 840 |
| 8/18/2023 | 76 | 2.4 | 2.9 | *1.0* | 1.8 | 340 |
| 11/21/2023 | 186 | 2.8 | 18 | 1.7 | 18 | 480 |
| 3/4/2024 | 212 | 4.0 | 29.0 | 2.7 | 31 | 580 |
| 6/14/2024 | 142 | 4.4 | 4.1 | *1.0* | 2.1 | 340 |
| 9/16/2024 | 55 | 5.8 | 24 | 1.3 | 13 | 510 |
| 11/18/2024 | 87 | 9.6 | 60 | 5.0 | 53 | 1,100 |
| 2/8/2025 | 29 | 6.1 | 6.3 | *1.0* | 3.7 | 460 |
| 5/19/2025 | 68 | 15 | 53 | 3.1 | 34 | 1,500 |
| **Average** | 970 | 106 | 289 | 17 | 206 | 21,715 |

**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) |
|---|---|---|---|---|---|---|---|---|
| 4/18/2016 | 90 | 0 | 0 | 0.28 | 0.64 | 0.029 | 0.28 | 47 |
| 4/20/2016 | 109 | 313,920 | 313,920 | 0.34 | 0.77 | 0.035 | 0.34 | 57 |
| 4/29/2017 | 90 | 1,480,320 | 1,166,400 | 0.19 | 0.49 | 0.025 | 0.25 | 35 |
| 8/11/2016 | 70 | 6,923,520 | 5,443,200 | 0.049 | 0.22 | 0.020 | 0.20 | 12 |
| 1/24/2018 | 60 | -- | -- | 0.015 | 0.094 | 0.011 | 0.15 | 4.9 |
| 6/29/2018 | 41 | 53,246,160 | 46,322,640 | 0.0084 | 0.027 | 0.001 | 0.063 | 3.7 |
| 12/2/2021 | **Rental SVE System Startup** | | | | | | | |
| 12/2/2021 | 49 | 53,246,160 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3/16/2022 | 49 | 60,581,754 | 7,335,594 | 0.0014 | 0.00047 | 0.00047 | 0.0092 | 3.0 |
| 3/21/2022 | **Permanent SVE System Startup** | | | | | | | |
| 6/17/2022 | 80 | 70,724,634 | 10,142,880 | 0.000030 | 0.000030 | 0.000030 | 0.0002 | 0.011 |
| 9/22/2022 | 68 | 80,221,650 | 9,497,016 | 0.000025 | 0.000025 | 0.000025 | 0.000051 | 0.0019 |
| 12/10/2022 | 80 | 89,341,170 | 9,119,520 | 0.00013 | 0.00075 | 0.000088 | 0.0014 | 0.074 |
| 3/13/2023 | 75 | 99,328,020 | 9,986,850 | 0.00022 | 0.0013 | 0.00011 | 0.0021 | 0.11 |
| 6/23/2023 | 76 | 110,408,820 | 11,080,800 | 0.00095 | 0.0023 | 0.00047 | 0.0018 | 0.16 |
| 8/18/2023 | 80 | 116,845,620 | 6,436,800 | 0.00124 | 0.0022 | 0.00060 | 0.0013 | 0.18 |
| 11/21/2023 | 75 | 127,065,120 | 10,219,500 | 0.00073 | 0.0029 | 0.00038 | 0.0028 | 0.12 |
| 3/4/2024 | 110 | 143,512,320 | 16,447,200 | 0.00140 | 0.0097 | 0.00091 | 0.0101 | 0.22 |
| 6/14/2024 | 110 | 157,953,120 | 14,440,800 | 0.00173 | 0.0068 | 0.00076 | 0.0068 | 0.19 |
| 9/16/2024 | 105 | 172,046,220 | 14,093,100 | 0.00200 | 0.0055 | 0.00045 | 0.0030 | 0.17 |
| 11/18/2024 | 105 | 181,590,720 | 9,544,500 | 0.00302 | 0.0165 | 0.00124 | 0.0130 | 0.32 |
| 2/8/2025 | 110 | 186,169,800 | 4,579,080 | 0.00323 | 0.0136 | 0.00123 | 0.0117 | 0.32 |
| 5/19/2025 | 115 | 202,704,270 | 16,534,470 | 0.00454 | 0.0128 | 0.00088 | 0.0081 | 0.42 |
| | | | **Average** | 0.043 | 0.111 | 0.006 | 0.065 | 7.82 |

