

**REVIEWED**

By Mike Buchanan at 2:55 pm, Jan 24, 2024



# ENSOLUM

Review of the Gas Mitigation Monthly Report, dated June 20, 2023: **Content Satisfactory**

1. Continue to monitor the Levey Well and conduct air sampling as prescribed in section 2.1
2. Continue to monitor wells MW-1 and MW-2 at the site until compliance expectations are achieved.
3. Continue to submit reports as scheduled for 2024.

## GAS MITIGATION MONTHLY REPORT - FEBRUARY 2023

Property:

**South Hobbs G/SA Unit  
Unit F, Section 5, Township 19S, Range 38E  
Latitude 32.690683, Longitude -103.173158  
Lea County, New Mexico**

**New Mexico EMNRD OCD  
Order No. R-4934-F, Case No. 14981  
Incident ID No. nAPP2227033082**


June 20, 2023

Prepared for:

**Occidental Permian LTD  
1600 Gehrig Dr.  
Midland, Texas 79706  
Attn: Ms. Melissa Gilliland**

Prepared by:

  
Beaux Jennings  
Senior Project Manager

  
Elizabeth Scaggs, PG  
Principal



# ENSOLUM

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# ENSOLUM

## GAS MITIGATION MONTHLY REPORT – FEBRUARY 2023

**South Hobbs G/SA Unit Operations**  
**Order No. R-4934-F, Case No. 14981**  
**Incident ID No. nAPP2227033082**  
**Unit F, Section 5, Township 19S, Range 38E**  
**Latitude 32.690683, Longitude -103.173158**  
**Lea County, New Mexico**

### 1.0 INTRODUCTION

#### 1.1 Site Description & Background

<b>Operator:</b>	Occidental Permian LTD (OXY)
<b>Site Name:</b>	South Hobbs G/SA Unit Operations (Site)
<b>Location:</b>	Unit F, Section 5, Township 19 South, Range 38 East Latitude 32.690683, Longitude -103.173158 Lea County, New Mexico
<b>Property Owner:</b>	OXY
<b>Regulatory:</b>	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) New Mexico Oil Conservation Division (NMOCD) Order No. R-4934-F Case No. 14981

This Gas Mitigation Monthly Report - February 2023 summarizes activities subsequent to the *Gas Mitigation Monthly Report - November 2021*, dated December 14, 2021, the *Gas Mitigation Monthly Report - December 2021*, dated January 20, 2022, the *Gas Mitigation Monthly Report - January 2022*, dated March 1, 2022, the *Gas Mitigation Monthly Report - February 2022*, dated March 24, 2022, the *Gas Mitigation Monthly Report - March 2022*, dated May 4, 2022, the *Gas Mitigation Monthly Report - April 2022*, dated July 11, 2022, the *Gas Mitigation Monthly Report - May 2022*, dated July 22, 2022 and the *Gas Mitigation Monthly Report - June 2022*, dated July 22, 2022, the *Gas Mitigation Monthly Report - July 2022*, dated September 1, 2022, the *Gas Mitigation Monthly Report - August 2022*, dated December 6, 2022, the *Gas Mitigation Monthly Report - September 2022*, dated December 6, 2022, the *Gas Mitigation Monthly Report - October 2022*, dated January 20, 2022, the *Gas Mitigation Monthly Report - December 2022*, dated March 9, 2023, and the *Gas Mitigation Monthly Report - January 2023*, dated March 9, 2023. All wells are located within operations that are part of the South Hobbs Grayburg/San Andres Unit (SHU) Field in the southwestern area of the City of Hobbs, Lea County, New Mexico. Collectively, the Levey water well (Levey Well) and the two monitoring wells (MW-1 and MW-2) are referred to as the "Site".

OXY has investigated groundwater and oil and gas operation well conditions in the area of the Site. A Site Map, which indicates the approximate locations of the Levey Well and monitoring wells MW-1 and MW-2 in relation to pertinent structures and general Site boundaries, is included as **Figure 1** in **Appendix A**.

South Hobbs G/SA Unit Operations  
Gas Mitigation Monthly Report - February 2023  
June 20, 2023



On June 30, 2019, elevated pressure was observed at the Levey Well. At the request of the New Mexico Oil Conservation Division (NMOCD), localized area wells were “shut in” from operational use. Over time, the pressure being observed at the Levey Well declined until pressure was no longer recorded. Observations and water analysis of the Levey water well did identify free gas in the well bore; however, pressure from the underlying groundwater-bearing zone was no longer present. Operational data was analyzed as part of the area wide assessment and adjacent wells investigated as potential sources for the gas infiltration. During maintenance operations at SHU #183, located approximately 575 feet southwest of the Levey Well, the SHU #183 well string was pulled, and pressures measured for proof of casing integrity. During these operations, SHU #183 was found to have a casing leak, which is believed to be the source of the pressure observed at Levey well. In response, OXY plugged the SHU #183 well to surface. No other anomalies were observed in the adjacent area oil and gas wells. After SHU #183 was plugged, OXY drilled a nearby replacement well. This replacement well, designated as SHU #297, is currently operational and shows no concerns of free gas migration.

In February of 2020, permission was obtained from the NMOCD to drill two monitoring wells (MW-1 and MW-2) for analysis and observation purposes. Monitoring well MW-1 was installed in the vicinity of the Levey Well and monitoring well MW-2 was installed in the vicinity of SHU #183.

During initial pre-start up background sampling of the Levey Well, MW-1 and MW-2 on two separate events, May 25th and June 20th of 2020, gas with lower explosive limits (LEL's) at or over 60% were observed in the Levey Well and monitoring well MW-2. This finding was consistent with previous analysis and findings within the Levey Well and not an unexpected result as the previous contributions of gas from the SHU #183 had been sufficient to result in pressure at the surface through the Levey Well.

OXY's groundwater monitoring program included the collection of a groundwater sample from each monitoring well (MW-1 and MW- 2). The monitoring wells were gauged and sampled on May 26, June 30, August 20, October 23, November 24, December 18, 2020, and weekly thereafter. The Levey Well has been sampled consistently from December 6, 2019, to February 22, 2023. The groundwater samples collected from the monitoring wells (MW-1 and MW-2) were analyzed for total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO) utilizing Environmental Protection Agency (EPA) Method 8015M, volatile organic compounds (VOCs) utilizing EPA Method SW-846 #8260 (full list), carbon dioxide utilizing Standard Method 4500 CO<sub>2</sub> C, dissolved sulfide utilizing EPA Method SW-846 #376.2, chloride using EPA Method SW-846 #300.0 and pH utilizing EPA Method SW-846 #150.1. The groundwater samples collected from the Levey Well were analyzed for VOCs, recoverable metals per ICP by EPA 200.7, inorganic anions by EPA 300/300.1, pH by SM4500-H, total dissolved solids (TDS) by SM2540C, alkalinity by SM2320B and cation-anion balance by SM1030E.

During the February 2023 groundwater sampling event the groundwater samples did not exhibit constituent concentrations above New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards* (GQSs), with the exception of benzene, chloride, and TDS. Benzene concentrations ranged from 0.0138 milligrams per liter (mg/L) to 0.0165 mg/L in monitoring well MW-2. A chloride exceedance of 309 mg/L was also observed in the Levey Well. TDS concentrations ranged from 1,160 mg/L to 1,680 mg/L in the Levey Well. Although above the GQS, these TDS concentrations are consistent with background levels in the Quaternary Alluvium, Ogallala Formation, and the Dockum Group (i.e., the three groundwater bearing units) in Southern Lea County (Nicholson and Clebsch, 1961). The groundwater analytical summary tables are included in **Appendix B**.

South Hobbs G/SA Unit Operations  
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OXY utilized automated processes to compile and monitor dates related to the SHU localized wells to ensure tracking of production and injection activities as related to the re-start of these area operations. No anomalies were observed in the area oil and gas wells that could contribute free gas into the groundwater-bearing zone.

To mitigate potential exposures, the Levey residence was purchased by OXY and remains unoccupied. A passive vent was installed on the Levey Well to mitigate safety and explosivity concerns for the residential and work area. There has been no detectable build-up of pressure in the Levey Well or monitoring wells MW-1 and MW-2. Hydrogen sulfide (H<sub>2</sub>S) has not been detected in any of the three aforementioned wells since July 15, 2020. All detections of H<sub>2</sub>S prior to July 15, 2020 were within the well bore. No H<sub>2</sub>S above permissible exposure limits was observed outside of the well bores.

OXY installed pressure reading charts at the Levey Well to measure the potential for any returning pressure at the well. These charts measure pressure 24 hours a day and show that no pressure has returned to the Levey Well. Monitoring wells MW-1 and MW-2 were physically monitored for the presence of gas and pressure on several dates from 7/1/2020 to 2/22/2023, with no pressure observed in either monitoring well. The pressure reading chart available for February 2023 is included in **Appendix D**.

The data indicates that pressure sourced from SHU #183 contributed to the infiltration of free gas into the red beds just beneath the groundwater-bearing zone, creating a pressurized pool of gas that traveled to the Levey Well. Once SHU #183 was plugged, the pressure source was removed from the red beds and overlying groundwater-bearing zone and the remaining free gases below remain pooling within the red bed underlying the groundwater-bearing zone. This is supported by the data described above and is consistent with findings reported in two reports, one co-authored and supplied by Lisa Molofsky of GSI Environmental Inc. The first is "Purging and other sampling variables affecting dissolved methane concentration in water supply wells", and the second "Factors affecting the variability of stray gas concentration and composition in groundwater" authored by A.W. Gorody, referenced below. The reports state:

*As free-phase gas spreads vertically and/or laterally from a source of release, it can become trapped beneath low permeability sediments (e.g., the "red beds" which separate the overlying Ogallala aquifer from the underlying Santa Rosa). Irregularities in the base topography of these barriers can result in discretized pools of free-phase gas. In many ways, this trapping and accumulation of free-phase gases beneath impermeable units is analogous to the development of structural traps that form in conventional oil and gas reservoirs. This phenomenon can also be viewed as the conceptual inverse of a chlorinated solvent release (a dense NAPL, or "DNAPL") in which the dense liquid can migrate downward through the groundwater via available pathways, until encountering a resistant layer, where the dense liquid pools and accumulates.*

*In water supply wells, free-phase gas entry is most likely to occur when water levels are lowered in a well by pumping or drought, because this reduces the pressure head resisting gas entry from the formation into the well (Gorody 2012, Molofsky et al. 2018). This may allow free-phase gas to enter the well from one unit (e.g., red bed), while water is primarily originating from another (e.g., the Ogallala aquifer). When the two phases (free-phase gas from the red bed and groundwater from the Ogallala) mix in the water well, there is relatively little time for equilibration under pumping conditions; consequently, dissolved gas concentrations may be very low even though free-phase gas is observed in the well headspace.*

These studies and OXY's related findings are that the remaining free gas beneath portions of the Site is pooled within the red beds and the overlying geologic pressure is such that it is confining the free gas. The free gas observed in the Levey Well and monitoring well MW-2 well bores are traveling through these conduits to near surface but lack the pressure to release from the subsurface as the additional pressure from SHU #183 has been eliminated. This coupled with the finding that there is little mixing of constituents of gases into the dissolved phase within the adjacent groundwater supports the understanding that the gases are remaining beneath the water interface and only traveling up to surface when the relative pressure allows it to do so, rather than mixing with the water source.

The data indicates that the current free gas in the subsurface has reached a point of equilibrium and, without influence, is stable. To mobilize the free gas, a pressure change was proposed to release the free gas pool from the subsurface red bed, as described below in Section 1.3.

## 1.2 Groundwater Recovery – Levey Well

As of July 1, 2021, the Levey Well has run full time and recovered groundwater is transferred via flowline to a nearby tank for proper disposal. The groundwater recovered from the Levey Well during February 1 - 22, 2023 was approximately 331,331 gallons. Due to a severe winter storm on February 2, 2022, the Levey well flowline pump was damaged. Replacement parts were ordered, the pump was repaired and has been active as of March 14, 2022.

## 1.3 Gas Recovery – Levey Well

OXY conducted two vacuum recovery events during the month of February 2023 with positive results as shown on **Table 4** in **Appendix B**. The purpose of this event was to attach a vacuum pump truck to the Levey Well, creating a vacuum on the wellbore, and displacing the underlying water releasing the overlying pressure restraining the free gas pool, and releasing it to the surface. This process will continue into March 2023 once every two weeks until the sampling results of the air is minimal after displacement of the overlying pressure, or the process proves to become ineffective.

## 2.0 AIR AND GROUNDWATER MONITORING

### 2.1 Air Sampling Program

#### Levey Well

The air samples from February 7 and 20, 2023, were taken prior to, during, and subsequent to the vacuum recovery event utilizing Summa<sup>®</sup> canisters. Upon arrival at the Site, the Levey Well is turned off and allowed to stabilize for approximately one hour. An air sample is taken after one hour of the Levey Well stabilization, prior to initiating the vacuum recovery event.

During the February 7 and 20, 2023 vacuum recovery events, the vacuum was applied to the Levey Well for a duration of approximately two hours. Approximately one hour and two hours into the event, an air sample was taken. The vacuum was then turned off and an additional air sample from the Levey Well was taken one hour subsequent to the vacuum recovery event. Water was not recovered during the vacuum recovery event.

The Summa<sup>®</sup> canisters were shipped under proper chain-of-custody to Pace Analytical Laboratory in Mount Juliet, TN for analysis of volatile organic compounds (VOCs) by Method TO-15. Laboratory analytical results are summarized in **Table 4** in **Appendix B**. The executed chain-of-custody forms and laboratory data sheets from the February 2023 sampling events are provided in **Appendix C**.

## 2.2 Groundwater Sampling Program

Groundwater sampling events were conducted each week on the Levey Well and monitoring wells MW-1 and MW-2. The groundwater sampling program followed the requirements from NMOCD and consists of the following:

### Levey Well

As of July 1, 2021, the Levey water well ran full time until February 2, 2022. The Levey well recovered groundwater is transferred via flowline to a nearby tank battery for proper disposal. Prior to sample collection, the Levey Well is turned off and allowed to stabilize for approximately one hour prior to sampling. Once the Levey Well is properly purged and readings from the AquaTROLL 500 stabilize, a groundwater sample is collected.

As previously stated, due to a severe winter storm on February 2, 2022, the Levey well flowline pump was damaged. Replacement parts were ordered, the pump was repaired and has been active since March 14, 2022.

The groundwater samples collected from the Levey Well were analyzed for VOCs, recoverable metals per ICP by EPA 200.7, inorganic anions by EPA 300/300.1, pH by SM4500-H, TDS by SM2540C, alkalinity by SM2320B and cation-anion balance by SM1030E.

### Monitoring Wells MW-1 and MW-2

Prior to sample collection, the depth to fluids in each monitoring well (MW-1 and MW-2) are gauged using a water level meter capable of detecting groundwater up to 0.01 feet. Each monitoring well is then sampled utilizing micro-purge low-flow sampling techniques. Subsequent to the completion of the micro-purge process, one groundwater sample is collected from each monitoring well.

The groundwater samples collected from monitoring wells MW-1 and MW-2 were analyzed for TPH GRO, TPH DRO and ORO utilizing EPA Method 8015M, VOCs utilizing EPA Method SW-846 #8260, carbon dioxide utilizing Standard Method 4500, dissolved sulfide utilizing EPA Method SW-846 #376.2, chloride using EPA Method SW-846 300.0 and pH utilizing EPA Method SW-846 #150.1.

Low flow refers to the velocity with which groundwater enters the pump intake and is imparted to the formation water in the immediate vicinity of the well screen. The objective is to pump in a manner that minimizes stress (drawdown) to the system, to the extent practical, taking into account established Site sampling objectives. Flow rates on the order of 0.1 to 0.5 liters per minute (l/min) will be maintained during sampling activities, using dedicated or decontaminated sampling equipment.

The groundwater samples are collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements during purging are taken every three to five minutes. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for three successive readings.

Groundwater samples were collected in laboratory supplied containers, labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The groundwater samples were relinquished to the courier for Eurofins Midland (formerly Xenco) of Midland, Texas under proper chain-of-custody procedures.

Laboratory analytical results are summarized in **Tables 1** through **Table 3** in **Appendix B**. The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix C**.

### 3.0 DATA EVALUTATION

#### 3.1 Air Samples

Gas mitigation activities at the Levey Well began on November 8, 2021 and will continue on a bi-weekly basis through March 2023. Based on the concentrations observed in the Levey Well air samples, the vacuum recovery events are drawing the free gas over to the Levey Well. Prior to each vacuum recovery event, an air sample is taken to give a representative snapshot of static conditions of gas in the subsurface. Elevated concentrations of cyclohexane, ethanol, heptane, n-hexane, 2-propanol, and/or TPH were observed prior to the initiation of each vacuum recovery event.

Once initiated, an air sample is taken at one hour and two hours into the vacuum recovery event. During each of the vacuum recovery events, cyclohexane, ethanol, heptane, n-hexane, 2-propanol, and TPH concentrations significantly decrease throughout the duration of the event.

Approximately one hour after the termination of the vacuum recovery event, a final air sample is collected. Elevated concentrations of cyclohexane, ethanol, heptane, n-hexane, 2-propanol, and TPH begin to accumulate inside the Levey water well casing. These results indicate that the vacuum recovery events are successful in drawing the subsurface gas over to the Levey Well.

Air samples are also collected on a bi-weekly basis approximately one week subsequent to the vacuum recovery event. During each of the bi-weekly air sampling events, elevated concentrations of acetone, carbon disulfide, cyclohexane, ethanol, n-hexane, 2-Butanone (MEK), 2-propanol, and/or TPH were observed inside the Levey water well casing. These results again indicate that the vacuum recovery events are successful in drawing the subsurface gas over to the Levey Well.

#### 3.2 Groundwater Samples

Ensolum compared the laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with the February 2023 groundwater samples collected from the Levey Well and monitoring wells MW-1 and MW-2 to the New Mexico WQCC GQs. The results of the groundwater sample analyses are summarized in **Table 1** through **Table 3** of **Appendix B**. All analytical results were below the WQCC GQs, with the exception of the analytes, as discussed below.



### Levey Well

The groundwater samples collected from the Levey Well exhibited a chloride exceedance of 309 mg/L, which are above the WQCC GQS of 250.0 mg/L.

TDS concentrations of 1,160 mg/L to 1,680 mg/L were observed during the February 2023 sampling. Although above the GQS, these TDS concentrations are consistent with background levels in the Quaternary Alluvium, Ogallala Formation, and the Dockum Group (i.e., the three groundwater bearing units) in Southern Lea County (Nicholson and Clebsch, 1961). Specifically, for the 20 water supply wells sampled by the USGS in Southern Lea County with TDS analyses, the median TDS concentration was 722 mg/L, and the 75<sup>th</sup> percentile TDS concentration was 1,953 mg/L.

The Levey Well sampling first began on December 6, 2019. Through mitigation activities, including groundwater recovery and vacuum recovery events, the benzene concentration in the Levey Well has significantly decreased over time, with the exception of December 29, 2021, which had a benzene analytical result of 0.00611 mg/L, the January 19, 2022, which had a benzene analytical result of 0.00684 mg/L, the March 9, 2022, which had a benzene analytical result of 0.00552 mg/L, and the January 25, 2023, which had a benzene analytical result of 0.00589 mg/L, which exceeds the WQCC GQS of 0.005 mg/L. This slight rise in concentration is indicative that the vacuum recovery events are successful in drawing the subsurface gas over to the Levey Well. Benzene concentrations over time are graphed and included in **Appendix A**, showing the significant decrease of benzene in the Levey Well over time.

### Monitoring Well MW-1 and MW-2

The groundwater samples collected from monitoring well MW-1 did not exhibit benzene concentrations above the WQCC GQS of 0.005 mg/L. The groundwater samples collected from monitoring well MW-2 exhibited benzene concentrations ranging from 0.0138 mg/L to 0.0165 mg/L, which exceed the WQCC GQS of 0.005 mg/L.

All other VOC concentrations were either below the laboratory reporting limit or below the WQCC GQS protective concentrations. All laboratory reporting limits were below the WQCC GQS protective concentrations, indicating a lack of dissolved phase gas infiltration into the localized groundwater.

## **4.0 RECOMMENDATIONS**

OXY has demonstrated over time that the SHU #290 and the surrounding oil and gas operations were and are not a contributor to the previous related pressure observed in the Levey Well. This has been demonstrated by over four months of readings (**Appendix D**) which show that the pressures and gas readings are very consistent with pre-injection background, including, but not limited to carbon dioxide. The plugging of the SHU #183 well has shown to be effective in discontinuing the source of free gas related to the Levey water well.

**Based on verbal communication between OXY and NMOCD, OXY concurs with the following recommendations and/or requests from the NMOCD moving forward in 2023:**

- **Continue to remove free gas accumulations from the underlying red bed and groundwater-bearing zone on a bi-weekly basis to acceptable levels of removal to achieve compliance expectations. The air sampling process performed at the Levey Well will continue to be utilized, as described in Section 2.1;**

- **Continue to monitor the Levey Well and monitoring wells MW-1 and MW-2 utilizing daily pressure checks for significant changes in pressure, which could indicate a secondary source, until compliance of free gas removal is achieved; and**
- **Implement monthly sampling for water and air on the Levey Well and monitoring wells MW-1 and MW-2 moving forward in 2023.**

## 5.0 REFERENCES

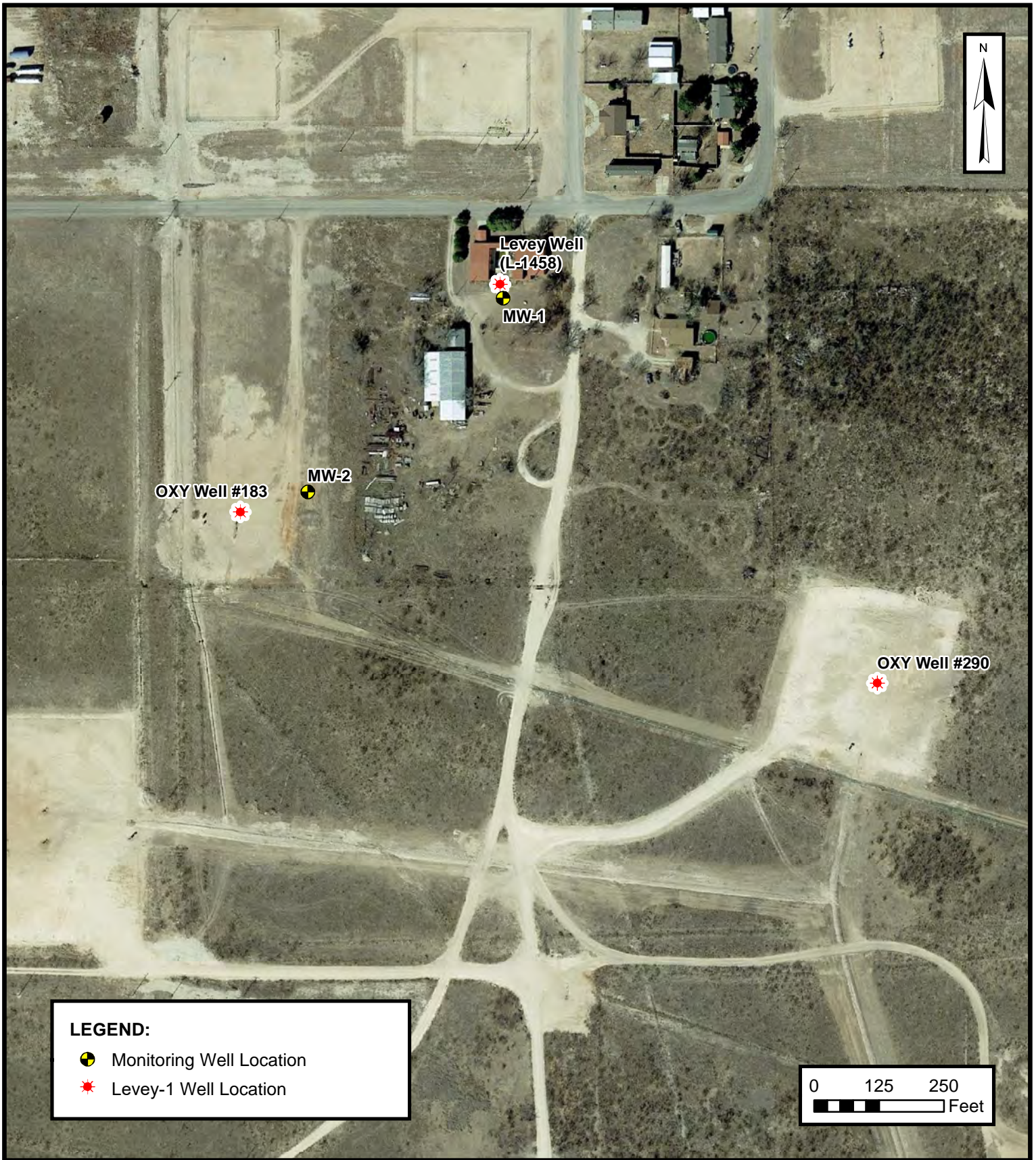
- GSI Environmental Inc. Preliminary Draft -Results of Water Supply Well Sampling and Investigation. November 2019. Hobbs New Mexico Municipal Code, Title 13.04.017. Accessed Sept. 2020.
- New Mexico Environment Department. 2018. 20.6.2 NMAC: Title 20 (Environmental Protection), Chapter 6 (Water Quality), Part 2 (Ground and Surface Water Protection). Amended December 11<sup>th</sup>, 2019.
- Nicholson, Jr. A. and A. Clebsch, Jr. 1961. Geology and Ground-Water Conditions in Southern Lea County, New Mexico. United States Geological Survey Ground-Water Report 6. Prepared in cooperation with the New Mexico Institute of Mining and Technology, State Bureau of Mines and Mineral Resources Division and the New Mexico State Engineer.
- Gorody, A.W., 2012. Factors affecting the variability of stray gas concentration and composition ingroundwater. Environ. Geosci. 19, 17–31. <https://doi.org/10.1306/eg.12081111013>.
- Molofsky, L.J., Richardson, S.D., Gorody, A.W., Baldassare, F., Connor, J.A., McHugh, T.E., Smith, A.P., Wylie, A.S., Wagner, T., 2018. Purging and other sampling variables affecting dissolved methane concentration in water supply wells. Sci. Total Environ. 618, 998-1007. <https://doi.org/10.1016/j.scitotenv.2017.09.077>.



## APPENDIX A

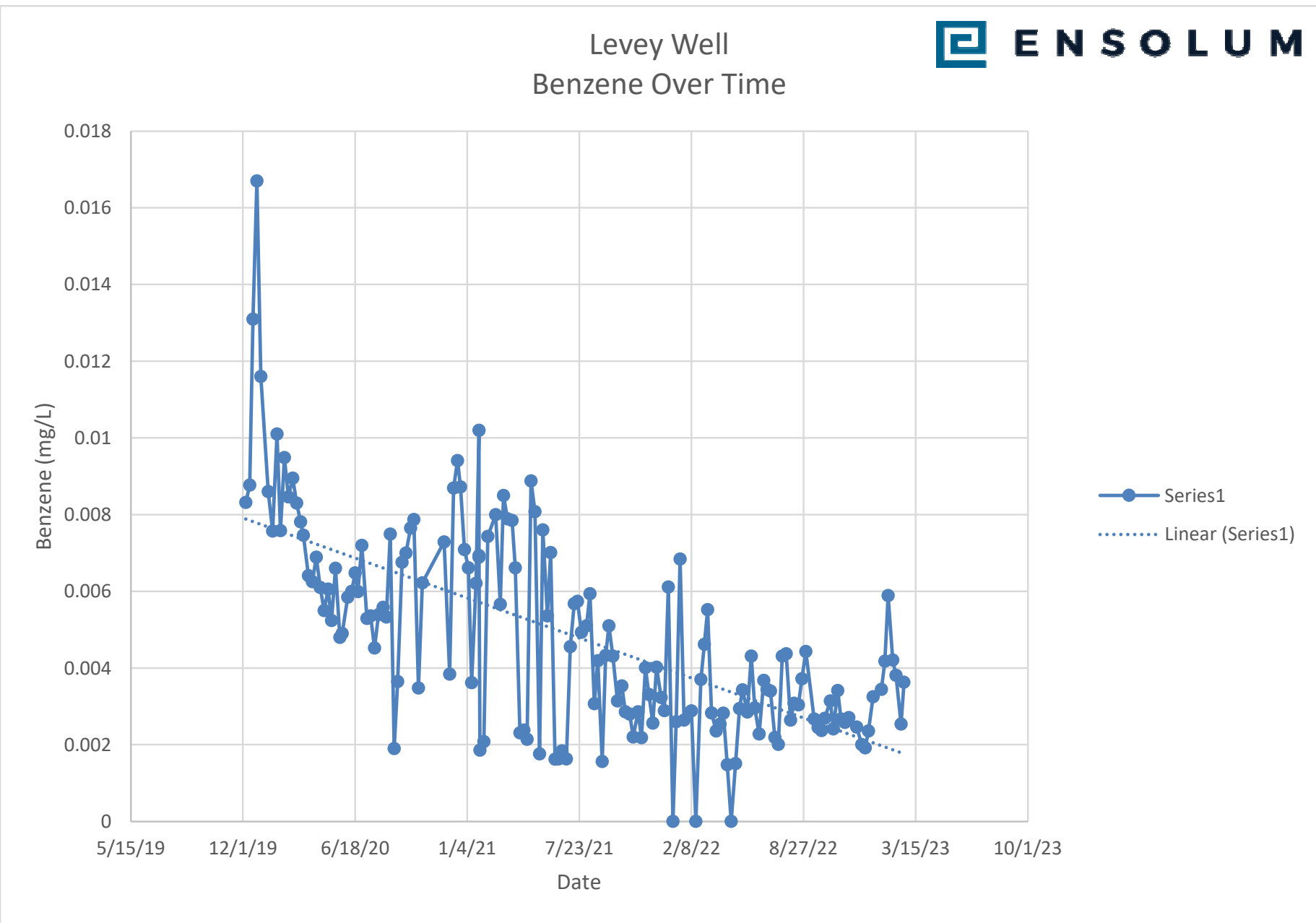
### Figures and Graphs

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**SITE MAP**  
 OCCIDENTAL PERMIAN LTD  
 S HOBBS G/SA UNIT  
 SE ¼ of the NW ¼, Sec 5, T29S, R38E, Hobbs, New Mexico  
 32.690683° N, 103.173158° W  
 PROJECT NUMBER: 03B1417001

**FIGURE**  
**1**





## APPENDIX B

### Tables

TABLE 1
GROUNDWATER SAMPLING (VOCs) ANALYTICAL DATA SUMMARY

Levey Well
Oxy Permian Ltd.
Hobbs, New Mexico
Ensolum Project No. 03B1417001 / 03B1417002

Table with columns: Sample Designation, Date, and VOCs (mg/l). VOCs include Benzene, Toluene, Ethylbenzene, o-Xylene, m,p-Xylenes, Total Xylenes, Methyl ethyl ketone (2-Butanone), n-Butylbenzene, Sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, p-Cymene (p-Isopropyltoluene), 1,2-Dichloroethane, 1,2-Dichloropropane, cis-1,2-Dichloroethylene, 1,4-Dichlorobenzene, 1,1-Dichloropropene, Isopropylbenzene, Naphthalene, n-Propylbenzene, 1,2-Trichloroethane, Styrene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene. The table contains data for 20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards, with numerical values for each parameter across 58 sampling dates from 2019 to 2020.







TABLE 1
GROUNDWATER SAMPLING (VOCs) ANALYTICAL DATA SUMMARY

Levey Well
Oxy Permian Ltd.
Hobbs, New Mexico
Ensolum Project No. 03B1417001 / 03B1417002

Table with 28 columns for VOCs and 30 rows of data. Includes headers for Benzene, Toluene, Ethylbenzene, etc., and values for various sampling dates from 5/26/2020 to 12/16/2021.

TABLE 1
GROUNDWATER SAMPLING (VOCs) ANALYTICAL DATA SUMMARY
Levey Well
Oxy Permian Ltd.
Hobbs, New Mexico
Ensolium Project No. 03B1417001 / 03B1417002

Table with columns: Sample Designation, Date, and VOCs (mg/l) including Benzene, Toluene, Ethylbenzene, o-Xylene, m,p-Xylenes, Total Xylenes, Methyl ethyl ketone (2-Butanone), n-Butylbenzene, Sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, p-Cymene (p-Isopropyltoluene), 1,2-Dichloroethane, 1,2-Dichloropropane, cis-1,2-Dichloroethylene, 1,4-Dichlorobenzene, 1,1-Dichloropropane, Isopropylbenzene, Naphthalene, n-Propylbenzene, 1,2-Trichloroethane, Styrene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene. Includes a note: 'Unable to Sample due to Inclement Weather. Booster Pump for Levey Well Damaged by Freeze.' and another note: 'Booster Pump for Levey Well Repaired and Back on Running Full Time.'

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Received by OCD: 6/20/2023 3:03:32 PM

TABLE 1  
GROUNDWATER SAMPLING (VOCs) ANALYTICAL DATA SUMMARY

Levey Well

Oxy Permian Ltd.

Hobbs, New Mexico

Ensolum Project No. 03B1417001 / 03B1417002

Table with columns: Sample Designation, Date, and 28 VOCs (mg/l) including Benzene, Toluene, Ethylbenzene, o-Xylene, m,p-Xylenes, Total Xylenes, Methyl ethyl ketone (2-Butanone), n-Butylbenzene, Sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethy(l)ene, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, p-Cymene (p-Isopropyltoluene), 1,2-Dichloroethane, 1,2-Dichloropropane, cis-1,2-Dichloroethy(l)ene, 1,4-Dichlorobenzene, 1,1-Dichloropropane, Isopropylbenzene, Naphthalene, n-Propylbenzene, 1,2-Trichloroethane, Styrene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene. Rows include standard values and sampling data for MW-2 from 5/26/2020 to 12/29/2021.









**TABLE 2**  
**GROUNDWATER SAMPLING (General Water Chemistry) ANALYTICAL DATA SUMMARY**  
 Levey Well  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417001 / 03B1417002

Sample Designation	Date	(mg/l)													%	SU
		Bromide	Chloride	Fluoride	Nitrate as N	Nitrite as N	Sulfate	Calcium	Magnesium	Potassium	Sodium	Total Dissolved Solids	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	Alkalinity, Carbonate (as CaCO <sub>3</sub> )	Cation-Anion Balance	pH
20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards		NE	250.0	1.6	10.0	1.0	NE	NE	NE	NE	NE	1,000.0	NE	NE	NE	6-9
Levey Well	10/4/2022	0.515	200	0.740	0.396	<0.0293	45.0	242	50.2	4.07	78.2	706	456	<4.00	4.21	6.6
	10/14/2022	0.495 J	212	0.655	0.464	<0.0293	49.1	208	42.7	3.22	68.5	1,250	719	<4.00	-16.5	6.3
	10/19/2022	1.08 J	206	0.612 J	0.359	<0.0293	46.0	250	51.3	4.05	81.9	1,340	676	<4.00	-5.64	6.6
	10/27/2022	0.412 J	201	0.631	0.0757 J	0.690	40.1	322	64.8	5.47	95.2	977	740	<4.00	3.53	6.4
	11/2/2022	0.473 J	216	0.509	0.165	<0.0293	46.1	247	49.2	4.26	76.4	1,230	681	<4.00	-6.86	6.3
	11/9/2022	0.461 J	218	0.683	0.0934 J	<0.0293	46.5	238	44.2	3.36	73.3	1,450	708	<4.00	-11.0	6.5
	11/16/2022	0.480 J	219	0.493 J	0.154	<0.0293	47.5	250	50.0	4.20	78.0	1,340	611	<4.00	-3.43	6.8
	11/30/2022	0.487 J	218	0.710	0.0811 J	<0.0293	44.9	208	43.2	3.12	70.9	1,270	618	<4.00	-11.7	6.7
	12/9/2022	0.335 J	206	0.685	0.153	0.108	40.5	244	49.3	3.61	62.9	1,170	626	<4.00	-5.72	6.5
	12/15/2022	0.311 J	211	0.628	0.137	<0.0293	40.5	254	48.3	4.05	76.3	956	440	<4.00	6.29	6.3
	12/21/2022	0.392 J	214	0.732	0.144	<0.0293	44.5	258	49.1	4.69	80.4	1,130	656	<4.00	-3.79	6.5
	12/29/2022	0.515	209	0.568	0.0543 J	<0.0293	43.5	242	45.9	3.93	74.9	1,060	670	<4.00	-7.08	6.6
	1/4/2023	Electrical Failure, Unable to Sample.														
	1/13/2023	0.562	292	0.202 J	0.227	<0.0293	35.2	393	71.7	6.96	125	1,800	949	<4.00	1.05	6.4
	1/19/2023	0.658	304	0.191 J	0.109	<0.0293	53.7	450	84.0	7.71	133	1,730	1,140	<4.00	0.441	6.3
	1/25/2023	0.525	298	0.207 J	0.0992 J	<0.0293	46.7	416	72.6	6.84	119	1,760	1,110	<4.00	-2.84	6.7
	2/2/2023	0.609	309	<0.100	0.256	<0.0293	43.5	366	69.4	6.39	113	1,680	1,120	<4.00	-8.22	6.4
2/8/2023	0.514	224	0.443 J	0.108	<0.0293	44.6	228	46.7	4.18	78.0	1,230	704	<4.00	-11.0	6.7	
2/17/2023	0.403 J	231	0.632	0.0839 J	<0.0293	50.5	234	46.5	3.96	74.4	1,190	651	<4.00	-9.14	6.5	
2/22/2023	0.442 J	214	0.464 J	0.0849 J	<0.0293	46.8	246	50.4	4.19	78.6	1,160	732	<4.00	-8.94	6.3	







**TABLE 2**  
**GROUNDWATER SAMPLING (General Water Chemistry) ANALYTICAL DATA SUMMARY**  
 Levey Well  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417001 / 03B1417002

Sample Designation	Date	(mg/l)													%	SU
		Bromide	Chloride	Fluoride	Nitrate as N	Nitrite as N	Sulfate	Calcium	Magnesium	Potassium	Sodium	Total Dissolved Solids	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	Alkalinity, Carbonate (as CaCO <sub>3</sub> )	Cation-Anion Balance	pH
20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards		NE	250.0	1.6	10.0	1.0	NE	NE	NE	NE	NE	1,000.0	NE	NE	NE	6-9
MW-1	3/24/2022	NA	147	0.610	<0.0391	<0.0293	42.9			NA			297	<4.00	NA	7.2
	3/31/2022	NA	143	0.568	0.164	<0.0293	40.4			NA			275	<4.00	NA	7.1
	4/6/2022	NA	133	0.677	0.186	<0.0293	39.7			NA			262	<4.00	NA	7.1
	4/13/2022	NA	129	0.767	<0.0391	<0.0293	40.9			NA			259	<4.00	NA	7.6
	4/20/2022	NA	173	0.574	0.152	0.176	42.4			NA			362	<4.00	NA	7.0
	4/28/2022	NA	136	0.608	0.0700 J	0.0717 J	41.7			NA			300	<4.00	NA	7.5
	5/5/2022	NA	118	0.746	<0.0391	1.75	41.1			NA			253	<4.00	NA	7.2
	5/10/2022	NA	116	0.709	0.0815 J	<0.0293	43.9			NA			250	<4.00	NA	7.2
	5/19/2022	NA	106	0.643	0.0743 J	0.199	41.0			NA			262	<4.00	NA	7.1
	5/26/2022	NA	98.7	0.720	0.0777 J	0.809	44.7			NA			256	<4.00	NA	7.2
	6/1/2022	NA	100	0.690	0.0629 J	<0.0293	46.4			NA			240	<4.00	NA	7.4
	6/9/2022	NA	99.9	0.743	<0.0391	<0.0293	46.6			NA			246	<4.00	NA	7.1
	6/17/2022	NA	83.5	0.710	0.146	0.275	47.9			NA			253	<4.00	NA	7.3
	6/23/2022	NA	83.9	0.616	0.238	<0.0293	47.7			NA			258	<4.00	NA	7.2
	6/29/2022	NA	84.8	0.644	0.199	0.556	48.0			NA			264	<4.00	NA	7.2
	7/7/2022	NA	83.7	0.660	0.0413 J	0.0458 J	47.7			NA			238	<4.00	NA	7.4
	7/13/2022	NA	91.3	0.778	0.102	<0.0293	49.2			NA			253	<4.00	NA	7.2
	7/20/2022	NA	81.5	0.766	<0.0391	<0.0293	48.5			NA			249	<4.00	NA	7.2
	7/27/2022	NA	85.8	0.766	0.0482 J	<0.0293	47.2			NA			268	<4.00	NA	7.7
	8/4/2022	NA	77.5	0.633	0.126	0.118	43.1			NA			253	<4.00	NA	7.2
	8/10/2022	NA	68.3	0.737	<0.0391	0.212	40.9			NA			278	<4.00	NA	7.2
	8/18/2022	NA	77.7	0.752	0.0696 J	0.154	39.4			NA			262	<4.00	NA	7.0
	8/24/2022	NA	92.0	0.739	<0.100	<0.100	40.8			NA			273	<4.00	NA	7.2
	8/31/2022	NA	85.9	0.628	<0.0391	<0.0293	36.7			NA			277	<4.00	NA	7.4
	9/15/2022	NA	86.4	1.03	0.0909 J	0.206	33.4			NA			277	<4.00	NA	7.0
	9/22/2022	NA	95.8	0.585	0.518	<0.0293	38.4			NA			280	<4.00	NA	7.3
	9/28/2022	NA	91.2	0.702	<0.0391	<0.0293	32.8			NA			285	<4.00	NA	7.3
	10/4/2022	NA	75.6	0.803	0.376	0.201	33.7			NA			272	<4.00	NA	7.2
	10/14/2022	NA	81.0	0.807	0.360	0.195	33.1			NA			266	<4.00	NA	7.3
	10/19/2022	NA	136	<0.100	<0.0391	<0.0293	19.2			NA			283	<4.00	NA	7.4
	10/27/2022	NA	80.4	0.750	0.0601 J	0.423	29.8			NA			277	<4.00	NA	7.4
	11/2/2022	NA	80.0	0.681	0.120	0.154	29.8			NA			252	<4.00	NA	7.2
11/9/2022	NA	81.1	0.746	0.141	0.117	32.5			NA			294	<4.00	NA	7.4	
11/16/2022	NA	82.2	0.738	0.120	0.384	30.9			NA			282	<4.00	NA	7.3	
11/30/2022	NA	88.1	0.602	0.140	0.141	45.4			NA			300	<4.00	NA	7.3	
12/9/2022	NA	83.7	0.809	0.0610 J	0.247	44.2			NA			309	<4.00	NA	7.5	
12/15/2022	NA	82.1	0.786	<0.0391	0.121	44.3			NA			348	<4.00	NA	7.2	
12/21/2022	NA	84.4	0.676	0.0802 J	<0.0293	43.6			NA			377	<4.00	NA	7.3	
12/29/2022	NA	77.3	0.555	0.211	0.310	33.4			NA			409	<4.00	NA	7.1	
1/4/2023	NA	75.9	0.863	0.0857 J	<0.0293	39.7			NA			354	<4.00	NA	7.4	
1/13/2023	NA	76.2	0.600	0.208	0.266	41.1			NA			357	<4.00	NA	7.2	
1/19/2023	NA	82.6	0.624	<0.0391	<0.0293	49.2			NA			340	<4.00	NA	7.1	
1/25/2023	NA	73.7	0.631	0.0564 J	0.149	47.7			NA			363	<4.00	NA	7.4	
2/2/2023	NA	75.4	0.670	0.223	0.196	47.2			NA			329	<4.00	NA	7.1	
2/8/2023	NA	84.5	0.607	0.0542 J	0.133	54.7			NA			360	<4.00	NA	7.2	
2/17/2023	NA	102	0.763	<0.0391	<0.0293	65.2			NA			432	<4.00	NA	7.5	
2/22/2023	NA	87.3	0.528	<0.0391	<0.0293	55.6			NA			418	<4.00	NA	7.1	





**TABLE 2**  
**GROUNDWATER SAMPLING (General Water Chemistry) ANALYTICAL DATA SUMMARY**  
 Levey Well  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417001 / 03B1417002

Sample Designation	Date	(mg/l)													%	SU
		Bromide	Chloride	Fluoride	Nitrate as N	Nitrite as N	Sulfate	Calcium	Magnesium	Potassium	Sodium	Total Dissolved Solids	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	Alkalinity, Carbonate (as CaCO <sub>3</sub> )		
20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards		NE	250.0	1.6	10.0	1.0	NE	NE	NE	NE	NE	1,000.0	NE	NE	NE	6-9
MW-2	3/31/2022	NA	150	<0.100	<0.0391	1.65	106			NA			1,340	<4.00	NA	6.3
	4/6/2022	NA	130	0.175 J	0.619	1.60	111			NA			1,360	<4.00	NA	6.2
	4/13/2022	NA	135	0.271 J	0.589	1.67	108			NA			1,380	<4.00	NA	6.5
	4/20/2022	NA	198	0.174 J	0.966	0.722	121			NA			1,330	<4.00	NA	6.4
	4/28/2022	NA	156	0.172 J	0.711	0.434	118			NA			1,380	<4.00	NA	6.4
	5/5/2022	NA	116	0.229 J	0.586	11.5	112			NA			1,330	<4.00	NA	6.3
	5/10/2022	NA	134	0.230 J	0.548	1.83	120			NA			1,320	<4.00	NA	6.3
	5/19/2022	NA	133	0.116 J	<0.0391	0.373	118			NA			1,380	<4.00	NA	6.2
	5/26/2022	NA	107	0.196 J	0.392	1.14	104			NA			1,320	<4.00	NA	6.0
	6/1/2022	NA	130	0.107 J	0.481	1.47	116			NA			1,340	<4.00	NA	6.3
	6/9/2022	NA	103	<0.100	0.330	0.236	103			NA			1,320	<4.00	NA	6.2
	6/17/2022	NA	99.0	0.213 J	0.395	0.702	102			NA			1,290	<4.00	NA	6.4
	6/23/2022	NA	109	<0.100	0.494	5.21	107			NA			1,270	<4.00	NA	6.3
	6/29/2022	NA	82.6	0.111 J	0.351	0.827	89.7			NA			1,330	<4.00	NA	6.2
	7/7/2022	NA	107	0.141 J	0.399	0.440	98.3			NA			1,300	<4.00	NA	6.4
	7/13/2022	NA	95.3	0.262 J	0.306	1.23	100			NA			1,280	<4.00	NA	6.2
	7/20/2022	NA	134	<0.100	0.485	1.46	122			NA			1,360	<4.00	NA	6.3
	7/27/2022	NA	101	<0.100	0.403	3.86	105			NA			1,340	<4.00	NA	6.4
	8/4/2022	NA	107	0.112 J	0.451	0.477	99.9			NA			1,250	<4.00	NA	6.2
	8/10/2022	NA	89.4	0.189 J	0.189	0.210	97.2			NA			1,260	<4.00	NA	6.3
	8/18/2022	NA	99.1	0.122 J	0.333	0.303	100			NA			1,280	<4.00	NA	6.3
	8/24/2022	NA	110	0.172 J	0.282	0.427	103			NA			1,290	<4.00	NA	6.3
	8/31/2022	NA	94.8	<0.100	0.175	0.238	94.4			NA			1,280	<4.00	NA	6.3
	9/15/2022	NA	94.4	0.538	0.232	2.31	98.7			NA			1,320	<4.00	NA	6.3
	9/22/2022	NA	94.4	0.260 J	0.650	0.481	105			NA			1,320	<4.00	NA	6.3
	9/28/2022	NA	91.2	0.498 J	0.261	<0.0293	92.5			NA			1,280	<4.00	NA	6.3
	10/4/2022	NA	88.9	0.143 J	0.497	0.189	97.0			NA			1,320	<4.00	NA	6.2
	10/14/2022	NA	82.6	0.101 J	<0.0391	0.0760 J	84.6			NA			1,320	<4.00	NA	6.2
	10/19/2022	NA	51.2	<0.100	0.101	<0.0293	48.5			NA			1,290	<4.00	NA	6.5
	10/27/2022	NA	124	0.165 J	0.319	0.871	104			NA			1,340	<4.00	NA	6.3
11/2/2022	NA	91.1	0.148 J	0.221	0.947	92.9			NA			1,330	<4.00	NA	6.2	
11/9/2022	NA	97.8	0.161 J	0.273	0.366	101			NA			1,430	<4.00	NA	6.4	
11/16/2022	NA	86.0	0.180 J	0.206	0.579	91.4			NA			1,300	<4.00	NA	6.6	
11/30/2022	NA	90.4	0.133 J	0.264	0.168	91.1			NA			1,300	<4.00	NA	6.4	
12/9/2022	NA	78.0	0.158 J	0.217	0.785	82.5			NA			1,290	<4.00	NA	6.4	
12/15/2022	NA	100	0.120 J	0.331	1.64	91.2			NA			1,140	<4.00	NA	6.2	
12/21/2022	NA	94.8	0.212 J	0.252	1.16	99.5			NA			1,270	<4.00	NA	6.3	
12/29/2022	NA	124	0.114 J	0.527	0.338	95.6			NA			1,250	<4.00	NA	6.5	
1/4/2023	NA	92.6	0.126 J	0.318	1.23	88.2			NA			1,140	<4.00	NA	6.4	
1/13/2023	NA	72.6	0.112 J	0.227	0.381	81.1			NA			1,210	<4.00	NA	6.4	
1/19/2023	NA	96.5	0.135 J	0.185	0.320	96.7			NA			1,270	<4.00	NA	6.2	
1/25/2023	NA	83.2	0.133 J	0.128	0.416	87.9			NA			1,110	<4.00	NA	6.5	
2/2/2023	NA	80.8	<0.100	0.273	0.334	84.7			NA			1,180	<4.00	NA	6.2	
2/8/2023	NA	89.2	<0.100	0.180	0.392	92.3			NA			1,300	<4.00	NA	6.3	
2/17/2023	NA	89.9	0.226 J	0.194	0.178	96.2			NA			1,300	<4.00	NA	6.4	
2/22/2023	NA	98.9	0.113 J	0.606	0.162	70.9			NA			1,310	<4.00	NA	6.1	

NOTES:  
 SU - standard units  
 mg/l - milligrams per liter  
 NE - not established  
 NA - not analyzed  
 J - The target analyte was positively identified below the quantitation limit and above the detection limit.  
 Concentrations highlighted in yellow exceed the NMAC Human Health Standards



**TABLE 3**  
**GROUNDWATER SAMPLING (Additional Parameters) ANALYTICAL DATA SUMMARY**  
 South Hobbs G/SA Unit  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417002

Sample Designation	Date	(mg/l)						°C	
		Sulfide	Carbon Dioxide (Free)	TPH GRO	TPH DRO	TPH ORO	Total TPH	Temperature	
<b>20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	
MW-1	5/26/2020	<0.495	163	<0.943	1.48	<0.910	1.48	22.9	
	6/30/2020	<5.00	648	<2.34	<2.34	<2.34	<2.34	21.9	
	8/20/2020	<5.00	596	2.35	3.18	<2.26	5.53	23.7	
	11/24/2020	<0.495	756	<0.907	<0.838	<0.838	<0.8380	19.1	
	12/18/2020	<0.495	432	<0.909	<0.840	<0.840	<0.840	15.8	
	12/23/2020	<0.495	553	<0.895	1.81 J	<0.827	1.81 J	15.5	
	12/30/2020	<0.495	1,170	<0.917	<0.847	<0.847	<0.847	13.1	
	1/6/2021	<0.495	585	<0.897	<0.829	<0.829	<0.829	12.7	
	1/12/2021	<0.495	731	<0.891	<0.823	<0.823	<0.823	14.6	
	1/20/2021	0.600 J	667	<0.889	<0.821	<0.821	<0.821	17.6	
	1/27/2021	0.800 J	668	<0.909	<0.840	<0.840	<0.840	18.0	
	2/3/2021	<0.495	699	<0.907	<0.838	<0.838	<0.838	20.6	
	2/10/2021	1.20 J	423	1.66 J	<0.828	<0.828	1.66 J	14.1	
	2/24/2021	0.600 J	448	<0.884	<0.817	<0.817	<0.817	18.0	
	3/4/2021	<0.495	515	3.04	1.03 J	<0.846	4.07	18.8	
	3/10/2021	1.20 J	499	<0.878	<0.811	<0.811	<0.811	18.6	
	3/17/2021	<0.495	378	<0.886	<0.819	<0.819	<0.819	19.1	
	3/25/2021	<0.495	333	17.2	1.00 J	<0.867	18.2	20.2	
	3/31/2021	<0.495	526	<0.893	<0.825	<0.825	<0.825	18.4	
	4/8/2021	<0.495	364	2.57 J	1.55 J	<0.867	4.12 J	18.9	
	4/15/2021	<0.495	418	<0.887	<0.887	1.72 J	1.72 J	20.5	
	4/21/2021	<0.495	415	<0.898	2.05 J	<0.867	2.05 J	18.8	
	4/28/2021	<0.495	689	<0.890	1.19 J	<0.859	1.19 J	18.9	
	5/5/2021	<0.495	647	<0.890	<0.890	<0.859	<0.890	18.8	
	5/13/2021	<0.495	259	<0.893	<0.893	<0.862	<0.893	19.0	
	5/19/2021	<0.495	679	<0.893	<0.893	<0.862	<0.893	21.5	
	5/27/2021	<0.495	973	<0.923	<0.923	<0.891	<0.923	20.6	
	6/2/2021	<0.495	619	<0.918	<0.918	<0.886	<0.918	18.1	
	6/10/2021	<0.495	385	<0.915	<0.915	<0.883	<0.915	22.0	
	6/16/2021	<0.495	323	<0.926	<0.926	<0.894	<0.926	18.2	
	6/22/2021	<0.495	250	<0.938	<0.938	<0.905	<0.938	22.1	
	6/30/2021	<0.495	324	<0.923	<0.923	<0.891	<0.923	21.0	
	7/1/2021	Levey Well Now Running Full Time							
	7/7/2021	<0.495	241	<0.901	<0.901	<0.869	<0.901	18.4	
	7/14/2021	<0.495	295	<0.991	<0.957	<0.991	<0.991	19.0	
	7/20/2021	<0.495	321	<0.938	<0.938	<0.905	<0.938	19.8	
	7/27/2021	<0.495	321	<0.906	<0.906	<0.875	<0.906	22.0	
	8/5/2021	<0.495	196	<0.950	<0.950	<0.917	<0.950	21.9	
	8/11/2021	<0.495	369	<0.932	<0.932	<0.900	<0.932	19.9	
	8/19/2021	<0.495	457	<0.950	<0.950	<0.917	<0.950	20.8	
8/25/2021	<0.495	477	<0.918	<0.918	<0.886	<0.918	20.0		
9/2/2021	<0.495	416	<0.935	<0.935	<0.902	<0.935	20.6		
9/8/2021	<0.495	280	<0.953	<0.953	<0.920	<0.953	21.4		
9/14/2021	<0.495	289	<0.932	0.978 J	<0.900	0.978 J	19.3		
9/21/2021	1.00 J	105	<0.918	<0.918	<0.886	<0.918	18.0		
9/29/2021	<0.495	127	<0.998	<0.998	<0.963	<0.998	18.7		
10/7/2021	<0.495	143	<0.923	<0.923	<0.891	<0.923	18.0		
10/13/2021	<0.495	8.85	<0.950	<0.950	<0.917	<0.950	20.7		
10/21/2021	<0.495	434	<0.918	<0.918	<0.886	<0.918	19.9		
11/5/2021	<0.495	114	<1.03	<1.03	<0.993	<1.03	22.9		
11/11/2021	<0.495	563	<0.923	<0.923	<0.891	<0.923	19.3		
11/18/2021	<0.495	24.9	1.05 J	<0.969	<0.935	1.05 J	19.0		
11/24/2021	<5.00	159	<4.70	<4.70	<4.70	<4.70	19.7		
12/1/2021	<0.495	39.0	<0.935	<0.935	<0.902	<0.935	19.4		
12/8/2021	<0.495	122	<0.929	<0.929	<0.897	<0.929	18.1		
12/16/2021	<0.495	69.3	<0.962	<0.962	<0.929	<0.962	18.0		
12/22/2021	<0.495	49.5	1.34 J	<0.941	<0.908	1.34 J	21.5		
12/29/2021	<0.495	50.2	<0.935	<0.935	<0.902	<0.935	18.1		



**TABLE 3**  
**GROUNDWATER SAMPLING (Additional Parameters) ANALYTICAL DATA SUMMARY**  
 South Hobbs G/SA Unit  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417002

Sample Designation	Date	(mg/l)					Total TPH	°C Temperature
		Sulfide	Carbon Dioxide (Free)	TPH GRO	TPH DRO	TPH ORO		
<b>20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
MW-1	1/6/2022	<0.495	<b>67.0</b>	<0.932	<0.932	<0.900	<0.932	<b>18.0</b>
	1/12/2022	<0.495	<b>130</b>	<b>0.960 J</b>	<b>1.06 J</b>	<0.900	<b>2.02 J</b>	<b>21.7</b>
	1/19/2022	<0.495	<b>56.4</b>	<0.912	<0.912	<0.880	<0.912	<b>18.0</b>
	1/26/2022	<0.495	<b>44.7</b>	<0.898	<0.898	<0.867	<0.898	<b>18.8</b>
	2/2/2022	Unable to Sample due to Incliment Weather. Booster Pump for Levey Well Damaged by Freeze.						
	2/8/2022	<0.495	<b>95.7</b>	<0.895	<0.895	<0.864	<0.895	<b>20.8</b>
	2/16/2022	<0.495	<b>61.0</b>	<0.877	<0.877	<0.846	<0.877	<b>18.7</b>
	2/25/2022	<0.495	<b>54.2</b>	<0.923	<0.923	<0.891	<0.923	<b>20.0</b>
	3/3/2022	<0.495	<b>90.5</b>	<0.935	<0.935	<0.902	<0.935	<b>18.2</b>
	3/9/2022	<0.495	<b>40.7</b>	<0.874	<0.874	<0.874	<0.874	<b>18.1</b>
	3/14/2022	Booster Pump for Levey Well Repaired and Back on Running Full Time.						
	3/16/2022	<0.495	<b>67.6</b>	<0.959	<0.959	<0.959	<0.959	<b>18.1</b>
	3/24/2022	<0.495	<b>37.5</b>	<0.901	<0.901	<0.869	<0.901	<b>18.9</b>
	3/31/2022	<0.495	<b>43.7</b>	<0.926	<0.926	<0.894	<0.926	<b>19.0</b>
	4/6/2022	<0.495	<b>41.6</b>	<0.926	<0.926	<0.894	<0.926	<b>18.1</b>
	4/13/2022	<0.495	<b>13.0</b>	<0.918	<0.918	<0.886	<0.918	<b>19.0</b>
	4/20/2022	<0.495	<b>72.4</b>	<0.904	<0.904	<0.872	<0.904	<b>18.3</b>
	4/28/2022	<0.495	<b>18.9</b>	<0.890	<0.890	<0.859	<0.890	<b>19.9</b>
	5/5/2022	<0.495	<b>31.8</b>	<0.912	<0.912	<0.880	<0.912	<b>19.5</b>
	5/10/2022	<b>1.20 J</b>	<b>31.5</b>	<0.985	<0.985	<0.950	<0.985	<b>16.7</b>
	5/19/2022	<b>0.600 J</b>	<b>41.5</b>	<0.926	<0.926	<0.894	<0.926	<b>20.3</b>
	5/26/2022	<b>1.00 J</b>	<b>32.2</b>	<0.920	<0.920	<0.888	<0.920	<b>18.0</b>
	6/1/2022	<b>0.800 J</b>	<b>19.0</b>	<0.926	<0.926	<0.894	<0.926	<b>20.5</b>
	6/9/2022	<b>0.600 J</b>	<b>24.6</b>	<0.962	<0.962	<0.929	<0.962	<b>20.3</b>
	6/17/2022	<0.495	<b>21.1</b>	<0.918	<0.918	<0.886	<0.918	<b>18.3</b>
	6/23/2022	<b>0.800 J</b>	<b>32.5</b>	<0.932	<0.932	<0.900	<0.932	<b>18.0</b>
	6/29/2022	<b>1.00 J</b>	<b>33.2</b>	<b>0.954 J</b>	<0.923	<0.891	<b>0.954 J</b>	<b>15.8</b>
	7/7/2022	<b>0.600 J</b>	<b>22.2</b>	<0.947	<0.947	<0.914	<0.947	<b>23.1</b>
	7/13/2022	<0.495	<b>31.9</b>	<0.950	<0.950	<0.917	<0.950	<b>20.6</b>
	7/20/2022	<0.495	<b>31.4</b>	<0.959	<0.959	<0.926	<0.959	<b>20.0</b>
	7/27/2022	<0.495	<b>10.6</b>	<0.904	<0.904	<0.872	<0.904	<b>17.6</b>
	8/4/2022	<b>0.800 J</b>	<b>31.9</b>	<0.906	<0.906	<0.875	<0.906	<b>19.2</b>
	8/10/2022	<b>1.00 J</b>	<b>35.0</b>	<0.929	<0.929	<0.897	<0.929	<b>19.8</b>
	8/18/2022	<0.495	<b>52.4</b>	<1.04	<1.04	<1.00	<1.04	<b>20.7</b>
	8/24/2022	<b>1.40 J</b>	<b>34.4</b>	<4.78	<4.78	<4.78	<4.78	<b>18.2</b>
	8/31/2022	<b>1.20 J</b>	<b>22.0</b>	<0.932	<0.932	<0.900	<0.932	<b>19.9</b>
	9/15/2022	<b>0.800 J</b>	<b>55.4</b>	<0.988	<0.988	<0.954	<0.988	<b>18.6</b>
	9/22/2022	<0.495	<b>28.0</b>	<0.944	<0.944	<0.911	<0.944	<b>21.0</b>
	9/28/2022	<b>1.20 J</b>	<b>28.5</b>	<0.956	<0.956	<0.923	<0.956	<b>17.9</b>
	10/4/2022	<b>0.800 J</b>	<b>34.2</b>	<0.895	<0.895	<0.864	<0.895	<b>17.8</b>
10/14/2022	<b>1.20 J</b>	<b>26.6</b>	<0.935	<0.935	<0.902	<0.935	<b>18.7</b>	
10/19/2022	<0.495	<b>22.4</b>	<0.981	<0.981	<0.947	<0.981	<b>18.4</b>	
10/27/2022	<0.495	<b>22.0</b>	<1.00	<1.00	<0.968	<1.00	<b>25.0</b>	
11/2/2022	<0.495	<b>31.7</b>	<0.972	<0.972	<0.938	<0.972	<b>25.0</b>	
11/9/2022	<0.495	<b>33.0</b>	<0.972	<0.972	<0.938	<0.972	<b>21.4</b>	
11/16/2022	<0.495	<b>28.2</b>	<1.00	<1.00	<0.970	<1.00	<b>18.0</b>	
11/30/2022	<0.495	<b>30.0</b>	<0.915	<0.915	<0.883	<0.915	<b>18.5</b>	
12/9/2022	<0.495	<b>19.5</b>	<1.00	<1.00	<0.970	<1.00	<b>17.1</b>	
12/15/2022	<0.495	<b>43.9</b>	<0.918	<0.918	<0.886	<0.918	<b>15.7</b>	
12/21/2022	<0.495	<b>37.8</b>	<0.890	<0.890	<0.859	<0.890	<b>15.8</b>	
12/29/2022	<0.495	<b>64.9</b>	<0.938	<0.938	<0.905	<0.938	<b>16.7</b>	
1/4/2023	<0.495	<b>28.1</b>	<0.923	<0.923	<0.891	<0.923	<b>15.9</b>	
1/13/2023	<0.495	<b>45.0</b>	<0.935	<0.935	<0.902	<0.935	<b>13.8</b>	
1/19/2023	<b>0.800 J</b>	<b>53.9</b>	<0.918	<0.918	<0.886	<0.918	<b>16.0</b>	
1/25/2023	<0.495	<b>28.9</b>	<1.00	<1.00	<0.966	<1.00	<b>19.5</b>	
2/2/2023	<0.495	<b>52.2</b>	<0.978	<0.978	<0.944	<0.978	<b>18.6</b>	
2/8/2023	<0.495	<b>45.3</b>	<0.969	<0.969	<0.935	<0.969	<b>16.9</b>	
2/17/2023	<0.495	<b>27.2</b>	<0.938	<0.938	<0.905	<0.938	<b>20.0</b>	
2/22/2023	<0.495	<b>66.3</b>	<0.906	<0.906	<0.875	<0.906	<b>18.7</b>	



**TABLE 3**  
**GROUNDWATER SAMPLING (Additional Parameters) ANALYTICAL DATA SUMMARY**  
 South Hobbs G/SA Unit  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417002

Sample Designation	Date	(mg/l)						°C	
		Sulfide	Carbon Dioxide (Free)	TPH GRO	TPH DRO	TPH ORO	Total TPH	Temperature	
<b>20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	
MW-2	5/26/2020	<0.495	923	2.10	1.07 J	<0.900	6.16	23.1	
	6/30/2020	<5.00	1,290	<2.32	<2.32	<2.32	<2.32	22.1	
	8/20/2020	<5.00	1,150	2.75	3.29	<2.26	6.02	23.0	
	11/24/2020	<0.495	1,300	1.73 J	2.17 J	<0.835	3.900	19.1	
	12/18/2020	0.600 J	958	1.34 J	0.915 J	<0.824	2.26 J	15.1	
	12/23/2020	<0.495	1,090	1.61 J	1.12 J	<0.837	2.73	15.6	
	12/30/2020	<0.495	1,090	<0.893	<0.825	<0.825	<0.825	12.1	
	1/6/2021	<0.495	1,240	1.99 J	<0.824	<0.824	1.99 J	13.1	
	1/12/2021	11.2	1,450	1.64 J	<0.833	<0.833	1.64 J	13.9	
	1/20/2021	9.60	1,390	<0.907	<0.838	<0.838	<0.838	18.2	
	1/27/2021	15.0	1,600	1.31 J	<0.834	<0.834	1.31 J	13.4	
	2/3/2021	<0.495	1,030	0.955 J	1.15 J	<0.813	2.11 J	20.9	
	2/10/2021	<0.495	915	2.08	<0.746	<0.746	2.08	11.5	
	2/24/2021	<0.495	793	1.01 J	<0.832	<0.832	1.01 J	19.4	
	3/4/2021	<0.495	1,030	1.74 J	<0.819	<0.819	1.74 J	18.2	
	3/10/2021	<0.495	1,010	<0.893	<0.825	<0.825	<0.825	18.5	
	3/17/2021	<0.495	970	2.33	<0.835	<0.835	2.33	19.5	
	3/25/2021	<0.495	653	1.50 J	1.16 J	<0.857	2.66 J	20.2	
	3/31/2021	<0.495	1,110	<0.941	<0.941	<0.908	<0.941	18.3	
	4/8/2021	<0.495	1,010	2.30 J	1.01 J	<0.875	3.31 J	18.9	
	4/15/2021	<0.495	2,200	2.49 J	0.999 J	1.70 J	5.19	20.1	
	4/21/2021	<0.495	1,230	1.01 J	0.913 J	<0.856	1.92 J	18.9	
	4/28/2021	<0.495	1,100	2.54 J	1.19 J	<0.872	3.73 J	19.0	
	5/5/2021	<0.495	1,350	2.09 J	<0.890	<0.859	2.09 J	18.8	
	5/13/2021	<0.495	1,320	1.18 J	<0.906	<0.875	1.18 J	19.6	
	5/19/2021	<0.495	1,730	1.46 J	<0.901	<0.869	1.46 J	19.8	
	5/27/2021	<0.495	798	<0.920	<0.920	<0.888	<0.920	20.8	
	6/2/2021	<0.495	1,580	2.01 J	<0.895	<0.864	2.01 J	18.1	
	6/10/2021	<0.495	2,010	1.46 J	<0.882	<0.851	1.46 J	22.0	
	6/16/2021	<0.495	810	0.963 J	<0.826	<0.797	0.963 J	18.0	
	6/22/2021	<0.495	795	1.18 J	<0.947	<0.914	1.18 J	22.2	
	6/30/2021	<0.495	975	1.21 J	<0.893	<0.862	1.21 J	20.3	
	7/1/2021	Levey Well Now Running Full Time							
	7/7/2021	<0.495	889	1.62 J	<0.906	<0.875	1.62 J	18.3	
	7/14/2021	<0.495	1,080	<0.965	<0.965	<0.932	<0.965	19.3	
	7/20/2021	<0.495	1,170	1.16 J	<0.898	<0.867	1.16 J	19.8	
	7/27/2021	<0.495	950	1.03 J	<0.906	<0.875	1.03 J	22.3	
	8/5/2021	<0.495	778	<0.909	<0.909	<0.877	<0.909	22.1	
	8/11/2021	<0.495	1,040	1.46 J	<0.887	<0.856	1.46 J	19.7	
	8/19/2021	<0.495	2,010	1.93 J	<0.959	<0.926	1.93 J	20.7	
8/25/2021	<0.495	1,400	1.01 J	<0.932	<0.900	1.01 J	19.2		
9/2/2021	<0.495	1,830	3.03 J	2.11 J	<0.920	5.14	21.4		
9/8/2021	<0.495	1,570	1.70 J	<0.932	<0.900	1.70 J	20.5		
9/14/2021	<0.495	1,240	1.93 J	1.01 J	<0.917	2.94 J	19.4		
9/21/2021	<0.495	1,260	1.33 J	<0.941	<0.908	1.33 J	18.0		
9/29/2021	<0.495	1,040	1.60 J	<1.19	<1.15	1.60 J	18.5		
10/7/2021	<0.495	1,020	1.45 J	<0.988	<0.954	1.45 J	18.0		
10/13/2021	<0.495	834	1.56 J	<0.935	<0.902	1.56 J	20.6		
10/21/2021	<0.495	2,420	1.64 J	<0.918	<0.886	1.64 J	19.8		
11/5/2021	<0.495	628	1.39 J	<0.965	<0.932	1.39 J	22.8		
11/11/2021	<0.495	4,500	2.27 J	<0.985	<0.950	2.27 J	18.5		
11/18/2021	<0.495	574	2.56 J	<0.923	<0.891	2.56 J	19.5		
11/24/2021	<5.00	1,500	2.34 J	<4.59	<4.59	2.34 J	19.1		
12/1/2021	<0.495	313	1.69 J	<0.912	<0.880	1.69 J	19.2		
12/8/2021	<0.495	1,260	1.86 J	<0.932	<0.900	1.86 J	18.9		
12/16/2021	<0.495	957	1.15 J	<0.947	<0.914	1.15 J	18.0		
12/22/2021	<0.495	1,020	1.95 J	<0.944	<0.911	1.95 J	21.6		
12/29/2021	<0.495	1,250	1.15 J	<0.935	<0.902	1.15 J	18.0		



**TABLE 3**  
**GROUNDWATER SAMPLING (Additional Parameters) ANALYTICAL DATA SUMMARY**  
 South Hobbs G/SA Unit  
 Oxy Permian Ltd.  
 Hobbs, New Mexico  
 Ensolum Project No. 03B1417002

Sample Designation	Date	(mg/l)						°C	
		Sulfide	Carbon Dioxide (Free)	TPH GRO	TPH DRO	TPH ORO	Total TPH	Temperature	
<b>20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	
MW-2	1/6/2022	<0.495	1,030	1.31 J	<0.915	<0.883	1.31 J	18.2	
	1/12/2022	<0.495	1,450	3.63 J	1.34 J	<1.00	4.97 J	22.0	
	1/19/2022	<0.495	1,420	2.83 J	<0.915	<0.883	2.83 J	18.2	
	1/26/2022	<0.495	2,020	<0.923	<0.923	<0.891	<0.923	18.8	
	2/2/2022	Unable to Sample due to Incliment Weather. Booster Pump for Levey Well Damaged by Freeze.							
	2/8/2022	<0.495	2,050	1.31 J	<0.909	<0.877	1.31 J	20.7	
	2/16/2022	<0.495	1,670	0.974 J	<0.864	<0.834	0.974 J	18.3	
	2/25/2022	<0.495	1,280	1.43 J	<0.965	<0.932	1.43 J	19.9	
	3/3/2022	<0.495	2,160	1.86 J	<0.909	<0.877	1.86 J	18.1	
	3/9/2022	<0.495	1,680	1.77 J	<0.947	<0.914	1.77 J	18.4	
	3/14/2022	Booster Pump for Levey Well Repaired and Back on Running Full Time.							
	3/16/2022	<0.495	1,700	2.22 J	<0.915	<0.883	2.22 J	18.1	
	3/24/2022	<0.495	1,330	1.29 J	<0.909	<0.877	1.29 J	19.1	
	3/31/2022	<0.495	1,340	1.28 J	<0.938	<0.905	1.28 J	19.0	
	4/6/2022	<0.495	1,720	1.00 J	<0.938	<0.905	1.00 J	18.1	
	4/13/2022	<0.495	874	0.915 J	<0.906	<0.875	0.915 J	19.0	
	4/20/2022	<0.495	1,060	1.06 J	<0.901	<0.869	1.06 J	18.6	
	4/28/2022	<0.495	1,100	1.76 J	<0.915	<0.883	1.76 J	19.8	
	5/5/2022	0.600 J	1,330	1.40 J	<0.920	<0.888	1.40 J	19.2	
	5/10/2022	<0.495	1,320	1.63 J	<0.965	<0.932	1.63 J	16.8	
	5/19/2022	<0.495	1,740	1.80 J	<0.915	<0.883	1.80 J	20.5	
	5/26/2022	<0.495	2,650	1.02 J	<0.950	<0.917	1.02 J	18.1	
	6/1/2022	<0.495	1,340	1.43 J	<0.909	<0.877	1.43 J	20.5	
	6/9/2022	<0.495	1,080	1.23 J	<0.938	<0.905	1.23 J	19.8	
	6/17/2022	<0.495	894	1.49 J	<0.895	<0.864	1.49 J	17.8	
	6/23/2022	<0.495	1,270	1.25 J	<0.920	<0.888	1.25 J	18.0	
	6/29/2022	<0.495	1,680	<0.935	<0.935	<0.902	<0.935	15.9	
	7/7/2022	<0.495	1,190	0.912 J	<0.906	<0.875	0.912 J	23.0	
	7/13/2022	<0.495	1,610	1.17 J	<0.947	<0.914	1.17 J	20.1	
	7/20/2022	<0.495	1,360	1.07 J	<0.981	<0.947	1.07 J	19.8	
	7/27/2022	<0.495	1,070	1.49 J	<0.975	<0.941	1.49 J	18.2	
	8/4/2022	<0.495	1,570	1.31 J	<0.904	<0.872	1.31 J	19.2	
	8/10/2022	<0.495	1,260	1.17 J	<0.932	<0.900	1.17 J	19.3	
	8/18/2022	<0.495	1,280	1.43 J	7.62	<0.897	9.05	21.3	
	8/24/2022	<5.00	1,300	1.18 J	<4.63	<4.63	1.18 J	18.0	
	8/31/2022	1.00 J	1,290	1.08 J	<0.950	<0.917	1.08 J	20.0	
	9/15/2022	<0.495	1,320	1.83 J	<1.07	<1.04	1.83 J	18.9	
	9/22/2022	<0.495	1,320	1.56 J	<1.05	<1.01	1.56 J	20.9	
	9/28/2022	<0.495	1,280	1.06 J	<1.05	<1.01	1.06 J	18.6	
	10/4/2022	<0.495	1,670	1.11 J	<0.904	<0.872	1.11 J	17.6	
10/14/2022	<0.989	1,670	1.12 J	<0.915	<0.883	1.12 J	18.1		
10/19/2022	<0.495	814	1.46 J	<0.877	<0.846	1.46 J	18.3		
10/27/2022	<0.495	1,350	<0.988	<0.988	<0.954	<0.988	25.0		
11/2/2022	<0.495	1,680	1.82 J	<0.978	<0.944	1.82 J	25.0		
11/9/2022	<4.95	1,220	1.14 J	<0.978	<0.944	1.14 J	21.2		
11/16/2022	<0.495	653	2.20 J	<0.909	<0.877	2.20 J	18.0		
11/30/2022	<0.495	1,030	<0.959	<0.959	<0.926	<0.959	18.7		
12/9/2022	<0.495	1,030	1.38 J	<0.969	<0.935	1.38 J	17.3		
12/15/2022	<0.495	1,440	1.71 J	<0.988	<0.954	1.71 J	15.3		
12/21/2022	<0.495	1,280	1.11 J	<0.904	<0.872	1.11 J	16.3		
12/29/2022	<0.495	789	<0.923	<0.923	<0.891	<0.923	17.3		
1/4/2023	<0.495	910	1.66 J	<0.988	<0.954	1.66 J	16.8		
1/13/2023	<0.495	966	1.43 J	<0.941	<0.908	1.43 J	13.6		
1/19/2023	<0.495	1,610	1.06 J	<0.929	<0.897	1.06 J	16.3		
1/25/2023	<0.495	704	<0.923	<0.923	<0.891	<0.923	19.3		
2/2/2023	<0.495	1,480	1.01 J	<0.959	<0.926	1.01 J	18.7		
2/8/2023	<0.495	1,300	0.984 J	<0.898	<0.867	0.984 J	16.7		
2/17/2023	<0.495	1,040	1.24 J	<0.953	<0.920	1.24 J	20.0		
2/22/2023	<0.495	2,070	1.97 J	<0.926	<0.894	1.97 J	18.7		

**NOTES:**  
 °C - degrees celsius  
 mg/l - milligrams per liter  
 NE - not established  
 J - The target analyte was positively identified below the quantitation limit and above the detection limit.



TABLE 4  
AIR SAMPLING (VOCs) ANALYTICAL DATA SUMMARY  
Levey Well  
Oxy Permian Ltd.  
Hobbs, New Mexico  
Ensolum Project No. 03B1417001

Table with columns: Sample Designation, Date, Time, and various VOCs (Acetone, Benzene, Bromomethane, Carbon disulfide, Chloromethane, 2-Chlorotoluene, Cyclohexane, 1,2-Dichloroethane, cis-1,2-Dichloroethane, Ethanol, Ethylbenzene, 4-Ethyltoluene, Trichlorofluoromethane, Dichlorodifluoromethane, Heptane, n-Hexane, Isopropylbenzene, Methylene Chloride, Methyl Butyl Ketone, 2-Butanone (MEK), 4-Methyl-2-pentanone (MIBK), Methyl methacrylate, Naphthalene, 2-Propanol, Styrene, Tetrachloroethylene, Tetrahydrofuran, Toluene, 1,1,1-Trichloroethane, Trichloroethylene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl acetate, m&p-Xylene, o-Xylene, TPH (GC/MS) Low Fraction). Rows include dates from 1/25/2021 to 12/29/2021 with numerical values for each compound.

Released to Imging: 1/24/2024 3:10:57 PM

Received by OCD: 6/20/2023 3:03:32 PM





TABLE 4
AIR SAMPLING (VOCs) ANALYTICAL DATA SUMMARY
Levey Well
Oxy Permian Ltd.
Hobbs, New Mexico
Ensolum Project No. 03B1417001

Table with columns: Sample Designation, Date, Time, and 28 VOC/chemical concentrations (Acetone, Benzene, Bromomethane, Carbon disulfide, Chloromethane, 2-Chlorotoluene, Cyclohexane, 1,2-Dichloroethane, cis-1,2-Dichloroethane, Ethanol, Ethylbenzene, 4-Ethyltoluene, Trichlorofluoromethane, Dichlorodifluoromethane, Heptane, n-Hexane, Isopropylbenzene, Methylene Chloride, Methyl Butyl Ketone, 2-Butanone (MEK), 4-Methyl-2-pentanone (MIBK), Methyl methacrylate, Naphthalene, 2-Propanol, Styrene, Tetrachloroethylene, Tetrahydrofuran, Toluene, 1,1,1-Trichloroethane, Trichloroethylene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl acetate, m&p-Xylene, o-Xylene, TPH (GC/MS) Low Fraction). Rows include dates from 8/18/2022 to 1/19/2023.