**Mass Recovery**

| Date | Total SVE System Hours | Delta Hours | Benzene (pounds) | Toluene (pounds) | Ethylbenzene (pounds) | Total Xylenes (pounds) | TVPH (pounds) | TVPH (tons) |
|---|---|---|---|---|---|---|---|---|
| 4/18/2016 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4/20/2016 | 48 | 48 | 16 | 37 | 1.7 | 16 | 2,740 | 1.4 |
| 4/29/2017 | 264 | 216 | 41 | 105 | 5.5 | 53 | 7,452 | 3.7 |
| 8/11/2016 | 1,560 | 1,296 | 63 | 288 | 26 | 261 | 14,929 | 7.5 |
| 1/24/2018 | -- | -- | -- | -- | -- | -- | -- | -- |
| 6/29/2018 | 16,848 | 15,288 | 128 | 410 | 12 | 961 | 56,264 | 28 |
| 12/2/2021 | **Rental SVE System Startup** | | | | | | | |
| 12/2/2021 | 968 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3/16/2022 | 3,463 | 2,495 | 3.5 | 1.2 | 1.2 | 23 | 7,559 | 3.8 |
| 3/21/2022 | **Permanent SVE System Startup** | | | | | | | |
| 3/21/2022 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6/17/2022 | 2,113 | 2,113 | 0.063 | 0.063 | 0.063 | 0.43 | 23 | 0.012 |
| 9/22/2022 | 4,441 | 2,328 | 0.059 | 0.059 | 0.059 | 0.12 | 4.4 | 0.0022 |
| 12/10/2022 | 6,341 | 1,900 | 0.24 | 1.4 | 0.17 | 2.6 | 141 | 0.070 |
| 3/13/2023 | 8,560 | 2,219 | 0.49 | 2.9 | 0.25 | 4.6 | 246 | 0.12 |
| 6/23/2023 | 10,990 | 2,430 | 2.3 | 5.7 | 1.1 | 4.3 | 394 | 0.20 |
| 8/18/2023 | 12,331 | 1,341 | 1.7 | 3.0 | 0.80 | 1.7 | 237 | 0.12 |
| 11/21/2023 | 14,602 | 2,271 | 1.7 | 6.7 | 0.86 | 6.3 | 261 | 0.13 |
| 3/4/2024 | 17,094 | 2,492 | 3.5 | 24.1 | 2.26 | 25.1 | 543 | 0.27 |
| 6/14/2024 | 19,282 | 2,188 | 3.8 | 14.9 | 1.67 | 14.9 | 414 | 0.21 |
| 9/16/2024 | 21,519 | 2,237 | 4.5 | 12.3 | 1.01 | 6.6 | 373 | 0.19 |
| 11/18/2024 | 23,034 | 1,515 | 4.6 | 25.0 | 1.87 | 19.6 | 479 | 0.24 |
| 2/8/2025[1] | 23,728 | 694 | 2.2 | 9.5 | 0.86 | 8.1 | 223 | 0.11 |
| 5/19/2025 | 26,124 | 2,396 | 10.9 | 30.6 | 2.11 | 19.4 | 1,010 | 0.51 |
| | **Total Mass Recovery to Date** | | 287 | 979 | 59 | 1,429 | 93,293 | 47 |

***Notes:***

*cf: cubic feet*
*cfm: cubic feet per minute*
*µg/L: micrograms per liter*
*lb/hr: pounds per hour*
*--: not sampled*
*PID: photoionization detector*
*ppm: parts per million*
*TVPH: total volatile petroleum hydrocarbons*
*gray: laboratory reporting limit used for calculating emissions*

*(1) Runtime hours estimated due to hour meter* failure identified on 12/2/2024; Replacement meter readings began on 1/20/2025

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# APPENDIX A

# Field Notes

# SULLIVAN GC D#1E SVE SYSTEM (RENTAL UNIT)
# BIWEEKLY O&M FORM

DATE: 4-8
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

## SVE SYSTEM - MONTHLY O&M

SVE ALARMS: (check if applicable)

| | |
|---|---|
| | HIGH/LOW VACUUM |
| | KO TANK HIGH LEVEL |
| | HIGH EXHAUST TEMPERATURE |

**Product Skimmer**

| | |
|---|---|
| Hours **(take photo)** | |
| Volume in bbl | |
| Volume removed | |
| Volume removed to date | |

| **SVE SYSTEM** | READING | TIME |
|---|---|---|
| Blower Hours **(take photo)** | 2119.4 | 1313 |
| Pre K/O Vacuum (IWC) | 11 | |
| Post K/O Vacuum (IWC) | 18 | |
| Total Flow (cfm) | 110 | |
| Zone 1/ Leg A Flow (cfm) | | |
| Inlet PID (ppm) | 27.1 | |
| Exhaust Post GAC PID (ppm) | 20.2 | |
| Liquid in K/O Sight Tube (Y/N) | | |
| K/O Liquid Drained (gallons) | | |

**HOUSEKEEPING** Check

| | |
|---|---|
| Inline Filter Clean | |
| Clean tank level alarm on skimmer | |

## SVE SYSTEM - QUARTERLY SAMPLING

**SAMPLE ID:** **SAMPLE TIME:**
**Analytes:** TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
**OPERATING WELLS**

# ZONES

**Change in Well Operation:**
**Zone 1/ Leg A**

| LOCATION | VACUUM (IWC) | VELOCITY (fpm) | PID HEADSPACE (PPM) | ADJUSTMENTS |
|---|---|---|---|---|
| MW-01 | 3.88 | | 30.2 | |
| MW-02 | 3.05 | | 29.1 | |
| MW-05 | 3.13 | | 28.9 | |
| MW-06 | 3.05 | | 28.4 | |
| PR-1 | 3.11 | | 30.8 | |

# Product Recovery

**Well**

| LOCATION | Product thickness | Product removed from Sock (volume and color) | Volume removed total (gal or oz?) | Replace Sock? (Y/N0 |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
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| | | | | |
| | | | | |
| | | | | |

COMMENTS/OTHER MAINTENANCE:

# SULLIVAN GC D#1E SVE SYSTEM (RENTAL UNIT)
## BIWEEKLY O&M FORM

DATE: 4-23
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

### SVE SYSTEM - MONTHLY O&M

| SVE ALARMS: (check if applicable) | |
|---|---|
| | HIGH/LOW VACUUM |
| | KO TANK HIGH LEVEL |
| | HIGH EXHAUST TEMPERATURE |

**Product Skimmer**

| | |
|---|---|
| Hours **(take photo)** | |
| Volume in bbl | |
| Volume removed | |
| Volume removed to date | |

| **SVE SYSTEM** | READING | TIME |
|---|---|---|
| Blower Hours **(take photo)** | 2470.5 | 1316 |
| Pre K/O Vacuum (IWC) | 12 | |
| Post K/O Vacuum (IWC) | 18 | |
| Total Flow (cfm) | 110 | |
| Zone 1/ Leg A Flow (cfm) | | |
| Inlet PID (ppm) | 25.7 | |
| Exhaust Post GAC PID (ppm) | 18.1 | |
| Liquid in K/O Sight Tube (Y/N) | | |
| K/O Liquid Drained (gallons) | | |

| **HOUSEKEEPING** | Check |
|---|---|
| Inline Filter Clean | |
| Clean tank level alarm on skimmer | |

### SVE SYSTEM - QUARTERLY SAMPLING

| | |
|---|---|
| **SAMPLE ID:** | **SAMPLE TIME:** |
| **Analytes:** | TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2) |
| **OPERATING WELLS** | |

## ZONES

**Change in Well Operation:**

**Zone 1/ Leg A**

| LOCATION | VACUUM (IWC) | VELOCITY (fpm) | PID HEADSPACE (PPM) | ADJUSTMENTS |
|---|---|---|---|---|
| MW-01 | 2.89 | | 29.7 | |
| MW-02 | 3.03 | | 26.3 | |
| MW-05 | 3.12 | | 26.8 | |
| MW-06 | 3.01 | | 30.1 | |
| PR-1 | 3.12 | | 32.2 | |

## Product Recovery

**Well**

| LOCATION | Product thickness | Product removed from Sock (volume and color) | Volume removed total (gal or oz?) | Replace Sock? (Y/N0 |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |
| | | | | |

COMMENTS/OTHER MAINTENANCE:

78

Location Sullivan GC D #1E Date 5.7.25

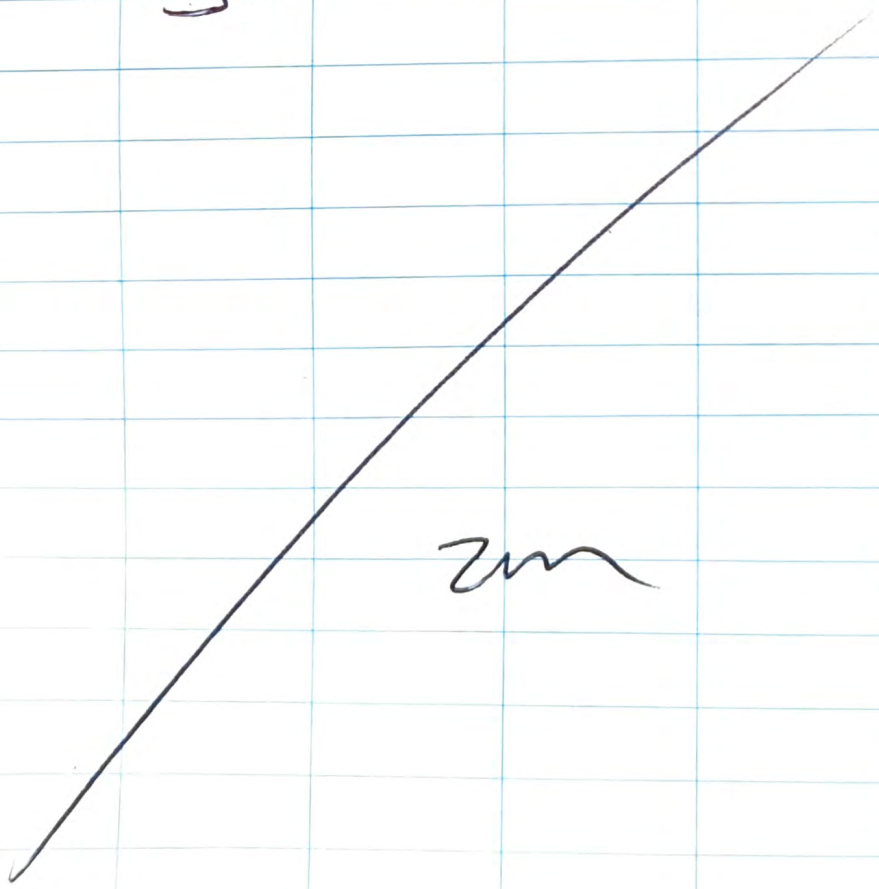
Project / Client HEC

ZM, truck, PID, HVAS

1520 - onsite for OHM

Blower Hours: 2,809.0 hours @ 1535
Pre-KO Vac: 7 inWC
Post-KO Vac: 14 inWC
Total Flow: 110 cfm
Inlet PID: 47.9 ppm
Ex PID: 41.7 ppm