Released to Imging: 1/24/2024 3:10:57 PM

Received by OCD: 6/20/2023 3:03:32 PM

TABLE 4  
AIR SAMPLING (VOCs) ANALYTICAL DATA SUMMARY  
Levey Well  
Oxy Permian Ltd.  
Hobbs, New Mexico  
Ensolum Project No. 03B1417001

Sample Designation	Date	Time	(ug/m3)																																			
			Acetone	Benzene	Bromomethane	Carbon disulfide	Chloromethane	2-Chlorotoluene	Cyclohexane	1,2-Dichloroethane	cis-1,2-Dichloroethene	Ethanol	Ethylbenzene	4-Ethyltoluene	Trichlorofluoromethane	Dichlorodifluoromethane	Heptane	n-Hexane	Isopropylbenzene	Methylene Chloride	Methyl Butyl Ketone	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Methyl methacrylate	Naphthalene	2-Propanol	Styrene	Tetrachloroethylene	Tetrahydrofuran	Toluene	1,1,1-Trichloroethane	Trichloroethylene	1,2,4-Trimethylbenzene	1,3,5,5,5-Pentamethylbenzene	Vinyl acetate	m&p-Xylene	o-Xylene	TPH (GC/MS) Low Fraction
Levey Well	1/23/2023	1111	<29,700	<6,390	<7,760	<6,220	<4,130	<10,300	486,000	<8,100	<7,930	1,260,000	<8,670	<9,820	<11,200	<9,890	109,000	864,000	<9,830	18,800	<51,100	<36,900	<51,200	40,900	<33,000	1,530,000	<8,510	<13,600	<5,900	27,200	<10,900	<10,700	<9,820	<9,820	<7,040	<17,300	<8,670	12,300,000
		1113	Initiate Vacuum Recovery Event																																			
		1320	<297	<63.9	<77.6	<62.2	<41.3	<103	1,770	<81.0	<79.3	3,560	<86.7	<98.2	<112	<98.9	589	3,740	<98.3	319	<511	<369	<512	<81.9	<330	27,500	<85.1	153	<59.0	<188	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	116,000
		1420	<297	<63.9	<77.6	<62.2	<41.3	<103	1,040	<81.0	<79.3	4,000	<86.7	<98.2	<112	<98.9	362	2,780	<98.3	358	<511	<369	<512	<81.9	<330	10,600	<85.1	245	<59.0	<188	<109	<107	<98.2	<98.2	2,150	<173	<86.7	122,000
		1420	Vacuum Recovery Event Terminated																																			
		1520	<297	<63.9	<77.6	<62.2	<41.3	<103	2,240	<81.0	<79.3	4,200	<86.7	<98.2	<112	<98.9	646	4,410	<98.3	378	<511	<369	<512	<81.9	<330	12,800	<85.1	160	<59.0	<188	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	109,000
	2/2/2023	1205	10,800	<639	<776	<622	<413	<1,030	413,000	<810	<793	<2,360	<867	<982	<1,120	<989	65,400	733,000	<983	<694	<5,110	<3,690	<5,120	<819	<3,300	19,100	<851	<1,360	<590	<1,180	<1,090	<1,070	<982	<982	<704	<1,730	<867	5,160,000
		1105	5,940	<639	<776	<622	<413	<1,030	207,000	<810	<793	<2,360	<867	<982	<1,120	<989	34,200	213,000	<983	<694	<5,110	<3,690	<5,120	<819	<3,300	10,600	<851	<1,360	<590	<1,180	<1,090	<1,070	<982	<982	<704	<1,730	<867	3,530,000
		1140	Initiate Vacuum Recovery Event																																			
		1248	140	<6.39	<7.76	<6.22	<4.13	<10.3	1,790	<8.10	<7.93	24.1	<8.67	<9.82	<11.2	<9.89	<8.18	1,280	<9.83	<6.94	<51.1	43.3	<51.2	<8.19	<33.0	<30.7	<8.51	<13.6	<5.90	<18.8	<10.9	<10.7	<9.82	<9.82	<7.04	<17.3	<8.67	24,500
		1348	115	<6.39	<7.76	<6.22	<4.13	<10.3	950	<8.10	<7.93	<23.6	<8.67	<9.82	<11.2	<9.89	<8.18	532	<9.83	<6.94	<51.1	<36.9	<51.2	<8.19	<33.0	<30.7	<8.51	<13.6	<5.90	<18.8	<10.9	<10.7	<9.82	<9.82	<7.04	<17.3	<8.67	13,700
		1348	Vacuum Recovery Event Terminated																																			
	1449	220	<6.39	<7.76	<6.22	<4.13	<10.3	2,660	<8.10	<7.93	<23.6	<8.67	<9.82	<11.2	<9.89	<8.18	1,800	<9.83	<6.94	<51.1	<36.9	<51.2	<8.19	<33.0	<30.7	<8.51	<13.6	<5.90	<18.8	<10.9	<10.7	<9.82	<9.82	<7.04	<17.3	<8.67	31,900	
	2/8/2023	1327	509	<63.9	<77.6	<62.2	<41.3	<103	6,650	<81.0	<79.3	241	<86.7	<98.2	<112	<98.9	2,430	5,960	<98.3	<69.4	<511	<369	<512	<81.9	<330	752	<85.1	<136	<59.0	<188	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	85,500
	2/17/2023	1347	<297	<63.9	<77.6	<62.2	<41.3	<103	24,900	<81.0	<79.3	3,210	<86.7	<98.2	<112	<98.9	14,100	<4,440	<98.3	<69.4	<511	1,390	<512	<81.9	<330	1,130	<85.1	<136	<59.0	<188	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	772,000
	2/20/2023	1052	383,000	<63.9	<77.6	<62.2	<41.3	<103	9,950	185	<79.3	5,450	<86.7	<98.2	<112	<98.9	6,130	67,000	<98.3	182	<511	1,600	<512	532	<330	21,900	<85.1	183	<59.0	418	<109	<107	<98.2	<98.2	<70.4	189	<86.7	367,000
		1055	Initiate Vacuum Recovery Event																																			
		1203	<59.4	<12.8	<15.5	<12.4	<8.26	<20.6	223	<16.2	<15.9	47.3	<17.3	<19.6	<22.5	<19.8	200	596	<19.7	<13.9	<102	<73.7	<102	<16.4	<66.0	<61.5	<17.0	<27.2	<11.8	<37.7	<21.8	<21.4	<19.6	<19.6	<14.1	<34.7	<17.3	<16,500
		1300	<297	<63.9	<77.6	<62.2	<41.3	<103	111	185	<79.3	1,790	<86.7	<98.2	<112	<98.9	97.3	4,480	<98.3	120	<511	<369	<512	463	<330	12,900	<85.1	212	<59.0	253	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	<82,600
		1300	Vacuum Recovery Event Terminated																																			
		1408	<297	<63.9	<77.6	<62.2	<41.3	<103	2,420	<81.0	<79.3	1,920.0	<86.7	<98.2	<112	<98.9	1,860	9,240	<98.3	134	<511	442	<512	770	<330	7,940	<85.1	<136	<59.0	265	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	114,000
	2/22/2023	1341	<297	<63.9	<77.6	<62.2	<41.3	<103	2,350	<81.0	<79.3	1,730	<86.7	<98.2	<112	<98.9	1,620	9,270	<98.3	86.1	<511	784	<512	508	<330	10,400	<85.1	<136	<59.0	<188	<109	<107	<98.2	<98.2	<70.4	<173	<86.7	<82,600

NOTES:  
ug/m3 - micrograms per cubic meter of air



## APPENDIX C

### Laboratory Data Sheets and Chain-of-Custody Documentation

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
 Ensolum  
 601 N. Marienfeld St.  
 Suite 400  
 Midland, Texas 79701  
 Generated 2/9/2023 9:28:08 AM

## JOB DESCRIPTION

Levey Well Hobbs, NM - 03B1417001  
 SDG NUMBER Hobbs NM

## JOB NUMBER

880-24277-1

Eurofins Midland  
 1211 W. Florida Ave  
 Midland TX 79701

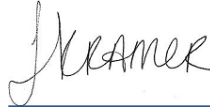


# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
2/9/2023 9:28:08 AM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440



Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Laboratory Job ID: 880-24277-1  
SDG: Hobbs NM

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## Definitions/Glossary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## 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)

### Definitions/Glossary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

#### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

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### Case Narrative

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

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**Job ID: 880-24277-1**

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**Laboratory: Eurofins Midland****Narrative****Job Narrative  
880-24277-1****Receipt**

The sample was received on 2/2/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C

**GC/MS VOA**

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 860-88856 recovered outside control limits for the following analytes: Naphthalene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 860-88856 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**HPLC/IC**

Method 300\_ORGFM\_28D: The method blank for analytical batch 860-88953 contained Sulfate above the method detection limit (MDL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-88953 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 300\_ORGFMS: The following sample was received outside of holding time: Levey Well (880-24277-1).

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

**Metals**

Method 200.7: Due to the high concentration of Calcium and Magnesium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 860-89039 and analytical batch 860-89141 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

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

**General Chemistry**

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



### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

Client Sample ID: Levey Well

Lab Sample ID: 880-24277-1

Date Collected: 02/02/23 12:35

Matrix: Water

Date Received: 02/02/23 16:20

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.00421</b>		0.00100	0.000533 mg/L			02/06/23 13:23	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/06/23 13:23	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/06/23 13:23	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/06/23 13:23	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/06/23 13:23	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/06/23 13:23	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/06/23 13:23	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/06/23 13:23	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/06/23 13:23	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/06/23 13:23	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/06/23 13:23	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/06/23 13:23	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/06/23 13:23	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/06/23 13:23	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/06/23 13:23	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/06/23 13:23	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/06/23 13:23	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 13:23	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/06/23 13:23	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/06/23 13:23	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/06/23 13:23	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/06/23 13:23	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919 mg/L			02/06/23 13:23	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/06/23 13:23	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/06/23 13:23	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/06/23 13:23	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/06/23 13:23	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/06/23 13:23	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/06/23 13:23	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/06/23 13:23	1
<b>Ethylbenzene</b>	<b>0.0146</b>		0.00100	0.000411 mg/L			02/06/23 13:23	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/06/23 13:23	1
<b>Isopropylbenzene</b>	<b>0.00695</b>		0.00100	0.000613 mg/L			02/06/23 13:23	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/06/23 13:23	1
<b>m,p-Xylenes</b>	<b>0.0601</b>		0.0100	0.00124 mg/L			02/06/23 13:23	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/06/23 13:23	1
Naphthalene	<0.00135	U **	0.0100	0.00135 mg/L			02/06/23 13:23	1
<b>n-Butylbenzene</b>	<b>0.000778</b>	<b>J</b>	0.00100	0.000644 mg/L			02/06/23 13:23	1
<b>N-Propylbenzene</b>	<b>0.00320</b>		0.00100	0.000498 mg/L			02/06/23 13:23	1
<b>o-Xylene</b>	<b>0.00885</b>		0.00100	0.000551 mg/L			02/06/23 13:23	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/06/23 13:23	1
<b>sec-Butylbenzene</b>	<b>0.00121</b>		0.00100	0.000468 mg/L			02/06/23 13:23	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/06/23 13:23	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/06/23 13:23	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/06/23 13:23	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/06/23 13:23	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/06/23 13:23	1
<b>Toluene</b>	<b>0.0338</b>		0.00100	0.000475 mg/L			02/06/23 13:23	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/06/23 13:23	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24277-1**

Date Collected: 02/02/23 12:35

Matrix: Water

Date Received: 02/02/23 16:20

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 13:23	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/06/23 13:23	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/06/23 13:23	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/06/23 13:23	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/06/23 13:23	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/06/23 13:23	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/06/23 13:23	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/06/23 13:23	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.0112</b>		0.00100	0.000417 mg/L			02/06/23 13:23	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.00392</b>		0.00100	0.000456 mg/L			02/06/23 13:23	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/06/23 13:23	1
<b>Xylenes, Total</b>	<b>0.0690</b>		0.0100	0.00124 mg/L			02/06/23 13:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		74 - 124		02/06/23 13:23	1
Dibromofluoromethane (Surr)	96		75 - 131		02/06/23 13:23	1
1,2-Dichloroethane-d4 (Surr)	93		63 - 144		02/06/23 13:23	1
Toluene-d8 (Surr)	109		80 - 117		02/06/23 13:23	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>0.609</b>		0.500	0.0711 mg/L			02/07/23 00:35	1
<b>Nitrate as N</b>	<b>0.256</b>	<b>H</b>	0.100	0.0391 mg/L			02/07/23 00:35	1
<b>Chloride</b>	<b>309</b>		0.500	0.200 mg/L			02/07/23 00:35	1
Nitrite as N	<0.0293	U H	0.100	0.0293 mg/L			02/07/23 00:35	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/07/23 00:35	1
<b>Sulfate</b>	<b>43.5</b>	<b>B</b>	0.500	0.109 mg/L			02/07/23 00:35	1

**Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>366</b>		10.0	5.76 mg/L		02/06/23 21:28	02/07/23 10:43	50
<b>Magnesium</b>	<b>69.4</b>		0.200	0.0428 mg/L		02/06/23 21:28	02/07/23 10:25	1
<b>Potassium</b>	<b>6.39</b>		0.500	0.0914 mg/L		02/06/23 21:28	02/07/23 10:25	1
<b>Sodium</b>	<b>113</b>		0.500	0.152 mg/L		02/06/23 21:28	02/07/23 10:25	1
<b>SiO2</b>	<b>67.0</b>		1.07	0.471 mg/L		02/06/23 21:28	02/07/23 10:25	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Anion/Cation Balance (SM 1030E)</b>	<b>-8.22</b>			%			02/09/23 09:17	1
<b>Alkalinity (SM 2320B)</b>	<b>1120</b>		4.00	4.00 mg/L			02/06/23 12:26	1
<b>Bicarbonate Alkalinity as CaCO3 (SM 2320B)</b>	<b>1120</b>		4.00	4.00 mg/L			02/06/23 12:26	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/06/23 12:26	1
Hydroxide Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/06/23 12:26	1
Phenolphthalein Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/06/23 12:26	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1680</b>		20.0	20.0 mg/L			02/06/23 09:00	1
<b>pH (SM 4500 H+ B)</b>	<b>6.4</b>	<b>HF</b>		SU			02/06/23 14:42	1
<b>Temperature (SM 4500 H+ B)</b>	<b>17.9</b>	<b>HF</b>		Degrees C			02/06/23 14:42	1

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### Surrogate Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

**Method: 8260C - Volatile Organic Compounds by GC/MS**

**Matrix: Water**

**Prep Type: Total/NA**

**Percent Surrogate Recovery (Acceptance Limits)**

Lab Sample ID	Client Sample ID	BFB	DBFM	DCA	TOL
		(74-124)	(75-131)	(63-144)	(80-117)
880-24277-1	Levey Well	101	96	93	109
LCS 860-88856/3	Lab Control Sample	98	99	96	101
LCSD 860-88856/4	Lab Control Sample Dup	103	100	92	102
MB 860-88856/12	Method Blank	99	104	97	103

**Surrogate Legend**

- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)



## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

## Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-88856/12

Matrix: Water

Analysis Batch: 88856

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.000533	U	0.00100	0.000533	mg/L		02/06/23 12:21	1
Bromobenzene	<0.000665	U	0.00100	0.000665	mg/L		02/06/23 12:21	1
Bromochloromethane	<0.000657	U	0.00100	0.000657	mg/L		02/06/23 12:21	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552	mg/L		02/06/23 12:21	1
Bromoform	<0.000633	U	0.00500	0.000633	mg/L		02/06/23 12:21	1
Bromomethane	<0.00142	U	0.00500	0.00142	mg/L		02/06/23 12:21	1
2-Butanone	<0.00828	U	0.0500	0.00828	mg/L		02/06/23 12:21	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896	mg/L		02/06/23 12:21	1
Chlorobenzene	<0.000530	U	0.00100	0.000530	mg/L		02/06/23 12:21	1
Chloroethane	<0.00198	U	0.0100	0.00198	mg/L		02/06/23 12:21	1
Chloroform	<0.000643	U	0.00100	0.000643	mg/L		02/06/23 12:21	1
Chloromethane	<0.00204	U	0.0100	0.00204	mg/L		02/06/23 12:21	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118	mg/L		02/06/23 12:21	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472	mg/L		02/06/23 12:21	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714	mg/L		02/06/23 12:21	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107	mg/L		02/06/23 12:21	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547	mg/L		02/06/23 12:21	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127	mg/L		02/06/23 12:21	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999	mg/L		02/06/23 12:21	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509	mg/L		02/06/23 12:21	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/06/23 12:21	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/06/23 12:21	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919	mg/L		02/06/23 12:21	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635	mg/L		02/06/23 12:21	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590	mg/L		02/06/23 12:21	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738	mg/L		02/06/23 12:21	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667	mg/L		02/06/23 12:21	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514	mg/L		02/06/23 12:21	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780	mg/L		02/06/23 12:21	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160	mg/L		02/06/23 12:21	1
Ethylbenzene	<0.000411	U	0.00100	0.000411	mg/L		02/06/23 12:21	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126	mg/L		02/06/23 12:21	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613	mg/L		02/06/23 12:21	1
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L		02/06/23 12:21	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124	mg/L		02/06/23 12:21	1
MTBE	<0.00139	U	0.00500	0.00139	mg/L		02/06/23 12:21	1
Naphthalene	<0.00135	U	0.0100	0.00135	mg/L		02/06/23 12:21	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644	mg/L		02/06/23 12:21	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498	mg/L		02/06/23 12:21	1
o-Xylene	<0.000551	U	0.00100	0.000551	mg/L		02/06/23 12:21	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919	mg/L		02/06/23 12:21	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468	mg/L		02/06/23 12:21	1
Styrene	<0.000655	U	0.00100	0.000655	mg/L		02/06/23 12:21	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442	mg/L		02/06/23 12:21	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644	mg/L		02/06/23 12:21	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470	mg/L		02/06/23 12:21	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801	mg/L		02/06/23 12:21	1
Toluene	<0.000475	U	0.00100	0.000475	mg/L		02/06/23 12:21	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

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

Lab Sample ID: MB 860-88856/12

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 88856

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/06/23 12:21	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 12:21	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/06/23 12:21	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/06/23 12:21	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/06/23 12:21	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/06/23 12:21	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/06/23 12:21	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/06/23 12:21	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/06/23 12:21	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/06/23 12:21	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/06/23 12:21	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/06/23 12:21	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/06/23 12:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		74 - 124		02/06/23 12:21	1
Dibromofluoromethane (Surr)	104		75 - 131		02/06/23 12:21	1
1,2-Dichloroethane-d4 (Surr)	97		63 - 144		02/06/23 12:21	1
Toluene-d8 (Surr)	103		80 - 117		02/06/23 12:21	1

Lab Sample ID: LCS 860-88856/3

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 88856

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.05415		mg/L		108	75 - 125
Bromobenzene	0.0500	0.04932		mg/L		99	75 - 125
Bromochloromethane	0.0500	0.05281		mg/L		106	60 - 140
Bromodichloromethane	0.0500	0.04927		mg/L		99	75 - 125
Bromoform	0.0500	0.04711		mg/L		94	70 - 130
Bromomethane	0.0500	0.04700		mg/L		94	60 - 140
2-Butanone	0.250	0.2895		mg/L		116	60 - 140
Carbon tetrachloride	0.0500	0.05089		mg/L		102	70 - 130
Chlorobenzene	0.0500	0.05224		mg/L		104	65 - 135
Chloroethane	0.0500	0.05368		mg/L		107	60 - 140
Chloroform	0.0500	0.05038		mg/L		101	70 - 121
Chloromethane	0.0500	0.04836		mg/L		97	60 - 140
2-Chlorotoluene	0.0500	0.05112		mg/L		102	73 - 125
4-Chlorotoluene	0.0500	0.05202		mg/L		104	74 - 125
cis-1,2-Dichloroethene	0.0500	0.05436		mg/L		109	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05330		mg/L		107	74 - 125
Dibromochloromethane	0.0500	0.04901		mg/L		98	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.05231		mg/L		105	59 - 125
1,2-Dibromoethane	0.0500	0.05265		mg/L		105	73 - 125
1,2-Dichlorobenzene	0.0500	0.05120		mg/L		102	75 - 125
1,3-Dichlorobenzene	0.0500	0.05216		mg/L		104	75 - 125
1,4-Dichlorobenzene	0.0500	0.05069		mg/L		101	75 - 125
Dichlorodifluoromethane	0.0500	0.04637		mg/L		93	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

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

Lab Sample ID: LCS 860-88856/3

Matrix: Water

Analysis Batch: 88856

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	0.0500	0.05521		mg/L		110	70 - 130
1,2-Dichloroethane	0.0500	0.04772		mg/L		95	72 - 130
1,1-Dichloroethene	0.0500	0.05434		mg/L		109	50 - 150
1,2-Dichloropropane	0.0500	0.05379		mg/L		108	74 - 125
1,3-Dichloropropane	0.0500	0.05164		mg/L		103	75 - 125
2,2-Dichloropropane	0.0500	0.05400		mg/L		108	75 - 125
1,1-Dichloropropene	0.0500	0.05410		mg/L		108	75 - 125
Ethylbenzene	0.0500	0.05405		mg/L		108	75 - 125
Hexachlorobutadiene	0.0500	0.04753		mg/L		95	75 - 125
Isopropylbenzene	0.0500	0.05505		mg/L		110	75 - 125
Methylene Chloride	0.0500	0.04937		mg/L		99	75 - 125
m,p-Xylenes	0.0500	0.05463		mg/L		109	75 - 125
MTBE	0.0500	0.05096		mg/L		102	65 - 135
Naphthalene	0.0500	0.05286		mg/L		106	70 - 130
n-Butylbenzene	0.0500	0.05343		mg/L		107	75 - 125
N-Propylbenzene	0.0500	0.05400		mg/L		108	75 - 125
o-Xylene	0.0500	0.05387		mg/L		108	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05535		mg/L		111	75 - 125
sec-Butylbenzene	0.0500	0.05482		mg/L		110	75 - 125
Styrene	0.0500	0.05549		mg/L		111	75 - 125
tert-Butylbenzene	0.0500	0.05350		mg/L		107	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.05035		mg/L		101	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.05315		mg/L		106	74 - 125
Tetrachloroethene	0.0500	0.05278		mg/L		106	71 - 125
Toluene	0.0500	0.05267		mg/L		105	70 - 130
trans-1,2-Dichloroethene	0.0500	0.05338		mg/L		107	75 - 125
trans-1,3-Dichloropropene	0.0500	0.05188		mg/L		104	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05265		mg/L		105	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05317		mg/L		106	75 - 135
1,1,1-Trichloroethane	0.0500	0.05025		mg/L		101	70 - 130
1,1,2-Trichloroethane	0.0500	0.05257		mg/L		105	70 - 130
Trichloroethene	0.0500	0.05047		mg/L		101	75 - 135
Trichlorofluoromethane	0.0500	0.04822		mg/L		96	60 - 140
1,2,3-Trichloropropane	0.0500	0.05124		mg/L		102	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05488		mg/L		110	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.05203		mg/L		104	60 - 140
Vinyl chloride	0.0500	0.05175		mg/L		104	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		74 - 124
Dibromofluoromethane (Surr)	99		75 - 131
1,2-Dichloroethane-d4 (Surr)	96		63 - 144
Toluene-d8 (Surr)	101		80 - 117

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-88856/4

Matrix: Water

Analysis Batch: 88856

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Benzene	0.0500	0.05179		mg/L		104	75 - 125	4	25
Bromobenzene	0.0500	0.05206		mg/L		104	75 - 125	5	25
Bromochloromethane	0.0500	0.05009		mg/L		100	60 - 140	5	25
Bromodichloromethane	0.0500	0.04735		mg/L		95	75 - 125	4	25
Bromoform	0.0500	0.04753		mg/L		95	70 - 130	1	25
Bromomethane	0.0500	0.04717		mg/L		94	60 - 140	0	25
2-Butanone	0.250	0.2834		mg/L		113	60 - 140	2	25
Carbon tetrachloride	0.0500	0.04994		mg/L		100	70 - 130	2	25
Chlorobenzene	0.0500	0.05092		mg/L		102	65 - 135	3	25
Chloroethane	0.0500	0.05312		mg/L		106	60 - 140	1	25
Chloroform	0.0500	0.05011		mg/L		100	70 - 121	1	25
Chloromethane	0.0500	0.04880		mg/L		98	60 - 140	1	25
2-Chlorotoluene	0.0500	0.05370		mg/L		107	73 - 125	5	25
4-Chlorotoluene	0.0500	0.05404		mg/L		108	74 - 125	4	25
cis-1,2-Dichloroethene	0.0500	0.05308		mg/L		106	75 - 125	2	25
cis-1,3-Dichloropropene	0.0500	0.05159		mg/L		103	74 - 125	3	25
Dibromochloromethane	0.0500	0.04827		mg/L		97	73 - 125	2	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05769		mg/L		115	59 - 125	10	25
1,2-Dibromoethane	0.0500	0.05101		mg/L		102	73 - 125	3	25
1,2-Dichlorobenzene	0.0500	0.05416		mg/L		108	75 - 125	6	25
1,3-Dichlorobenzene	0.0500	0.05455		mg/L		109	75 - 125	4	25
1,4-Dichlorobenzene	0.0500	0.05263		mg/L		105	75 - 125	4	25
Dichlorodifluoromethane	0.0500	0.04453		mg/L		89	70 - 130	4	25
1,1-Dichloroethane	0.0500	0.05254		mg/L		105	70 - 130	5	25
1,2-Dichloroethane	0.0500	0.04625		mg/L		93	72 - 130	3	25
1,1-Dichloroethene	0.0500	0.05423		mg/L		108	50 - 150	0	25
1,2-Dichloropropane	0.0500	0.05277		mg/L		106	74 - 125	2	25
1,3-Dichloropropane	0.0500	0.05091		mg/L		102	75 - 125	1	25
2,2-Dichloropropane	0.0500	0.05221		mg/L		104	75 - 125	3	25
1,1-Dichloropropene	0.0500	0.05325		mg/L		106	75 - 125	2	25
Ethylbenzene	0.0500	0.05293		mg/L		106	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.05531		mg/L		111	75 - 125	15	25
Isopropylbenzene	0.0500	0.05443		mg/L		109	75 - 125	1	25
Methylene Chloride	0.0500	0.04772		mg/L		95	75 - 125	3	25
m,p-Xylenes	0.0500	0.05288		mg/L		106	75 - 125	3	25
MTBE	0.0500	0.04989		mg/L		100	65 - 135	2	25
Naphthalene	0.0500	0.06693	*+	mg/L		134	70 - 130	23	25
n-Butylbenzene	0.0500	0.05842		mg/L		117	75 - 125	9	25
N-Propylbenzene	0.0500	0.05778		mg/L		116	75 - 125	7	25
o-Xylene	0.0500	0.05323		mg/L		106	75 - 125	1	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.05928		mg/L		119	75 - 125	7	25
sec-Butylbenzene	0.0500	0.05940		mg/L		119	75 - 125	8	25
Styrene	0.0500	0.05387		mg/L		108	75 - 125	3	25
tert-Butylbenzene	0.0500	0.05684		mg/L		114	75 - 125	6	25
1,1,1,2-Tetrachloroethane	0.0500	0.04792		mg/L		96	72 - 125	5	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.05648		mg/L		113	74 - 125	6	25
Tetrachloroethene	0.0500	0.05115		mg/L		102	71 - 125	3	25
Toluene	0.0500	0.05242		mg/L		105	70 - 130	0	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-88856/4  
 Matrix: Water  
 Analysis Batch: 88856

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
trans-1,2-Dichloroethene	0.0500	0.05263		mg/L		105	75 - 125	1	25
trans-1,3-Dichloropropene	0.0500	0.05069		mg/L		101	66 - 125	2	25
1,2,3-Trichlorobenzene	0.0500	0.06563		mg/L		131	75 - 137	22	25
1,2,4-Trichlorobenzene	0.0500	0.06006		mg/L		120	75 - 135	12	25
1,1,1-Trichloroethane	0.0500	0.04865		mg/L		97	70 - 130	3	25
1,1,2-Trichloroethane	0.0500	0.05165		mg/L		103	70 - 130	2	25
Trichloroethene	0.0500	0.04961		mg/L		99	75 - 135	2	25
Trichlorofluoromethane	0.0500	0.04721		mg/L		94	60 - 140	2	25
1,2,3-Trichloropropane	0.0500	0.05433		mg/L		109	75 - 125	6	25
1,2,4-Trimethylbenzene	0.0500	0.05679		mg/L		114	75 - 125	3	25
1,3,5-Trimethylbenzene	0.0500	0.05506		mg/L		110	60 - 140	6	25
Vinyl chloride	0.0500	0.05111		mg/L		102	60 - 140	1	25

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	100		75 - 131
1,2-Dichloroethane-d4 (Surr)	92		63 - 144
Toluene-d8 (Surr)	102		80 - 117

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-88953/3  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Bromide	<0.0711	U	0.500	0.0711 mg/L			02/06/23 14:01	1
Chloride	<0.200	U	0.500	0.200 mg/L			02/06/23 14:01	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/06/23 14:01	1
Sulfate	0.2149	J	0.500	0.109 mg/L			02/06/23 14:01	1

Lab Sample ID: LCS 860-88953/4  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Bromide	10.0	9.896		mg/L		99	90 - 110
Chloride	10.0	10.03		mg/L		100	90 - 110
Fluoride	10.0	9.837		mg/L		98	90 - 110
Sulfate	10.0	9.942		mg/L		99	90 - 110

Lab Sample ID: LCSD 860-88953/5  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
Bromide	10.0	9.901		mg/L		99	90 - 110	0	20
Chloride	10.0	10.02		mg/L		100	90 - 110	0	20
Fluoride	10.0	9.827		mg/L		98	90 - 110	0	20

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

**Method: 300.0 - Anions, Ion Chromatography (Continued)**

Lab Sample ID: LCSD 860-88953/5  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	9.847		mg/L		98	90 - 110	1	20

Lab Sample ID: LLCS 860-88953/7  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.6071		mg/L		121	50 - 150
Chloride	0.500	0.5662		mg/L		113	50 - 150
Fluoride	0.500	0.4997	J	mg/L		100	50 - 150
Sulfate	0.500	0.5939		mg/L		119	50 - 150

Lab Sample ID: MB 860-88954/3  
 Matrix: Water  
 Analysis Batch: 88954

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/06/23 14:01	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/06/23 14:01	1

Lab Sample ID: LCS 860-88954/4  
 Matrix: Water  
 Analysis Batch: 88954

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	9.906		mg/L		99	80 - 120
Nitrite as N	10.0	9.453		mg/L		95	80 - 120

Lab Sample ID: LCSD 860-88954/5  
 Matrix: Water  
 Analysis Batch: 88954

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	9.910		mg/L		99	80 - 120	0	20
Nitrite as N	10.0	9.464		mg/L		95	80 - 120	0	20

Lab Sample ID: LLCS 860-88954/6  
 Matrix: Water  
 Analysis Batch: 88954

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.1166		mg/L		117	50 - 150
Nitrite as N	0.100	0.08181	J	mg/L		82	50 - 150

### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

**Method: 200.7 Rev 4.4 - Metals (ICP)**

**Lab Sample ID: MB 860-89039/1-A**  
**Matrix: Water**  
**Analysis Batch: 89141**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 89039**

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Calcium	<0.115	U	0.200	0.115 mg/L		02/06/23 21:27	02/07/23 10:15	1
Magnesium	<0.0428	U	0.200	0.0428 mg/L		02/06/23 21:27	02/07/23 10:15	1
Potassium	<0.0914	U	0.500	0.0914 mg/L		02/06/23 21:27	02/07/23 10:15	1
Sodium	<0.152	U	0.500	0.152 mg/L		02/06/23 21:27	02/07/23 10:15	1
SiO2	<0.471	U	1.07	0.471 mg/L		02/06/23 21:27	02/07/23 10:15	1

**Lab Sample ID: LCS 860-89039/2-A**  
**Matrix: Water**  
**Analysis Batch: 89141**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 89039**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Calcium	25.0	25.20		mg/L		101	85 - 115
Magnesium	25.0	24.90		mg/L		100	85 - 115
Potassium	10.0	9.680		mg/L		97	85 - 115
Sodium	25.0	23.80		mg/L		95	85 - 115
SiO2	21.4	21.83		mg/L		102	85 - 115

**Lab Sample ID: LCSD 860-89039/3-A**  
**Matrix: Water**  
**Analysis Batch: 89141**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total Recoverable**  
**Prep Batch: 89039**

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Calcium	25.0	25.20		mg/L		101	85 - 115	0	20
Magnesium	25.0	24.90		mg/L		100	85 - 115	0	20
Potassium	10.0	9.640		mg/L		96	85 - 115	0	20
Sodium	25.0	23.80		mg/L		95	85 - 115	0	20
SiO2	21.4	21.83		mg/L		102	85 - 115	0	20

**Lab Sample ID: LLCS 860-89039/4-A**  
**Matrix: Water**  
**Analysis Batch: 89141**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 89039**

Analyte	Spike Added	LLCS LLCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Calcium	0.200	0.2240		mg/L		112	50 - 150
Magnesium	0.200	0.2300		mg/L		115	50 - 150
Potassium	0.500	0.4820	J	mg/L		96	50 - 150
Sodium	0.500	0.5170		mg/L		103	50 - 150
SiO2	1.07	1.156		mg/L		108	50 - 150

**Lab Sample ID: 880-24277-1 MS**  
**Matrix: Water**  
**Analysis Batch: 89141**

**Client Sample ID: Levey Well**  
**Prep Type: Total Recoverable**  
**Prep Batch: 89039**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Calcium	373	E	25.0	407.0	E 4	mg/L		136	70 - 130
Magnesium	69.4		25.0	95.30	E	mg/L		104	70 - 130
Potassium	6.39		10.0	16.40		mg/L		100	70 - 130
Sodium	113		25.0	140.0	4	mg/L		108	70 - 130
SiO2	67.0		21.4	92.02		mg/L		117	70 - 130

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

#### Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 880-24277-1 MSD  
 Matrix: Water  
 Analysis Batch: 89141

Client Sample ID: Levey Well  
 Prep Type: Total Recoverable  
 Prep Batch: 89039

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Calcium	373	E	25.0	375.0	E 4	mg/L		8	70 - 130	8	20
Magnesium	69.4		25.0	87.50	E	mg/L		72	70 - 130	9	20
Potassium	6.39		10.0	15.10		mg/L		87	70 - 130	8	20
Sodium	113		25.0	129.0	4	mg/L		64	70 - 130	8	20
SiO2	67.0		21.4	84.74		mg/L		83	70 - 130	8	20

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-88966/3  
 Matrix: Water  
 Analysis Batch: 88966

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Alkalinity	<4.00	U	4.00	4.00			02/06/23 11:05	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00			02/06/23 11:05	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00			02/06/23 11:05	1
Hydroxide Alkalinity	<4.00	U	4.00	4.00			02/06/23 11:05	1
Phenolphthalein Alkalinity	<4.00	U	4.00	4.00			02/06/23 11:05	1

Lab Sample ID: LCS 860-88966/4  
 Matrix: Water  
 Analysis Batch: 88966

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Alkalinity	250	244.6		mg/L		98	85 - 115

Lab Sample ID: LCSD 860-88966/5  
 Matrix: Water  
 Analysis Batch: 88966

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

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
Alkalinity	250	249.1		mg/L		100	85 - 115	2	20

#### Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-88940/1  
 Matrix: Water  
 Analysis Batch: 88940

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Total Dissolved Solids	<5.00	U	5.00	5.00			02/06/23 09:00	1

Lab Sample ID: LCS 860-88940/2  
 Matrix: Water  
 Analysis Batch: 88940

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Total Dissolved Solids	1000	941.0		mg/L		94	80 - 120

Eurofins Midland

### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

**Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)**

Lab Sample ID: LCSD 860-88940/3  
 Matrix: Water  
 Analysis Batch: 88940

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	945.0		mg/L		95	80 - 120	0	10

Lab Sample ID: LLCS 860-88940/4  
 Matrix: Water  
 Analysis Batch: 88940

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	5.00	<5.00	U	mg/L		80	50 - 150		

**Method: SM 4500 H+ B - pH**

Lab Sample ID: 880-24277-1 DU  
 Matrix: Water  
 Analysis Batch: 88983

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.4	HF	6.4		SU		0.2	20
Temperature	17.9	HF	18.1		Degrees C		1	20



## QC Association Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

## GC/MS VOA

## Analysis Batch: 88856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	8260C	
MB 860-88856/12	Method Blank	Total/NA	Water	8260C	
LCS 860-88856/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-88856/4	Lab Control Sample Dup	Total/NA	Water	8260C	

## HPLC/IC

## Analysis Batch: 88953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	300.0	
MB 860-88953/3	Method Blank	Total/NA	Water	300.0	
LCS 860-88953/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-88953/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-88953/7	Lab Control Sample	Total/NA	Water	300.0	

## Analysis Batch: 88954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	300.0	
MB 860-88954/3	Method Blank	Total/NA	Water	300.0	
LCS 860-88954/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-88954/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-88954/6	Lab Control Sample	Total/NA	Water	300.0	

## Metals

## Prep Batch: 89039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total Recoverable	Water	200.7	
MB 860-89039/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-89039/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-89039/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
LLCS 860-89039/4-A	Lab Control Sample	Total Recoverable	Water	200.7	
880-24277-1 MS	Levey Well	Total Recoverable	Water	200.7	
880-24277-1 MSD	Levey Well	Total Recoverable	Water	200.7	

## Analysis Batch: 89141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	89039
880-24277-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	89039
MB 860-89039/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	89039
LCS 860-89039/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	89039
LCSD 860-89039/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	89039
LLCS 860-89039/4-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	89039
880-24277-1 MS	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	89039
880-24277-1 MSD	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	89039

## General Chemistry

## Analysis Batch: 87898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	SM 1030E	

Eurofins Midland

### QC Association Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

#### General Chemistry

##### Analysis Batch: 88940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	SM 2540C	
MB 860-88940/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-88940/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-88940/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-88940/4	Lab Control Sample	Total/NA	Water	SM 2540C	

##### Analysis Batch: 88966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	SM 2320B	
MB 860-88966/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-88966/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-88966/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

##### Analysis Batch: 88983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24277-1	Levey Well	Total/NA	Water	SM 4500 H+ B	
880-24277-1 DU	Levey Well	Total/NA	Water	SM 4500 H+ B	

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### Lab Chronicle

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24277-1**

Date Collected: 02/02/23 12:35

Matrix: Water

Date Received: 02/02/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	88856	NA	EET HOU	02/06/23 13:23
Total/NA	Analysis	300.0		1	88953	A1S	EET HOU	02/07/23 00:35
Total/NA	Analysis	300.0		1	88954	A1S	EET HOU	02/07/23 00:35
Total Recoverable	Prep	200.7			89039	AGR	EET HOU	02/06/23 21:28
Total Recoverable	Analysis	200.7 Rev 4.4		1	89141	JDM	EET HOU	02/07/23 10:25
Total Recoverable	Prep	200.7			89039	AGR	EET HOU	02/06/23 21:28
Total Recoverable	Analysis	200.7 Rev 4.4		50	89141	JDM	EET HOU	02/07/23 10:43
Total/NA	Analysis	SM 1030E		1	87898	AA	EET HOU	02/09/23 09:17
Total/NA	Analysis	SM 2320B		1	88966	TL	EET HOU	02/06/23 12:26
Total/NA	Analysis	SM 2540C		1	88940	HN	EET HOU	02/06/23 09:00
Total/NA	Analysis	SM 4500 H+ B		1	88983	TL	EET HOU	02/06/23 14:42

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

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### Accreditation/Certification Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
200.7 Rev 4.4	200.7	Water	SiO2
SM 1030E		Water	Anion/Cation Balance
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2320B		Water	Hydroxide Alkalinity
SM 2320B		Water	Phenolphthalein Alkalinity
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
 SDG: Hobbs NM

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
200.7 Rev 4.4	Metals (ICP)	EPA	EET HOU
SM 1030E	Cation Anion Balance	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
200.7	Preparation, Total Recoverable Metals	EPA	EET HOU
5030C	Purge and Trap	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24277-1  
SDG: Hobbs NM

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-24277-1	Levey Well	Water	02/02/23 12:35	02/02/23 16:20

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296  
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

Chain of Custody

Work Order No: 24277

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	601 Merrenfeld #400	Address:	
City, State ZIP:	Midland TX 79701	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@ensolum.com

Project Name:	Levey Well	Hobbs NM	Turn Around	
Project Number:	03B1417001		Routine	
P.O. Number:	03B1417001		Rush 24 hr	
Sampler's Name:	Shane Diller		Due Date	

Temp Blank:	Yes (No)	Wet Ice:	Yes No
Temperature (°C):	10.13	Thermometer ID:	123
Received Intact:	Yes No	Correction Factor:	0.5
Cooler Custody Seals:	Yes No N/A	Total Containers:	
Sample Custody Seals:	Yes No N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Work Order Notes
Levey Well	GW	2-2-23	1235		7	VOCs Anions: F, Cl, SO4, B Cations: Ca, K, Mg, Na, Si pH Alkalinity TDS	TAT starts the day received by the lab, if received by 4 30pm Sample Comments 24hr

Total 200.7 / 6010    200.8 / 6020:    8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd    TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

Circle Method(s) and Metal(s) to be analyzed

**CUSTODY SEAL**  
**QEC**  
 Quality Environmental Containers  
 800-255-3950 • 304-255-3900  
 DATE 2-2-23  
 SIGNATURE [Signature]



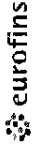
880-24277 Chain of Custody

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[Signature]	[Signature]	2/2/23	[Signature]	[Signature]	10/20

**Eurofins Midland**  
1211 W Florida Ave  
Midland, TX 79701  
Phone: 432-704-5440

# Chain of Custody Record



Environment Testing

<b>Client Information (Sub Contract Lab)</b> Client Contact: <u>Kramer, Jessica</u> Shipping/Receiving: <u>Jessica Krainer@et.eurofins.com</u> Company: <u>NELAP Texas</u>		Lab P/N: <u>Kramer, Jessica</u> E-Mail: <u>Jessica Krainer@et.eurofins.com</u> Carrier Tracking No(s): <u></u> State of Origin: <u>New Mexico</u> Page: <u>Page 1 of 1</u> Job #: <u>880-24277 1</u> Preservation Codes: <u>880-24277 1</u>	COC No: <u>880-6229.1</u> Job #: <u>880-24277 1</u> Preservation Codes: <u>880-24277 1</u>
Due Date Requested: <u>2/6/2023</u> TAT Requested (days): <u></u> PO #: <u></u> WO #: <u></u> Project #: <u>88000024</u> SSOW#: <u></u>		<b>Analysis Requested</b> 9260/6030C (MOD) Full List VOCs <input checked="" type="checkbox"/> 200_7/200_7_P_TR (MOD) Custom List <input checked="" type="checkbox"/> 300_ORGFM_28D/ Br Cl, F, SO4 <input checked="" type="checkbox"/> 300_ORGFM/NO2, NO3 <input checked="" type="checkbox"/> 5M4500_H+/- pH <input checked="" type="checkbox"/> 2540C_Calc'd TDS <input checked="" type="checkbox"/> 2320B/Alkalinity <input checked="" type="checkbox"/> Cation/Anion(MOD) Copy Analyses <input checked="" type="checkbox"/>	
Address: <u>4145 Greenbriar Dr</u> City: <u>Stafford</u> State/Zip: <u>TX, 77477</u> Phone: <u>281-240-4200(Tel)</u> Email: <u></u>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Matrix (W=Water, S=Solid, O=Other) <u>Water</u> Sample Type (C=Comp, G=Grab) <u></u> Sample Date <u>2/2/23</u> Sample Time <u>12:35</u> Preservation Code <u>Mountain</u>	
Project Name: <u>Levey Well Hobbs, NM 03B1417001</u> Site: <u></u>		Total Number of Containers <u>7</u> Special Instructions/Note: <u></u>	
Preservative: <u></u> A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other: <u></u>		M Hexane N None O AsHAcO2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4.5 Y Trizma Z other (specify) <u></u>	
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/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 <input type="checkbox"/> Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: <u>I</u> <u>II</u> <u>III</u> <u>IV</u> Other (specify) <u>Primary Deliverable Rank: 2</u>			
Empty Kit Relinquished by: <u></u> Date: <u></u> Company: <u></u>		Method of Shipment: <u>FedEX</u> Date/Time: <u></u> Company: <u></u>	
Relinquished by: <u></u> Date/Time: <u></u> Company: <u></u>		Received by: <u>Jessica Krainer</u> Date/Time: <u>2/14/2023 12:32</u> Company: <u>EX</u>	
Relinquished by: <u></u> Date/Time: <u></u> Company: <u></u>		Received by: <u></u> Date/Time: <u></u> Company: <u></u>	
Custody Seals Intact: <u>Yes</u> <u>No</u>		Cooler Temperature(s) °C and °F: <u>C/F: +0.3/3.1</u> Temp: <u></u> Corrected Temp: <u>3.4</u>	

Ver: 06/08/2021

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24277-1

SDG Number: Hobbs NM

**Login Number: 24277**

**List Number: 1**

**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24277-1

SDG Number: Hobbs NM

**Login Number: 24277**

**List Number: 2**

**Creator: Pena, Jesiel**

**List Source: Eurofins Houston**

**List Creation: 02/05/23 03:33 PM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
 Ensolum  
 601 N. Marienfeld St.  
 Suite 400  
 Midland, Texas 79701

Generated 2/14/2023 3:54:00 PM

## JOB DESCRIPTION

Levey Well Hobbs, NM - 03B1417001  
 SDG NUMBER Hobbs NM

## JOB NUMBER

880-24492-1

Eurofins Midland  
 1211 W. Florida Ave  
 Midland TX 79701



# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
2/14/2023 3:54:00 PM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Laboratory Job ID: 880-24492-1  
SDG: Hobbs NM

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## Definitions/Glossary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## 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: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

**Job ID: 880-24492-1****Laboratory: Eurofins Midland****Narrative**

**Job Narrative**  
**880-24492-1**

**Receipt**

The sample was received on 2/8/2023 3:36 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

**GC/MS VOA**

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 860-89498 recovered outside control limits for the following analyte(s): Dichloro difluoromethane. Dichloro difluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified. Note, The continuing calibration verification was within control limits. And the associated samples were not detected (ND).