1600 - leaving site



# SULLIVAN GC D#1E SVE SYSTEM (RENTAL UNIT)
# BIWEEKLY O&M FORM

DATE: 5-19
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

## SVE SYSTEM - MONTHLY O&M

| SVE ALARMS: (check if applicable) | |
|---|---|
| | HIGH/LOW VACUUM |
| | KO TANK HIGH LEVEL |
| | HIGH EXHAUST TEMPERATURE |

**Product Skimmer**

| | |
|---|---|
| Hours **(take photo)** | |
| Volume in bbl | |
| Volume removed | |
| Volume removed to date | |

| **SVE SYSTEM** | READING | TIME |
|---|---|---|
| Blower Hours **(take photo)** | 3095.2 | 1356 |
| Pre K/O Vacuum (IWC) | 6 | |
| Post K/O Vacuum (IWC) | 12 | |
| Total Flow (cfm) | 115 | |
| Zone 1/ Leg A Flow (cfm) | | |
| Inlet PID (ppm) | 67.6 | |
| Exhaust Post GAC PID (ppm) | 28.8 | |
| Liquid in K/O Sight Tube (Y/N) | | |
| K/O Liquid Drained (gallons) | | |

| **HOUSEKEEPING** | Check |
|---|---|
| Inline Filter Clean | |
| Clean tank level alarm on skimmer | |

## SVE SYSTEM - QUARTERLY SAMPLING

| | |
|---|---|
| **SAMPLE ID:** | SVE-1 **SAMPLE TIME:** 1400 |
| **Analytes:** | TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2) |
| **OPERATING WELLS** | |

# ZONES

**Change in Well Operation:**

**Zone 1/ Leg A**

| LOCATION | VACUUM (IWC) | VELOCITY (fpm) | PID HEADSPACE (PPM) | ADJUSTMENTS |
|---|---|---|---|---|
| MW-01 | 3.91 | | 43.2 | |
| MW-02 | 3.10 | | 38.7 | |
| MW-05 | 3.22 | | 50.4 | |
| MW-06 | 3.11 | | 56.3 | |
| PR-1 | 3.44 | | 53.6 | |

# Product Recovery

**Well**

| LOCATION | Product thickness | Product removed from Sock (volume and color) | Volume removed total (gal or oz?) | Replace Sock? (Y/N0 |
|---|---|---|---|---|
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COMMENTS/OTHER MAINTENANCE:

# SULLIVAN GC D#1E SVE SYSTEM (RENTAL UNIT)
# BIWEEKLY O&M FORM

DATE: 6-6
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

## SVE SYSTEM - MONTHLY O&M

| SVE ALARMS: (check if applicable) | |
|---|---|
| | HIGH/LOW VACUUM |
| | KO TANK HIGH LEVEL |
| | HIGH EXHAUST TEMPERATURE |

**Product Skimmer**

| | |
|---|---|
| Hours **(take photo)** | |
| Volume in bbl | |
| Volume removed | |
| Volume removed to date | |

| **SVE SYSTEM** | READING | TIME |
|---|---|---|
| Blower Hours **(take photo)** | 3523.5 | 1156 |
| Pre K/O Vacuum (IWC) | 8 | |
| Post K/O Vacuum (IWC) | 12 | |
| Total Flow (cfm) | 110 | |
| Zone 1/ Leg A Flow (cfm) | | |
| Inlet PID (ppm) | 75.3 | |
| Exhaust Post GAC PID (ppm) | 32.7 | |
| Liquid in K/O Sight Tube (Y/N) | | |
| K/O Liquid Drained (gallons) | | |

| **HOUSEKEEPING** | Check |
|---|---|
| Inline Filter Clean | |
| Clean tank level alarm on skimmer | |

## SVE SYSTEM - QUARTERLY SAMPLING

| | |
|---|---|
| **SAMPLE ID:** | **SAMPLE TIME:** |
| **Analytes:** | TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2) |
| **OPERATING WELLS** | |

## ZONES

**Change in Well Operation:**

**Zone 1/ Leg A**

| LOCATION | VACUUM (IWC) | VELOCITY (fpm) | PID HEADSPACE (PPM) | ADJUSTMENTS |
|---|---|---|---|---|
| MW-01 | 2.86 | | 51.3 | |
| MW-02 | 3.15 | | 31.1 | |
| MW-05 | 3.23 | | 71.6 | |
| MW-06 | 3.15 | | 52.8 | |
| PR-2 | 3.43 | | 56.0 | |