Method 8260C: The matrix spike (MS) recoveries for analytical batch 860-89498 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 860-89498 recovered outside control limits for the following analytes: Naphthalene. These analytes were biased high in the LCSD and were not detected in the associated samples; 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.

**HPLC/IC**

Method 300\_ORGFM\_28D: The method blank for analytical batch 860-89513 contained Sulfate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300\_ORGFM\_28D: The method blank for analytical batch 860-89513 contained Sulfate above the method detection limit (MDL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-89513 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

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

**Metals**

Method 200.7: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-89574 and analytical batch 860-89825 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**General Chemistry**

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

### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

Client Sample ID: Levey Well

Lab Sample ID: 880-24492-1

Date Collected: 02/08/23 11:30

Matrix: Water

Date Received: 02/08/23 15:36

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.00381</b>		0.00100	0.000533 mg/L			02/09/23 21:51	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/09/23 21:51	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/09/23 21:51	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/09/23 21:51	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/09/23 21:51	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/09/23 21:51	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/09/23 21:51	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/09/23 21:51	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/09/23 21:51	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/09/23 21:51	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/09/23 21:51	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/09/23 21:51	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/09/23 21:51	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/09/23 21:51	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/09/23 21:51	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/09/23 21:51	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/09/23 21:51	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/09/23 21:51	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/09/23 21:51	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/09/23 21:51	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/09/23 21:51	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/09/23 21:51	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/09/23 21:51	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/09/23 21:51	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/09/23 21:51	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/09/23 21:51	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/09/23 21:51	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/09/23 21:51	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/09/23 21:51	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/09/23 21:51	1
<b>Ethylbenzene</b>	<b>0.0115</b>		0.00100	0.000411 mg/L			02/09/23 21:51	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/09/23 21:51	1
<b>Isopropylbenzene</b>	<b>0.00583</b>		0.00100	0.000613 mg/L			02/09/23 21:51	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/09/23 21:51	1
<b>m,p-Xylenes</b>	<b>0.0496</b>		0.0100	0.00124 mg/L			02/09/23 21:51	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/09/23 21:51	1
Naphthalene	<0.00135	U **	0.0100	0.00135 mg/L			02/09/23 21:51	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/09/23 21:51	1
<b>N-Propylbenzene</b>	<b>0.00265</b>		0.00100	0.000498 mg/L			02/09/23 21:51	1
<b>o-Xylene</b>	<b>0.00734</b>		0.00100	0.000551 mg/L			02/09/23 21:51	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/09/23 21:51	1
<b>sec-Butylbenzene</b>	<b>0.00101</b>		0.00100	0.000468 mg/L			02/09/23 21:51	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/09/23 21:51	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/09/23 21:51	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/09/23 21:51	1
1,1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/09/23 21:51	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/09/23 21:51	1
<b>Toluene</b>	<b>0.0269</b>		0.00100	0.000475 mg/L			02/09/23 21:51	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/09/23 21:51	1

Eurofins Midland



### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24492-1**

Date Collected: 02/08/23 11:30

Matrix: Water

Date Received: 02/08/23 15:36

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/09/23 21:51	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/09/23 21:51	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/09/23 21:51	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/09/23 21:51	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/09/23 21:51	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/09/23 21:51	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/09/23 21:51	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/09/23 21:51	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.0106</b>		0.00100	0.000417 mg/L			02/09/23 21:51	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.00335</b>		0.00100	0.000456 mg/L			02/09/23 21:51	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/09/23 21:51	1
<b>Xylenes, Total</b>	<b>0.0569</b>		0.0100	0.00124 mg/L			02/09/23 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		74 - 124		02/09/23 21:51	1
Dibromofluoromethane (Surr)	94		75 - 131		02/09/23 21:51	1
1,2-Dichloroethane-d4 (Surr)	86		63 - 144		02/09/23 21:51	1
Toluene-d8 (Surr)	100		80 - 117		02/09/23 21:51	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>0.514</b>		0.500	0.0711 mg/L			02/09/23 22:41	1
<b>Nitrate as N</b>	<b>0.108</b>		0.100	0.0391 mg/L			02/09/23 22:41	1
<b>Chloride</b>	<b>224</b>		0.500	0.200 mg/L			02/09/23 22:41	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/09/23 22:41	1
<b>Fluoride</b>	<b>0.443</b>	<b>J</b>	0.500	0.100 mg/L			02/09/23 22:41	1
<b>Sulfate</b>	<b>44.6</b>	<b>B</b>	0.500	0.109 mg/L			02/09/23 22:41	1

**Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>228</b>		10.0	5.76 mg/L		02/09/23 19:57	02/10/23 19:25	50
<b>Magnesium</b>	<b>46.7</b>		0.200	0.0428 mg/L		02/09/23 19:57	02/10/23 18:57	1
<b>Potassium</b>	<b>4.18</b>		0.500	0.0914 mg/L		02/09/23 19:57	02/10/23 18:57	1
<b>Sodium</b>	<b>78.0</b>		0.500	0.152 mg/L		02/09/23 19:57	02/10/23 18:57	1
<b>SiO2</b>	<b>60.3</b>		1.07	0.471 mg/L		02/09/23 19:57	02/10/23 18:57	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Anion/Cation Balance (SM 1030E)</b>	<b>-11.0</b>			%			02/14/23 15:26	1
<b>Alkalinity (SM 2320B)</b>	<b>704</b>		4.00	4.00 mg/L			02/10/23 12:47	1
<b>Bicarbonate Alkalinity as CaCO3 (SM 2320B)</b>	<b>704</b>		4.00	4.00 mg/L			02/10/23 12:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/10/23 12:47	1
Hydroxide Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/10/23 12:47	1
Phenolphthalein Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/10/23 12:47	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1230</b>		10.0	10.0 mg/L			02/09/23 19:00	1
<b>pH (SM 4500 H+ B)</b>	<b>6.7</b>	<b>HF</b>		SU			02/10/23 13:11	1
<b>Temperature (SM 4500 H+ B)</b>	<b>17.7</b>	<b>HF</b>		Degrees C			02/10/23 13:11	1

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### Surrogate Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

**Method: 8260C - Volatile Organic Compounds by GC/MS**

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-24492-1	Levey Well	94	94	86	100
LCS 860-89498/3	Lab Control Sample	94	98	87	100
LCSD 860-89498/4	Lab Control Sample Dup	97	98	85	99
MB 860-89498/9	Method Blank	98	99	90	99

**Surrogate Legend**

- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)



### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

#### Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-89498/9  
 Matrix: Water  
 Analysis Batch: 89498

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/09/23 20:49	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/09/23 20:49	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/09/23 20:49	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/09/23 20:49	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/09/23 20:49	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/09/23 20:49	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/09/23 20:49	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/09/23 20:49	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/09/23 20:49	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/09/23 20:49	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/09/23 20:49	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/09/23 20:49	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/09/23 20:49	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/09/23 20:49	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/09/23 20:49	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/09/23 20:49	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/09/23 20:49	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/09/23 20:49	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/09/23 20:49	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/09/23 20:49	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/09/23 20:49	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/09/23 20:49	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919 mg/L			02/09/23 20:49	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/09/23 20:49	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/09/23 20:49	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/09/23 20:49	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/09/23 20:49	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/09/23 20:49	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/09/23 20:49	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/09/23 20:49	1
Ethylbenzene	<0.000411	U	0.00100	0.000411 mg/L			02/09/23 20:49	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/09/23 20:49	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613 mg/L			02/09/23 20:49	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/09/23 20:49	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124 mg/L			02/09/23 20:49	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/09/23 20:49	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/09/23 20:49	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/09/23 20:49	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498 mg/L			02/09/23 20:49	1
o-Xylene	<0.000551	U	0.00100	0.000551 mg/L			02/09/23 20:49	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/09/23 20:49	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/09/23 20:49	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/09/23 20:49	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/09/23 20:49	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/09/23 20:49	1
1,1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/09/23 20:49	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/09/23 20:49	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/09/23 20:49	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

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

Lab Sample ID: MB 860-89498/9  
 Matrix: Water  
 Analysis Batch: 89498

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L		02/09/23 20:49	02/09/23 20:49	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L		02/09/23 20:49	02/09/23 20:49	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L		02/09/23 20:49	02/09/23 20:49	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L		02/09/23 20:49	02/09/23 20:49	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L		02/09/23 20:49	02/09/23 20:49	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L		02/09/23 20:49	02/09/23 20:49	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L		02/09/23 20:49	02/09/23 20:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		74 - 124		02/09/23 20:49	1
Dibromofluoromethane (Surr)	99		75 - 131		02/09/23 20:49	1
1,2-Dichloroethane-d4 (Surr)	90		63 - 144		02/09/23 20:49	1
Toluene-d8 (Surr)	99		80 - 117		02/09/23 20:49	1

Lab Sample ID: LCS 860-89498/3  
 Matrix: Water  
 Analysis Batch: 89498

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.04887		mg/L		98	75 - 125
Bromobenzene	0.0500	0.04933		mg/L		99	75 - 125
Bromochloromethane	0.0500	0.04913		mg/L		98	60 - 140
Bromodichloromethane	0.0500	0.04369		mg/L		87	75 - 125
Bromoform	0.0500	0.04483		mg/L		90	70 - 130
Bromomethane	0.0500	0.04670		mg/L		93	60 - 140
2-Butanone	0.250	0.2765		mg/L		111	60 - 140
Carbon tetrachloride	0.0500	0.04201		mg/L		84	70 - 130
Chlorobenzene	0.0500	0.04956		mg/L		99	65 - 135
Chloroethane	0.0500	0.05400		mg/L		108	60 - 140
Chloroform	0.0500	0.04640		mg/L		93	70 - 121
Chloromethane	0.0500	0.03765		mg/L		75	60 - 140
2-Chlorotoluene	0.0500	0.04717		mg/L		94	73 - 125
4-Chlorotoluene	0.0500	0.04725		mg/L		94	74 - 125
cis-1,2-Dichloroethene	0.0500	0.04753		mg/L		95	75 - 125
cis-1,3-Dichloropropene	0.0500	0.04781		mg/L		96	74 - 125
Dibromochloromethane	0.0500	0.04599		mg/L		92	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.04928		mg/L		99	59 - 125
1,2-Dibromoethane	0.0500	0.04993		mg/L		100	73 - 125
1,2-Dichlorobenzene	0.0500	0.04923		mg/L		98	75 - 125
1,3-Dichlorobenzene	0.0500	0.04966		mg/L		99	75 - 125
1,4-Dichlorobenzene	0.0500	0.04811		mg/L		96	75 - 125
Dichlorodifluoromethane	0.0500	0.03172	*	mg/L		63	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

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

Lab Sample ID: LCS 860-89498/3

Matrix: Water

Analysis Batch: 89498

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	0.0500	0.05248		mg/L		105	70 - 130
1,2-Dichloroethane	0.0500	0.04316		mg/L		86	72 - 130
1,1-Dichloroethene	0.0500	0.05254		mg/L		105	50 - 150
1,2-Dichloropropane	0.0500	0.04898		mg/L		98	74 - 125
1,3-Dichloropropane	0.0500	0.04827		mg/L		97	75 - 125
2,2-Dichloropropane	0.0500	0.04275		mg/L		85	75 - 125
1,1-Dichloropropene	0.0500	0.04748		mg/L		95	75 - 125
Ethylbenzene	0.0500	0.04915		mg/L		98	75 - 125
Hexachlorobutadiene	0.0500	0.04364		mg/L		87	75 - 125
Isopropylbenzene	0.0500	0.05050		mg/L		101	75 - 125
Methylene Chloride	0.0500	0.04756		mg/L		95	75 - 125
m,p-Xylenes	0.0500	0.05086		mg/L		102	75 - 125
MTBE	0.0500	0.04909		mg/L		98	65 - 135
Naphthalene	0.0500	0.05787		mg/L		116	70 - 130
n-Butylbenzene	0.0500	0.04859		mg/L		97	75 - 125
N-Propylbenzene	0.0500	0.04956		mg/L		99	75 - 125
o-Xylene	0.0500	0.05007		mg/L		100	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05085		mg/L		102	75 - 125
sec-Butylbenzene	0.0500	0.05026		mg/L		101	75 - 125
Styrene	0.0500	0.05253		mg/L		105	75 - 125
tert-Butylbenzene	0.0500	0.04920		mg/L		98	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.04539		mg/L		91	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.04906		mg/L		98	74 - 125
Tetrachloroethene	0.0500	0.04864		mg/L		97	71 - 125
Toluene	0.0500	0.04892		mg/L		98	70 - 130
trans-1,2-Dichloroethene	0.0500	0.05280		mg/L		106	75 - 125
trans-1,3-Dichloropropene	0.0500	0.04648		mg/L		93	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05776		mg/L		116	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05439		mg/L		109	75 - 135
1,1,1-Trichloroethane	0.0500	0.04294		mg/L		86	70 - 130
1,1,2-Trichloroethane	0.0500	0.04966		mg/L		99	70 - 130
Trichloroethene	0.0500	0.04976		mg/L		100	75 - 135
Trichlorofluoromethane	0.0500	0.04446		mg/L		89	60 - 140
1,2,3-Trichloropropane	0.0500	0.05085		mg/L		102	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05058		mg/L		101	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.04960		mg/L		99	60 - 140
Vinyl chloride	0.0500	0.04740		mg/L		95	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	94		74 - 124
Dibromofluoromethane (Surr)	98		75 - 131
1,2-Dichloroethane-d4 (Surr)	87		63 - 144
Toluene-d8 (Surr)	100		80 - 117

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-89498/4

Matrix: Water

Analysis Batch: 89498

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Benzene	0.0500	0.04798		mg/L		96	75 - 125	2	25
Bromobenzene	0.0500	0.04942		mg/L		99	75 - 125	0	25
Bromochloromethane	0.0500	0.04911		mg/L		98	60 - 140	0	25
Bromodichloromethane	0.0500	0.04360		mg/L		87	75 - 125	0	25
Bromoform	0.0500	0.04446		mg/L		89	70 - 130	1	25
Bromomethane	0.0500	0.04863		mg/L		97	60 - 140	4	25
2-Butanone	0.250	0.2717		mg/L		109	60 - 140	2	25
Carbon tetrachloride	0.0500	0.04390		mg/L		88	70 - 130	4	25
Chlorobenzene	0.0500	0.04933		mg/L		99	65 - 135	0	25
Chloroethane	0.0500	0.05594		mg/L		112	60 - 140	4	25
Chloroform	0.0500	0.04582		mg/L		92	70 - 121	1	25
Chloromethane	0.0500	0.03870		mg/L		77	60 - 140	3	25
2-Chlorotoluene	0.0500	0.04847		mg/L		97	73 - 125	3	25
4-Chlorotoluene	0.0500	0.04882		mg/L		98	74 - 125	3	25
cis-1,2-Dichloroethene	0.0500	0.04720		mg/L		94	75 - 125	1	25
cis-1,3-Dichloropropene	0.0500	0.04660		mg/L		93	74 - 125	3	25
Dibromochloromethane	0.0500	0.04374		mg/L		87	73 - 125	5	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05298		mg/L		106	59 - 125	7	25
1,2-Dibromoethane	0.0500	0.04807		mg/L		96	73 - 125	4	25
1,2-Dichlorobenzene	0.0500	0.05056		mg/L		101	75 - 125	3	25
1,3-Dichlorobenzene	0.0500	0.05056		mg/L		101	75 - 125	2	25
1,4-Dichlorobenzene	0.0500	0.04878		mg/L		98	75 - 125	1	25
Dichlorodifluoromethane	0.0500	0.03431	*-	mg/L		69	70 - 130	8	25
1,1-Dichloroethane	0.0500	0.05067		mg/L		101	70 - 130	4	25
1,2-Dichloroethane	0.0500	0.04118		mg/L		82	72 - 130	5	25
1,1-Dichloroethene	0.0500	0.05363		mg/L		107	50 - 150	2	25
1,2-Dichloropropane	0.0500	0.04755		mg/L		95	74 - 125	3	25
1,3-Dichloropropane	0.0500	0.04675		mg/L		93	75 - 125	3	25
2,2-Dichloropropane	0.0500	0.04308		mg/L		86	75 - 125	1	25
1,1-Dichloropropene	0.0500	0.04964		mg/L		99	75 - 125	4	25
Ethylbenzene	0.0500	0.05007		mg/L		100	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.04826		mg/L		97	75 - 125	10	25
Isopropylbenzene	0.0500	0.05212		mg/L		104	75 - 125	3	25
Methylene Chloride	0.0500	0.04522		mg/L		90	75 - 125	5	25
m,p-Xylenes	0.0500	0.05046		mg/L		101	75 - 125	1	25
MTBE	0.0500	0.04802		mg/L		96	65 - 135	2	25
Naphthalene	0.0500	0.06591	*+	mg/L		132	70 - 130	13	25
n-Butylbenzene	0.0500	0.05224		mg/L		104	75 - 125	7	25
N-Propylbenzene	0.0500	0.05202		mg/L		104	75 - 125	5	25
o-Xylene	0.0500	0.04984		mg/L		100	75 - 125	0	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.05427		mg/L		109	75 - 125	6	25
sec-Butylbenzene	0.0500	0.05399		mg/L		108	75 - 125	7	25
Styrene	0.0500	0.05221		mg/L		104	75 - 125	1	25
tert-Butylbenzene	0.0500	0.05257		mg/L		105	75 - 125	7	25
1,1,1,2-Tetrachloroethane	0.0500	0.04513		mg/L		90	72 - 125	1	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.04860		mg/L		97	74 - 125	1	25
Tetrachloroethene	0.0500	0.05021		mg/L		100	71 - 125	3	25
Toluene	0.0500	0.04937		mg/L		99	70 - 130	1	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-89498/4  
 Matrix: Water  
 Analysis Batch: 89498

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.0500	0.05293		mg/L		106	75 - 125	0	25
trans-1,3-Dichloropropene	0.0500	0.04595		mg/L		92	66 - 125	1	25
1,2,3-Trichlorobenzene	0.0500	0.06408		mg/L		128	75 - 137	10	25
1,2,4-Trichlorobenzene	0.0500	0.05849		mg/L		117	75 - 135	7	25
1,1,1-Trichloroethane	0.0500	0.04466		mg/L		89	70 - 130	4	25
1,1,2-Trichloroethane	0.0500	0.04767		mg/L		95	70 - 130	4	25
Trichloroethene	0.0500	0.05046		mg/L		101	75 - 135	1	25
Trichlorofluoromethane	0.0500	0.04666		mg/L		93	60 - 140	5	25
1,2,3-Trichloropropane	0.0500	0.04828		mg/L		97	75 - 125	5	25
1,2,4-Trimethylbenzene	0.0500	0.05157		mg/L		103	75 - 125	2	25
1,3,5-Trimethylbenzene	0.0500	0.05087		mg/L		102	60 - 140	3	25
Vinyl chloride	0.0500	0.05051		mg/L		101	60 - 140	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	97		74 - 124
Dibromofluoromethane (Surr)	98		75 - 131
1,2-Dichloroethane-d4 (Surr)	85		63 - 144
Toluene-d8 (Surr)	99		80 - 117

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-89513/3  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.0711	U	0.500	0.0711 mg/L			02/09/23 15:37	1
Chloride	<0.200	U	0.500	0.200 mg/L			02/09/23 15:37	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/09/23 15:37	1
Sulfate	0.2186	J	0.500	0.109 mg/L			02/09/23 15:37	1

Lab Sample ID: LCS 860-89513/4  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	9.974		mg/L		100	90 - 110
Chloride	10.0	10.14		mg/L		101	90 - 110
Fluoride	10.0	10.17		mg/L		102	90 - 110
Sulfate	10.0	10.13		mg/L		101	90 - 110

Lab Sample ID: LCSD 860-89513/5  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.02		mg/L		100	90 - 110	0	20
Chloride	10.0	10.19		mg/L		102	90 - 110	0	20
Fluoride	10.0	10.20		mg/L		102	90 - 110	0	20

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

**Method: 300.0 - Anions, Ion Chromatography (Continued)**

Lab Sample ID: LCSD 860-89513/5  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	10.13		mg/L		101	90 - 110	0	20

Lab Sample ID: LLCS 860-89513/7  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.5811		mg/L		116	50 - 150
Chloride	0.500	0.5491		mg/L		110	50 - 150
Fluoride	0.500	0.4964	J	mg/L		99	50 - 150
Sulfate	0.500	0.5796		mg/L		116	50 - 150

Lab Sample ID: MB 860-89514/3  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/09/23 15:37	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/09/23 15:37	1

Lab Sample ID: LCS 860-89514/4  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	9.978		mg/L		100	80 - 120
Nitrite as N	10.0	9.625		mg/L		96	80 - 120

Lab Sample ID: LCSD 860-89514/5  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.03		mg/L		100	80 - 120	1	20
Nitrite as N	10.0	9.682		mg/L		97	80 - 120	1	20

Lab Sample ID: LLCS 860-89514/6  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.1111		mg/L		111	50 - 150
Nitrite as N	0.100	0.07605	J	mg/L		76	50 - 150



### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

#### Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 860-89574/1-A  
 Matrix: Water  
 Analysis Batch: 89825

Client Sample ID: Method Blank  
 Prep Type: Total Recoverable  
 Prep Batch: 89574

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Calcium	<0.115	U	0.200	0.115 mg/L		02/09/23 19:56	02/10/23 18:14	1
Magnesium	<0.0428	U	0.200	0.0428 mg/L		02/09/23 19:56	02/10/23 18:14	1
Potassium	<0.0914	U	0.500	0.0914 mg/L		02/09/23 19:56	02/10/23 18:14	1
Sodium	<0.152	U	0.500	0.152 mg/L		02/09/23 19:56	02/10/23 18:14	1
SiO2	<0.471	U	1.07	0.471 mg/L		02/09/23 19:56	02/10/23 18:14	1

Lab Sample ID: LCS 860-89574/2-A  
 Matrix: Water  
 Analysis Batch: 89825

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 89574

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	25.0	23.80		mg/L		95	85 - 115
Potassium	10.0	9.800		mg/L		98	85 - 115
Sodium	25.0	24.40		mg/L		98	85 - 115
SiO2	21.4	21.29		mg/L		100	85 - 115

Lab Sample ID: LCSD 860-89574/3-A  
 Matrix: Water  
 Analysis Batch: 89825

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total Recoverable  
 Prep Batch: 89574

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Magnesium	25.0	23.70		mg/L		95	85 - 115	0	20
Potassium	10.0	9.830		mg/L		98	85 - 115	0	20
Sodium	25.0	24.30		mg/L		97	85 - 115	0	20
SiO2	21.4	21.34		mg/L		100	85 - 115	0	20

Lab Sample ID: LLCS 860-89574/4-A  
 Matrix: Water  
 Analysis Batch: 89825

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 89574

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	0.200	0.2010		mg/L		101	50 - 150
Potassium	0.500	0.5580		mg/L		112	50 - 150
Sodium	0.500	0.5530		mg/L		111	50 - 150
SiO2	1.07	1.115		mg/L		104	50 - 150

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-89724/3  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Alkalinity	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1
Hydroxide Alkalinity	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1

Eurofins Midland

### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

#### Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 860-89724/3  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolphthalein Alkalinity	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1

Lab Sample ID: LCS 860-89724/4  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	247.0		mg/L		99	85 - 115

Lab Sample ID: LCSD 860-89724/5  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	250.3		mg/L		100	85 - 115	1	20

#### Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-89463/1  
 Matrix: Water  
 Analysis Batch: 89463

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U	5.00	5.00 mg/L			02/09/23 19:00	1

Lab Sample ID: LCS 860-89463/2  
 Matrix: Water  
 Analysis Batch: 89463

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	884.0		mg/L		88	80 - 120

Lab Sample ID: LCSD 860-89463/3  
 Matrix: Water  
 Analysis Batch: 89463

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	879.0		mg/L		88	80 - 120	1	10

Lab Sample ID: LLCS 860-89463/4  
 Matrix: Water  
 Analysis Batch: 89463

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	<5.00	U	mg/L		80	50 - 150

Eurofins Midland

## QC Association Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

## GC/MS VOA

## Analysis Batch: 89498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	8260C	
MB 860-89498/9	Method Blank	Total/NA	Water	8260C	
LCS 860-89498/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-89498/4	Lab Control Sample Dup	Total/NA	Water	8260C	

## HPLC/IC

## Analysis Batch: 89513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	300.0	
MB 860-89513/3	Method Blank	Total/NA	Water	300.0	
LCS 860-89513/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-89513/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-89513/7	Lab Control Sample	Total/NA	Water	300.0	

## Analysis Batch: 89514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	300.0	
MB 860-89514/3	Method Blank	Total/NA	Water	300.0	
LCS 860-89514/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-89514/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-89514/6	Lab Control Sample	Total/NA	Water	300.0	

## Metals

## Prep Batch: 89574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total Recoverable	Water	200.7	
MB 860-89574/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-89574/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-89574/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
LLCS 860-89574/4-A	Lab Control Sample	Total Recoverable	Water	200.7	

## Analysis Batch: 89825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	89574
880-24492-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	89574
MB 860-89574/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	89574
LCS 860-89574/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	89574
LCSD 860-89574/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	89574
LLCS 860-89574/4-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	89574

## General Chemistry

## Analysis Batch: 89463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	SM 2540C	
MB 860-89463/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-89463/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-89463/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-89463/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins Midland

### QC Association Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

#### General Chemistry

##### Analysis Batch: 89690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	SM 4500 H+ B	

##### Analysis Batch: 89724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	SM 2320B	
MB 860-89724/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-89724/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-89724/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

##### Analysis Batch: 90098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24492-1	Levey Well	Total/NA	Water	SM 1030E	

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### Lab Chronicle

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24492-1**

Date Collected: 02/08/23 11:30

Matrix: Water

Date Received: 02/08/23 15:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	89498	NA	EET HOU	02/09/23 21:51
Total/NA	Analysis	300.0		1	89513	WP	EET HOU	02/09/23 22:41
Total/NA	Analysis	300.0		1	89514	WP	EET HOU	02/09/23 22:41
Total Recoverable	Prep	200.7			89574	AGR	EET HOU	02/09/23 19:57
Total Recoverable	Analysis	200.7 Rev 4.4		1	89825	JDM	EET HOU	02/10/23 18:57
Total Recoverable	Prep	200.7			89574	AGR	EET HOU	02/09/23 19:57
Total Recoverable	Analysis	200.7 Rev 4.4		50	89825	JDM	EET HOU	02/10/23 19:25
Total/NA	Analysis	SM 1030E		1	90098	SC	EET HOU	02/14/23 15:26
Total/NA	Analysis	SM 2320B		1	89724	TL	EET HOU	02/10/23 12:47
Total/NA	Analysis	SM 2540C		1	89463	HN	EET HOU	02/09/23 19:00
Total/NA	Analysis	SM 4500 H+ B		1	89690	TL	EET HOU	02/10/23 13:11

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

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### Accreditation/Certification Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
200.7 Rev 4.4	200.7	Water	SiO2
SM 1030E		Water	Anion/Cation Balance
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2320B		Water	Hydroxide Alkalinity
SM 2320B		Water	Phenolphthalein Alkalinity
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
 SDG: Hobbs NM

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
200.7 Rev 4.4	Metals (ICP)	EPA	EET HOU
SM 1030E	Cation Anion Balance	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
200.7	Preparation, Total Recoverable Metals	EPA	EET HOU
5030C	Purge and Trap	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

- EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24492-1  
SDG: Hobbs NM

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-24492-1	Levey Well	Water	02/08/23 11:30	02/08/23 15:36

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: 24492

Project Manager: Beaux Jennings  
Company Name: Ensolum LLC  
Address: 601 Merienfeld #400  
City, State ZIP: Midland TX 79701  
Phone: 432-230-3344  
Project Name: Levey Well Hobbs NM  
Project Number: 03B1417001  
P.O. Number: 03B1417001  
Sampler's Name: Shane Diller  
Bill to: (if different)  
Company Name:  
Address:  
City, State ZIP:  
Email: bjennings@ensolum.com

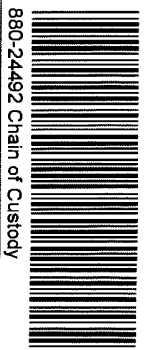
Work Order Comments  
Program: UST/PST  PRP  Brownfields  RRC  Superfund   
State of Project:  
Reporting Level: Level II  Level III  PST/UST  TRRP  Level IV   
Deliverables: EDD  ADAPT  Other:  
Work Order Notes

SAMPLE RECEIPT  
Temp Blank: Yes  No   
Thermometer ID: 5205  
Received Intact: Yes  No   
Cooler Custody Seals: Yes  No   
Sample Custody Seals: Yes  No   
Correction Factor: 1.00  
Total Containers: 1

ANALYSIS REQUEST

Number of Containers	VOCs	Anions: F, Cl, SO4, B	Cations: Ca, K, Mg, Na, Si	pH	Alkalinity	TDS
7	X	X	X	X	X	X

Sample Identification  
Levey Well  
Matrix: GW  
Date Sampled: 2-8-23  
Time Sampled: 1130  
Depth: 7  
Number of Containers: 7  
VOCs: X  
Anions: F, Cl, SO4, B: X  
Cations: Ca, K, Mg, Na, Si: X  
pH: X  
Alkalinity: X  
TDS: X  
TAT starts the day received by the lab, if received by 4:30pm  
Sample Comments: 24hr



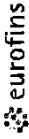
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of sample constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/8/23			
		1530			

**Eurofins Midland**  
1211 W Florida Ave  
Midland, TX 79701  
Phone: 432-704-5440

### Chain of Custody Record



Environment Testing



<b>Client Information (Sub Contract Lab)</b>			Sampler	Lab Pkt: Kramer, Jessica	Carrier Tracking No(s):	COC No: 880-6261 1
Client Contact:			Phone:	E-Mail: Jessica.Kramer@eurofins.com	State of Origin: New Mexico	Page: Page 1 of 1
Shipping/Receiving			Accreditations Required (See note):			Job #: 880-24492-1
Company: Eurofins Environment Testing South Cent			Address: 4145 Greenbriar Dr			Preservation Codes:
City: Stafford			State, Zip: TX, 77477			A HCL
Phone: 281-240-4200(Tel)			PO #:			B NaOH
Email:			WO #:			C Zn Acetate
Project Name: Levey Well Hobbs, NM 0381417001			Project #: 88000024			D Nitric Acid
Site:			SSOW#:			E NaHSO4
Due Date Requested: 2/10/2023			Due Date Requested (days):			F MeOH
Sample Date			Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Invert, Seawater, Dissolved, Acid)	G Amchlor
2/8/23			11:30	Mountain	Water	H Ascorbic Acid
Levey Well (880-24492-1)						I Ice
						J DI Water
						K EDTA
						L EDA
						Other
						M Hexane
						N None
						O AsNaO2
						P Na2O4S
						Q Na2SO3
						R Na2SO3
						S H2SO4
						T TSP Dodecahydrate
						U Acetone
						V MCAA
						W pH 4.5
						Y Trizma
						Z other (specify)
<b>Sample Identification Client ID (Lab ID)</b>			<b>Analysis Requested</b>			<b>Special Instructions/Note:</b>
			Field Filtered Sample (Yes or No)			Total Number of Containers
			Pattern MS/MSD (Yes or No)			7
			820C/5030C (MOD) Full List VOCs			
			200.7/200.7_P_TR (MOD) Custom List			
			300_ORGFM_28D/B/Cl, F, SO4			
			300_ORGFM_2, NO2, NO3			
			6M4500_Hr/PH			
			2540C_Calc/TDS			
			2320B_Alkalinity			
			Cation_Anion (MOD) Copy Analyses			

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/test/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**  
 Unconfirmed  
 Deliverable Requested, I II III IV Other (specify) \_\_\_\_\_  
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: [Signature]  
 Relinquished by: [Signature] FedEX  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Custody Seals Intact:  Yes  No  
 Custody Seal No. \_\_\_\_\_

Temp. IR ID: HOU-343  
 C/F: -0.3 2.8  
 Corrected Temp: 3.1

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Received by: FedEX  
 Date/Time: \_\_\_\_\_  
 Received by: [Signature]  
 Date/Time: 2/9/2023 10:13  
 Received by: [Signature]  
 Date/Time: \_\_\_\_\_

Method of Shipment: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Company: \_\_\_\_\_

Ver: 06/08/2021

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24492-1

SDG Number: Hobbs NM

Login Number: 24492

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24492-1

SDG Number: Hobbs NM

Login Number: 24492

List Number: 2

Creator: Pena, Jesiel

List Source: Eurofins Houston

List Creation: 02/09/23 12:08 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701

Generated 2/22/2023 7:23:11 AM

## JOB DESCRIPTION

Levey Well Hobbs, NM - 03B1417001  
SDG NUMBER Hobbs NM

## JOB NUMBER

880-24898-1

Eurofins Midland  
1211 W. Florida Ave  
Midland TX 79701

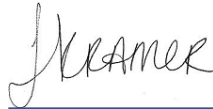


# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
2/22/2023 7:23:11 AM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Laboratory Job ID: 880-24898-1  
SDG: Hobbs NM

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## Definitions/Glossary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

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



### Case Narrative

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

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**Job ID: 880-24898-1**

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**Laboratory: Eurofins Midland****Narrative****Job Narrative  
880-24898-1****Receipt**

The sample was received on 2/17/2023 4:13 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

**GC/MS VOA**

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 860-90731 recovered outside control limits for the following analyte(s): Dichlorodifluoromethane. Dichlorodifluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260C: The matrix spike (MS) recoveries and precision for analytical batch 860-90731 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

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

**HPLC/IC**

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-90785 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300\_ORGFMS: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-90786 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

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

**Metals**

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

**General Chemistry**

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

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### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24898-1**

Date Collected: 02/17/23 10:25

Matrix: Water

Date Received: 02/17/23 16:13

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.00254</b>		0.00100	0.000533 mg/L			02/20/23 17:39	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/20/23 17:39	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/20/23 17:39	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/20/23 17:39	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/20/23 17:39	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/20/23 17:39	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/20/23 17:39	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/20/23 17:39	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/20/23 17:39	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/20/23 17:39	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/20/23 17:39	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/20/23 17:39	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/20/23 17:39	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/20/23 17:39	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/20/23 17:39	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/20/23 17:39	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/20/23 17:39	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 17:39	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/20/23 17:39	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/20/23 17:39	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 17:39	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 17:39	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/20/23 17:39	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/20/23 17:39	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/20/23 17:39	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/20/23 17:39	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/20/23 17:39	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/20/23 17:39	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/20/23 17:39	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/20/23 17:39	1
<b>Ethylbenzene</b>	<b>0.00982</b>		0.00100	0.000411 mg/L			02/20/23 17:39	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/20/23 17:39	1
<b>Isopropylbenzene</b>	<b>0.00499</b>		0.00100	0.000613 mg/L			02/20/23 17:39	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/20/23 17:39	1
<b>m,p-Xylenes</b>	<b>0.0396</b>		0.0100	0.00124 mg/L			02/20/23 17:39	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/20/23 17:39	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/20/23 17:39	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 17:39	1
<b>N-Propylbenzene</b>	<b>0.00238</b>		0.00100	0.000498 mg/L			02/20/23 17:39	1
<b>o-Xylene</b>	<b>0.00629</b>		0.00100	0.000551 mg/L			02/20/23 17:39	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 17:39	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/20/23 17:39	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/20/23 17:39	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/20/23 17:39	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 17:39	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/20/23 17:39	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/20/23 17:39	1
<b>Toluene</b>	<b>0.0204</b>		0.00100	0.000475 mg/L			02/20/23 17:39	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/20/23 17:39	1

Eurofins Midland

### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24898-1**

Date Collected: 02/17/23 10:25

Matrix: Water

Date Received: 02/17/23 16:13

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 17:39	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/20/23 17:39	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/20/23 17:39	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/20/23 17:39	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/20/23 17:39	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/20/23 17:39	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/20/23 17:39	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/20/23 17:39	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.0102</b>		0.00100	0.000417 mg/L			02/20/23 17:39	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.00316</b>		0.00100	0.000456 mg/L			02/20/23 17:39	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/20/23 17:39	1
<b>Xylenes, Total</b>	<b>0.0459</b>		0.0100	0.00124 mg/L			02/20/23 17:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		74 - 124				02/20/23 17:39	1
Dibromofluoromethane (Surr)	106		75 - 131				02/20/23 17:39	1
1,2-Dichloroethane-d4 (Surr)	111		63 - 144				02/20/23 17:39	1
Toluene-d8 (Surr)	100		80 - 117				02/20/23 17:39	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>0.403</b>	<b>J</b>	0.500	0.0711 mg/L			02/18/23 18:51	1
<b>Nitrate as N</b>	<b>0.0839</b>	<b>J</b>	0.100	0.0391 mg/L			02/18/23 18:51	1
<b>Chloride</b>	<b>231</b>		0.500	0.200 mg/L			02/18/23 18:51	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/18/23 18:51	1
<b>Fluoride</b>	<b>0.632</b>		0.500	0.100 mg/L			02/18/23 18:51	1
<b>Sulfate</b>	<b>50.5</b>		0.500	0.109 mg/L			02/18/23 18:51	1

**Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>234</b>		10.0	5.76 mg/L		02/20/23 09:00	02/20/23 16:57	50
<b>Magnesium</b>	<b>46.5</b>		0.200	0.0428 mg/L		02/20/23 09:00	02/20/23 16:36	1
<b>Potassium</b>	<b>3.96</b>		0.500	0.0914 mg/L		02/20/23 09:00	02/20/23 16:36	1
<b>Sodium</b>	<b>74.4</b>		0.500	0.152 mg/L		02/20/23 09:00	02/20/23 16:36	1
<b>SiO2</b>	<b>60.6</b>		1.07	0.471 mg/L		02/20/23 09:00	02/20/23 16:36	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Anion/Cation Balance (SM 1030E)</b>	<b>-9.14</b>			%			02/22/23 08:13	1
<b>Alkalinity (SM 2320B)</b>	<b>651</b>		4.00	4.00 mg/L			02/20/23 15:14	1
<b>Bicarbonate Alkalinity as CaCO3 (SM 2320B)</b>	<b>651</b>		4.00	4.00 mg/L			02/20/23 15:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/20/23 15:14	1
Hydroxide Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/20/23 15:14	1
Phenolphthalein Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/20/23 15:14	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1190</b>		10.0	10.0 mg/L			02/20/23 20:00	1
<b>pH (SM 4500 H+ B)</b>	<b>6.5</b>	<b>HF</b>		SU			02/20/23 12:59	1
<b>Temperature (SM 4500 H+ B)</b>	<b>19.1</b>	<b>HF</b>		Degrees C			02/20/23 12:59	1

Eurofins Midland

### Surrogate Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-24898-1	Levey Well	106	106	111	100
LCS 860-90731/3	Lab Control Sample	103	106	107	100
LCSD 860-90731/4	Lab Control Sample Dup	103	104	107	100
MB 860-90731/10	Method Blank	107	103	107	101

**Surrogate Legend**

- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)



### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

#### Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-90731/10  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/20/23 11:50	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/20/23 11:50	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/20/23 11:50	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/20/23 11:50	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/20/23 11:50	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/20/23 11:50	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/20/23 11:50	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/20/23 11:50	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/20/23 11:50	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/20/23 11:50	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/20/23 11:50	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/20/23 11:50	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/20/23 11:50	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/20/23 11:50	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/20/23 11:50	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/20/23 11:50	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/20/23 11:50	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 11:50	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/20/23 11:50	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/20/23 11:50	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 11:50	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 11:50	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 11:50	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/20/23 11:50	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/20/23 11:50	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/20/23 11:50	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/20/23 11:50	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/20/23 11:50	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/20/23 11:50	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/20/23 11:50	1
Ethylbenzene	<0.000411	U	0.00100	0.000411 mg/L			02/20/23 11:50	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/20/23 11:50	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613 mg/L			02/20/23 11:50	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/20/23 11:50	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124 mg/L			02/20/23 11:50	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/20/23 11:50	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/20/23 11:50	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 11:50	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498 mg/L			02/20/23 11:50	1
o-Xylene	<0.000551	U	0.00100	0.000551 mg/L			02/20/23 11:50	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 11:50	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/20/23 11:50	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/20/23 11:50	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/20/23 11:50	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 11:50	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/20/23 11:50	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/20/23 11:50	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/20/23 11:50	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

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

Lab Sample ID: MB 860-90731/10  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/20/23 11:50	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 11:50	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/20/23 11:50	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/20/23 11:50	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/20/23 11:50	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/20/23 11:50	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/20/23 11:50	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/20/23 11:50	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/20/23 11:50	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/20/23 11:50	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/20/23 11:50	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/20/23 11:50	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/20/23 11:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		74 - 124		02/20/23 11:50	1
Dibromofluoromethane (Surr)	103		75 - 131		02/20/23 11:50	1
1,2-Dichloroethane-d4 (Surr)	107		63 - 144		02/20/23 11:50	1
Toluene-d8 (Surr)	101		80 - 117		02/20/23 11:50	1