## Product Recovery

**Well**

| LOCATION | Product thickness | Product removed from Sock (volume and color) | Volume removed total (gal or oz?) | Replace Sock? (Y/N0 |
|---|---|---|---|---|
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COMMENTS/OTHER MAINTENANCE:

# SULLIVAN GC D#1E SVE SYSTEM (RENTAL UNIT)
## BIWEEKLY O&M FORM

DATE: 6-24
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

### SVE SYSTEM - MONTHLY O&M

SVE ALARMS: (check if applicable)

| | |
|---|---|
| | HIGH/LOW VACUUM |
| | KO TANK HIGH LEVEL |
| | HIGH EXHAUST TEMPERATURE |

**Product Skimmer**
Hours **(take photo)**
Volume in bbl
Volume removed
Volume removed to date

| SVE SYSTEM | READING | TIME |
|---|---|---|
| Blower Hours **(take photo)** | 39571 | 1327 |
| Pre K/O Vacuum (IWC) | 6 | |
| Post K/O Vacuum (IWC) | 12 | |
| Total Flow (cfm) | 110 | |
| Zone 1/ Leg A Flow (cfm) | | |
| Inlet PID (ppm) | 62.8 | |
| Exhaust Post GAC PID (ppm) | 31.3 | |
| Liquid in K/O Sight Tube (Y/N) | | |
| K/O Liquid Drained (gallons) | | |

**HOUSEKEEPING** Check

| | |
|---|---|
| Inline Filter Clean | |
| Clean tank level alarm on skimmer | |

### SVE SYSTEM - QUARTERLY SAMPLING

**SAMPLE ID:** **SAMPLE TIME:**
**Analytes:** TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
**OPERATING WELLS**

## ZONES

**Change in Well Operation:**

**Zone 1/ Leg A**

| LOCATION | VACUUM (IWC) | VELOCITY (fpm) | PID HEADSPACE (PPM) | ADJUSTMENTS |
|---|---|---|---|---|
| MW-01 | 2.94 | | 47.2 | |
| MW-02 | 3.12 | | 33.8 | |
| MW-05 | 3.21 | | 68.6 | |
| MW-06 | 3.12 | | 59.2 | |
| PR-2 | 3.45 | | 57.1 | |

## Product Recovery

**Well**

| LOCATION | Product thickness | Product removed from Sock (volume and color) | Volume removed total (gal or oz?) | Replace Sock? (Y/N0 |
|---|---|---|---|---|
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COMMENTS/OTHER MAINTENANCE:

ENSOLUM

# APPENDIX B

# Project Photographs

**PROJECT PHOTOGRAPHS**
Sullivan GC D #1E
San Juan County, New Mexico
Hilcorp Energy Company

| | |
|---|---|
| **Photograph 1**<br><br>Runtime meter taken on March 25, 2025 at 1:54 PM<br>Hours = 1,775.1 |  |
| **Photograph 2**<br><br>Runtime meter taken on June 24, 2025 at 1:27 PM<br>Hours = 3,957.1 |  |



Ensolum, LLC | Environmental & Hydrogeologic Consultants
Durango, Colorado | info@ensolum.com

ENSOLUM

# APPENDIX C

# Laboratory Analytical Reports

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mitch Killough
Hilcorp Energy
PO BOX 4700
Farmington, New Mexico 87499

Generated 6/2/2025 4:58:40 PM

## JOB DESCRIPTION

Sullivan GC D 1E

## JOB NUMBER

885-25199-1

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
6/2/2025 4:58:40 PM

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

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Laboratory Job ID: 885-25199-1

# Table of Contents

# Definitions/Glossary

Client: Hilcorp Energy
Job ID: 885-25199-1
Project/Site: Sullivan GC D 1E

## Glossary

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

# Case Narrative

Client: Hilcorp Energy
Project: Sullivan GC D 1E

Job ID: 885-25199-1

## Job ID: 885-25199-1 Eurofins Albuquerque

**Job Narrative**
**885-25199-1**

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 sample was received on 5/20/2025 6:50 AM. Unless otherwise noted below, the sample 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
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

**Client Sample ID: SVE-1**
**Date Collected: 05/19/25 14:00**
**Date Received: 05/20/25 06:50**
**Sample Container: Tedlar Bag 1L**

**Lab Sample ID: 885-25199-1**
**Matrix: Air**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2,3-Trichloropropane | ND | | 2.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| **1,2,4-Trimethylbenzene** | **1.6** | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 2.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2-Dibromoethane (EDB) | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2-Dichloroethane (EDC) | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| **1,3,5-Trimethylbenzene** | **1.4** | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 1-Methylnaphthalene | ND | | 4.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 2,2-Dichloropropane | ND | | 2.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 2-Butanone | ND | | 10 | | ug/L | | | 05/23/25 17:41 | 10 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 05/23/25 17:41 | 10 |
| 2-Methylnaphthalene | ND | | 4.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| 4-Methyl-2-pentanone | ND | | 10 | | ug/L | | | 05/23/25 17:41 | 10 |
| Acetone | ND | | 10 | | ug/L | | | 05/23/25 17:41 | 10 |
| **Benzene** | **15** | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Bromodichloromethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Dibromochloromethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Bromoform | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Bromomethane | ND | | 3.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 05/23/25 17:41 | 10 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Chloroform | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Chloromethane | ND | | 3.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| cis-1,3-Dichloropropene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| **Ethylbenzene** | **3.1** | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Hexachlorobutadiene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |

# Client Sample Results

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

## Client Sample ID: SVE-1

**Lab Sample ID: 885-25199-1**

**Date Collected: 05/19/25 14:00**
**Matrix: Air**
**Date Received: 05/20/25 06:50**
**Sample Container: Tedlar Bag 1L**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Methyl-tert-butyl Ether (MTBE) | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Methylene Chloride | ND | | 3.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| n-Butylbenzene | ND | | 3.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Styrene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Tetrachloroethene (PCE) | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| **Toluene** | **53** | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| trans-1,3-Dichloropropene | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Trichloroethene (TCE) | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 05/23/25 17:41 | 10 |
| **Xylenes, Total** | **34** | | 1.5 | | ug/L | | | 05/23/25 17:41 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *70 - 130* | | *05/23/25 17:41* | *10* |
| *Toluene-d8 (Surr)* | *107* | | *70 - 130* | | *05/23/25 17:41* | *10* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *05/23/25 17:41* | *10* |
| *Dibromofluoromethane (Surr)* | *86* | | *70 - 130* | | *05/23/25 17:41* | *10* |

### Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Gasoline Range Organics [C6 - C10]** | **1500** | | 50 | | ug/L | | | 05/22/25 12:46 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *135* | | *15 - 150* | | *05/22/25 12:46* | *10* |

# QC Sample Results

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

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

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

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,1-Dichloroethane | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,1-Dichloroethene | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,1-Dichloropropene | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.20 | | ug/L | | | 05/23/25 12:45 | 1 |
| 1,2,4-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-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-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 |
| 1,3,5-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-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 |
| 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 | | 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-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 |
| 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 | | 0.20 | | 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 |
| Ethylbenzene | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |
| Hexachlorobutadiene | ND | | 0.10 | | ug/L | | | 05/23/25 12:45 | 1 |

# QC Sample Results

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

## 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**

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

| *Surrogate* | *MB %Recovery* | *MB 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**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %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 | | |

| *Surrogate* | *LCS %Recovery* | *LCS 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* |

# QC Sample Results

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

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

**Lab Sample ID: MB 885-26751/4**
**Matrix: Air**
**Analysis Batch: 26751**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics [C6 - C10] | ND | | 5.0 | | ug/L | | | 05/22/25 11:11 | 1 |

| *Surrogate* | *MB %Recovery* | *MB 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**
**Matrix: Air**
**Analysis Batch: 26751**

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

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics [C6 - C10] | | | 50.0 | 39.4 | | ug/L | | 79 | 70 - 130 | | |

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

# QC Association Summary

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

## GC/MS VOA

### Analysis Batch: 26885

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 885-25199-1 | SVE-1 | 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 |
|---|---|---|---|---|---|
| 885-25199-1 | SVE-1 | 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 | |

# Lab Chronicle

Client: Hilcorp Energy
Job ID: 885-25199-1
Project/Site: Sullivan GC D 1E

**Client Sample ID: SVE-1**
**Lab Sample ID: 885-25199-1**
**Date Collected: 05/19/25 14:00**
**Matrix: Air**
**Date Received: 05/20/25 06:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 10 | 26885 | CM | EET ALB | 05/23/25 17:41 |
| Total/NA | Analysis | 8015D | | 10 | 26751 | JP | EET ALB | 05/22/25 12:46 |

**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
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

## Laboratory: Eurofins Albuquerque

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New Mexico | State | NM9425, NM0901 | 02-27-26 |

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 |
| 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 |

# Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

## Laboratory: Eurofins Albuquerque (Continued)

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 8260B | | Air | Dibromomethane |
| 8260B | | Air | Dichlorodifluoromethane |
| 8260B | | Air | Ethylbenzene |
| 8260B | | Air | Hexachlorobutadiene |
| 8260B | | Air | Isopropylbenzene |
| 8260B | | Air | Methylene Chloride |
| 8260B | | Air | Methyl-tert-butyl Ether (MTBE) |
| 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 |
| 8260B | | Air | Xylenes, Total |

| | | | |
|---|---|---|---|
| Oregon | NELAP | 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 |

# Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Sullivan GC D 1E

Job ID: 885-25199-1

## Laboratory: Eurofins Albuquerque (Continued)

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 8260B | | 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 | Ethylbenzene |
| 8260B | | Air | Hexachlorobutadiene |
| 8260B | | Air | Isopropylbenzene |
| 8260B | | Air | Methylene Chloride |
| 8260B | | Air | Methyl-tert-butyl Ether (MTBE) |
| 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 |
| 8260B | | Air | Xylenes, Total |