Lab Sample ID: LCS 860-90731/3  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.05027		mg/L		101	75 - 125
Bromobenzene	0.0500	0.05200		mg/L		104	75 - 125
Bromochloromethane	0.0500	0.05432		mg/L		109	60 - 140
Bromodichloromethane	0.0500	0.05564		mg/L		111	75 - 125
Bromoform	0.0500	0.04879		mg/L		98	70 - 130
Bromomethane	0.0500	0.04139		mg/L		83	60 - 140
2-Butanone	0.250	0.2413		mg/L		97	60 - 140
Carbon tetrachloride	0.0500	0.05841		mg/L		117	70 - 130
Chlorobenzene	0.0500	0.05080		mg/L		102	65 - 135
Chloroethane	0.0500	0.04062		mg/L		81	60 - 140
Chloroform	0.0500	0.05437		mg/L		109	70 - 121
Chloromethane	0.0500	0.03588		mg/L		72	60 - 140
2-Chlorotoluene	0.0500	0.05219		mg/L		104	73 - 125
4-Chlorotoluene	0.0500	0.05296		mg/L		106	74 - 125
cis-1,2-Dichloroethene	0.0500	0.05411		mg/L		108	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05399		mg/L		108	74 - 125
Dibromochloromethane	0.0500	0.05535		mg/L		111	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.05729		mg/L		115	59 - 125
1,2-Dibromoethane	0.0500	0.05367		mg/L		107	73 - 125
1,2-Dichlorobenzene	0.0500	0.05247		mg/L		105	75 - 125
1,3-Dichlorobenzene	0.0500	0.05173		mg/L		103	75 - 125
1,4-Dichlorobenzene	0.0500	0.05169		mg/L		103	75 - 125
Dichlorodifluoromethane	0.0500	0.02317	*	mg/L		46	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

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

Lab Sample ID: LCS 860-90731/3

Matrix: Water

Analysis Batch: 90731

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethane	0.0500	0.05356		mg/L		107	70 - 130
1,2-Dichloroethane	0.0500	0.05581		mg/L		112	72 - 130
1,1-Dichloroethene	0.0500	0.04573		mg/L		91	50 - 150
1,2-Dichloropropane	0.0500	0.05323		mg/L		106	74 - 125
1,3-Dichloropropane	0.0500	0.05163		mg/L		103	75 - 125
2,2-Dichloropropane	0.0500	0.05789		mg/L		116	75 - 125
1,1-Dichloropropene	0.0500	0.05518		mg/L		110	75 - 125
Ethylbenzene	0.0500	0.05139		mg/L		103	75 - 125
Hexachlorobutadiene	0.0500	0.05772		mg/L		115	75 - 125
Isopropylbenzene	0.0500	0.05204		mg/L		104	75 - 125
Methylene Chloride	0.0500	0.04886		mg/L		98	75 - 125
m,p-Xylenes	0.0500	0.05092		mg/L		102	75 - 125
MTBE	0.0500	0.05242		mg/L		105	65 - 135
Naphthalene	0.0500	0.05485		mg/L		110	70 - 130
n-Butylbenzene	0.0500	0.05594		mg/L		112	75 - 125
N-Propylbenzene	0.0500	0.05301		mg/L		106	75 - 125
o-Xylene	0.0500	0.05100		mg/L		102	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05345		mg/L		107	75 - 125
sec-Butylbenzene	0.0500	0.05348		mg/L		107	75 - 125
Styrene	0.0500	0.05170		mg/L		103	75 - 125
tert-Butylbenzene	0.0500	0.05205		mg/L		104	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.05368		mg/L		107	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.05282		mg/L		106	74 - 125
Tetrachloroethene	0.0500	0.05314		mg/L		106	71 - 125
Toluene	0.0500	0.05057		mg/L		101	70 - 130
trans-1,2-Dichloroethene	0.0500	0.05139		mg/L		103	75 - 125
trans-1,3-Dichloropropene	0.0500	0.05562		mg/L		111	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05469		mg/L		109	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05368		mg/L		107	75 - 135
1,1,1-Trichloroethane	0.0500	0.05642		mg/L		113	70 - 130
1,1,2-Trichloroethane	0.0500	0.05216		mg/L		104	70 - 130
Trichloroethene	0.0500	0.05167		mg/L		103	75 - 135
Trichlorofluoromethane	0.0500	0.04799		mg/L		96	60 - 140
1,2,3-Trichloropropane	0.0500	0.05290		mg/L		106	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05249		mg/L		105	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.05253		mg/L		105	60 - 140
Vinyl chloride	0.0500	0.03812		mg/L		76	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	106		75 - 131
1,2-Dichloroethane-d4 (Surr)	107		63 - 144
Toluene-d8 (Surr)	100		80 - 117

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-90731/4

Matrix: Water

Analysis Batch: 90731

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0500	0.04933		mg/L		99	75 - 125	2	25
Bromobenzene	0.0500	0.05145		mg/L		103	75 - 125	1	25
Bromochloromethane	0.0500	0.05337		mg/L		107	60 - 140	2	25
Bromodichloromethane	0.0500	0.05447		mg/L		109	75 - 125	2	25
Bromoform	0.0500	0.04962		mg/L		99	70 - 130	2	25
Bromomethane	0.0500	0.04038		mg/L		81	60 - 140	2	25
2-Butanone	0.250	0.2497		mg/L		100	60 - 140	3	25
Carbon tetrachloride	0.0500	0.05502		mg/L		110	70 - 130	6	25
Chlorobenzene	0.0500	0.04996		mg/L		100	65 - 135	2	25
Chloroethane	0.0500	0.03988		mg/L		80	60 - 140	2	25
Chloroform	0.0500	0.05296		mg/L		106	70 - 121	3	25
Chloromethane	0.0500	0.03451		mg/L		69	60 - 140	4	25
2-Chlorotoluene	0.0500	0.05153		mg/L		103	73 - 125	1	25
4-Chlorotoluene	0.0500	0.05236		mg/L		105	74 - 125	1	25
cis-1,2-Dichloroethene	0.0500	0.05196		mg/L		104	75 - 125	4	25
cis-1,3-Dichloropropene	0.0500	0.05349		mg/L		107	74 - 125	1	25
Dibromochloromethane	0.0500	0.05483		mg/L		110	73 - 125	1	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05901		mg/L		118	59 - 125	3	25
1,2-Dibromoethane	0.0500	0.05370		mg/L		107	73 - 125	0	25
1,2-Dichlorobenzene	0.0500	0.05162		mg/L		103	75 - 125	2	25
1,3-Dichlorobenzene	0.0500	0.05086		mg/L		102	75 - 125	2	25
1,4-Dichlorobenzene	0.0500	0.05091		mg/L		102	75 - 125	2	25
Dichlorodifluoromethane	0.0500	0.02183	*	mg/L		44	70 - 130	6	25
1,1-Dichloroethane	0.0500	0.05158		mg/L		103	70 - 130	4	25
1,2-Dichloroethane	0.0500	0.05549		mg/L		111	72 - 130	1	25
1,1-Dichloroethene	0.0500	0.04402		mg/L		88	50 - 150	4	25
1,2-Dichloropropane	0.0500	0.05252		mg/L		105	74 - 125	1	25
1,3-Dichloropropane	0.0500	0.05228		mg/L		105	75 - 125	1	25
2,2-Dichloropropane	0.0500	0.05473		mg/L		109	75 - 125	6	25
1,1-Dichloropropene	0.0500	0.05257		mg/L		105	75 - 125	5	25
Ethylbenzene	0.0500	0.05052		mg/L		101	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.05572		mg/L		111	75 - 125	4	25
Isopropylbenzene	0.0500	0.05095		mg/L		102	75 - 125	2	25
Methylene Chloride	0.0500	0.04819		mg/L		96	75 - 125	1	25
m,p-Xylenes	0.0500	0.05056		mg/L		101	75 - 125	1	25
MTBE	0.0500	0.05195		mg/L		104	65 - 135	1	25
Naphthalene	0.0500	0.05738		mg/L		115	70 - 130	5	25
n-Butylbenzene	0.0500	0.05410		mg/L		108	75 - 125	3	25
N-Propylbenzene	0.0500	0.05136		mg/L		103	75 - 125	3	25
o-Xylene	0.0500	0.05031		mg/L		101	75 - 125	1	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.05197		mg/L		104	75 - 125	3	25
sec-Butylbenzene	0.0500	0.05179		mg/L		104	75 - 125	3	25
Styrene	0.0500	0.05101		mg/L		102	75 - 125	1	25
tert-Butylbenzene	0.0500	0.05107		mg/L		102	75 - 125	2	25
1,1,1,2-Tetrachloroethane	0.0500	0.05324		mg/L		106	72 - 125	1	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.05386		mg/L		108	74 - 125	2	25
Tetrachloroethene	0.0500	0.05121		mg/L		102	71 - 125	4	25
Toluene	0.0500	0.04970		mg/L		99	70 - 130	2	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-90731/4  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.0500	0.04880		mg/L		98	75 - 125	5	25
trans-1,3-Dichloropropene	0.0500	0.05547		mg/L		111	66 - 125	0	25
1,2,3-Trichlorobenzene	0.0500	0.05541		mg/L		111	75 - 137	1	25
1,2,4-Trichlorobenzene	0.0500	0.05398		mg/L		108	75 - 135	1	25
1,1,1-Trichloroethane	0.0500	0.05344		mg/L		107	70 - 130	5	25
1,1,2-Trichloroethane	0.0500	0.05249		mg/L		105	70 - 130	1	25
Trichloroethene	0.0500	0.05059		mg/L		101	75 - 135	2	25
Trichlorofluoromethane	0.0500	0.04572		mg/L		91	60 - 140	5	25
1,2,3-Trichloropropane	0.0500	0.05402		mg/L		108	75 - 125	2	25
1,2,4-Trimethylbenzene	0.0500	0.05135		mg/L		103	75 - 125	2	25
1,3,5-Trimethylbenzene	0.0500	0.05138		mg/L		103	60 - 140	2	25
Vinyl chloride	0.0500	0.03604		mg/L		72	60 - 140	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	104		75 - 131
1,2-Dichloroethane-d4 (Surr)	107		63 - 144
Toluene-d8 (Surr)	100		80 - 117

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-90785/3  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.0711	U	0.500	0.0711 mg/L			02/18/23 17:00	1
Chloride	<0.200	U	0.500	0.200 mg/L			02/18/23 17:00	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/18/23 17:00	1
Sulfate	<0.109	U	0.500	0.109 mg/L			02/18/23 17:00	1

Lab Sample ID: LCS 860-90785/4  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.63		mg/L		106	90 - 110
Chloride	10.0	10.34		mg/L		103	90 - 110
Fluoride	10.0	10.50		mg/L		105	90 - 110
Sulfate	10.0	10.59		mg/L		106	90 - 110

Lab Sample ID: LCSD 860-90785/5  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.60		mg/L		106	90 - 110	0	20
Chloride	10.0	10.32		mg/L		103	90 - 110	0	20
Fluoride	10.0	10.60		mg/L		106	90 - 110	1	20

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 860-90785/5  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	10.63		mg/L		106	90 - 110	0	20

Lab Sample ID: LLCS 860-90785/7  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.5960		mg/L		119	50 - 150
Chloride	0.500	0.5472		mg/L		109	50 - 150
Fluoride	0.500	0.5089		mg/L		102	50 - 150
Sulfate	0.500	0.5169		mg/L		103	50 - 150

Lab Sample ID: MB 860-90786/3  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/18/23 17:00	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/18/23 17:00	1

Lab Sample ID: LCS 860-90786/4  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.15		mg/L		101	80 - 120
Nitrite as N	10.0	10.33		mg/L		103	80 - 120

Lab Sample ID: LCSD 860-90786/5  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.18		mg/L		102	80 - 120	0	20
Nitrite as N	10.0	10.36		mg/L		104	80 - 120	0	20

Lab Sample ID: LLCS 860-90786/6  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.1303		mg/L		130	50 - 150
Nitrite as N	0.100	0.09259	J	mg/L		93	50 - 150

### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

#### Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 860-90759/1-A  
 Matrix: Water  
 Analysis Batch: 90993

Client Sample ID: Method Blank  
 Prep Type: Total Recoverable  
 Prep Batch: 90759

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.115	U	0.200	0.115 mg/L		02/20/23 09:00	02/20/23 15:49	1
Magnesium	<0.0428	U	0.200	0.0428 mg/L		02/20/23 09:00	02/20/23 15:49	1
Potassium	<0.0914	U	0.500	0.0914 mg/L		02/20/23 09:00	02/20/23 15:49	1
Sodium	<0.152	U	0.500	0.152 mg/L		02/20/23 09:00	02/20/23 15:49	1
SiO2	<0.471	U	1.07	0.471 mg/L		02/20/23 09:00	02/20/23 15:49	1

Lab Sample ID: LCS 860-90759/2-A  
 Matrix: Water  
 Analysis Batch: 90993

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 90759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25.0	23.50		mg/L		94	85 - 115
Magnesium	25.0	22.90		mg/L		92	85 - 115
Potassium	10.0	9.200		mg/L		92	85 - 115
Sodium	25.0	22.90		mg/L		92	85 - 115
SiO2	21.4	20.37		mg/L		95	85 - 115

Lab Sample ID: LCSD 860-90759/3-A  
 Matrix: Water  
 Analysis Batch: 90993

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total Recoverable  
 Prep Batch: 90759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	25.0	23.40		mg/L		94	85 - 115	0	20
Magnesium	25.0	22.70		mg/L		91	85 - 115	1	20
Potassium	10.0	9.170		mg/L		92	85 - 115	0	20
Sodium	25.0	22.80		mg/L		91	85 - 115	0	20
SiO2	21.4	20.44		mg/L		96	85 - 115	0	20

Lab Sample ID: LLCS 860-90759/4-A  
 Matrix: Water  
 Analysis Batch: 90993

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 90759

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	0.200	0.2160		mg/L		108	50 - 150
Magnesium	0.200	0.2100		mg/L		105	50 - 150
Potassium	0.500	0.5670		mg/L		113	50 - 150
Sodium	0.500	0.5130		mg/L		103	50 - 150
SiO2	1.07	1.119		mg/L		105	50 - 150

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-90901/3  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<4.00	U	4.00	4.00 mg/L			02/20/23 11:19	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/20/23 11:19	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/20/23 11:19	1
Hydroxide Alkalinity	<4.00	U	4.00	4.00 mg/L			02/20/23 11:19	1

Eurofins Midland

### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

#### Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 860-90901/3  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolphthalein Alkalinity	<4.00	U	4.00	4.00 mg/L			02/20/23 11:19	1

Lab Sample ID: LCS 860-90901/4  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	253.8		mg/L		102	85 - 115

Lab Sample ID: LCSD 860-90901/5  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	256.8		mg/L		103	85 - 115	1	20

#### Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-90933/1  
 Matrix: Water  
 Analysis Batch: 90933

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U	5.00	5.00 mg/L			02/20/23 20:00	1

Lab Sample ID: LCS 860-90933/2  
 Matrix: Water  
 Analysis Batch: 90933

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	827.0		mg/L		83	80 - 120

Lab Sample ID: LCSD 860-90933/3  
 Matrix: Water  
 Analysis Batch: 90933

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	849.0		mg/L		85	80 - 120	3	10

Lab Sample ID: LLCS 860-90933/4  
 Matrix: Water  
 Analysis Batch: 90933

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	<5.00	U	mg/L		80	50 - 150

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### QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

#### Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 880-24898-1 DU  
Matrix: Water  
Analysis Batch: 90933

Client Sample ID: Levey Well  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1190		1236		mg/L		NC	10

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## QC Association Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

## GC/MS VOA

## Analysis Batch: 90731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	8260C	
MB 860-90731/10	Method Blank	Total/NA	Water	8260C	
LCS 860-90731/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-90731/4	Lab Control Sample Dup	Total/NA	Water	8260C	

## HPLC/IC

## Analysis Batch: 90785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	300.0	
MB 860-90785/3	Method Blank	Total/NA	Water	300.0	
LCS 860-90785/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-90785/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-90785/7	Lab Control Sample	Total/NA	Water	300.0	

## Analysis Batch: 90786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	300.0	
MB 860-90786/3	Method Blank	Total/NA	Water	300.0	
LCS 860-90786/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-90786/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-90786/6	Lab Control Sample	Total/NA	Water	300.0	

## Metals

## Prep Batch: 90759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total Recoverable	Water	200.7	
MB 860-90759/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-90759/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-90759/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
LLCS 860-90759/4-A	Lab Control Sample	Total Recoverable	Water	200.7	

## Analysis Batch: 90993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	90759
880-24898-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	90759
MB 860-90759/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	90759
LCS 860-90759/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	90759
LCSD 860-90759/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	90759
LLCS 860-90759/4-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	90759

## General Chemistry

## Analysis Batch: 90844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	SM 4500 H+ B	

## Analysis Batch: 90901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	SM 2320B	
MB 860-90901/3	Method Blank	Total/NA	Water	SM 2320B	

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### QC Association Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

#### General Chemistry (Continued)

##### Analysis Batch: 90901 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-90901/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-90901/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

##### Analysis Batch: 90933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	SM 2540C	
MB 860-90933/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-90933/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-90933/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-90933/4	Lab Control Sample	Total/NA	Water	SM 2540C	
880-24898-1 DU	Levey Well	Total/NA	Water	SM 2540C	

##### Analysis Batch: 91170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24898-1	Levey Well	Total/NA	Water	SM 1030E	

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### Lab Chronicle

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-24898-1**

**Date Collected: 02/17/23 10:25**

**Matrix: Water**

**Date Received: 02/17/23 16:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	90731	AN	EET HOU	02/20/23 17:39
Total/NA	Analysis	300.0		1	90785	AA	EET HOU	02/18/23 18:51
Total/NA	Analysis	300.0		1	90786	AA	EET HOU	02/18/23 18:51
Total Recoverable	Prep	200.7			90759	MD	EET HOU	02/20/23 09:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	90993	JDM	EET HOU	02/20/23 16:36
Total Recoverable	Prep	200.7			90759	MD	EET HOU	02/20/23 09:00
Total Recoverable	Analysis	200.7 Rev 4.4		50	90993	JDM	EET HOU	02/20/23 16:57
Total/NA	Analysis	SM 1030E		1	91170	SC	EET HOU	02/22/23 08:13
Total/NA	Analysis	SM 2320B		1	90901	TL	EET HOU	02/20/23 15:14
Total/NA	Analysis	SM 2540C		1	90933	HN	EET HOU	02/20/23 20:00
Total/NA	Analysis	SM 4500 H+ B		1	90844	TL	EET HOU	02/20/23 12:59

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

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### Accreditation/Certification Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
200.7 Rev 4.4	200.7	Water	SiO2
SM 1030E		Water	Anion/Cation Balance
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2320B		Water	Hydroxide Alkalinity
SM 2320B		Water	Phenolphthalein Alkalinity
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
 SDG: Hobbs NM

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
200.7 Rev 4.4	Metals (ICP)	EPA	EET HOU
SM 1030E	Cation Anion Balance	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
200.7	Preparation, Total Recoverable Metals	EPA	EET HOU
5030C	Purge and Trap	SW846	EET HOU

**Protocol References:**

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-24898-1  
SDG: Hobbs NM

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-24898-1	Levey Well	Water	02/17/23 10:25	02/17/23 16:13

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Hobbs NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No: 2489B

Project Manager: Beaux Jennings  
Company Name: Ensolum LLC  
Address: 601 Merrenfeld #400  
City, State ZIP: Midland TX 79701  
Phone: 432-230-3344  
Project Name: Levey Well Hobbs NM  
Project Number: 03B1417001  
P.O. Number: 03B1417001  
Sampler's Name: Shane Diller

Bill to: (if different)  
Company Name:  
Address:  
City, State ZIP:  
Email: bjennings@ensolum.com  
Program: UST/PST PRP Brownfields RRC Superfund  
State of Project:  
Reporting Level I  Level II  Level III  PST/UST TRRP Level IV   
Deliverables EDD  ADAPT  Other

Turn Around  
Routine  
Rush 24 hr  
Due Date  
ANALYSIS REQUEST

SAMPLE RECEIPT  
Temperature (°C): 29.7  
Received Intact: Yes  
Cooler Custody Seals: Yes  
Sample Custody Seals: Yes  
Temp Blank: Yes  
Wet Ice: Yes  
Thermometer ID: 1100  
Correction Factor: -0.30  
Total Containers: 7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	VOCs	Anions: F, Cl, SO4, B	Cations: Ca, K, Mg, Na, Si	pH	Alkalinity	TDS	Sample Comments
Levey Well	GW	2-17-23	1025		7	X	X	X	X	X	X	24hr



Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expense incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/17/23			2/17/23
		10/3			

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**Eurofins Midland**  
 1211 W. Florida Ave  
 Midland TX 79701  
 Phone: 432-704-5440

**Chain of Custody Record**



rofins  
 Environment Test'ng

880-24898 Chain of Custody

**Client Information (Sub Contract Lab)**  
 Client Contact: \_\_\_\_\_  
 Shipping/Receiving: \_\_\_\_\_  
 Company: Eurofins Environment Testing South Cent  
 Address: 4145 Greenbriar Dr  
 City: Stafford  
 State: TX  
 Zip: 77477  
 Phone: 281-240-4200(Tel)  
 Email: \_\_\_\_\_  
 Project Name: Levey Well Hobbs NIM 03B1417001  
 Site: \_\_\_\_\_  
 Project #: 88000024  
 SSOV#: \_\_\_\_\_

**Sampler**  
 Sampler: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Lab P#: Kramer Jessica  
 E-Mail: Jessica.Kramer@et.eurofins.com  
 State of Origin: New Mexico

**Analysis Requested**  
 Due Date Requested: 2/21/2023  
 TAT Requested (days): \_\_\_\_\_  
 PO #: \_\_\_\_\_  
 W/O #: \_\_\_\_\_

**Accreditations Required (See note):** NELAP Texas

Page: 132.1  
 Page 1 of 1  
 Job #: 880-24898-1

**Preservation Codes:**  
 A HCL  
 B NaOH  
 C Zn Acetate  
 D Nitric Acid  
 E NaHSO4  
 F MeOH  
 G Amelior  
 H Ascorbic Acid  
 I Ice  
 J DI Water  
 K EDTA  
 L EDA  
 M Hexane  
 N None  
 O AsNaO2  
 P Na2O4S  
 Q Na2SO3  
 R Na2S2O3  
 S H2SO4  
 T TSP Dodecahydrate  
 U Acetone  
 V MCAA  
 W pH 4-5  
 Y Trizma  
 Z other (specify)

Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Metal, Semi-Metal, Organic)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
2/17/23	10:25	Mountain	Water	X	X	8260C/5030C (MOD) Full List VOCs 200.7/200.7_P_TR (MOD) Custom List 300_ORGFMS_28D/ Br Cl, F, SO4 300_ORGFMS/ NO2, NO3 SM4500_H+ pH 2540C_Calcd/ TDS 2320B/ AlkalIntly Catlon_Anion/ (MOD) Copy Analytes	7	Temp: 1.5 IR ID:HOU-34 CF:-0.4 Corrected Temp: 1.1

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I II III IV Other (specify)  
 Primary Deliverable Rank: 2

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:** \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

**Relinquished by:** \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

**Relinquished by:** \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

**Custody Seals Intact:**  Yes  No  
 Custody Seal No. \_\_\_\_\_

**Received by:** \_\_\_\_\_  
 Date/Time: 2/18/23 9:25  
 Company: Eurofins

**Received by:** \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

**Received by:** \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_

### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24898-1

SDG Number: Hobbs NM

Login Number: 24898

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24898-1

SDG Number: Hobbs NM

**Login Number: 24898**

**List Number: 2**

**Creator: Torres, Sandra**

**List Source: Eurofins Houston**

**List Creation: 02/18/23 10:38 AM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701

Generated 2/27/2023 5:24:48 PM

## JOB DESCRIPTION

Levey Well Hobbs, NM - 03B1417001  
SDG NUMBER Hobbs NM

## JOB NUMBER

880-25083-1

Eurofins Midland  
1211 W. Florida Ave  
Midland TX 79701





# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



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2/27/2023 5:24:48 PM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Laboratory Job ID: 880-25083-1  
SDG: Hobbs NM

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## Definitions/Glossary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## 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)

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### Definitions/Glossary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

#### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Case Narrative

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

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## Job ID: 880-25083-1

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### Laboratory: Eurofins Midland

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#### Narrative

#### Job Narrative 880-25083-1

#### Receipt

The sample was received on 2/22/2023 3:47 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

#### GC/MS VOA

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 860-91344 recovered outside control limits for the following analyte(s): Dichloro difluoromethane. Dichloro difluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 860-91344 were outside control limits. Sample matrix interference is suspected.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-91496 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery was within acceptance limits.

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

#### Metals

Method 200.7: Due to the high concentration of Calcium and Sodium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 860-91520 and analytical batch 860-91634 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

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

#### General Chemistry

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



### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

Client Sample ID: Levey Well

Lab Sample ID: 880-25083-1

Date Collected: 02/22/23 11:30

Matrix: Water

Date Received: 02/22/23 15:47

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.00363</b>		0.00100	0.000533 mg/L			02/23/23 17:09	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/23/23 17:09	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/23/23 17:09	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/23/23 17:09	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/23/23 17:09	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/23/23 17:09	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/23/23 17:09	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/23/23 17:09	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/23/23 17:09	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/23/23 17:09	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/23/23 17:09	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/23/23 17:09	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/23/23 17:09	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/23/23 17:09	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/23/23 17:09	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/23/23 17:09	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/23/23 17:09	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 17:09	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/23/23 17:09	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/23/23 17:09	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 17:09	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 17:09	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/23/23 17:09	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/23/23 17:09	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/23/23 17:09	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/23/23 17:09	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/23/23 17:09	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/23/23 17:09	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/23/23 17:09	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/23/23 17:09	1
<b>Ethylbenzene</b>	<b>0.0133</b>		0.00100	0.000411 mg/L			02/23/23 17:09	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/23/23 17:09	1
<b>Isopropylbenzene</b>	<b>0.00623</b>		0.00100	0.000613 mg/L			02/23/23 17:09	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/23/23 17:09	1
<b>m,p-Xylenes</b>	<b>0.0540</b>		0.0100	0.00124 mg/L			02/23/23 17:09	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/23/23 17:09	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/23/23 17:09	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 17:09	1
<b>N-Propylbenzene</b>	<b>0.00302</b>		0.00100	0.000498 mg/L			02/23/23 17:09	1
<b>o-Xylene</b>	<b>0.00889</b>		0.00100	0.000551 mg/L			02/23/23 17:09	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/23/23 17:09	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/23/23 17:09	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/23/23 17:09	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/23/23 17:09	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 17:09	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/23/23 17:09	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/23/23 17:09	1
<b>Toluene</b>	<b>0.0281</b>		0.00100	0.000475 mg/L			02/23/23 17:09	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/23/23 17:09	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-25083-1**

Date Collected: 02/22/23 11:30

Matrix: Water

Date Received: 02/22/23 15:47

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 17:09	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/23/23 17:09	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/23/23 17:09	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/23/23 17:09	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/23/23 17:09	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/23/23 17:09	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/23/23 17:09	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/23/23 17:09	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.0140</b>		0.00100	0.000417 mg/L			02/23/23 17:09	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.00426</b>		0.00100	0.000456 mg/L			02/23/23 17:09	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/23/23 17:09	1
<b>Xylenes, Total</b>	<b>0.0629</b>		0.0100	0.00124 mg/L			02/23/23 17:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		74 - 124				02/23/23 17:09	1
Dibromofluoromethane (Surr)	107		75 - 131				02/23/23 17:09	1
1,2-Dichloroethane-d4 (Surr)	111		63 - 144				02/23/23 17:09	1
Toluene-d8 (Surr)	99		80 - 117				02/23/23 17:09	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>0.442</b>	<b>J</b>	0.500	0.0711 mg/L			02/23/23 18:15	1
<b>Nitrate as N</b>	<b>0.0849</b>	<b>J</b>	0.100	0.0391 mg/L			02/23/23 18:15	1
<b>Chloride</b>	<b>214</b>		0.500	0.200 mg/L			02/23/23 18:15	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/23/23 18:15	1
<b>Fluoride</b>	<b>0.464</b>	<b>J F1</b>	0.500	0.100 mg/L			02/23/23 18:15	1
<b>Sulfate</b>	<b>46.8</b>		0.500	0.109 mg/L			02/23/23 18:15	1

**Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>246</b>		10.0	5.76 mg/L		02/23/23 20:00	02/24/23 11:20	50
<b>Magnesium</b>	<b>50.4</b>		0.200	0.0428 mg/L		02/23/23 20:00	02/24/23 10:55	1
<b>Potassium</b>	<b>4.19</b>		0.500	0.0914 mg/L		02/23/23 20:00	02/24/23 10:55	1
<b>Sodium</b>	<b>78.6</b>		0.500	0.152 mg/L		02/23/23 20:00	02/24/23 10:55	1
<b>SiO2</b>	<b>66.1</b>		1.07	0.471 mg/L		02/23/23 20:00	02/24/23 10:55	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Anion/Cation Balance (SM 1030E)</b>	<b>-8.94</b>			%			02/27/23 17:21	1
<b>Alkalinity (SM 2320B)</b>	<b>732</b>		4.00	4.00 mg/L			02/23/23 17:51	1
<b>Bicarbonate Alkalinity as CaCO3 (SM 2320B)</b>	<b>732</b>		4.00	4.00 mg/L			02/23/23 17:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/23/23 17:51	1
Hydroxide Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/23/23 17:51	1
Phenolphthalein Alkalinity (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/23/23 17:51	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1160</b>		10.0	10.0 mg/L			02/24/23 09:00	1
<b>pH (SM 4500 H+ B)</b>	<b>6.3</b>	<b>HF</b>		SU			02/24/23 16:11	1
<b>Temperature (SM 4500 H+ B)</b>	<b>18.8</b>	<b>HF</b>		Celsius			02/24/23 16:11	1

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# Surrogate Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

**Method: 8260C - Volatile Organic Compounds by GC/MS**

**Matrix: Water**

**Prep Type: Total/NA**

**Percent Surrogate Recovery (Acceptance Limits)**

Lab Sample ID	Client Sample ID	BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-25083-1	Levey Well	108	107	111	99
LCS 860-91344/3	Lab Control Sample	104	108	108	100
LCSD 860-91344/4	Lab Control Sample Dup	102	106	108	100
MB 860-91344/10	Method Blank	108	103	109	101

**Surrogate Legend**

- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



## QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

## Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-91344/10

Matrix: Water

Analysis Batch: 91344

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.000533	U	0.00100	0.000533	mg/L		02/23/23 10:42	1
Bromobenzene	<0.000665	U	0.00100	0.000665	mg/L		02/23/23 10:42	1
Bromochloromethane	<0.000657	U	0.00100	0.000657	mg/L		02/23/23 10:42	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552	mg/L		02/23/23 10:42	1
Bromoform	<0.000633	U	0.00500	0.000633	mg/L		02/23/23 10:42	1
Bromomethane	<0.00142	U	0.00500	0.00142	mg/L		02/23/23 10:42	1
2-Butanone	<0.00828	U	0.0500	0.00828	mg/L		02/23/23 10:42	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896	mg/L		02/23/23 10:42	1
Chlorobenzene	<0.000530	U	0.00100	0.000530	mg/L		02/23/23 10:42	1
Chloroethane	<0.00198	U	0.0100	0.00198	mg/L		02/23/23 10:42	1
Chloroform	<0.000643	U	0.00100	0.000643	mg/L		02/23/23 10:42	1
Chloromethane	<0.00204	U	0.0100	0.00204	mg/L		02/23/23 10:42	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118	mg/L		02/23/23 10:42	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472	mg/L		02/23/23 10:42	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714	mg/L		02/23/23 10:42	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107	mg/L		02/23/23 10:42	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547	mg/L		02/23/23 10:42	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127	mg/L		02/23/23 10:42	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999	mg/L		02/23/23 10:42	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509	mg/L		02/23/23 10:42	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/23/23 10:42	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/23/23 10:42	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919	mg/L		02/23/23 10:42	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635	mg/L		02/23/23 10:42	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590	mg/L		02/23/23 10:42	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738	mg/L		02/23/23 10:42	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667	mg/L		02/23/23 10:42	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514	mg/L		02/23/23 10:42	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780	mg/L		02/23/23 10:42	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160	mg/L		02/23/23 10:42	1
Ethylbenzene	<0.000411	U	0.00100	0.000411	mg/L		02/23/23 10:42	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126	mg/L		02/23/23 10:42	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613	mg/L		02/23/23 10:42	1
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L		02/23/23 10:42	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124	mg/L		02/23/23 10:42	1
MTBE	<0.00139	U	0.00500	0.00139	mg/L		02/23/23 10:42	1
Naphthalene	<0.00135	U	0.0100	0.00135	mg/L		02/23/23 10:42	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644	mg/L		02/23/23 10:42	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498	mg/L		02/23/23 10:42	1
o-Xylene	<0.000551	U	0.00100	0.000551	mg/L		02/23/23 10:42	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919	mg/L		02/23/23 10:42	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468	mg/L		02/23/23 10:42	1
Styrene	<0.000655	U	0.00100	0.000655	mg/L		02/23/23 10:42	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442	mg/L		02/23/23 10:42	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644	mg/L		02/23/23 10:42	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470	mg/L		02/23/23 10:42	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801	mg/L		02/23/23 10:42	1
Toluene	<0.000475	U	0.00100	0.000475	mg/L		02/23/23 10:42	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

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

Lab Sample ID: MB 860-91344/10  
 Matrix: Water  
 Analysis Batch: 91344

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/23/23 10:42	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 10:42	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/23/23 10:42	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/23/23 10:42	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/23/23 10:42	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/23/23 10:42	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/23/23 10:42	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/23/23 10:42	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/23/23 10:42	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/23/23 10:42	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/23/23 10:42	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/23/23 10:42	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/23/23 10:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		74 - 124		02/23/23 10:42	1
Dibromofluoromethane (Surr)	103		75 - 131		02/23/23 10:42	1
1,2-Dichloroethane-d4 (Surr)	109		63 - 144		02/23/23 10:42	1
Toluene-d8 (Surr)	101		80 - 117		02/23/23 10:42	1

Lab Sample ID: LCS 860-91344/3  
 Matrix: Water  
 Analysis Batch: 91344

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0500	0.04822		mg/L		96	75 - 125
Bromobenzene	0.0500	0.05075		mg/L		102	75 - 125
Bromochloromethane	0.0500	0.05434		mg/L		109	60 - 140
Bromodichloromethane	0.0500	0.05358		mg/L		107	75 - 125
Bromoform	0.0500	0.04723		mg/L		94	70 - 130
Bromomethane	0.0500	0.03780		mg/L		76	60 - 140
2-Butanone	0.250	0.2537		mg/L		101	60 - 140
Carbon tetrachloride	0.0500	0.05377		mg/L		108	70 - 130
Chlorobenzene	0.0500	0.04907		mg/L		98	65 - 135
Chloroethane	0.0500	0.04318		mg/L		86	60 - 140
Chloroform	0.0500	0.05357		mg/L		107	70 - 121
Chloromethane	0.0500	0.03748		mg/L		75	60 - 140
2-Chlorotoluene	0.0500	0.05093		mg/L		102	73 - 125
4-Chlorotoluene	0.0500	0.05143		mg/L		103	74 - 125
cis-1,2-Dichloroethene	0.0500	0.05201		mg/L		104	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05198		mg/L		104	74 - 125
Dibromochloromethane	0.0500	0.05266		mg/L		105	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.05629		mg/L		113	59 - 125
1,2-Dibromoethane	0.0500	0.05311		mg/L		106	73 - 125
1,2-Dichlorobenzene	0.0500	0.05096		mg/L		102	75 - 125
1,3-Dichlorobenzene	0.0500	0.05033		mg/L		101	75 - 125
1,4-Dichlorobenzene	0.0500	0.05018		mg/L		100	75 - 125
Dichlorodifluoromethane	0.0500	0.02901	*	mg/L		58	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

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

Lab Sample ID: LCS 860-91344/3

Matrix: Water

Analysis Batch: 91344

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethane	0.0500	0.05126		mg/L		103	70 - 130
1,2-Dichloroethane	0.0500	0.05511		mg/L		110	72 - 130
1,1-Dichloroethene	0.0500	0.04323		mg/L		86	50 - 150
1,2-Dichloropropane	0.0500	0.05108		mg/L		102	74 - 125
1,3-Dichloropropane	0.0500	0.05104		mg/L		102	75 - 125
2,2-Dichloropropane	0.0500	0.05477		mg/L		110	75 - 125
1,1-Dichloropropene	0.0500	0.05198		mg/L		104	75 - 125
Ethylbenzene	0.0500	0.04944		mg/L		99	75 - 125
Hexachlorobutadiene	0.0500	0.05249		mg/L		105	75 - 125
Isopropylbenzene	0.0500	0.04949		mg/L		99	75 - 125
Methylene Chloride	0.0500	0.04847		mg/L		97	75 - 125
m,p-Xylenes	0.0500	0.04969		mg/L		99	75 - 125
MTBE	0.0500	0.05184		mg/L		104	65 - 135
Naphthalene	0.0500	0.05305		mg/L		106	70 - 130
n-Butylbenzene	0.0500	0.05249		mg/L		105	75 - 125
N-Propylbenzene	0.0500	0.05076		mg/L		102	75 - 125
o-Xylene	0.0500	0.04919		mg/L		98	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05066		mg/L		101	75 - 125
sec-Butylbenzene	0.0500	0.05045		mg/L		101	75 - 125
Styrene	0.0500	0.05029		mg/L		101	75 - 125
tert-Butylbenzene	0.0500	0.04920		mg/L		98	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.05155		mg/L		103	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.05348		mg/L		107	74 - 125
Tetrachloroethene	0.0500	0.04944		mg/L		99	71 - 125
Toluene	0.0500	0.04839		mg/L		97	70 - 130
trans-1,2-Dichloroethene	0.0500	0.04861		mg/L		97	75 - 125
trans-1,3-Dichloropropene	0.0500	0.05363		mg/L		107	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05155		mg/L		103	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05107		mg/L		102	75 - 135
1,1,1-Trichloroethane	0.0500	0.05336		mg/L		107	70 - 130
1,1,2-Trichloroethane	0.0500	0.05148		mg/L		103	70 - 130
Trichloroethene	0.0500	0.04971		mg/L		99	75 - 135
Trichlorofluoromethane	0.0500	0.04949		mg/L		99	60 - 140
1,2,3-Trichloropropane	0.0500	0.05365		mg/L		107	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05046		mg/L		101	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.04978		mg/L		100	60 - 140
Vinyl chloride	0.0500	0.04049		mg/L		81	60 - 140
		<b>LCS</b>	<b>LCS</b>				
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
4-Bromofluorobenzene (Surr)	104		74 - 124				
Dibromofluoromethane (Surr)	108		75 - 131				
1,2-Dichloroethane-d4 (Surr)	108		63 - 144				
Toluene-d8 (Surr)	100		80 - 117				

## QC Sample Results

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-91344/4

Matrix: Water

Analysis Batch: 91344

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0500	0.04774		mg/L		95	75 - 125	1	25
Bromobenzene	0.0500	0.04925		mg/L		99	75 - 125	3	25
Bromochloromethane	0.0500	0.05327		mg/L		107	60 - 140	2	25
Bromodichloromethane	0.0500	0.05285		mg/L		106	75 - 125	1	25
Bromoform	0.0500	0.04738		mg/L		95	70 - 130	0	25
Bromomethane	0.0500	0.03659		mg/L		73	60 - 140	3	25
2-Butanone	0.250	0.2569		mg/L		103	60 - 140	1	25
Carbon tetrachloride	0.0500	0.05212		mg/L		104	70 - 130	3	25
Chlorobenzene	0.0500	0.04841		mg/L		97	65 - 135	1	25
Chloroethane	0.0500	0.04218		mg/L		84	60 - 140	2	25
Chloroform	0.0500	0.05207		mg/L		104	70 - 121	3	25
Chloromethane	0.0500	0.03658		mg/L		73	60 - 140	2	25
2-Chlorotoluene	0.0500	0.04901		mg/L		98	73 - 125	4	25
4-Chlorotoluene	0.0500	0.04983		mg/L		100	74 - 125	3	25
cis-1,2-Dichloroethene	0.0500	0.05087		mg/L		102	75 - 125	2	25
cis-1,3-Dichloropropene	0.0500	0.05156		mg/L		103	74 - 125	1	25
Dibromochloromethane	0.0500	0.05275		mg/L		106	73 - 125	0	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05793		mg/L		116	59 - 125	3	25
1,2-Dibromoethane	0.0500	0.05315		mg/L		106	73 - 125	0	25
1,2-Dichlorobenzene	0.0500	0.04946		mg/L		99	75 - 125	3	25
1,3-Dichlorobenzene	0.0500	0.04889		mg/L		98	75 - 125	3	25
1,4-Dichlorobenzene	0.0500	0.04875		mg/L		97	75 - 125	3	25
Dichlorodifluoromethane	0.0500	0.02766	*	mg/L		55	70 - 130	5	25
1,1-Dichloroethane	0.0500	0.04986		mg/L		100	70 - 130	3	25
1,2-Dichloroethane	0.0500	0.05527		mg/L		111	72 - 130	0	25
1,1-Dichloroethene	0.0500	0.04159		mg/L		83	50 - 150	4	25
1,2-Dichloropropane	0.0500	0.05101		mg/L		102	74 - 125	0	25
1,3-Dichloropropane	0.0500	0.05128		mg/L		103	75 - 125	0	25
2,2-Dichloropropane	0.0500	0.05217		mg/L		104	75 - 125	5	25
1,1-Dichloropropene	0.0500	0.05034		mg/L		101	75 - 125	3	25
Ethylbenzene	0.0500	0.04827		mg/L		97	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.05152		mg/L		103	75 - 125	2	25
Isopropylbenzene	0.0500	0.04820		mg/L		96	75 - 125	3	25
Methylene Chloride	0.0500	0.04756		mg/L		95	75 - 125	2	25
m,p-Xylenes	0.0500	0.04836		mg/L		97	75 - 125	3	25
MTBE	0.0500	0.05196		mg/L		104	65 - 135	0	25
Naphthalene	0.0500	0.05582		mg/L		112	70 - 130	5	25
n-Butylbenzene	0.0500	0.05044		mg/L		101	75 - 125	4	25
N-Propylbenzene	0.0500	0.04894		mg/L		98	75 - 125	4	25
o-Xylene	0.0500	0.04835		mg/L		97	75 - 125	2	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.04892		mg/L		98	75 - 125	3	25
sec-Butylbenzene	0.0500	0.04873		mg/L		97	75 - 125	3	25
Styrene	0.0500	0.04946		mg/L		99	75 - 125	2	25
tert-Butylbenzene	0.0500	0.04783		mg/L		96	75 - 125	3	25
1,1,1,2-Tetrachloroethane	0.0500	0.05085		mg/L		102	72 - 125	1	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.05330		mg/L		107	74 - 125	0	25
Tetrachloroethene	0.0500	0.04887		mg/L		98	71 - 125	1	25
Toluene	0.0500	0.04761		mg/L		95	70 - 130	2	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