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# ANALYTICAL SUMMARY REPORT

May 28, 2025

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

Work Order: B25051745 Quote ID: B15626

Project Name: Sullivan GC D 1E 88501698

Energy Laboratories Inc Billings MT received the following 1 sample for Eurofins TestAmerica - Albuquerque on 5/21/2025 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---|---|---|---|---|---|
| B25051745-001 | SVE-1 (885-25199-1) | 05/19/25 14:00 | 05/21/25 | Air | Air Correction Calculations<br>Appearance and Comments<br>Calculated Properties<br>GPM @ std cond,/1000 cu. ft., moist.<br>Free<br>Natural Gas Analysis<br>Specific Gravity @ 60/60 |

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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# LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Eurofins TestAmerica - Albuquerque
**Project:** Sullivan GC D 1E 88501698
**Lab ID:** B25051745-001
**Client Sample ID:** SVE-1 (885-25199-1)

**Report Date:** 05/28/25
**Collection Date:** 05/19/25 14:00
**DateReceived:** 05/21/25
**Matrix:** Air

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **GAS CHROMATOGRAPHY ANALYSIS REPORT** | | | | | | | |
| Oxygen | 20.62 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Nitrogen | 76.97 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Carbon Dioxide | 0.94 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Hydrogen Sulfide | <0.01 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Methane | 1.15 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Ethane | 0.18 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Propane | 0.07 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Isobutane | 0.01 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| n-Butane | 0.02 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Isopentane | 0.01 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| n-Pentane | 0.01 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Hexanes plus | 0.02 | Mol % | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Propane | 0.019 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Isobutane | 0.003 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| n-Butane | 0.006 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Isopentane | 0.004 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| n-Pentane | 0.004 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Hexanes plus | 0.008 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| GPM Total | 0.045 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| GPM Pentanes plus | 0.016 | gpm | | 0.001 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| **CALCULATED PROPERTIES** | | | | | | | |
| Gross BTU per cu ft @ Std Cond. (HHV) | 19 | | | 1 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Net BTU per cu ft @ std cond. (LHV) | 18 | | | 1 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Pseudo-critical Pressure, psia | 550 | | | 1 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Pseudo-critical Temperature, deg R | 244 | | | 1 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| Specific Gravity @ 60/60F | 0.998 | | | 0.001 | | D3588-81 | 05/22/25 12:27 / jrj |
| Air, % | 94.23 | | | 0.01 | | GPA 2261-13 | 05/22/25 12:27 / jrj |
| - The analysis was not corrected for air. | | | | | | | |
| **COMMENTS** | | | | | | | |
| - | | | | | | - | 05/22/25 12:27 / 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.

**Report Definitions:**
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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# QA/QC Summary Report

Prepared by Billings, MT Branch

**Work Order:** B25051745 **Report Date:** 05/28/25

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **Method:** **GPA 2261-13** | | | | | | | | | | Batch: R442898 |
| **Lab ID:** **B25051745-001ADUP** | 12 | Sample Duplicate | | | | Run: GC7890_250522A | | | | 05/22/25 13:16 |
| Oxygen | | 20.2 | Mol % | 0.01 | | | | 2.1 | 20 | |
| Nitrogen | | 77.4 | Mol % | 0.01 | | | | 0.6 | 20 | |
| Carbon Dioxide | | 0.94 | Mol % | 0.01 | | | | 0.0 | 20 | |
| Hydrogen Sulfide | | <0.01 | Mol % | 0.01 | | | | | 20 | |
| Methane | | 1.15 | Mol % | 0.01 | | | | 0.0 | 20 | |
| Ethane | | 0.18 | Mol % | 0.01 | | | | 0.0 | 20 | |
| Propane | | 0.07 | Mol % | 0.01 | | | | 0.0 | 20 | |
| Isobutane | | <0.01 | Mol % | 0.01 | | | | | 20 | |
| n-Butane | | 0.02 | Mol % | 0.01 | | | | 0.0 | 20 | |
| Isopentane | | 0.01 | Mol % | 0.01 | | | | 0.0 | 20 | |
| n-Pentane | | <0.01 | Mol % | 0.01 | | | | | 20 | |
| Hexanes plus | | 0.02 | Mol % | 0.01 | | | | 0.0 | 20 | |
| **Lab ID:** **LCS052225** | 11 | Laboratory Control Sample | | | | Run: GC7890_250522A | | | | 05/22/25 14:56 |
| Oxygen | | 0.59 | Mol % | 0.01 | 120 | 70 | 130 | | | |
| Nitrogen | | 6.14 | Mol % | 0.01 | 104 | 70 | 130 | | | |
| Carbon Dioxide | | 0.97 | Mol % | 0.01 | 97 | 70 | 130 | | | |
| Methane | | 76.2 | Mol % | 0.01 | 100 | 70 | 130 | | | |
| Ethane | | 6.12 | Mol % | 0.01 | 101 | 70 | 130 | | | |
| Propane | | 5.02 | Mol % | 0.01 | 101 | 70 | 130 | | | |
| Isobutane | | 1.72 | Mol % | 0.01 | 86 | 70 | 130 | | | |
| n-Butane | | 2.01 | Mol % | 0.01 | 101 | 70 | 130 | | | |
| Isopentane | | 0.52 | Mol % | 0.01 | 104 | 70 | 130 | | | |
| n-Pentane | | 0.51 | Mol % | 0.01 | 102 | 70 | 130 | | | |
| Hexanes plus | | 0.21 | Mol % | 0.01 | 102 | 70 | 130 | | | |