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

Lab Sample ID: LCSD 860-91344/4  
 Matrix: Water  
 Analysis Batch: 91344

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.0500	0.04775		mg/L		96	75 - 125	2	25
trans-1,3-Dichloropropene	0.0500	0.05335		mg/L		107	66 - 125	1	25
1,2,3-Trichlorobenzene	0.0500	0.05335		mg/L		107	75 - 137	3	25
1,2,4-Trichlorobenzene	0.0500	0.05127		mg/L		103	75 - 135	0	25
1,1,1-Trichloroethane	0.0500	0.05142		mg/L		103	70 - 130	4	25
1,1,2-Trichloroethane	0.0500	0.05223		mg/L		104	70 - 130	1	25
Trichloroethene	0.0500	0.04904		mg/L		98	75 - 135	1	25
Trichlorofluoromethane	0.0500	0.04763		mg/L		95	60 - 140	4	25
1,2,3-Trichloropropane	0.0500	0.05357		mg/L		107	75 - 125	0	25
1,2,4-Trimethylbenzene	0.0500	0.04886		mg/L		98	75 - 125	3	25
1,3,5-Trimethylbenzene	0.0500	0.04843		mg/L		97	60 - 140	3	25
Vinyl chloride	0.0500	0.03931		mg/L		79	60 - 140	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	102		74 - 124
Dibromofluoromethane (Surr)	106		75 - 131
1,2-Dichloroethane-d4 (Surr)	108		63 - 144
Toluene-d8 (Surr)	100		80 - 117

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-91496/3  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.0711	U	0.500	0.0711 mg/L			02/23/23 17:18	1
Chloride	<0.200	U	0.500	0.200 mg/L			02/23/23 17:18	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/23/23 17:18	1
Sulfate	<0.109	U	0.500	0.109 mg/L			02/23/23 17:18	1

Lab Sample ID: LCS 860-91496/4  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.29		mg/L		103	90 - 110
Chloride	10.0	9.822		mg/L		98	90 - 110
Fluoride	10.0	10.52		mg/L		105	90 - 110
Sulfate	10.0	9.333		mg/L		93	90 - 110

Lab Sample ID: LCSD 860-91496/5  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.30		mg/L		103	90 - 110	0	20
Chloride	10.0	9.829		mg/L		98	90 - 110	0	20
Fluoride	10.0	10.51		mg/L		105	90 - 110	0	20

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 860-91496/5  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	9.373		mg/L		94	90 - 110	0	20

Lab Sample ID: LLCS 860-91496/7  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	5.813		mg/L		116	50 - 150
Chloride	5.00	5.755		mg/L		115	50 - 150
Fluoride	5.00	4.941	J	mg/L		99	50 - 150
Sulfate	5.00	3.710	J	mg/L		74	50 - 150

Lab Sample ID: 880-25083-1 MS  
 Matrix: Water  
 Analysis Batch: 91496

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.442	J	10.0	11.16		mg/L		107	90 - 110
Chloride	214		10.0	219.9	4	mg/L		55	90 - 110
Fluoride	0.464	J F1	10.0	11.61	F1	mg/L		111	90 - 110
Sulfate	46.8		10.0	56.46	4	mg/L		97	90 - 110

Lab Sample ID: 880-25083-1 MSD  
 Matrix: Water  
 Analysis Batch: 91496

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.442	J	10.0	11.20		mg/L		108	90 - 110	0	20
Chloride	214		10.0	220.5	4	mg/L		61	90 - 110	0	20
Fluoride	0.464	J F1	10.0	11.66	F1	mg/L		112	90 - 110	0	20
Sulfate	46.8		10.0	56.63	4	mg/L		99	90 - 110	0	20

Lab Sample ID: MB 860-91497/3  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/23/23 17:18	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/23/23 17:18	1

Lab Sample ID: LCS 860-91497/4  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.26		mg/L		103	80 - 120
Nitrite as N	10.0	9.717		mg/L		97	80 - 120

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 860-91497/5  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.26		mg/L		103	80 - 120	0	20
Nitrite as N	10.0	9.752		mg/L		98	80 - 120	0	20

Lab Sample ID: LLCS 860-91497/6  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	1.00	1.163		mg/L		116	50 - 150
Nitrite as N	1.00	0.9709	J	mg/L		97	50 - 150

Lab Sample ID: 880-25083-1 MS  
 Matrix: Water  
 Analysis Batch: 91497

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0849	J	10.0	10.74		mg/L		107	80 - 120
Nitrite as N	<0.0293	U	2.50	2.424		mg/L		97	80 - 120

Lab Sample ID: 880-25083-1 MSD  
 Matrix: Water  
 Analysis Batch: 91497

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.0849	J	10.0	10.78		mg/L		107	80 - 120	0	15
Nitrite as N	<0.0293	U	2.50	2.429		mg/L		97	80 - 120	0	15

#### Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 860-91520/1-A  
 Matrix: Water  
 Analysis Batch: 91634

Client Sample ID: Method Blank  
 Prep Type: Total Recoverable  
 Prep Batch: 91520

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.115	U	0.200	0.115 mg/L		02/23/23 20:00	02/24/23 10:12	1
Magnesium	<0.0428	U	0.200	0.0428 mg/L		02/23/23 20:00	02/24/23 10:12	1
Potassium	<0.0914	U	0.500	0.0914 mg/L		02/23/23 20:00	02/24/23 10:12	1
Sodium	<0.152	U	0.500	0.152 mg/L		02/23/23 20:00	02/24/23 10:12	1
SiO2	<0.471	U	1.07	0.471 mg/L		02/23/23 20:00	02/24/23 10:12	1

Lab Sample ID: LCS 860-91520/2-A  
 Matrix: Water  
 Analysis Batch: 91634

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 91520

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25.0	24.20		mg/L		97	85 - 115
Magnesium	25.0	24.00		mg/L		96	85 - 115
Potassium	10.0	9.660		mg/L		97	85 - 115
Sodium	25.0	23.80		mg/L		95	85 - 115
SiO2	21.4	21.83		mg/L		102	85 - 115

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

#### Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: LCSD 860-91520/3-A  
 Matrix: Water  
 Analysis Batch: 91634

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total Recoverable  
 Prep Batch: 91520

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Calcium	25.0	24.10		mg/L		96	85 - 115	0	20	
Magnesium	25.0	23.90		mg/L		96	85 - 115	0	20	
Potassium	10.0	9.730		mg/L		97	85 - 115	1	20	
Sodium	25.0	23.70		mg/L		95	85 - 115	0	20	
SiO2	21.4	21.83		mg/L		102	85 - 115	0	20	

Lab Sample ID: LLCS 860-91520/4-A  
 Matrix: Water  
 Analysis Batch: 91634

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 91520

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Calcium	0.200	0.2320		mg/L		116	50 - 150			
Magnesium	0.200	0.2040		mg/L		102	50 - 150			
Potassium	0.500	0.4980	J	mg/L		100	50 - 150			
Sodium	0.500	0.4900	J	mg/L		98	50 - 150			
SiO2	1.07	1.121		mg/L		105	50 - 150			

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-91564/3  
 Matrix: Water  
 Analysis Batch: 91564

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

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Alkalinity	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1
Hydroxide Alkalinity	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1
Phenolphthalein Alkalinity	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1

Lab Sample ID: LCS 860-91564/4  
 Matrix: Water  
 Analysis Batch: 91564

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Alkalinity	250	254.4		mg/L		102	85 - 115			

Lab Sample ID: LCSD 860-91564/5  
 Matrix: Water  
 Analysis Batch: 91564

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Alkalinity	250	256.4		mg/L		103	85 - 115	1	20	

Lab Sample ID: 880-25083-1 DU  
 Matrix: Water  
 Analysis Batch: 91564

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit

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### QC Sample Results

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

#### Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 880-25083-1 DU  
 Matrix: Water  
 Analysis Batch: 91564

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Bicarbonate Alkalinity as CaCO3	732		723.4		mg/L		1	20
Carbonate Alkalinity as CaCO3	<4.00	U	<4.00	U	mg/L		NC	20
Hydroxide Alkalinity	<4.00	U	<4.00	U	mg/L		NC	20
Phenolphthalein Alkalinity	<4.00	U	<4.00	U	mg/L		NC	20

#### Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-91615/1  
 Matrix: Water  
 Analysis Batch: 91615

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Total Dissolved Solids	<5.00	U	5.00	5.00	mg/L		02/24/23 09:00	1

Lab Sample ID: LCS 860-91615/2  
 Matrix: Water  
 Analysis Batch: 91615

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Total Dissolved Solids	1000	852.0		mg/L		85	80 - 120

Lab Sample ID: LCSD 860-91615/3  
 Matrix: Water  
 Analysis Batch: 91615

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

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Total Dissolved Solids	1000	869.0		mg/L		87	80 - 120	2	10

Lab Sample ID: LLCS 860-91615/4  
 Matrix: Water  
 Analysis Batch: 91615

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

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Total Dissolved Solids	5.00	<5.00	U	mg/L		80	50 - 150

#### Method: SM 4500 H+ B - pH

Lab Sample ID: 880-25083-1 DU  
 Matrix: Water  
 Analysis Batch: 91683

Client Sample ID: Levey Well  
 Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
pH	6.3	HF	6.3		SU		0.6	20
Temperature	18.8	HF	18.8		Celsius		0	20

## QC Association Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

## GC/MS VOA

## Analysis Batch: 91344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	8260C	
MB 860-91344/10	Method Blank	Total/NA	Water	8260C	
LCS 860-91344/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-91344/4	Lab Control Sample Dup	Total/NA	Water	8260C	

## HPLC/IC

## Analysis Batch: 91496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	300.0	
MB 860-91496/3	Method Blank	Total/NA	Water	300.0	
LCS 860-91496/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-91496/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-91496/7	Lab Control Sample	Total/NA	Water	300.0	
880-25083-1 MS	Levey Well	Total/NA	Water	300.0	
880-25083-1 MSD	Levey Well	Total/NA	Water	300.0	

## Analysis Batch: 91497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	300.0	
MB 860-91497/3	Method Blank	Total/NA	Water	300.0	
LCS 860-91497/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-91497/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-91497/6	Lab Control Sample	Total/NA	Water	300.0	
880-25083-1 MS	Levey Well	Total/NA	Water	300.0	
880-25083-1 MSD	Levey Well	Total/NA	Water	300.0	

## Metals

## Prep Batch: 91520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total Recoverable	Water	200.7	
MB 860-91520/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-91520/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-91520/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
LLCS 860-91520/4-A	Lab Control Sample	Total Recoverable	Water	200.7	

## Analysis Batch: 91634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	91520
880-25083-1	Levey Well	Total Recoverable	Water	200.7 Rev 4.4	91520
MB 860-91520/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	91520
LCS 860-91520/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	91520
LCSD 860-91520/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	91520
LLCS 860-91520/4-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	91520

## General Chemistry

## Analysis Batch: 91564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	SM 2320B	
MB 860-91564/3	Method Blank	Total/NA	Water	SM 2320B	

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### QC Association Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

#### General Chemistry (Continued)

##### Analysis Batch: 91564 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-91564/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-91564/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
880-25083-1 DU	Levey Well	Total/NA	Water	SM 2320B	

##### Analysis Batch: 91615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	SM 2540C	
MB 860-91615/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-91615/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-91615/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-91615/4	Lab Control Sample	Total/NA	Water	SM 2540C	

##### Analysis Batch: 91683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	SM 4500 H+ B	
880-25083-1 DU	Levey Well	Total/NA	Water	SM 4500 H+ B	

##### Analysis Batch: 91917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25083-1	Levey Well	Total/NA	Water	SM 1030E	

- 1
- 2
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# Lab Chronicle

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

**Client Sample ID: Levey Well**

**Lab Sample ID: 880-25083-1**

**Date Collected: 02/22/23 11:30**

**Matrix: Water**

**Date Received: 02/22/23 15:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	91344	TTD	EET HOU	02/23/23 17:09
Total/NA	Analysis	300.0		1	91496	A1S	EET HOU	02/23/23 18:15
Total/NA	Analysis	300.0		1	91497	A1S	EET HOU	02/23/23 18:15
Total Recoverable	Prep	200.7			91520	AGR	EET HOU	02/23/23 20:00
Total Recoverable	Analysis	200.7 Rev 4.4		1	91634	JDM	EET HOU	02/24/23 10:55
Total Recoverable	Prep	200.7			91520	AGR	EET HOU	02/23/23 20:00
Total Recoverable	Analysis	200.7 Rev 4.4		50	91634	JDM	EET HOU	02/24/23 11:20
Total/NA	Analysis	SM 1030E		1	91917	AA	EET HOU	02/27/23 17:21
Total/NA	Analysis	SM 2320B		1	91564	TL	EET HOU	02/23/23 17:51
Total/NA	Analysis	SM 2540C		1	91615	HN	EET HOU	02/24/23 09:00
Total/NA	Analysis	SM 4500 H+ B		1	91683	TL	EET HOU	02/24/23 16:11

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

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### Accreditation/Certification Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
200.7 Rev 4.4	200.7	Water	SiO2
SM 1030E		Water	Anion/Cation Balance
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2320B		Water	Hydroxide Alkalinity
SM 2320B		Water	Phenolphthalein Alkalinity
SM 4500 H+ B		Water	Temperature

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## Method Summary

Client: Ensolum  
 Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
 SDG: Hobbs NM

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
200.7 Rev 4.4	Metals (ICP)	EPA	EET HOU
SM 1030E	Cation Anion Balance	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
200.7	Preparation, Total Recoverable Metals	EPA	EET HOU
5030C	Purge and Trap	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

- EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



# Sample Summary

Client: Ensolum  
Project/Site: Levey Well Hobbs, NM - 03B1417001

Job ID: 880-25083-1  
SDG: Hobbs NM

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-25083-1	Levey Well	Water	02/22/23 11:30	02/22/23 15:47

- 1
- 2
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# Chain of Custody

Work Order No: 25083

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) EL Paso, TX (915)565-3443 Lubbock, TX (806)794-1296  
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)



Project Manager: Beaux Jennings  
 Company Name: Ensolum LLC  
 Address: 601 Merienfeld #400  
 City, State ZIP: Midland TX 79701  
 Phone: 432-230-3344  
 Email: bjennings@ensolum.com

Bill to: (if different)  
 Company Name:  
 Address:  
 City, State ZIP:

Project Name: Levey Well Hobbs NM  
 Project Number: 03B1417001  
 P.O. Number: 03B1417001  
 Sampler's Name: Shane Diller

Program:  UST/PST  PRP  Brownfields  RRC  Superfund   
 State of Project: \_\_\_\_\_  
 Reporting Level II  Level III  PST/UST  TRRP  Level IV   
 Deliverables EDD  ADaPT  Other \_\_\_\_\_

Turn Around  
 Routine   
 Rush 24 hr   
 Due Date \_\_\_\_\_

**SAMPLE RECEIPT**  
 Temperature (°C): 3.3 Wet Ice:  Yes  No  
 Received Intact:  Yes  No Thermometer ID: FLC  
 Cooler Custody Seals: Yes No N/A Correction Factor: 0.30  
 Sample Custody Seals: Yes No N/A Total Containers: \_\_\_\_\_

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
Levey Well	GW	2-22-23	1130	
<i>WIFE</i> <i>5-22-23</i>				

**ANALYSIS REQUEST**

Number of Containers	VOCs	Antons: F, Cl, SO4, B	Cations: Ca, K, Mg, Na, Si	pH	Alkalinity	TDS
7	X	X	X	X	X	X

**Work Order Notes**

TAT starts the day received by the lab, if received by 4:30pm

Sample Comments: 24hr

**CUSTODY SEAL OEC**  
 Quality Environmental Containers  
 800-255-3950 • 304-255-3900

DATE: 2-22-23  
 SIGNATURE: [Signature]

**Total 200.7 / 6010 200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
 Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg**

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<u>[Signature]</u>	<u>[Signature]</u>	2/22/23
		1547
		6



**Eurofins Midland**  
1211 W Florida Ave  
Midland TX 79701  
Phone: 432-704-5440

# Chain of Custody Record



Environment Test'ng



<b>Client Information (Sub Contract Lab)</b>		Sampler: Kramer, Jessica	Lab P#:	Carrier Tracking No(s):	COC No: 880-6365.1
Client Contact: Shipping/Receiving		Phone: Jessica.Kramer@et.eurofins.com	E-Mail: Jessica.Kramer@et.eurofins.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Center		Accreditations Required (See note): NELAP Texas		Job #:	880-25083-1
Address: 4145 Greenbriar Dr		Due Date Requested: 2/24/2023		Preservation Codes:	
City: Stafford	State: TX	Zip: 77477	TAT Requested (days):	A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other	
Phone: 281-240-4200(Tel)	PO #:	WO #:		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-S Y Trizma Z other (specify)	
Project Name: Levey Well Hobbs, NM 03B1417001	Project #: 88000024	SSON#:		Special Instructions/Note:	
Site:					
<b>Sample Identification Client ID (Lab ID)</b>	Levey Well (880-25083-1)	Sample Date	2/22/23	Sample Time	11:30 Mountain
Matrix (Water, Solid, Over-sat)	Water	Sample Type (C=Comp, G=grab)		Field Filtered Sample (Yes or No)	X
				Perform MS/MSD (Yes or No)	X
				8260/6030C (MOD) Full List VOCs	X
				200.7/200.7.P.YR (MOD) Custom List	X
				300_ORGFM_28D/Br Cl, F, SO4	X
				300_ORGFM/NO2, NO3	X
				9M4500_H+ pH	X
				2540C_Calcd/ TDS	X
				2320B/ Alkalinity	X
				Cation/Anion/ (MOD) Copy Analytes	X
				Total Number of Containers	7

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analysis & 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, the 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 to Eurofins Environment Testing South Central, LLC.

**Possible Hazard Identification**  
 Unconfirmed  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:  
 Deliverable Requested: I, II, III, IV Other (specify) \_\_\_\_\_  
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: *[Signature]* Date/Time: \_\_\_\_\_ Company: **FedEx**  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_  
 Δ Yes Δ No \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: C/F -0.2 2.2 IR ID:HOU-344  
 Corrected Temp: 2.0

IT 06/08/2021



### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-25083-1

SDG Number: Hobbs NM

**Login Number: 25083**

**List Number: 1**

**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-25083-1

SDG Number: Hobbs NM

**Login Number: 25083**

**List Number: 2**

**Creator: Pena, Jesiel**

**List Source: Eurofins Houston**

**List Creation: 02/23/23 02:21 PM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701  
Generated 2/9/2023 9:33:26 AM

## JOB DESCRIPTION

South Hobbs - 03B1417002  
South Hobbs

## JOB NUMBER

880-24278-1

Eurofins Midland  
1211 W. Florida Ave  
Midland TX 79701

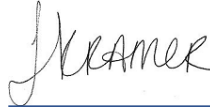


# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
2/9/2023 9:33:26 AM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Laboratory Job ID: 880-24278-1

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## Definitions/Glossary

Client: Ensolum

Job ID: 880-24278-1

Project/Site: South Hobbs - 03B1417002

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## 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)

Eurofins Midland

### Definitions/Glossary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

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### Case Narrative

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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**Job ID: 880-24278-1**

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**Laboratory: Eurofins Midland****Narrative****Job Narrative  
880-24278-1****Receipt**

The samples were received on 2/2/2023 4:20 PM. 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 1.3°C

**GC/MS VOA**

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 860-88856 recovered outside control limits for the following analytes: Naphthalene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 860-88856 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

**GC Semi VOA**

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

**HPLC/IC**

Method 300\_ORGFM\_28D: The method blank for analytical batch 860-88953 contained Sulfate above the method detection limit (MDL) . Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-88953 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 300\_ORGFMS: The following sample was analyzed outside of analytical holding time due to <EXPLANATION\_REQUIRED>: MW-1 (880-24278-1).

Method 300\_ORGFMS: The following samples were received outside of holding time: MW-1 (880-24278-1) and MW-2 (880-24278-2).

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

**General Chemistry**

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



### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

Client Sample ID: MW-1

Lab Sample ID: 880-24278-1

Date Collected: 02/02/23 12:40

Matrix: Water

Date Received: 02/02/23 16:20

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/06/23 12:42	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/06/23 12:42	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/06/23 12:42	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/06/23 12:42	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/06/23 12:42	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/06/23 12:42	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/06/23 12:42	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/06/23 12:42	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/06/23 12:42	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/06/23 12:42	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/06/23 12:42	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/06/23 12:42	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/06/23 12:42	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/06/23 12:42	1
cis-1,2-Dichloroethene	<0.000714	U F1	0.00100	0.000714 mg/L			02/06/23 12:42	1
cis-1,3-Dichloropropene	<0.00107	U F1	0.00500	0.00107 mg/L			02/06/23 12:42	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/06/23 12:42	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 12:42	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/06/23 12:42	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/06/23 12:42	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/06/23 12:42	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/06/23 12:42	1
Dichlorodifluoromethane	<0.000919	U F1	0.00100	0.000919 mg/L			02/06/23 12:42	1
1,1-Dichloroethane	<0.000635	U F1	0.00100	0.000635 mg/L			02/06/23 12:42	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/06/23 12:42	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/06/23 12:42	1
1,2-Dichloropropane	<0.000667	U F1	0.00500	0.000667 mg/L			02/06/23 12:42	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/06/23 12:42	1
2,2-Dichloropropane	<0.000780	U F1	0.00500	0.000780 mg/L			02/06/23 12:42	1
1,1-Dichloropropene	<0.00160	U F1	0.00500	0.00160 mg/L			02/06/23 12:42	1
Ethylbenzene	<0.000411	U F1	0.00100	0.000411 mg/L			02/06/23 12:42	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/06/23 12:42	1
Isopropylbenzene	<0.000613	U F1	0.00100	0.000613 mg/L			02/06/23 12:42	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/06/23 12:42	1
m,p-Xylenes	<0.00124	U F1	0.0100	0.00124 mg/L			02/06/23 12:42	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/06/23 12:42	1
Naphthalene	<0.00135	U **	0.0100	0.00135 mg/L			02/06/23 12:42	1
n-Butylbenzene	<0.000644	U F1	0.00100	0.000644 mg/L			02/06/23 12:42	1
N-Propylbenzene	<0.000498	U F1	0.00100	0.000498 mg/L			02/06/23 12:42	1
o-Xylene	<0.000551	U F1	0.00100	0.000551 mg/L			02/06/23 12:42	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U F1	0.00100	0.000919 mg/L			02/06/23 12:42	1
sec-Butylbenzene	<0.000468	U F1	0.00100	0.000468 mg/L			02/06/23 12:42	1
Styrene	<0.000655	U F1	0.00100	0.000655 mg/L			02/06/23 12:42	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/06/23 12:42	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/06/23 12:42	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/06/23 12:42	1
Tetrachloroethene	<0.000801	U F1	0.00100	0.000801 mg/L			02/06/23 12:42	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/06/23 12:42	1
trans-1,2-Dichloroethene	<0.000945	U F1	0.00100	0.000945 mg/L			02/06/23 12:42	1

Eurofins Midland

### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24278-1**

Date Collected: 02/02/23 12:40

Matrix: Water

Date Received: 02/02/23 16:20

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 12:42	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/06/23 12:42	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/06/23 12:42	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/06/23 12:42	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/06/23 12:42	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/06/23 12:42	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/06/23 12:42	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/06/23 12:42	1
1,2,4-Trimethylbenzene	<0.000417	U F1	0.00100	0.000417 mg/L			02/06/23 12:42	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/06/23 12:42	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/06/23 12:42	1
Xylenes, Total	<0.00124	U F1	0.0100	0.00124 mg/L			02/06/23 12:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		74 - 124		02/06/23 12:42	1
Dibromofluoromethane (Surr)	100		75 - 131		02/06/23 12:42	1
1,2-Dichloroethane-d4 (Surr)	99		63 - 144		02/06/23 12:42	1
Toluene-d8 (Surr)	106		80 - 117		02/06/23 12:42	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<0.978	U	4.95	0.978 mg/L			02/06/23 12:25	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.978	U	4.95	0.978 mg/L		02/06/23 12:25	02/06/23 12:59	1
Diesel Range Organics (Over C10-C28)	<0.978	U	4.95	0.978 mg/L		02/06/23 12:25	02/06/23 12:59	1
Oil Range Organics (Over C28-C36)	<0.944	U	4.95	0.944 mg/L		02/06/23 12:25	02/06/23 12:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 135	02/06/23 12:25	02/06/23 12:59	1
o-Terphenyl	128		70 - 135	02/06/23 12:25	02/06/23 12:59	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75.4		0.500	0.200 mg/L			02/06/23 22:23	1
Nitrate as N	0.223	H	0.100	0.0391 mg/L			02/06/23 22:23	1
Fluoride	0.670		0.500	0.100 mg/L			02/06/23 22:23	1
Nitrite as N	0.196	H	0.100	0.0293 mg/L			02/06/23 22:23	1
Sulfate	47.2	B	0.500	0.109 mg/L			02/06/23 22:23	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	329		4.00	4.00 mg/L			02/06/23 13:07	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	329		4.00	4.00 mg/L			02/06/23 13:07	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/06/23 13:07	1
Carbon dioxide (SM 4500 CO2 D)	341			mg/L			02/09/23 10:21	1

Eurofins Midland

### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24278-1**

Date Collected: 02/02/23 12:40

Matrix: Water

Date Received: 02/02/23 16:20

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free (SM 4500 CO2 D)	52.2			mg/L			02/09/23 10:21	1
pH (SM 4500 H+ B)	7.1	HF		SU			02/06/23 14:48	1
Temperature (SM 4500 H+ B)	18.6	HF		Degrees C			02/06/23 14:48	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495 mg/L			02/06/23 16:56	1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24278-2**

Date Collected: 02/02/23 13:40

Matrix: Water

Date Received: 02/02/23 16:20

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0138		0.00100	0.000533 mg/L			02/06/23 13:02	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/06/23 13:02	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/06/23 13:02	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/06/23 13:02	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/06/23 13:02	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/06/23 13:02	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/06/23 13:02	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/06/23 13:02	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/06/23 13:02	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/06/23 13:02	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/06/23 13:02	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/06/23 13:02	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/06/23 13:02	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/06/23 13:02	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/06/23 13:02	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/06/23 13:02	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/06/23 13:02	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 13:02	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/06/23 13:02	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/06/23 13:02	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/06/23 13:02	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/06/23 13:02	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919 mg/L			02/06/23 13:02	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/06/23 13:02	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/06/23 13:02	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/06/23 13:02	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/06/23 13:02	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/06/23 13:02	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/06/23 13:02	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/06/23 13:02	1
Ethylbenzene	0.00696		0.00100	0.000411 mg/L			02/06/23 13:02	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/06/23 13:02	1
Isopropylbenzene	0.00437		0.00100	0.000613 mg/L			02/06/23 13:02	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/06/23 13:02	1
m,p-Xylenes	0.0352		0.0100	0.00124 mg/L			02/06/23 13:02	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/06/23 13:02	1
Naphthalene	<0.00135	U *+	0.0100	0.00135 mg/L			02/06/23 13:02	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/06/23 13:02	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

Client Sample ID: MW-2

Lab Sample ID: 880-24278-2

Date Collected: 02/02/23 13:40

Matrix: Water

Date Received: 02/02/23 16:20

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	0.00111		0.00100	0.000498 mg/L			02/06/23 13:02	1
o-Xylene	0.00447		0.00100	0.000551 mg/L			02/06/23 13:02	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/06/23 13:02	1
sec-Butylbenzene	0.000511	J	0.00100	0.000468 mg/L			02/06/23 13:02	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/06/23 13:02	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/06/23 13:02	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/06/23 13:02	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/06/23 13:02	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/06/23 13:02	1
Toluene	0.00114		0.00100	0.000475 mg/L			02/06/23 13:02	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/06/23 13:02	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 13:02	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/06/23 13:02	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/06/23 13:02	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/06/23 13:02	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/06/23 13:02	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/06/23 13:02	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/06/23 13:02	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/06/23 13:02	1
1,2,4-Trimethylbenzene	0.0103		0.00100	0.000417 mg/L			02/06/23 13:02	1
1,3,5-Trimethylbenzene	0.00276		0.00100	0.000456 mg/L			02/06/23 13:02	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/06/23 13:02	1
Xylenes, Total	0.0397		0.0100	0.00124 mg/L			02/06/23 13:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		74 - 124		02/06/23 13:02	1
Dibromofluoromethane (Surr)	99		75 - 131		02/06/23 13:02	1
1,2-Dichloroethane-d4 (Surr)	95		63 - 144		02/06/23 13:02	1
Toluene-d8 (Surr)	101		80 - 117		02/06/23 13:02	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1.01	J	4.85	0.959 mg/L			02/06/23 12:25	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1.01	J	4.85	0.959 mg/L		02/07/23 11:33	02/07/23 11:45	1
Diesel Range Organics (Over C10-C28)	<0.959	U	4.85	0.959 mg/L		02/07/23 11:33	02/07/23 11:45	1
Oil Range Organics (Over C28-C36)	<0.926	U	4.85	0.926 mg/L		02/07/23 11:33	02/07/23 11:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 135	02/07/23 11:33	02/07/23 11:45	1
o-Terphenyl	101		70 - 135	02/07/23 11:33	02/07/23 11:45	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.8		0.500	0.200 mg/L			02/07/23 01:01	1
Nitrate as N	0.273	H	0.100	0.0391 mg/L			02/07/23 01:01	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/07/23 01:01	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24278-2**

Date Collected: 02/02/23 13:40

Matrix: Water

Date Received: 02/02/23 16:20

**Method: EPA 300.0 - Anions, Ion Chromatography (Continued)**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.334	H	0.100	0.0293	mg/L			02/07/23 01:01	1
Sulfate	84.7	B	0.500	0.109	mg/L			02/07/23 01:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	1180		4.00	4.00	mg/L			02/06/23 13:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	1180		4.00	4.00	mg/L			02/06/23 13:22	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00	mg/L			02/06/23 13:22	1
Carbon dioxide (SM 4500 CO2 D)	2520				mg/L			02/09/23 10:22	1
Carbon Dioxide, Free (SM 4500 CO2 D)	1480				mg/L			02/09/23 10:22	1
pH (SM 4500 H+ B)	6.2	HF			SU			02/06/23 14:47	1
Temperature (SM 4500 H+ B)	18.7	HF			Degrees C			02/06/23 14:47	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495	mg/L			02/06/23 16:56	1

## Surrogate Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-24278-1	MW-1	102	100	99	106
880-24278-1 MS	MW-1	97	98	91	99
880-24278-2	MW-2	98	99	95	101
LCS 860-88856/3	Lab Control Sample	98	99	96	101
LCSD 860-88856/4	Lab Control Sample Dup	103	100	92	102
MB 860-88856/12	Method Blank	99	104	97	103

## Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-135)	OTPH1 (70-135)
880-24278-1	MW-1	107	128
880-24278-2	MW-2	86	101
LCS 860-88947/2-A	Lab Control Sample	98	126
LCSD 860-88947/3-A	Lab Control Sample Dup	99	128
MB 860-88947/1-A	Method Blank	101	118

## Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

## QC Sample Results

Client: Ensolum

Job ID: 880-24278-1

Project/Site: South Hobbs - 03B1417002

## Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-88856/12

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 88856

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.000533	U	0.00100	0.000533	mg/L		02/06/23 12:21	1
Bromobenzene	<0.000665	U	0.00100	0.000665	mg/L		02/06/23 12:21	1
Bromochloromethane	<0.000657	U	0.00100	0.000657	mg/L		02/06/23 12:21	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552	mg/L		02/06/23 12:21	1
Bromoform	<0.000633	U	0.00500	0.000633	mg/L		02/06/23 12:21	1
Bromomethane	<0.00142	U	0.00500	0.00142	mg/L		02/06/23 12:21	1
2-Butanone	<0.00828	U	0.0500	0.00828	mg/L		02/06/23 12:21	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896	mg/L		02/06/23 12:21	1
Chlorobenzene	<0.000530	U	0.00100	0.000530	mg/L		02/06/23 12:21	1
Chloroethane	<0.00198	U	0.0100	0.00198	mg/L		02/06/23 12:21	1
Chloroform	<0.000643	U	0.00100	0.000643	mg/L		02/06/23 12:21	1
Chloromethane	<0.00204	U	0.0100	0.00204	mg/L		02/06/23 12:21	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118	mg/L		02/06/23 12:21	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472	mg/L		02/06/23 12:21	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714	mg/L		02/06/23 12:21	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107	mg/L		02/06/23 12:21	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547	mg/L		02/06/23 12:21	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127	mg/L		02/06/23 12:21	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999	mg/L		02/06/23 12:21	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509	mg/L		02/06/23 12:21	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/06/23 12:21	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/06/23 12:21	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919	mg/L		02/06/23 12:21	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635	mg/L		02/06/23 12:21	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590	mg/L		02/06/23 12:21	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738	mg/L		02/06/23 12:21	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667	mg/L		02/06/23 12:21	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514	mg/L		02/06/23 12:21	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780	mg/L		02/06/23 12:21	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160	mg/L		02/06/23 12:21	1
Ethylbenzene	<0.000411	U	0.00100	0.000411	mg/L		02/06/23 12:21	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126	mg/L		02/06/23 12:21	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613	mg/L		02/06/23 12:21	1
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L		02/06/23 12:21	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124	mg/L		02/06/23 12:21	1
MTBE	<0.00139	U	0.00500	0.00139	mg/L		02/06/23 12:21	1
Naphthalene	<0.00135	U	0.0100	0.00135	mg/L		02/06/23 12:21	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644	mg/L		02/06/23 12:21	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498	mg/L		02/06/23 12:21	1
o-Xylene	<0.000551	U	0.00100	0.000551	mg/L		02/06/23 12:21	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919	mg/L		02/06/23 12:21	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468	mg/L		02/06/23 12:21	1
Styrene	<0.000655	U	0.00100	0.000655	mg/L		02/06/23 12:21	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442	mg/L		02/06/23 12:21	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644	mg/L		02/06/23 12:21	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470	mg/L		02/06/23 12:21	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801	mg/L		02/06/23 12:21	1
Toluene	<0.000475	U	0.00100	0.000475	mg/L		02/06/23 12:21	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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

Lab Sample ID: MB 860-88856/12  
 Matrix: Water  
 Analysis Batch: 88856

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/06/23 12:21	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/06/23 12:21	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/06/23 12:21	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/06/23 12:21	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/06/23 12:21	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/06/23 12:21	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/06/23 12:21	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/06/23 12:21	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/06/23 12:21	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/06/23 12:21	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/06/23 12:21	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/06/23 12:21	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/06/23 12:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		74 - 124		02/06/23 12:21	1
Dibromofluoromethane (Surr)	104		75 - 131		02/06/23 12:21	1
1,2-Dichloroethane-d4 (Surr)	97		63 - 144		02/06/23 12:21	1
Toluene-d8 (Surr)	103		80 - 117		02/06/23 12:21	1

Lab Sample ID: LCS 860-88856/3  
 Matrix: Water  
 Analysis Batch: 88856

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.05415		mg/L		108	75 - 125
Bromobenzene	0.0500	0.04932		mg/L		99	75 - 125
Bromochloromethane	0.0500	0.05281		mg/L		106	60 - 140
Bromodichloromethane	0.0500	0.04927		mg/L		99	75 - 125
Bromoform	0.0500	0.04711		mg/L		94	70 - 130
Bromomethane	0.0500	0.04700		mg/L		94	60 - 140
2-Butanone	0.250	0.2895		mg/L		116	60 - 140
Carbon tetrachloride	0.0500	0.05089		mg/L		102	70 - 130
Chlorobenzene	0.0500	0.05224		mg/L		104	65 - 135
Chloroethane	0.0500	0.05368		mg/L		107	60 - 140
Chloroform	0.0500	0.05038		mg/L		101	70 - 121
Chloromethane	0.0500	0.04836		mg/L		97	60 - 140
2-Chlorotoluene	0.0500	0.05112		mg/L		102	73 - 125
4-Chlorotoluene	0.0500	0.05202		mg/L		104	74 - 125
cis-1,2-Dichloroethene	0.0500	0.05436		mg/L		109	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05330		mg/L		107	74 - 125
Dibromochloromethane	0.0500	0.04901		mg/L		98	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.05231		mg/L		105	59 - 125
1,2-Dibromoethane	0.0500	0.05265		mg/L		105	73 - 125
1,2-Dichlorobenzene	0.0500	0.05120		mg/L		102	75 - 125
1,3-Dichlorobenzene	0.0500	0.05216		mg/L		104	75 - 125
1,4-Dichlorobenzene	0.0500	0.05069		mg/L		101	75 - 125
Dichlorodifluoromethane	0.0500	0.04637		mg/L		93	70 - 130

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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

Lab Sample ID: LCS 860-88856/3

Matrix: Water

Analysis Batch: 88856

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethane	0.0500	0.05521		mg/L		110	70 - 130
1,2-Dichloroethane	0.0500	0.04772		mg/L		95	72 - 130
1,1-Dichloroethene	0.0500	0.05434		mg/L		109	50 - 150
1,2-Dichloropropane	0.0500	0.05379		mg/L		108	74 - 125
1,3-Dichloropropane	0.0500	0.05164		mg/L		103	75 - 125
2,2-Dichloropropane	0.0500	0.05400		mg/L		108	75 - 125
1,1-Dichloropropene	0.0500	0.05410		mg/L		108	75 - 125
Ethylbenzene	0.0500	0.05405		mg/L		108	75 - 125
Hexachlorobutadiene	0.0500	0.04753		mg/L		95	75 - 125
Isopropylbenzene	0.0500	0.05505		mg/L		110	75 - 125
Methylene Chloride	0.0500	0.04937		mg/L		99	75 - 125
m,p-Xylenes	0.0500	0.05463		mg/L		109	75 - 125
MTBE	0.0500	0.05096		mg/L		102	65 - 135
Naphthalene	0.0500	0.05286		mg/L		106	70 - 130
n-Butylbenzene	0.0500	0.05343		mg/L		107	75 - 125
N-Propylbenzene	0.0500	0.05400		mg/L		108	75 - 125
o-Xylene	0.0500	0.05387		mg/L		108	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05535		mg/L		111	75 - 125
sec-Butylbenzene	0.0500	0.05482		mg/L		110	75 - 125
Styrene	0.0500	0.05549		mg/L		111	75 - 125
tert-Butylbenzene	0.0500	0.05350		mg/L		107	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.05035		mg/L		101	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.05315		mg/L		106	74 - 125
Tetrachloroethene	0.0500	0.05278		mg/L		106	71 - 125
Toluene	0.0500	0.05267		mg/L		105	70 - 130
trans-1,2-Dichloroethene	0.0500	0.05338		mg/L		107	75 - 125
trans-1,3-Dichloropropene	0.0500	0.05188		mg/L		104	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05265		mg/L		105	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05317		mg/L		106	75 - 135
1,1,1-Trichloroethane	0.0500	0.05025		mg/L		101	70 - 130
1,1,2-Trichloroethane	0.0500	0.05257		mg/L		105	70 - 130
Trichloroethene	0.0500	0.05047		mg/L		101	75 - 135
Trichlorofluoromethane	0.0500	0.04822		mg/L		96	60 - 140
1,2,3-Trichloropropane	0.0500	0.05124		mg/L		102	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05488		mg/L		110	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.05203		mg/L		104	60 - 140
Vinyl chloride	0.0500	0.05175		mg/L		104	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		74 - 124
Dibromofluoromethane (Surr)	99		75 - 131
1,2-Dichloroethane-d4 (Surr)	96		63 - 144
Toluene-d8 (Surr)	101		80 - 117

## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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

Lab Sample ID: LCSD 860-88856/4

Matrix: Water

Analysis Batch: 88856

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Benzene	0.0500	0.05179		mg/L		104	75 - 125	4	25
Bromobenzene	0.0500	0.05206		mg/L		104	75 - 125	5	25
Bromochloromethane	0.0500	0.05009		mg/L		100	60 - 140	5	25
Bromodichloromethane	0.0500	0.04735		mg/L		95	75 - 125	4	25
Bromoform	0.0500	0.04753		mg/L		95	70 - 130	1	25
Bromomethane	0.0500	0.04717		mg/L		94	60 - 140	0	25
2-Butanone	0.250	0.2834		mg/L		113	60 - 140	2	25
Carbon tetrachloride	0.0500	0.04994		mg/L		100	70 - 130	2	25
Chlorobenzene	0.0500	0.05092		mg/L		102	65 - 135	3	25
Chloroethane	0.0500	0.05312		mg/L		106	60 - 140	1	25
Chloroform	0.0500	0.05011		mg/L		100	70 - 121	1	25
Chloromethane	0.0500	0.04880		mg/L		98	60 - 140	1	25
2-Chlorotoluene	0.0500	0.05370		mg/L		107	73 - 125	5	25
4-Chlorotoluene	0.0500	0.05404		mg/L		108	74 - 125	4	25
cis-1,2-Dichloroethene	0.0500	0.05308		mg/L		106	75 - 125	2	25
cis-1,3-Dichloropropene	0.0500	0.05159		mg/L		103	74 - 125	3	25
Dibromochloromethane	0.0500	0.04827		mg/L		97	73 - 125	2	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05769		mg/L		115	59 - 125	10	25
1,2-Dibromoethane	0.0500	0.05101		mg/L		102	73 - 125	3	25
1,2-Dichlorobenzene	0.0500	0.05416		mg/L		108	75 - 125	6	25
1,3-Dichlorobenzene	0.0500	0.05455		mg/L		109	75 - 125	4	25
1,4-Dichlorobenzene	0.0500	0.05263		mg/L		105	75 - 125	4	25
Dichlorodifluoromethane	0.0500	0.04453		mg/L		89	70 - 130	4	25
1,1-Dichloroethane	0.0500	0.05254		mg/L		105	70 - 130	5	25
1,2-Dichloroethane	0.0500	0.04625		mg/L		93	72 - 130	3	25
1,1-Dichloroethene	0.0500	0.05423		mg/L		108	50 - 150	0	25
1,2-Dichloropropane	0.0500	0.05277		mg/L		106	74 - 125	2	25
1,3-Dichloropropane	0.0500	0.05091		mg/L		102	75 - 125	1	25
2,2-Dichloropropane	0.0500	0.05221		mg/L		104	75 - 125	3	25
1,1-Dichloropropene	0.0500	0.05325		mg/L		106	75 - 125	2	25
Ethylbenzene	0.0500	0.05293		mg/L		106	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.05531		mg/L		111	75 - 125	15	25
Isopropylbenzene	0.0500	0.05443		mg/L		109	75 - 125	1	25
Methylene Chloride	0.0500	0.04772		mg/L		95	75 - 125	3	25
m,p-Xylenes	0.0500	0.05288		mg/L		106	75 - 125	3	25
MTBE	0.0500	0.04989		mg/L		100	65 - 135	2	25
Naphthalene	0.0500	0.06693	*+	mg/L		134	70 - 130	23	25
n-Butylbenzene	0.0500	0.05842		mg/L		117	75 - 125	9	25
N-Propylbenzene	0.0500	0.05778		mg/L		116	75 - 125	7	25
o-Xylene	0.0500	0.05323		mg/L		106	75 - 125	1	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.05928		mg/L		119	75 - 125	7	25
sec-Butylbenzene	0.0500	0.05940		mg/L		119	75 - 125	8	25
Styrene	0.0500	0.05387		mg/L		108	75 - 125	3	25
tert-Butylbenzene	0.0500	0.05684		mg/L		114	75 - 125	6	25
1,1,1,2-Tetrachloroethane	0.0500	0.04792		mg/L		96	72 - 125	5	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.05648		mg/L		113	74 - 125	6	25
Tetrachloroethene	0.0500	0.05115		mg/L		102	71 - 125	3	25
Toluene	0.0500	0.05242		mg/L		105	70 - 130	0	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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

Lab Sample ID: LCSD 860-88856/4  
 Matrix: Water  
 Analysis Batch: 88856

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.0500	0.05263		mg/L		105	75 - 125	1	25
trans-1,3-Dichloropropene	0.0500	0.05069		mg/L		101	66 - 125	2	25
1,2,3-Trichlorobenzene	0.0500	0.06563		mg/L		131	75 - 137	22	25
1,2,4-Trichlorobenzene	0.0500	0.06006		mg/L		120	75 - 135	12	25
1,1,1-Trichloroethane	0.0500	0.04865		mg/L		97	70 - 130	3	25
1,1,2-Trichloroethane	0.0500	0.05165		mg/L		103	70 - 130	2	25
Trichloroethene	0.0500	0.04961		mg/L		99	75 - 135	2	25
Trichlorofluoromethane	0.0500	0.04721		mg/L		94	60 - 140	2	25
1,2,3-Trichloropropane	0.0500	0.05433		mg/L		109	75 - 125	6	25
1,2,4-Trimethylbenzene	0.0500	0.05679		mg/L		114	75 - 125	3	25
1,3,5-Trimethylbenzene	0.0500	0.05506		mg/L		110	60 - 140	6	25
Vinyl chloride	0.0500	0.05111		mg/L		102	60 - 140	1	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	100		75 - 131
1,2-Dichloroethane-d4 (Surr)	92		63 - 144
Toluene-d8 (Surr)	102		80 - 117

Lab Sample ID: 880-24278-1 MS  
 Matrix: Water  
 Analysis Batch: 88856

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000533	U	0.0500	0.06389		mg/L		128	66 - 142
Bromobenzene	<0.000665	U	0.0500	0.05830		mg/L		117	75 - 125
Bromochloromethane	<0.000657	U	0.0500	0.06166		mg/L		123	60 - 140
Bromodichloromethane	<0.000552	U	0.0500	0.06006		mg/L		120	75 - 125
Bromoform	<0.000633	U	0.0500	0.05558		mg/L		111	75 - 125
Bromomethane	<0.00142	U	0.0500	0.04778		mg/L		96	60 - 140
2-Butanone	<0.00828	U	0.250	0.3356		mg/L		134	60 - 140
Carbon tetrachloride	<0.000896	U	0.0500	0.06099		mg/L		122	62 - 125
Chlorobenzene	<0.000530	U	0.0500	0.06308		mg/L		126	60 - 133
Chloroethane	<0.00198	U	0.0500	0.05755		mg/L		115	60 - 140
Chloroform	<0.000643	U	0.0500	0.06144		mg/L		123	70 - 130
Chloromethane	<0.00204	U	0.0500	0.04540		mg/L		91	60 - 140
2-Chlorotoluene	<0.00118	U	0.0500	0.05946		mg/L		119	73 - 125
4-Chlorotoluene	<0.000472	U	0.0500	0.05985		mg/L		120	74 - 125
cis-1,2-Dichloroethene	<0.000714	U F1	0.0500	0.06514	F1	mg/L		130	75 - 125
cis-1,3-Dichloropropene	<0.00107	U F1	0.0500	0.06501	F1	mg/L		130	74 - 125
Dibromochloromethane	<0.000547	U	0.0500	0.05903		mg/L		118	73 - 125
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.0500	0.05671		mg/L		113	59 - 125
1,2-Dibromoethane	<0.000999	U	0.0500	0.06206		mg/L		124	73 - 125
1,2-Dichlorobenzene	<0.000509	U	0.0500	0.05888		mg/L		118	75 - 125
1,3-Dichlorobenzene	<0.000513	U	0.0500	0.06003		mg/L		120	75 - 125
1,4-Dichlorobenzene	<0.000513	U	0.0500	0.05799		mg/L		116	75 - 125
Dichlorodifluoromethane	<0.000919	U F1	0.0500	0.03367	F1	mg/L		67	70 - 130
1,1-Dichloroethane	<0.000635	U F1	0.0500	0.06389	F1	mg/L		128	72 - 125

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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

Lab Sample ID: 880-24278-1 MS

Matrix: Water

Analysis Batch: 88856

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
1,2-Dichloroethane	<0.000590	U	0.0500	0.05699		mg/L		114	68 - 127
1,1-Dichloroethene	<0.000738	U	0.0500	0.06270		mg/L		125	59 - 172
1,2-Dichloropropane	<0.000667	U F1	0.0500	0.06659	F1	mg/L		133	74 - 125
1,3-Dichloropropane	<0.000514	U	0.0500	0.06056		mg/L		121	75 - 125
2,2-Dichloropropane	<0.000780	U F1	0.0500	0.06473	F1	mg/L		129	75 - 125
1,1-Dichloropropene	<0.00160	U F1	0.0500	0.06451	F1	mg/L		129	75 - 125
Ethylbenzene	<0.000411	U F1	0.0500	0.06502	F1	mg/L		130	75 - 125
Hexachlorobutadiene	<0.00126	U	0.0500	0.05650		mg/L		113	75 - 125
Isopropylbenzene	<0.000613	U F1	0.0500	0.06738	F1	mg/L		135	75 - 125
Methylene Chloride	<0.00173	U	0.0500	0.05722		mg/L		114	75 - 125
m,p-Xylenes	<0.00124	U F1	0.0500	0.06572	F1	mg/L		131	75 - 125
MTBE	<0.00139	U	0.0500	0.06112		mg/L		122	65 - 135
Naphthalene	<0.00135	U *+	0.0500	0.05964		mg/L		119	70 - 130
n-Butylbenzene	<0.000644	U F1	0.0500	0.06376	F1	mg/L		128	75 - 125
N-Propylbenzene	<0.000498	U F1	0.0500	0.06345	F1	mg/L		127	75 - 125
o-Xylene	<0.000551	U F1	0.0500	0.06555	F1	mg/L		131	75 - 125
p-Cymene (p-Isopropyltoluene)	<0.000919	U F1	0.0500	0.06504	F1	mg/L		130	75 - 125
sec-Butylbenzene	<0.000468	U F1	0.0500	0.06545	F1	mg/L		131	75 - 125
Styrene	<0.000655	U F1	0.0500	0.06741	F1	mg/L		135	75 - 125
tert-Butylbenzene	<0.000442	U	0.0500	0.06242		mg/L		125	75 - 125
1,1,1,2-Tetrachloroethane	<0.000644	U	0.0500	0.05849		mg/L		117	72 - 125
1,1,2,2-Tetrachloroethane	<0.000470	U	0.0500	0.05698		mg/L		114	74 - 125
Tetrachloroethene	<0.000801	U F1	0.0500	0.06387	F1	mg/L		128	71 - 125
Toluene	<0.000475	U	0.0500	0.06306		mg/L		126	59 - 139
trans-1,2-Dichloroethene	<0.000945	U F1	0.0500	0.06370	F1	mg/L		127	75 - 125
trans-1,3-Dichloropropene	<0.00127	U	0.0500	0.06089		mg/L		122	66 - 125
1,2,3-Trichlorobenzene	<0.00217	U	0.0500	0.06062		mg/L		121	75 - 137
1,2,4-Trichlorobenzene	<0.00175	U	0.0500	0.06331		mg/L		127	75 - 135
1,1,1-Trichloroethane	<0.00169	U	0.0500	0.05944		mg/L		119	75 - 125
1,1,2-Trichloroethane	<0.000511	U	0.0500	0.06053		mg/L		121	75 - 127
Trichloroethene	<0.000791	U	0.0500	0.06266		mg/L		125	62 - 137
Trichlorofluoromethane	<0.000638	U	0.0500	0.05316		mg/L		106	60 - 140
1,2,3-Trichloropropane	<0.000490	U	0.0500	0.05424		mg/L		108	75 - 125
1,2,4-Trimethylbenzene	<0.000417	U F1	0.0500	0.06377	F1	mg/L		128	75 - 125
1,3,5-Trimethylbenzene	<0.000456	U	0.0500	0.06138		mg/L		123	70 - 125
Vinyl chloride	<0.000638	U	0.0500	0.05370		mg/L		107	60 - 140

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	97		74 - 124
Dibromofluoromethane (Surr)	98		75 - 131
1,2-Dichloroethane-d4 (Surr)	91		63 - 144
Toluene-d8 (Surr)	99		80 - 117

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 860-88947/1-A  
 Matrix: Water  
 Analysis Batch: 88891

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 88947

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<0.988	U	5.00	0.988 mg/L		02/06/23 12:25	02/06/23 13:18	1
Diesel Range Organics (Over C10-C28)	<0.988	U	5.00	0.988 mg/L		02/06/23 12:25	02/06/23 13:18	1
Oil Range Organics (Over C28-C36)	<0.954	U	5.00	0.954 mg/L		02/06/23 12:25	02/06/23 13:18	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	101		70 - 135	02/06/23 12:25	02/06/23 13:18	1
o-Terphenyl	118		70 - 135	02/06/23 12:25	02/06/23 13:18	1

Lab Sample ID: LCS 860-88947/2-A  
 Matrix: Water  
 Analysis Batch: 88891

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 88947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	99.5	111.6		mg/L		112	70 - 135

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	98		70 - 135
o-Terphenyl	126		70 - 135

Lab Sample ID: LCSD 860-88947/3-A  
 Matrix: Water  
 Analysis Batch: 88891

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 88947

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	99.7	124.1		mg/L		124	70 - 135	4	35
Diesel Range Organics (Over C10-C28)	99.5	114.9		mg/L		116	70 - 135	3	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1-Chlorooctane	99		70 - 135
o-Terphenyl	128		70 - 135

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-88953/3  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<0.200	U	0.500	0.200 mg/L			02/06/23 14:01	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/06/23 14:01	1
Sulfate	0.2149	J	0.500	0.109 mg/L			02/06/23 14:01	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-88953/4  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chloride	10.0	10.03		mg/L		100	90 - 110
Fluoride	10.0	9.837		mg/L		98	90 - 110
Sulfate	10.0	9.942		mg/L		99	90 - 110

Lab Sample ID: LCSD 860-88953/5  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Chloride	10.0	10.02		mg/L		100	90 - 110	0	20
Fluoride	10.0	9.827		mg/L		98	90 - 110	0	20
Sulfate	10.0	9.847		mg/L		98	90 - 110	1	20

Lab Sample ID: LLCS 860-88953/7  
 Matrix: Water  
 Analysis Batch: 88953

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

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chloride	0.500	0.5662		mg/L		113	50 - 150
Fluoride	0.500	0.4997	J	mg/L		100	50 - 150
Sulfate	0.500	0.5939		mg/L		119	50 - 150

Lab Sample ID: 880-24278-1 MS  
 Matrix: Water  
 Analysis Batch: 88953

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Chloride	75.4		10.0	82.12	4	mg/L		67	90 - 110
Fluoride	0.670		10.0	10.60		mg/L		99	90 - 110
Sulfate	47.2	B	10.0	56.64	4	mg/L		95	90 - 110

Lab Sample ID: 880-24278-1 MSD  
 Matrix: Water  
 Analysis Batch: 88953

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
				Result	Qualifier						
Chloride	75.4		10.0	81.85	4	mg/L		64	90 - 110	0	20
Fluoride	0.670		10.0	10.62		mg/L		99	90 - 110	0	20
Sulfate	47.2	B	10.0	56.47	4	mg/L		93	90 - 110	0	20

Lab Sample ID: MB 860-88954/3  
 Matrix: Water  
 Analysis Batch: 88954

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

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/06/23 14:01	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/06/23 14:01	1

### QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-88954/4  
Matrix: Water  
Analysis Batch: 88954

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	9.906		mg/L		99	80 - 120
Nitrite as N	10.0	9.453		mg/L		95	80 - 120

Lab Sample ID: LCSD 860-88954/5  
Matrix: Water  
Analysis Batch: 88954

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	9.910		mg/L		99	80 - 120	0	20
Nitrite as N	10.0	9.464		mg/L		95	80 - 120	0	20

Lab Sample ID: LLCS 860-88954/6  
Matrix: Water  
Analysis Batch: 88954

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.1166		mg/L		117	50 - 150
Nitrite as N	0.100	0.08181	J	mg/L		82	50 - 150

Lab Sample ID: 880-24278-1 MS  
Matrix: Water  
Analysis Batch: 88954

Client Sample ID: MW-1  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.223	H	10.0	9.670		mg/L		94	80 - 120
Nitrite as N	0.196	H	2.50	2.429		mg/L		89	80 - 120

Lab Sample ID: 880-24278-1 MSD  
Matrix: Water  
Analysis Batch: 88954

Client Sample ID: MW-1  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.223	H	10.0	9.651		mg/L		94	80 - 120	0	15
Nitrite as N	0.196	H	2.50	2.412		mg/L		89	80 - 120	1	15

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-88966/3  
Matrix: Water  
Analysis Batch: 88966

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<4.00	U	4.00	4.00 mg/L			02/06/23 11:05	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/06/23 11:05	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/06/23 11:05	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 860-88966/4  
 Matrix: Water  
 Analysis Batch: 88966

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	244.6		mg/L		98	85 - 115

Lab Sample ID: LCSD 860-88966/5  
 Matrix: Water  
 Analysis Batch: 88966

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	249.1		mg/L		100	85 - 115	2	20

#### Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 860-89018/15  
 Matrix: Water  
 Analysis Batch: 89018

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.495	U	5.00	0.495 mg/L			02/06/23 16:56	1

Lab Sample ID: LCS 860-89018/16  
 Matrix: Water  
 Analysis Batch: 89018

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	50.0	45.80		mg/L		92	80 - 120

Lab Sample ID: LCSD 860-89018/17  
 Matrix: Water  
 Analysis Batch: 89018

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	50.0	45.80		mg/L		92	80 - 120	0	20

Lab Sample ID: 880-24278-1 MS  
 Matrix: Water  
 Analysis Batch: 89018

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	<0.495	U	50.0	45.80		mg/L		92	80 - 120

Lab Sample ID: 880-24278-1 MSD  
 Matrix: Water  
 Analysis Batch: 89018

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<0.495	U	50.0	45.80		mg/L		92	80 - 120	0	20

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### QC Association Summary

Client: Ensolium  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### GC/MS VOA

##### Analysis Batch: 88856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	8260C	
880-24278-2	MW-2	Total/NA	Water	8260C	
MB 860-88856/12	Method Blank	Total/NA	Water	8260C	
LCS 860-88856/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-88856/4	Lab Control Sample Dup	Total/NA	Water	8260C	
880-24278-1 MS	MW-1	Total/NA	Water	8260C	

#### GC Semi VOA

##### Analysis Batch: 80443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	8015 NM	
880-24278-2	MW-2	Total/NA	Water	8015 NM	

##### Analysis Batch: 88891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-88947/1-A	Method Blank	Total/NA	Water	8015B NM	88947
LCS 860-88947/2-A	Lab Control Sample	Total/NA	Water	8015B NM	88947
LCSD 860-88947/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	88947

##### Analysis Batch: 88893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	8015B NM	88947

##### Prep Batch: 88947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	8015NM Aq Prep	
880-24278-2	MW-2	Total/NA	Water	8015NM Aq Prep	
MB 860-88947/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 860-88947/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 860-88947/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	

##### Analysis Batch: 89066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-2	MW-2	Total/NA	Water	8015B NM	88947

#### HPLC/IC

##### Analysis Batch: 88953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	300.0	
880-24278-2	MW-2	Total/NA	Water	300.0	
MB 860-88953/3	Method Blank	Total/NA	Water	300.0	
LCS 860-88953/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-88953/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-88953/7	Lab Control Sample	Total/NA	Water	300.0	
880-24278-1 MS	MW-1	Total/NA	Water	300.0	
880-24278-1 MSD	MW-1	Total/NA	Water	300.0	

##### Analysis Batch: 88954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	300.0	

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### QC Association Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### HPLC/IC (Continued)

##### Analysis Batch: 88954 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-2	MW-2	Total/NA	Water	300.0	
MB 860-88954/3	Method Blank	Total/NA	Water	300.0	
LCS 860-88954/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-88954/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-88954/6	Lab Control Sample	Total/NA	Water	300.0	
880-24278-1 MS	MW-1	Total/NA	Water	300.0	
880-24278-1 MSD	MW-1	Total/NA	Water	300.0	

#### General Chemistry

##### Analysis Batch: 88966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	SM 2320B	
880-24278-2	MW-2	Total/NA	Water	SM 2320B	
MB 860-88966/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-88966/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-88966/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

##### Analysis Batch: 88983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	SM 4500 H+ B	
880-24278-2	MW-2	Total/NA	Water	SM 4500 H+ B	

##### Analysis Batch: 89018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	SM 4500 S2 F	
880-24278-2	MW-2	Total/NA	Water	SM 4500 S2 F	
MB 860-89018/15	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 860-89018/16	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
LCSD 860-89018/17	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 F	
880-24278-1 MS	MW-1	Total/NA	Water	SM 4500 S2 F	
880-24278-1 MSD	MW-1	Total/NA	Water	SM 4500 S2 F	

##### Analysis Batch: 89447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24278-1	MW-1	Total/NA	Water	SM 4500 CO2 D	
880-24278-2	MW-2	Total/NA	Water	SM 4500 CO2 D	

### Lab Chronicle

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24278-1**

Date Collected: 02/02/23 12:40

Matrix: Water

Date Received: 02/02/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	88856	NA	EET HOU	02/06/23 12:42
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/06/23 12:25
Total/NA	Prep	8015NM Aq Prep			88947	SAR	EET HOU	02/06/23 12:25
Total/NA	Analysis	8015B NM		1	88893	SAR	EET HOU	02/06/23 12:59
Total/NA	Analysis	300.0		1	88953	A1S	EET HOU	02/06/23 22:23
Total/NA	Analysis	300.0		1	88954	A1S	EET HOU	02/06/23 22:23
Total/NA	Analysis	SM 2320B		1	88966	TL	EET HOU	02/06/23 13:07
Total/NA	Analysis	SM 4500 CO2 D		1	89447	SC	EET HOU	02/09/23 10:21
Total/NA	Analysis	SM 4500 H+ B		1	88983	TL	EET HOU	02/06/23 14:48
Total/NA	Analysis	SM 4500 S2 F		1	89018	SCI	EET HOU	02/06/23 16:56

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24278-2**

Date Collected: 02/02/23 13:40

Matrix: Water

Date Received: 02/02/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	88856	NA	EET HOU	02/06/23 13:02
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/06/23 12:25
Total/NA	Prep	8015NM Aq Prep			88947	SAR	EET HOU	02/07/23 11:33
Total/NA	Analysis	8015B NM		1	89066	SAR	EET HOU	02/07/23 11:45
Total/NA	Analysis	300.0		1	88953	A1S	EET HOU	02/07/23 01:01
Total/NA	Analysis	300.0		1	88954	A1S	EET HOU	02/07/23 01:01
Total/NA	Analysis	SM 2320B		1	88966	TL	EET HOU	02/06/23 13:22
Total/NA	Analysis	SM 4500 CO2 D		1	89447	SC	EET HOU	02/09/23 10:22
Total/NA	Analysis	SM 4500 H+ B		1	88983	TL	EET HOU	02/06/23 14:47
Total/NA	Analysis	SM 4500 S2 F		1	89018	SCI	EET HOU	02/06/23 16:56

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

### Accreditation/Certification Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
8015 NM		Water	Total TPH
8015B NM	8015NM Aq Prep	Water	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Aq Prep	Water	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Aq Prep	Water	Oil Range Organics (Over C28-C36)
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 4500 CO2 D		Water	Carbon dioxide
SM 4500 CO2 D		Water	Carbon Dioxide, Free
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 4500 CO2 D	Carbon Dioxide and Forms of Alkalinity by Calculation	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 4500 S2 F	Sulfide, Total	SM	EET HOU
5030C	Purge and Trap	SW846	EET HOU
8015NM Aq Prep	Microextraction	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24278-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-24278-1	MW-1	Water	02/02/23 12:40	02/02/23 16:20
880-24278-2	MW-2	Water	02/02/23 13:40	02/02/23 16:20

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Houston TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296  
Hobbs NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

Chain of Custody

Work Order No: 24278

Project Manager: Beaux Jennings  
Company Name: Ensolum LLC  
Address: 601 Marrenfield #400  
City, State ZIP: Midland TX 79701  
Phone: 432-230-3344  
Email: bjennings@ensolum.com  
Bill to (if different):  
Company Name:  
Address:  
City, State ZIP:  
Turn Around: Routine  Rush 24 Hr   
Due Date:  
Analyses Requested:  
Program: UST/PST  PRP  Brownfields  RRC  Superfund   
State of Project:  
Reporting Level: I  Level II  Level III  PST/UST  TRRP  Level IV   
Deliverables: EDD  ADAPT  Other

Project Name: South Hobbs  
Project Number: 03B1417002  
P.O. Number: 03B1417002  
Sampler's Name: Shane Diller  
Temp Blank: Yes  No   
Temperature (°C): 14.13  
Received Intact: Yes  No   
Cooler Custody Seals: Yes  No   
Sample Custody Seals: Yes  No   
Thermometer ID: JPS  
Correction Factor: -0.5  
Total Containers: 7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Dissolved Carbon Dioxide 4500 CO2 c	Dissolved Sulfide SW-846 #376.2	VOC SW-846 #8260	TPH EPA Method #8015	Chloride EPA Method #846 300	pH EPA SW-846 Method 150.1	Work Order Notes
MW-1	GW	2-2-23	1240	-	7	X	X	X	X	X	X	
MW-2	GW	2-2-23	1340	-	7	X	X	X	X	X	X	



880-24278 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Received by: (Signature)  
Date/Time: 2/2/23  
Relinquished by: (Signature) Received by: (Signature)  
Date/Time: 2/2/23  
Relinquished by: (Signature) Received by: (Signature)  
Date/Time: 2/2/23





### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24278-1

**Login Number: 24278**

**List Number: 1**

**Creator: Rodriguez, Leticia**

**List Source: Eurofins Midland**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24278-1

Login Number: 24278

List Source: Eurofins Houston

List Number: 2

List Creation: 02/05/23 03:33 PM

Creator: Pena, Jesiel

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701

Generated 2/15/2023 9:43:07 AM

## JOB DESCRIPTION

South Hobbs - 03B1417002  
South Hobbs

## JOB NUMBER

880-24493-1

Eurofins Midland  
1211 W. Florida Ave  
Midland TX 79701



# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



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2/15/2023 9:43:07 AM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Laboratory Job ID: 880-24493-1

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## Definitions/Glossary

Client: Ensolum

Job ID: 880-24493-1

Project/Site: South Hobbs - 03B1417002

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

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

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### Definitions/Glossary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

#### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



## Case Narrative

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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**Job ID: 880-24493-1**

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**Laboratory: Eurofins Midland****Narrative****Job Narrative  
880-24493-1****Receipt**

The samples were received on 2/8/2023 3:36 PM. 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 0.2°C

**GC/MS VOA**

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 860-89498 recovered outside control limits for the following analyte(s): Dichloro difluoromethane. Dichloro difluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified. Note, The continuing calibration verification was within control limits. And the associated samples were not detected (ND).

Method 8260C: The matrix spike (MS) recoveries for analytical batch 860-89498 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 860-89498 recovered outside control limits for the following analytes: Naphthalene. These analytes were biased high in the LCSD and were not detected in the associated samples; 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.

**GC Semi VOA**

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

**HPLC/IC**

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-89513 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 300\_ORGFM\_28D: The method blank for analytical batch 860-89513 contained Sulfate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300\_ORGFM\_28D: The method blank for analytical batch 860-89513 contained Sulfate above the method detection limit (MDL) . Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 300\_ORGFMS: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-89514 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria..

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

**General Chemistry**

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

### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

Client Sample ID: MW-1

Lab Sample ID: 880-24493-1

Date Collected: 02/08/23 12:05

Matrix: Water

Date Received: 02/08/23 15:36

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/09/23 21:10	1
Bromobenzene	<0.000665	U F1	0.00100	0.000665 mg/L			02/09/23 21:10	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/09/23 21:10	1
Bromodichloromethane	<0.000552	U F1	0.00100	0.000552 mg/L			02/09/23 21:10	1
Bromoform	<0.000633	U F1	0.00500	0.000633 mg/L			02/09/23 21:10	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/09/23 21:10	1
2-Butanone	<0.00828	U F1	0.0500	0.00828 mg/L			02/09/23 21:10	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/09/23 21:10	1
Chlorobenzene	<0.000530	U F1	0.00100	0.000530 mg/L			02/09/23 21:10	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/09/23 21:10	1
Chloroform	<0.000643	U F1	0.00100	0.000643 mg/L			02/09/23 21:10	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/09/23 21:10	1
2-Chlorotoluene	<0.00118	U F1	0.00200	0.00118 mg/L			02/09/23 21:10	1
4-Chlorotoluene	<0.000472	U F1	0.00100	0.000472 mg/L			02/09/23 21:10	1
cis-1,2-Dichloroethene	<0.000714	U F1	0.00100	0.000714 mg/L			02/09/23 21:10	1
cis-1,3-Dichloropropene	<0.00107	U F1	0.00500	0.00107 mg/L			02/09/23 21:10	1
Dibromochloromethane	<0.000547	U F1	0.00500	0.000547 mg/L			02/09/23 21:10	1
1,2-Dibromo-3-Chloropropane	<0.00127	U F1	0.00500	0.00127 mg/L			02/09/23 21:10	1
1,2-Dibromoethane	<0.000999	U F1	0.00500	0.000999 mg/L			02/09/23 21:10	1
1,2-Dichlorobenzene	<0.000509	U F1	0.00100	0.000509 mg/L			02/09/23 21:10	1
1,3-Dichlorobenzene	<0.000513	U F1	0.00100	0.000513 mg/L			02/09/23 21:10	1
1,4-Dichlorobenzene	<0.000513	U F1	0.00100	0.000513 mg/L			02/09/23 21:10	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/09/23 21:10	1
1,1-Dichloroethane	<0.000635	U F1	0.00100	0.000635 mg/L			02/09/23 21:10	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/09/23 21:10	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/09/23 21:10	1
1,2-Dichloropropane	<0.000667	U F1	0.00500	0.000667 mg/L			02/09/23 21:10	1
1,3-Dichloropropane	<0.000514	U F1	0.00500	0.000514 mg/L			02/09/23 21:10	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/09/23 21:10	1
1,1-Dichloropropene	<0.00160	U F1	0.00500	0.00160 mg/L			02/09/23 21:10	1
Ethylbenzene	<0.000411	U F1	0.00100	0.000411 mg/L			02/09/23 21:10	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/09/23 21:10	1
Isopropylbenzene	<0.000613	U F1	0.00100	0.000613 mg/L			02/09/23 21:10	1
Methylene Chloride	<0.00173	U F1	0.00500	0.00173 mg/L			02/09/23 21:10	1
m,p-Xylenes	<0.00124	U F1	0.0100	0.00124 mg/L			02/09/23 21:10	1
MTBE	<0.00139	U F1	0.00500	0.00139 mg/L			02/09/23 21:10	1
Naphthalene	<0.00135	U *+ F1	0.0100	0.00135 mg/L			02/09/23 21:10	1
n-Butylbenzene	<0.000644	U F1	0.00100	0.000644 mg/L			02/09/23 21:10	1
N-Propylbenzene	<0.000498	U F1	0.00100	0.000498 mg/L			02/09/23 21:10	1
o-Xylene	<0.000551	U F1	0.00100	0.000551 mg/L			02/09/23 21:10	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U F1	0.00100	0.000919 mg/L			02/09/23 21:10	1
sec-Butylbenzene	<0.000468	U F1	0.00100	0.000468 mg/L			02/09/23 21:10	1
Styrene	<0.000655	U F1	0.00100	0.000655 mg/L			02/09/23 21:10	1
tert-Butylbenzene	<0.000442	U F1	0.00100	0.000442 mg/L			02/09/23 21:10	1
1,1,1,2-Tetrachloroethane	<0.000644	U F1	0.00100	0.000644 mg/L			02/09/23 21:10	1
1,1,2,2-Tetrachloroethane	<0.000470	U F1	0.00100	0.000470 mg/L			02/09/23 21:10	1
Tetrachloroethene	<0.000801	U F1	0.00100	0.000801 mg/L			02/09/23 21:10	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/09/23 21:10	1
trans-1,2-Dichloroethene	<0.000945	U F1	0.00100	0.000945 mg/L			02/09/23 21:10	1

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### Client Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

Client Sample ID: MW-1

Lab Sample ID: 880-24493-1

Date Collected: 02/08/23 12:05

Matrix: Water

Date Received: 02/08/23 15:36

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U F1	0.00500	0.00127 mg/L			02/09/23 21:10	1
1,2,3-Trichlorobenzene	<0.00217	U F1	0.00500	0.00217 mg/L			02/09/23 21:10	1
1,2,4-Trichlorobenzene	<0.00175	U F1	0.00500	0.00175 mg/L			02/09/23 21:10	1
1,1,1-Trichloroethane	<0.00169	U F1	0.00500	0.00169 mg/L			02/09/23 21:10	1
1,1,2-Trichloroethane	<0.000511	U F1	0.00100	0.000511 mg/L			02/09/23 21:10	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/09/23 21:10	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/09/23 21:10	1
1,2,3-Trichloropropane	<0.000490	U F1	0.00100	0.000490 mg/L			02/09/23 21:10	1
1,2,4-Trimethylbenzene	<0.000417	U F1	0.00100	0.000417 mg/L			02/09/23 21:10	1
1,3,5-Trimethylbenzene	<0.000456	U F1	0.00100	0.000456 mg/L			02/09/23 21:10	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/09/23 21:10	1
Xylenes, Total	<0.00124	U F1	0.0100	0.00124 mg/L			02/09/23 21:10	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	97		74 - 124				02/09/23 21:10	1
Dibromofluoromethane (Surr)	98		75 - 131				02/09/23 21:10	1
1,2-Dichloroethane-d4 (Surr)	93		63 - 144				02/09/23 21:10	1
Toluene-d8 (Surr)	101		80 - 117				02/09/23 21:10	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<0.969	U	4.90	0.969 mg/L			02/10/23 17:56	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.969	U	4.90	0.969 mg/L		02/10/23 11:04	02/10/23 13:52	1
Diesel Range Organics (Over C10-C28)	<0.969	U	4.90	0.969 mg/L		02/10/23 11:04	02/10/23 13:52	1
Oil Range Organics (Over C28-C36)	<0.935	U	4.90	0.935 mg/L		02/10/23 11:04	02/10/23 13:52	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1-Chlorooctane	94		70 - 135			02/10/23 11:04	02/10/23 13:52	1
o-Terphenyl	108		70 - 135			02/10/23 11:04	02/10/23 13:52	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	84.5		0.500	0.200 mg/L			02/09/23 16:44	1
Nitrate as N	0.0542	J F1	0.100	0.0391 mg/L			02/09/23 16:44	1
Fluoride	0.607	F1	0.500	0.100 mg/L			02/09/23 16:44	1
Nitrite as N	0.133	F1	0.100	0.0293 mg/L			02/09/23 16:44	1
Sulfate	54.7	B	0.500	0.109 mg/L			02/09/23 16:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	360		4.00	4.00 mg/L			02/10/23 12:56	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	360		4.00	4.00 mg/L			02/10/23 12:56	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/10/23 12:56	1
Carbon dioxide (SM 4500 CO2 D)	362			mg/L			02/15/23 10:33	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24493-1**

Date Collected: 02/08/23 12:05

Matrix: Water

Date Received: 02/08/23 15:36

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free (SM 4500 CO2 D)	45.3			mg/L			02/15/23 10:33	1
pH (SM 4500 H+ B)	7.2	HF		SU			02/10/23 13:12	1
Temperature (SM 4500 H+ B)	16.9	HF		Degrees C			02/10/23 13:12	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495 mg/L			02/10/23 10:06	1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24493-2**

Date Collected: 02/08/23 12:55

Matrix: Water

Date Received: 02/08/23 15:36

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0165		0.00100	0.000533 mg/L			02/09/23 21:30	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/09/23 21:30	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/09/23 21:30	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/09/23 21:30	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/09/23 21:30	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/09/23 21:30	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/09/23 21:30	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/09/23 21:30	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/09/23 21:30	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/09/23 21:30	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/09/23 21:30	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/09/23 21:30	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/09/23 21:30	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/09/23 21:30	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/09/23 21:30	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/09/23 21:30	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/09/23 21:30	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/09/23 21:30	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/09/23 21:30	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/09/23 21:30	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/09/23 21:30	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/09/23 21:30	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/09/23 21:30	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/09/23 21:30	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/09/23 21:30	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/09/23 21:30	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/09/23 21:30	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/09/23 21:30	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/09/23 21:30	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/09/23 21:30	1
Ethylbenzene	0.0187		0.00100	0.000411 mg/L			02/09/23 21:30	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/09/23 21:30	1
Isopropylbenzene	0.00892		0.00100	0.000613 mg/L			02/09/23 21:30	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/09/23 21:30	1
m,p-Xylenes	0.0787		0.0100	0.00124 mg/L			02/09/23 21:30	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/09/23 21:30	1
Naphthalene	<0.00135	U **	0.0100	0.00135 mg/L			02/09/23 21:30	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/09/23 21:30	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

Client Sample ID: MW-2

Lab Sample ID: 880-24493-2

Date Collected: 02/08/23 12:55

Matrix: Water

Date Received: 02/08/23 15:36

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	0.00274		0.00100	0.000498 mg/L			02/09/23 21:30	1
o-Xylene	0.0119		0.00100	0.000551 mg/L			02/09/23 21:30	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/09/23 21:30	1
sec-Butylbenzene	0.000970	J	0.00100	0.000468 mg/L			02/09/23 21:30	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/09/23 21:30	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/09/23 21:30	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/09/23 21:30	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/09/23 21:30	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/09/23 21:30	1
Toluene	0.00284		0.00100	0.000475 mg/L			02/09/23 21:30	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/09/23 21:30	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/09/23 21:30	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/09/23 21:30	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/09/23 21:30	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/09/23 21:30	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/09/23 21:30	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/09/23 21:30	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/09/23 21:30	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/09/23 21:30	1
1,2,4-Trimethylbenzene	0.0232		0.00100	0.000417 mg/L			02/09/23 21:30	1
1,3,5-Trimethylbenzene	0.00621		0.00100	0.000456 mg/L			02/09/23 21:30	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/09/23 21:30	1
Xylenes, Total	0.0906		0.0100	0.00124 mg/L			02/09/23 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		74 - 124		02/09/23 21:30	1
Dibromofluoromethane (Surr)	94		75 - 131		02/09/23 21:30	1
1,2-Dichloroethane-d4 (Surr)	88		63 - 144		02/09/23 21:30	1
Toluene-d8 (Surr)	101		80 - 117		02/09/23 21:30	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	0.984	J	4.55	0.898 mg/L			02/10/23 17:56	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	0.984	J	4.55	0.898 mg/L		02/10/23 11:04	02/10/23 14:11	1
Diesel Range Organics (Over C10-C28)	<0.898	U	4.55	0.898 mg/L		02/10/23 11:04	02/10/23 14:11	1
Oil Range Organics (Over C28-C36)	<0.867	U	4.55	0.867 mg/L		02/10/23 11:04	02/10/23 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	72		70 - 135	02/10/23 11:04	02/10/23 14:11	1
o-Terphenyl	85		70 - 135	02/10/23 11:04	02/10/23 14:11	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89.2		0.500	0.200 mg/L			02/09/23 23:33	1
Nitrate as N	0.180		0.100	0.0391 mg/L			02/09/23 23:33	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/09/23 23:33	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24493-2**

Date Collected: 02/08/23 12:55

Matrix: Water

Date Received: 02/08/23 15:36

**Method: EPA 300.0 - Anions, Ion Chromatography (Continued)**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.392		0.100	0.0293	mg/L			02/09/23 23:33	1
Sulfate	92.3	B	0.500	0.109	mg/L			02/09/23 23:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	1300		4.00	4.00	mg/L			02/10/23 13:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	1300		4.00	4.00	mg/L			02/10/23 13:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00	mg/L			02/10/23 13:12	1
Carbon dioxide (SM 4500 CO2 D)	2450				mg/L			02/15/23 10:33	1
Carbon Dioxide, Free (SM 4500 CO2 D)	1300				mg/L			02/15/23 10:33	1
pH (SM 4500 H+ B)	6.3	HF			SU			02/10/23 13:14	1
Temperature (SM 4500 H+ B)	16.7	HF			Degrees C			02/10/23 13:14	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495	mg/L			02/10/23 10:06	1

## Surrogate Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-24493-1	MW-1	97	98	93	101
880-24493-1 MS	MW-1	96	97	86	97
880-24493-2	MW-2	95	94	88	101
LCS 860-89498/3	Lab Control Sample	94	98	87	100
LCSD 860-89498/4	Lab Control Sample Dup	97	98	85	99
MB 860-89498/9	Method Blank	98	99	90	99

## Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-135)	OTPH1 (70-135)
880-24493-1	MW-1	94	108
880-24493-2	MW-2	72	85
LCS 860-89658/2-A	Lab Control Sample	90	112
LCSD 860-89658/3-A	Lab Control Sample Dup	107	114
MB 860-89658/1-A	Method Blank	98	112

## Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

## QC Sample Results

Client: Ensolum

Job ID: 880-24493-1

Project/Site: South Hobbs - 03B1417002

## Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-89498/9

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 89498

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.000533	U	0.00100	0.000533	mg/L		02/09/23 20:49	1
Bromobenzene	<0.000665	U	0.00100	0.000665	mg/L		02/09/23 20:49	1
Bromochloromethane	<0.000657	U	0.00100	0.000657	mg/L		02/09/23 20:49	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552	mg/L		02/09/23 20:49	1
Bromoform	<0.000633	U	0.00500	0.000633	mg/L		02/09/23 20:49	1
Bromomethane	<0.00142	U	0.00500	0.00142	mg/L		02/09/23 20:49	1
2-Butanone	<0.00828	U	0.0500	0.00828	mg/L		02/09/23 20:49	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896	mg/L		02/09/23 20:49	1
Chlorobenzene	<0.000530	U	0.00100	0.000530	mg/L		02/09/23 20:49	1
Chloroethane	<0.00198	U	0.0100	0.00198	mg/L		02/09/23 20:49	1
Chloroform	<0.000643	U	0.00100	0.000643	mg/L		02/09/23 20:49	1
Chloromethane	<0.00204	U	0.0100	0.00204	mg/L		02/09/23 20:49	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118	mg/L		02/09/23 20:49	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472	mg/L		02/09/23 20:49	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714	mg/L		02/09/23 20:49	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107	mg/L		02/09/23 20:49	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547	mg/L		02/09/23 20:49	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127	mg/L		02/09/23 20:49	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999	mg/L		02/09/23 20:49	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509	mg/L		02/09/23 20:49	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/09/23 20:49	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513	mg/L		02/09/23 20:49	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919	mg/L		02/09/23 20:49	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635	mg/L		02/09/23 20:49	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590	mg/L		02/09/23 20:49	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738	mg/L		02/09/23 20:49	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667	mg/L		02/09/23 20:49	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514	mg/L		02/09/23 20:49	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780	mg/L		02/09/23 20:49	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160	mg/L		02/09/23 20:49	1
Ethylbenzene	<0.000411	U	0.00100	0.000411	mg/L		02/09/23 20:49	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126	mg/L		02/09/23 20:49	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613	mg/L		02/09/23 20:49	1
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L		02/09/23 20:49	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124	mg/L		02/09/23 20:49	1
MTBE	<0.00139	U	0.00500	0.00139	mg/L		02/09/23 20:49	1
Naphthalene	<0.00135	U	0.0100	0.00135	mg/L		02/09/23 20:49	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644	mg/L		02/09/23 20:49	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498	mg/L		02/09/23 20:49	1
o-Xylene	<0.000551	U	0.00100	0.000551	mg/L		02/09/23 20:49	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919	mg/L		02/09/23 20:49	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468	mg/L		02/09/23 20:49	1
Styrene	<0.000655	U	0.00100	0.000655	mg/L		02/09/23 20:49	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442	mg/L		02/09/23 20:49	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644	mg/L		02/09/23 20:49	1
1,1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470	mg/L		02/09/23 20:49	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801	mg/L		02/09/23 20:49	1
Toluene	<0.000475	U	0.00100	0.000475	mg/L		02/09/23 20:49	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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