**Qualifiers:**

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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# Work Order Receipt Checklist

## Eurofins TestAmerica - Albuquerque B25051745

Login completed by: Leslie S. Cadreau
Date Received: 5/21/2025
Reviewed by: darcy
Received by: NLA
Reviewed Date: 5/22/2025
Carrier name: FedEx NDA

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on all shipping container(s)/cooler(s)? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on all sample bottles? | 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 ☐ | |
| 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.) | Yes ☑ | No ☐ | |
| Temp Blank received in all shipping container(s)/cooler(s)? | Yes ☐ | 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"). | 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

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## Laboratory Certifications and Accreditations

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

| | Agency | Number |
|---|---|---|
| **Billings, MT** | Alaska | 17-023 |
| | California | 3087 |
| | Colorado | MT00005 |
| | Department of Defense (DoD)/ISO17025 | ADE-2588 |
| | Florida (Primary NELAP) | E87668 |
| | Idaho | MT00005 |
| | Louisiana | 05079 |
| | Montana | CERT0044 |
| | Nebraska | NE-OS-13-04 |
| | Nevada | NV-C24-00250 |
| | 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 |
| **Casper, WY** | Alaska | 20-006 |
| | California | 3021 |
| | Colorado | WY00002 |
| | Florida (Primary NELAP) | E87641 |
| | Idaho | WY00002 |
| | Louisiana | 05083 |
| | Montana | CERT0002 |
| | Nebraska | NE-OS-08-04 |
| | Nevada | NV-C24-00245 |
| | 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 |
| **Helena, MT** | Colorado | MT00945 |
| | Montana | CERT0079 |
| | Nevada | NV-C24-00119 |
| | US EPA Region VIII | Reciprocal |
| | USDA Soil Permit | P330-20-00090 |

**Eurofins Albuquerque**
4901 Hawkins NE
Albuquerque, NM 87109
Phone: 505-345-3975 Fax: 505-345-4107

# Chain of Custody Record

eurofins | Environment Testing

| Client Information (Sub Contract Lab) | Sampler: N/A | Lab PM: Garcia, Michelle | Carrier Tracking No(s): N/A | COC No: 885-5004.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: N/A | E-Mail: michelle.garcia@et.eurofinsus.com | State of Origin: New Mexico | Page: Page 1 of 1 |
| Company: Energy Laboratories, Inc. | | Accreditations Required (See note): NELAP - Oregon; State - New Mexico | | Job #: 885-25199-1 |
| Address: 1120 South 27th Street, , | Due Date Requested: 5/28/2025 | | | Preservation Codes: - |
| City: Billings | TAT Requested (days): N/A | | | |
| State, Zip: MT, 59101 | | | | |
| Phone: 406-252-6325(Tel) | PO #: N/A | | | |
| Email: N/A | WO #: N/A | | | |
| Project Name: Sullivan GC D 1E | Project #: 88501698 | | | |
| Site: N/A | SSOW#: N/A | | | Other: N/A |

Analysis Requested

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SUB (Fixed Gases)/ Fixed Gases | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| SVE-1 (885-25199-1) | 5/19/25 | 14:00 Mountain | G | Air | | | X | 1 | See Attached Instructions B250577 45 |

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 5/20/25 1400 | | | | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: Tasha Anthony | Date/Time: 05/21/25 1050 | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 10/10/2024

**ICOC No:**
885-5004

## Containers

| Count | Container Type | Preservative |
|---|---|---|
| 1 | Tedlar Bag 1L | None |

## Subcontract Method Instructions

| Sample IDs | Method | Method Description | Method Comments |
|---|---|---|---|
| 1 | SUBCONTRACT | SUB (Fixed Gases)/ Fixed Gases | Fixed Gases |

# Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

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

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Sullivan GC D 1E

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☐ Yes ☑ No

# of Coolers: 1

Cooler Temp(including CF): - (°C)

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

885-25199 COC

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. | BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, $NO_3$, $NO_2$, $PO_4$, $SO_4$ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | 8015 TVPH | Fixed gas $O_2$ & $CO_2$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-19 | 1400 | air | SVE-1 | 2 Tedlar | | | | | | | | | | ✓ | | | ✓ | ✓ | | | |

Analysis Request

| Date: | Time. | Relinquished by. | Received by. | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 5/19/25 | 1521 | | | | 5/19/25 | 1521 |
| Date. | Time | Relinquished by: | Received by: | Via: courier | Date | Time |
| 5/19/25 | 1730 | | | | 5/20/25 | 0:80 |

Remarks:

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

# Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-25199-1

**Login Number: 25199** **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. | 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 | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 485021

## CONDITIONS

| | |
|---|---|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171 |
| | Action Number:<br>485021 |
| | Action Type:<br>[REPORT] Alternative Remediation Report (C-141AR) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| nvelez | 1. Continue O&M & sampling as stated in report. 2. Submit next quarterly report by October 15, 2025. | 7/23/2025 |