Lab Sample ID: MB 860-89498/9  
 Matrix: Water  
 Analysis Batch: 89498

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/09/23 20:49	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/09/23 20:49	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/09/23 20:49	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/09/23 20:49	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/09/23 20:49	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/09/23 20:49	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/09/23 20:49	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/09/23 20:49	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/09/23 20:49	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/09/23 20:49	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/09/23 20:49	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/09/23 20:49	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/09/23 20:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		74 - 124		02/09/23 20:49	1
Dibromofluoromethane (Surr)	99		75 - 131		02/09/23 20:49	1
1,2-Dichloroethane-d4 (Surr)	90		63 - 144		02/09/23 20:49	1
Toluene-d8 (Surr)	99		80 - 117		02/09/23 20:49	1

Lab Sample ID: LCS 860-89498/3  
 Matrix: Water  
 Analysis Batch: 89498

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0500	0.04887		mg/L		98	75 - 125
Bromobenzene	0.0500	0.04933		mg/L		99	75 - 125
Bromochloromethane	0.0500	0.04913		mg/L		98	60 - 140
Bromodichloromethane	0.0500	0.04369		mg/L		87	75 - 125
Bromoform	0.0500	0.04483		mg/L		90	70 - 130
Bromomethane	0.0500	0.04670		mg/L		93	60 - 140
2-Butanone	0.250	0.2765		mg/L		111	60 - 140
Carbon tetrachloride	0.0500	0.04201		mg/L		84	70 - 130
Chlorobenzene	0.0500	0.04956		mg/L		99	65 - 135
Chloroethane	0.0500	0.05400		mg/L		108	60 - 140
Chloroform	0.0500	0.04640		mg/L		93	70 - 121
Chloromethane	0.0500	0.03765		mg/L		75	60 - 140
2-Chlorotoluene	0.0500	0.04717		mg/L		94	73 - 125
4-Chlorotoluene	0.0500	0.04725		mg/L		94	74 - 125
cis-1,2-Dichloroethene	0.0500	0.04753		mg/L		95	75 - 125
cis-1,3-Dichloropropene	0.0500	0.04781		mg/L		96	74 - 125
Dibromochloromethane	0.0500	0.04599		mg/L		92	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.04928		mg/L		99	59 - 125
1,2-Dibromoethane	0.0500	0.04993		mg/L		100	73 - 125
1,2-Dichlorobenzene	0.0500	0.04923		mg/L		98	75 - 125
1,3-Dichlorobenzene	0.0500	0.04966		mg/L		99	75 - 125
1,4-Dichlorobenzene	0.0500	0.04811		mg/L		96	75 - 125
Dichlorodifluoromethane	0.0500	0.03172	*	mg/L		63	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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

Lab Sample ID: LCS 860-89498/3

Matrix: Water

Analysis Batch: 89498

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	0.0500	0.05248		mg/L		105	70 - 130
1,2-Dichloroethane	0.0500	0.04316		mg/L		86	72 - 130
1,1-Dichloroethene	0.0500	0.05254		mg/L		105	50 - 150
1,2-Dichloropropane	0.0500	0.04898		mg/L		98	74 - 125
1,3-Dichloropropane	0.0500	0.04827		mg/L		97	75 - 125
2,2-Dichloropropane	0.0500	0.04275		mg/L		85	75 - 125
1,1-Dichloropropene	0.0500	0.04748		mg/L		95	75 - 125
Ethylbenzene	0.0500	0.04915		mg/L		98	75 - 125
Hexachlorobutadiene	0.0500	0.04364		mg/L		87	75 - 125
Isopropylbenzene	0.0500	0.05050		mg/L		101	75 - 125
Methylene Chloride	0.0500	0.04756		mg/L		95	75 - 125
m,p-Xylenes	0.0500	0.05086		mg/L		102	75 - 125
MTBE	0.0500	0.04909		mg/L		98	65 - 135
Naphthalene	0.0500	0.05787		mg/L		116	70 - 130
n-Butylbenzene	0.0500	0.04859		mg/L		97	75 - 125
N-Propylbenzene	0.0500	0.04956		mg/L		99	75 - 125
o-Xylene	0.0500	0.05007		mg/L		100	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05085		mg/L		102	75 - 125
sec-Butylbenzene	0.0500	0.05026		mg/L		101	75 - 125
Styrene	0.0500	0.05253		mg/L		105	75 - 125
tert-Butylbenzene	0.0500	0.04920		mg/L		98	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.04539		mg/L		91	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.04906		mg/L		98	74 - 125
Tetrachloroethene	0.0500	0.04864		mg/L		97	71 - 125
Toluene	0.0500	0.04892		mg/L		98	70 - 130
trans-1,2-Dichloroethene	0.0500	0.05280		mg/L		106	75 - 125
trans-1,3-Dichloropropene	0.0500	0.04648		mg/L		93	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05776		mg/L		116	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05439		mg/L		109	75 - 135
1,1,1-Trichloroethane	0.0500	0.04294		mg/L		86	70 - 130
1,1,2-Trichloroethane	0.0500	0.04966		mg/L		99	70 - 130
Trichloroethene	0.0500	0.04976		mg/L		100	75 - 135
Trichlorofluoromethane	0.0500	0.04446		mg/L		89	60 - 140
1,2,3-Trichloropropane	0.0500	0.05085		mg/L		102	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05058		mg/L		101	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.04960		mg/L		99	60 - 140
Vinyl chloride	0.0500	0.04740		mg/L		95	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	94		74 - 124
Dibromofluoromethane (Surr)	98		75 - 131
1,2-Dichloroethane-d4 (Surr)	87		63 - 144
Toluene-d8 (Surr)	100		80 - 117

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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

Lab Sample ID: LCSD 860-89498/4

Matrix: Water

Analysis Batch: 89498

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Benzene	0.0500	0.04798		mg/L		96	75 - 125	2	25
Bromobenzene	0.0500	0.04942		mg/L		99	75 - 125	0	25
Bromochloromethane	0.0500	0.04911		mg/L		98	60 - 140	0	25
Bromodichloromethane	0.0500	0.04360		mg/L		87	75 - 125	0	25
Bromoform	0.0500	0.04446		mg/L		89	70 - 130	1	25
Bromomethane	0.0500	0.04863		mg/L		97	60 - 140	4	25
2-Butanone	0.250	0.2717		mg/L		109	60 - 140	2	25
Carbon tetrachloride	0.0500	0.04390		mg/L		88	70 - 130	4	25
Chlorobenzene	0.0500	0.04933		mg/L		99	65 - 135	0	25
Chloroethane	0.0500	0.05594		mg/L		112	60 - 140	4	25
Chloroform	0.0500	0.04582		mg/L		92	70 - 121	1	25
Chloromethane	0.0500	0.03870		mg/L		77	60 - 140	3	25
2-Chlorotoluene	0.0500	0.04847		mg/L		97	73 - 125	3	25
4-Chlorotoluene	0.0500	0.04882		mg/L		98	74 - 125	3	25
cis-1,2-Dichloroethene	0.0500	0.04720		mg/L		94	75 - 125	1	25
cis-1,3-Dichloropropene	0.0500	0.04660		mg/L		93	74 - 125	3	25
Dibromochloromethane	0.0500	0.04374		mg/L		87	73 - 125	5	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05298		mg/L		106	59 - 125	7	25
1,2-Dibromoethane	0.0500	0.04807		mg/L		96	73 - 125	4	25
1,2-Dichlorobenzene	0.0500	0.05056		mg/L		101	75 - 125	3	25
1,3-Dichlorobenzene	0.0500	0.05056		mg/L		101	75 - 125	2	25
1,4-Dichlorobenzene	0.0500	0.04878		mg/L		98	75 - 125	1	25
Dichlorodifluoromethane	0.0500	0.03431	*-	mg/L		69	70 - 130	8	25
1,1-Dichloroethane	0.0500	0.05067		mg/L		101	70 - 130	4	25
1,2-Dichloroethane	0.0500	0.04118		mg/L		82	72 - 130	5	25
1,1-Dichloroethene	0.0500	0.05363		mg/L		107	50 - 150	2	25
1,2-Dichloropropane	0.0500	0.04755		mg/L		95	74 - 125	3	25
1,3-Dichloropropane	0.0500	0.04675		mg/L		93	75 - 125	3	25
2,2-Dichloropropane	0.0500	0.04308		mg/L		86	75 - 125	1	25
1,1-Dichloropropene	0.0500	0.04964		mg/L		99	75 - 125	4	25
Ethylbenzene	0.0500	0.05007		mg/L		100	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.04826		mg/L		97	75 - 125	10	25
Isopropylbenzene	0.0500	0.05212		mg/L		104	75 - 125	3	25
Methylene Chloride	0.0500	0.04522		mg/L		90	75 - 125	5	25
m,p-Xylenes	0.0500	0.05046		mg/L		101	75 - 125	1	25
MTBE	0.0500	0.04802		mg/L		96	65 - 135	2	25
Naphthalene	0.0500	0.06591	*+	mg/L		132	70 - 130	13	25
n-Butylbenzene	0.0500	0.05224		mg/L		104	75 - 125	7	25
N-Propylbenzene	0.0500	0.05202		mg/L		104	75 - 125	5	25
o-Xylene	0.0500	0.04984		mg/L		100	75 - 125	0	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.05427		mg/L		109	75 - 125	6	25
sec-Butylbenzene	0.0500	0.05399		mg/L		108	75 - 125	7	25
Styrene	0.0500	0.05221		mg/L		104	75 - 125	1	25
tert-Butylbenzene	0.0500	0.05257		mg/L		105	75 - 125	7	25
1,1,1,2-Tetrachloroethane	0.0500	0.04513		mg/L		90	72 - 125	1	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.04860		mg/L		97	74 - 125	1	25
Tetrachloroethene	0.0500	0.05021		mg/L		100	71 - 125	3	25
Toluene	0.0500	0.04937		mg/L		99	70 - 130	1	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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

Lab Sample ID: LCSD 860-89498/4

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 89498

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.0500	0.05293		mg/L		106	75 - 125	0	25
trans-1,3-Dichloropropene	0.0500	0.04595		mg/L		92	66 - 125	1	25
1,2,3-Trichlorobenzene	0.0500	0.06408		mg/L		128	75 - 137	10	25
1,2,4-Trichlorobenzene	0.0500	0.05849		mg/L		117	75 - 135	7	25
1,1,1-Trichloroethane	0.0500	0.04466		mg/L		89	70 - 130	4	25
1,1,2-Trichloroethane	0.0500	0.04767		mg/L		95	70 - 130	4	25
Trichloroethene	0.0500	0.05046		mg/L		101	75 - 135	1	25
Trichlorofluoromethane	0.0500	0.04666		mg/L		93	60 - 140	5	25
1,2,3-Trichloropropane	0.0500	0.04828		mg/L		97	75 - 125	5	25
1,2,4-Trimethylbenzene	0.0500	0.05157		mg/L		103	75 - 125	2	25
1,3,5-Trimethylbenzene	0.0500	0.05087		mg/L		102	60 - 140	3	25
Vinyl chloride	0.0500	0.05051		mg/L		101	60 - 140	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	97		74 - 124
Dibromofluoromethane (Surr)	98		75 - 131
1,2-Dichloroethane-d4 (Surr)	85		63 - 144
Toluene-d8 (Surr)	99		80 - 117

Lab Sample ID: 880-24493-1 MS

Client Sample ID: MW-1

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 89498

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000533	U	0.0500	0.06967		mg/L		139	66 - 142
Bromobenzene	<0.000665	U F1	0.0500	0.06879	F1	mg/L		138	75 - 125
Bromochloromethane	<0.000657	U	0.0500	0.06967		mg/L		139	60 - 140
Bromodichloromethane	<0.000552	U F1	0.0500	0.06396	F1	mg/L		128	75 - 125
Bromoform	<0.000633	U F1	0.0500	0.06355	F1	mg/L		127	75 - 125
Bromomethane	<0.00142	U	0.0500	0.05066		mg/L		101	60 - 140
2-Butanone	<0.00828	U F1	0.250	0.3816	F1	mg/L		153	60 - 140
Carbon tetrachloride	<0.000896	U	0.0500	0.06265		mg/L		125	62 - 125
Chlorobenzene	<0.000530	U F1	0.0500	0.06958	F1	mg/L		139	60 - 133
Chloroethane	<0.00198	U	0.0500	0.05726		mg/L		115	60 - 140
Chloroform	<0.000643	U F1	0.0500	0.06565	F1	mg/L		131	70 - 130
Chloromethane	<0.00204	U	0.0500	0.04001		mg/L		80	60 - 140
2-Chlorotoluene	<0.00118	U F1	0.0500	0.06575	F1	mg/L		132	73 - 125
4-Chlorotoluene	<0.000472	U F1	0.0500	0.06660	F1	mg/L		133	74 - 125
cis-1,2-Dichloroethene	<0.000714	U F1	0.0500	0.06868	F1	mg/L		137	75 - 125
cis-1,3-Dichloropropene	<0.00107	U F1	0.0500	0.06794	F1	mg/L		136	74 - 125
Dibromochloromethane	<0.000547	U F1	0.0500	0.06355	F1	mg/L		127	73 - 125
1,2-Dibromo-3-Chloropropane	<0.00127	U F1	0.0500	0.07601	F1	mg/L		152	59 - 125
1,2-Dibromoethane	<0.000999	U F1	0.0500	0.06829	F1	mg/L		137	73 - 125
1,2-Dichlorobenzene	<0.000509	U F1	0.0500	0.06919	F1	mg/L		138	75 - 125
1,3-Dichlorobenzene	<0.000513	U F1	0.0500	0.06960	F1	mg/L		139	75 - 125
1,4-Dichlorobenzene	<0.000513	U F1	0.0500	0.06854	F1	mg/L		137	75 - 125
Dichlorodifluoromethane	<0.000919	U *	0.0500	0.03925		mg/L		79	70 - 130
1,1-Dichloroethane	<0.000635	U F1	0.0500	0.07229	F1	mg/L		145	72 - 125

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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

Lab Sample ID: 880-24493-1 MS  
 Matrix: Water  
 Analysis Batch: 89498

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
1,2-Dichloroethane	<0.000590	U	0.0500	0.06097		mg/L		122	68 - 127
1,1-Dichloroethene	<0.000738	U	0.0500	0.07465		mg/L		149	59 - 172
1,2-Dichloropropane	<0.000667	U F1	0.0500	0.06847	F1	mg/L		137	74 - 125
1,3-Dichloropropane	<0.000514	U F1	0.0500	0.06674	F1	mg/L		133	75 - 125
2,2-Dichloropropane	<0.000780	U	0.0500	0.06209		mg/L		124	75 - 125
1,1-Dichloropropene	<0.00160	U F1	0.0500	0.07057	F1	mg/L		141	75 - 125
Ethylbenzene	<0.000411	U F1	0.0500	0.06945	F1	mg/L		139	75 - 125
Hexachlorobutadiene	<0.00126	U	0.0500	0.05681		mg/L		114	75 - 125
Isopropylbenzene	<0.000613	U F1	0.0500	0.07222	F1	mg/L		144	75 - 125
Methylene Chloride	<0.00173	U F1	0.0500	0.06593	F1	mg/L		132	75 - 125
m,p-Xylenes	<0.00124	U F1	0.0500	0.07110	F1	mg/L		142	75 - 125
MTBE	<0.00139	U F1	0.0500	0.06973	F1	mg/L		139	65 - 135
Naphthalene	<0.00135	U *+ F1	0.0500	0.09105	F1	mg/L		182	70 - 130
n-Butylbenzene	<0.000644	U F1	0.0500	0.06942	F1	mg/L		139	75 - 125
N-Propylbenzene	<0.000498	U F1	0.0500	0.07020	F1	mg/L		140	75 - 125
o-Xylene	<0.000551	U F1	0.0500	0.07115	F1	mg/L		142	75 - 125
p-Cymene (p-Isopropyltoluene)	<0.000919	U F1	0.0500	0.07225	F1	mg/L		145	75 - 125
sec-Butylbenzene	<0.000468	U F1	0.0500	0.07120	F1	mg/L		142	75 - 125
Styrene	<0.000655	U F1	0.0500	0.07389	F1	mg/L		148	75 - 125
tert-Butylbenzene	<0.000442	U F1	0.0500	0.06969	F1	mg/L		139	75 - 125
1,1,1,2-Tetrachloroethane	<0.000644	U F1	0.0500	0.06425	F1	mg/L		128	72 - 125
1,1,2,2-Tetrachloroethane	<0.000470	U F1	0.0500	0.07107	F1	mg/L		142	74 - 125
Tetrachloroethene	<0.000801	U F1	0.0500	0.06890	F1	mg/L		138	71 - 125
Toluene	<0.000475	U	0.0500	0.06885		mg/L		138	59 - 139
trans-1,2-Dichloroethene	<0.000945	U F1	0.0500	0.07422	F1	mg/L		148	75 - 125
trans-1,3-Dichloropropene	<0.00127	U F1	0.0500	0.06436	F1	mg/L		129	66 - 125
1,2,3-Trichlorobenzene	<0.00217	U F1	0.0500	0.08695	F1	mg/L		174	75 - 137
1,2,4-Trichlorobenzene	<0.00175	U F1	0.0500	0.07938	F1	mg/L		159	75 - 135
1,1,1-Trichloroethane	<0.00169	U F1	0.0500	0.06306	F1	mg/L		126	75 - 125
1,1,2-Trichloroethane	<0.000511	U F1	0.0500	0.06622	F1	mg/L		132	75 - 127
Trichloroethene	<0.000791	U	0.0500	0.06831		mg/L		137	62 - 137
Trichlorofluoromethane	<0.000638	U	0.0500	0.04765		mg/L		95	60 - 140
1,2,3-Trichloropropane	<0.000490	U F1	0.0500	0.07040	F1	mg/L		141	75 - 125
1,2,4-Trimethylbenzene	<0.000417	U F1	0.0500	0.07082	F1	mg/L		142	75 - 125
1,3,5-Trimethylbenzene	<0.000456	U F1	0.0500	0.06811	F1	mg/L		136	70 - 125
Vinyl chloride	<0.000638	U	0.0500	0.05233		mg/L		105	60 - 140

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	96		74 - 124
Dibromofluoromethane (Surr)	97		75 - 131
1,2-Dichloroethane-d4 (Surr)	86		63 - 144
Toluene-d8 (Surr)	97		80 - 117

### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 860-89658/1-A  
 Matrix: Water  
 Analysis Batch: 89648

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 89658

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<0.988	U	5.00	0.988 mg/L		02/10/23 11:04	02/10/23 13:32	1
Diesel Range Organics (Over C10-C28)	<0.988	U	5.00	0.988 mg/L		02/10/23 11:04	02/10/23 13:32	1
Oil Range Organics (Over C28-C36)	<0.954	U	5.00	0.954 mg/L		02/10/23 11:04	02/10/23 13:32	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	98		70 - 135	02/10/23 11:04	02/10/23 13:32	1
o-Terphenyl	112		70 - 135	02/10/23 11:04	02/10/23 13:32	1

Lab Sample ID: LCS 860-89658/2-A  
 Matrix: Water  
 Analysis Batch: 89648

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 89658

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	99.6	107.4		mg/L		108	70 - 135

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	90		70 - 135
o-Terphenyl	112		70 - 135

Lab Sample ID: LCSD 860-89658/3-A  
 Matrix: Water  
 Analysis Batch: 89648

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 89658

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	99.8	122.2		mg/L		122	70 - 135	3	35
Diesel Range Organics (Over C10-C28)	99.6	109.1		mg/L		110	70 - 135	2	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1-Chlorooctane	107		70 - 135
o-Terphenyl	114		70 - 135

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-89513/3  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<0.200	U	0.500	0.200 mg/L			02/09/23 15:37	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/09/23 15:37	1
Sulfate	0.2186	J	0.500	0.109 mg/L			02/09/23 15:37	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-89513/4  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chloride	10.0	10.14		mg/L		101	90 - 110
Fluoride	10.0	10.17		mg/L		102	90 - 110
Sulfate	10.0	10.13		mg/L		101	90 - 110

Lab Sample ID: LCSD 860-89513/5  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Chloride	10.0	10.19		mg/L		102	90 - 110	0	20
Fluoride	10.0	10.20		mg/L		102	90 - 110	0	20
Sulfate	10.0	10.13		mg/L		101	90 - 110	0	20

Lab Sample ID: LLCS 860-89513/7  
 Matrix: Water  
 Analysis Batch: 89513

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

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chloride	0.500	0.5491		mg/L		110	50 - 150
Fluoride	0.500	0.4964	J	mg/L		99	50 - 150
Sulfate	0.500	0.5796		mg/L		116	50 - 150

Lab Sample ID: 880-24493-1 MS  
 Matrix: Water  
 Analysis Batch: 89513

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Chloride	84.5		10.0	93.33	4	mg/L		88	90 - 110
Fluoride	0.607	F1	10.0	2.810	F1	mg/L		22	90 - 110
Sulfate	54.7	B	10.0	63.12	4	mg/L		84	90 - 110

Lab Sample ID: 880-24493-1 MSD  
 Matrix: Water  
 Analysis Batch: 89513

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
				Result	Qualifier						
Chloride	84.5		10.0	92.08	4	mg/L		76	90 - 110	1	20
Fluoride	0.607	F1	10.0	2.702	F1	mg/L		21	90 - 110	4	20
Sulfate	54.7	B	10.0	62.36	4	mg/L		76	90 - 110	1	20

Lab Sample ID: MB 860-89514/3  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/09/23 15:37	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/09/23 15:37	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-89514/4  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	9.978		mg/L		100	80 - 120
Nitrite as N	10.0	9.625		mg/L		96	80 - 120

Lab Sample ID: LCSD 860-89514/5  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.03		mg/L		100	80 - 120	1	20
Nitrite as N	10.0	9.682		mg/L		97	80 - 120	1	20

Lab Sample ID: LLCS 860-89514/6  
 Matrix: Water  
 Analysis Batch: 89514

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.1111		mg/L		111	50 - 150
Nitrite as N	0.100	0.07605	J	mg/L		76	50 - 150

Lab Sample ID: 880-24493-1 MS  
 Matrix: Water  
 Analysis Batch: 89514

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0542	J F1	10.0	6.647	F1	mg/L		66	80 - 120
Nitrite as N	0.133	F1	2.50	0.9796	F1	mg/L		34	80 - 120

Lab Sample ID: 880-24493-1 MSD  
 Matrix: Water  
 Analysis Batch: 89514

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.0542	J F1	10.0	6.584	F1	mg/L		65	80 - 120	1	15
Nitrite as N	0.133	F1	2.50	0.9697	F1	mg/L		33	80 - 120	1	15

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-89724/3  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/10/23 10:54	1

Eurofins Midland



### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

#### Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 860-89724/4  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	247.0		mg/L		99	85 - 115

Lab Sample ID: LCSD 860-89724/5  
 Matrix: Water  
 Analysis Batch: 89724

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	250.3		mg/L		100	85 - 115	1	20

#### Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 860-89659/1  
 Matrix: Water  
 Analysis Batch: 89659

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.495	U	5.00	0.495 mg/L			02/10/23 10:06	1

Lab Sample ID: LCS 860-89659/2  
 Matrix: Water  
 Analysis Batch: 89659

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	50.0	45.00		mg/L		90	80 - 120

Lab Sample ID: LCSD 860-89659/3  
 Matrix: Water  
 Analysis Batch: 89659

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	50.0	45.00		mg/L		90	80 - 120	0	20

Lab Sample ID: 880-24493-1 MS  
 Matrix: Water  
 Analysis Batch: 89659

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	<0.495	U	50.0	44.40		mg/L		89	80 - 120

Lab Sample ID: 880-24493-1 MSD  
 Matrix: Water  
 Analysis Batch: 89659

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<0.495	U	50.0	44.40		mg/L		89	80 - 120	0	20

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## QC Association Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

## GC/MS VOA

## Analysis Batch: 89498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	8260C	
880-24493-2	MW-2	Total/NA	Water	8260C	
MB 860-89498/9	Method Blank	Total/NA	Water	8260C	
LCS 860-89498/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-89498/4	Lab Control Sample Dup	Total/NA	Water	8260C	
880-24493-1 MS	MW-1	Total/NA	Water	8260C	

## GC Semi VOA

## Analysis Batch: 80443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	8015 NM	
880-24493-2	MW-2	Total/NA	Water	8015 NM	

## Analysis Batch: 89648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	8015B NM	89658
880-24493-2	MW-2	Total/NA	Water	8015B NM	89658
MB 860-89658/1-A	Method Blank	Total/NA	Water	8015B NM	89658
LCS 860-89658/2-A	Lab Control Sample	Total/NA	Water	8015B NM	89658
LCSD 860-89658/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	89658

## Prep Batch: 89658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	8015NM Aq Prep	
880-24493-2	MW-2	Total/NA	Water	8015NM Aq Prep	
MB 860-89658/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 860-89658/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 860-89658/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	

## HPLC/IC

## Analysis Batch: 89513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	300.0	
880-24493-2	MW-2	Total/NA	Water	300.0	
MB 860-89513/3	Method Blank	Total/NA	Water	300.0	
LCS 860-89513/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-89513/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-89513/7	Lab Control Sample	Total/NA	Water	300.0	
880-24493-1 MS	MW-1	Total/NA	Water	300.0	
880-24493-1 MSD	MW-1	Total/NA	Water	300.0	

## Analysis Batch: 89514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	300.0	
880-24493-2	MW-2	Total/NA	Water	300.0	
MB 860-89514/3	Method Blank	Total/NA	Water	300.0	
LCS 860-89514/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-89514/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-89514/6	Lab Control Sample	Total/NA	Water	300.0	
880-24493-1 MS	MW-1	Total/NA	Water	300.0	

Eurofins Midland

## QC Association Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

## HPLC/IC (Continued)

## Analysis Batch: 89514 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1 MSD	MW-1	Total/NA	Water	300.0	

## General Chemistry

## Analysis Batch: 89659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	SM 4500 S2 F	
880-24493-2	MW-2	Total/NA	Water	SM 4500 S2 F	
MB 860-89659/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 860-89659/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
LCSD 860-89659/3	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 F	
880-24493-1 MS	MW-1	Total/NA	Water	SM 4500 S2 F	
880-24493-1 MSD	MW-1	Total/NA	Water	SM 4500 S2 F	

## Analysis Batch: 89690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	SM 4500 H+ B	
880-24493-2	MW-2	Total/NA	Water	SM 4500 H+ B	

## Analysis Batch: 89724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	SM 2320B	
880-24493-2	MW-2	Total/NA	Water	SM 2320B	
MB 860-89724/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-89724/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-89724/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

## Analysis Batch: 90196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24493-1	MW-1	Total/NA	Water	SM 4500 CO2 D	
880-24493-2	MW-2	Total/NA	Water	SM 4500 CO2 D	

### Lab Chronicle

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24493-1**

Date Collected: 02/08/23 12:05

Matrix: Water

Date Received: 02/08/23 15:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	89498	NA	EET HOU	02/09/23 21:10
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/10/23 17:56
Total/NA	Prep	8015NM Aq Prep			89658	SAR	EET HOU	02/10/23 11:04
Total/NA	Analysis	8015B NM		1	89648	SAR	EET HOU	02/10/23 13:52
Total/NA	Analysis	300.0		1	89513	WP	EET HOU	02/09/23 16:44
Total/NA	Analysis	300.0		1	89514	WP	EET HOU	02/09/23 16:44
Total/NA	Analysis	SM 2320B		1	89724	TL	EET HOU	02/10/23 12:56
Total/NA	Analysis	SM 4500 CO2 D		1	90196	SC	EET HOU	02/15/23 10:33
Total/NA	Analysis	SM 4500 H+ B		1	89690	TL	EET HOU	02/10/23 13:12
Total/NA	Analysis	SM 4500 S2 F		1	89659	SCI	EET HOU	02/10/23 10:06

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24493-2**

Date Collected: 02/08/23 12:55

Matrix: Water

Date Received: 02/08/23 15:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	89498	NA	EET HOU	02/09/23 21:30
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/10/23 17:56
Total/NA	Prep	8015NM Aq Prep			89658	SAR	EET HOU	02/10/23 11:04
Total/NA	Analysis	8015B NM		1	89648	SAR	EET HOU	02/10/23 14:11
Total/NA	Analysis	300.0		1	89513	WP	EET HOU	02/09/23 23:33
Total/NA	Analysis	300.0		1	89514	WP	EET HOU	02/09/23 23:33
Total/NA	Analysis	SM 2320B		1	89724	TL	EET HOU	02/10/23 13:12
Total/NA	Analysis	SM 4500 CO2 D		1	90196	SC	EET HOU	02/15/23 10:33
Total/NA	Analysis	SM 4500 H+ B		1	89690	TL	EET HOU	02/10/23 13:14
Total/NA	Analysis	SM 4500 S2 F		1	89659	SCI	EET HOU	02/10/23 10:06

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

### Accreditation/Certification Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
8015 NM		Water	Total TPH
8015B NM	8015NM Aq Prep	Water	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Aq Prep	Water	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Aq Prep	Water	Oil Range Organics (Over C28-C36)
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 4500 CO2 D		Water	Carbon dioxide
SM 4500 CO2 D		Water	Carbon Dioxide, Free
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 4500 CO2 D	Carbon Dioxide and Forms of Alkalinity by Calculation	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 4500 S2 F	Sulfide, Total	SM	EET HOU
5030C	Purge and Trap	SW846	EET HOU
8015NM Aq Prep	Microextraction	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24493-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-24493-1	MW-1	Water	02/08/23 12:05	02/08/23 15:36
880-24493-2	MW-2	Water	02/08/23 12:55	02/08/23 15:36

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# Chain of Custody



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-820-2000)

Work Order No: 244913

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**Project Manager:** Beaux Jennings  
**Company Name:** Ensolum LLC  
**Address:** 601 Marientfield #400  
 Midland TX 79701  
**Phone:** 432-230-3344  
**Email:** bjennings@ensolum.com

**Bill to: (if different)**  
**Company Name:**  
**Address:**  
**City, State ZIP:**

**Program:**  UST/PST  PRP  Brownfields  RRC  Superfund   
**State of Project:**  
 Reporting: Level II  Level III  PST/UST  TRRP  Level IV   
 Deliverables: EDD  ADaPT  Other:

**Project Name:** South Hobbs  
**Project Number:** 03B1417002  
**P.O. Number:** 03B1417002  
**Sampler's Name:** Shane Diller

**Turn Around**  
 Routine   
 Rush: 24 Hr  
 Due Date:

**SAMPLE RECEIPT**  
 Temperature (°C): 05.0  
 Received intact: (Yes) No (No) Yes  
 Cooler Custody Seals: Yes No N/A  
 Sample Custody Seals: Yes No N/A

Temp Blank: Yes No Wet Ice: Yes No Thermometer ID: 1182  
 Correction Factor: 1.00  
 Total Containers: 7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers		ANALYSIS REQUEST						Work Order Notes
					7	7	Dissolved Carbon Dioxide 4500 CO2 c	Dissolved Sulfide SW-846 #376.2	VOC SW-846 #8260	TPH EPA Method #8015	Chloride EPA Method #846 300	pH EPA SW-846 Method 150.1	
MW-1	GW	2-8-23	1205		7	7	X	X	X	X	X	X	
MW-2	GW	2-8-23	1255		7	7	X	X	X	X	X	X	24 Hr.



**Total 200.7 / 6010 200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
**Circle Method(s) and Metal(s) to be analyzed** TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

**Notice:** Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	2/8/23 2:00	<i>[Signature]</i>	<i>[Signature]</i>	2/8/23 2:00
<i>[Signature]</i>	<i>[Signature]</i>	2/8/23 1:50	<i>[Signature]</i>	<i>[Signature]</i>	2/8/23 1:50
<i>[Signature]</i>	<i>[Signature]</i>		<i>[Signature]</i>	<i>[Signature]</i>	





**Eurofins Midland**  
1211 W Florida Ave  
Midland, TX 79701  
Phone: 432-704-5440

### Chain of Custody Record



Environment Testing

<b>Client Information (Sub Contract Lab)</b>		Sampler		Lab PM: Kramer, Jessica		COC No: 880-62611		Camera Tracking No(s):	
Client Contact: Shipping/Receiving		Phone:		E-Mail: Jessica.Kramer@et.eurofins.com		Page: 1 of 1		State of Origin: New Mexico	
Company: Eurofins Environment Testing South Cent		Address: 4145 Greenbriar Dr		City: Stafford		Job #: 880-24493-1		Preservation Codes:	
City: Stafford		State: TX, 77477		PO #: 281-240-4200(Tel)		Due Date Requested: 2/10/2023		Analysis Requested:	
Email:		Project Name: South Hobbs		Site: South Hobbs		TAT Requested (days):		8016MOD_280/ (MOD) Custom List	
Project #: 88000023		SSOW#: 03B1417002		Sample Date: 2/8/23		Field Filtered Sample (Yes or No):		8016MOD_MM/8016MM_Aq_Prep (MOD) Full TPH	
Sample Identification Client ID (Lab ID)		Sample Time		Sample Date		Field Filtered Sample (Yes or No)		8260C/5030C (MOD) Full List VOCs	
MW-1 (880-24493-1)		12:05 Mountain		2/8/23		Param MS/MSD (Yes or No)		300_ORGFMS/ (MOD) Custom List	
MW-2 (880-24493-2)		12:55 Mountain		2/8/23		5M4500_CO2_D/ (MOD) Carbon Dioxide		300_ORGFMS/ (MOD) Copy Analytes	
						5M4500_H		220B/ (MOD) Copy Analytes	
						8016MOD_MM/8016MM_Aq_Prep (MOD) Full TPH		8016MOD_Calc	
						8260C/5030C (MOD) Full List VOCs		Total Number of Containers	
						300_ORGFMS/ (MOD) Custom List		Special Instructions/Note:	
						300_ORGFMS/ (MOD) Copy Analytes		DISSOLVED SULFIDE	
						8016MOD_MM/8016MM_Aq_Prep (MOD) Full TPH		DISSOLVED SULFIDE	
						8260C/5030C (MOD) Full List VOCs			
						5M4500_CO2_D/ (MOD) Carbon Dioxide			
						5M4500_H			
						Param MS/MSD (Yes or No)			
						Field Filtered Sample (Yes or No)			
						5M4500_CO2_D/ (MOD) Carbon Dioxide			
						5M4500_H			
						8016MOD_MM/8016MM_Aq_Prep (MOD) Full TPH			
						300_ORGFMS/ (MOD) Custom List			
						300_ORGFMS/ (MOD) Copy Analytes			
						8016MOD_Calc			
						Total Number of Containers			

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**  
 Return to Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:

**Possible Hazard Identification**  
 Unconfirmed Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: **FedEX** Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ Custody Seal No. \_\_\_\_\_  
 Δ Yes Δ No Temp: \_\_\_\_\_ IR ID: HOU-343  
 C/F +0.3 ± 0.8 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_  
 Corrected Temp: 31 /2021



### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24493-1

Login Number: 24493

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24493-1

Login Number: 24493

List Source: Eurofins Houston

List Number: 2

List Creation: 02/09/23 12:56 PM

Creator: Pena, Jesiel

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701

Generated 2/22/2023 5:53:15 PM

## JOB DESCRIPTION

South Hobbs - 03B1417002  
South Hobbs

## JOB NUMBER

880-24899-1

Eurofins Midland  
1211 W. Florida Ave  
Midland TX 79701



# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



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Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Laboratory Job ID: 880-24899-1

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## Definitions/Glossary

Client: Ensolum

Job ID: 880-24899-1

Project/Site: South Hobbs - 03B1417002

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## 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

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### Definitions/Glossary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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### Case Narrative

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Job ID: 880-24899-1**

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative  
880-24899-1**

**Receipt**

The samples were received on 2/17/2023 4:13 PM. 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 2.6°C

**GC/MS VOA**

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 860-90731 recovered outside control limits for the following analyte(s): Dichlorodifluoromethane. Dichlorodifluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260C: The matrix spike (MS) recoveries and precision for analytical batch 860-90731 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

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

**GC Semi VOA**

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

**HPLC/IC**

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-90785 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300\_ORGFMS: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-90786 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

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

**General Chemistry**

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



### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

Client Sample ID: MW-1

Lab Sample ID: 880-24899-1

Date Collected: 02/17/23 10:55

Matrix: Water

Date Received: 02/17/23 16:13

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/20/23 16:58	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/20/23 16:58	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/20/23 16:58	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/20/23 16:58	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/20/23 16:58	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/20/23 16:58	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/20/23 16:58	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/20/23 16:58	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/20/23 16:58	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/20/23 16:58	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/20/23 16:58	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/20/23 16:58	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/20/23 16:58	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/20/23 16:58	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/20/23 16:58	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/20/23 16:58	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/20/23 16:58	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 16:58	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/20/23 16:58	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/20/23 16:58	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 16:58	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 16:58	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/20/23 16:58	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/20/23 16:58	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/20/23 16:58	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/20/23 16:58	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/20/23 16:58	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/20/23 16:58	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/20/23 16:58	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/20/23 16:58	1
Ethylbenzene	<0.000411	U	0.00100	0.000411 mg/L			02/20/23 16:58	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/20/23 16:58	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613 mg/L			02/20/23 16:58	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/20/23 16:58	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124 mg/L			02/20/23 16:58	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/20/23 16:58	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/20/23 16:58	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 16:58	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498 mg/L			02/20/23 16:58	1
o-Xylene	<0.000551	U	0.00100	0.000551 mg/L			02/20/23 16:58	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 16:58	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/20/23 16:58	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/20/23 16:58	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/20/23 16:58	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 16:58	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/20/23 16:58	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/20/23 16:58	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/20/23 16:58	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/20/23 16:58	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24899-1**

Date Collected: 02/17/23 10:55

Matrix: Water

Date Received: 02/17/23 16:13

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 16:58	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/20/23 16:58	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/20/23 16:58	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/20/23 16:58	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/20/23 16:58	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/20/23 16:58	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/20/23 16:58	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/20/23 16:58	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/20/23 16:58	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/20/23 16:58	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/20/23 16:58	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/20/23 16:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	108		74 - 124				02/20/23 16:58	1
Dibromofluoromethane (Surr)	103		75 - 131				02/20/23 16:58	1
1,2-Dichloroethane-d4 (Surr)	109		63 - 144				02/20/23 16:58	1
Toluene-d8 (Surr)	100		80 - 117				02/20/23 16:58	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<0.938	U	4.75	0.938 mg/L			02/20/23 19:28	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.938	U	4.75	0.938 mg/L		02/21/23 16:14	02/21/23 18:55	1
Diesel Range Organics (Over C10-C28)	<0.938	U	4.75	0.938 mg/L		02/21/23 16:14	02/21/23 18:55	1
Oil Range Organics (Over C28-C36)	<0.905	U	4.75	0.905 mg/L		02/21/23 16:14	02/21/23 18:55	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1-Chlorooctane	101		70 - 135			02/21/23 16:14	02/21/23 18:55	1
o-Terphenyl	111		70 - 135			02/21/23 16:14	02/21/23 18:55	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102		0.500	0.200 mg/L			02/18/23 18:02	1
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/18/23 18:02	1
Fluoride	0.763		0.500	0.100 mg/L			02/18/23 18:02	1
Nitrite as N	<0.0293	U F1	0.100	0.0293 mg/L			02/18/23 18:02	1
Sulfate	65.2		0.500	0.109 mg/L			02/18/23 18:02	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	432		4.00	4.00 mg/L			02/20/23 15:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	432		4.00	4.00 mg/L			02/20/23 15:24	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/20/23 15:24	1
Carbon dioxide (SM 4500 CO2 D)	407			mg/L			02/20/23 09:20	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24899-1**

Date Collected: 02/17/23 10:55

Matrix: Water

Date Received: 02/17/23 16:13

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free (SM 4500 CO2 D)	27.2			mg/L			02/20/23 09:20	1
pH (SM 4500 H+ B)	7.5	HF		SU			02/20/23 13:00	1
Temperature (SM 4500 H+ B)	20.0	HF		Degrees C			02/20/23 13:00	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495 mg/L			02/21/23 12:03	1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24899-2**

Date Collected: 02/17/23 12:10

Matrix: Water

Date Received: 02/17/23 16:13

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0139		0.00100	0.000533 mg/L			02/20/23 17:18	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/20/23 17:18	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/20/23 17:18	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/20/23 17:18	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/20/23 17:18	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/20/23 17:18	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/20/23 17:18	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/20/23 17:18	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/20/23 17:18	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/20/23 17:18	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/20/23 17:18	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/20/23 17:18	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/20/23 17:18	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/20/23 17:18	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/20/23 17:18	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/20/23 17:18	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/20/23 17:18	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 17:18	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/20/23 17:18	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/20/23 17:18	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 17:18	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 17:18	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/20/23 17:18	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/20/23 17:18	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/20/23 17:18	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/20/23 17:18	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/20/23 17:18	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/20/23 17:18	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/20/23 17:18	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/20/23 17:18	1
Ethylbenzene	0.00991		0.00100	0.000411 mg/L			02/20/23 17:18	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/20/23 17:18	1
Isopropylbenzene	0.00587		0.00100	0.000613 mg/L			02/20/23 17:18	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/20/23 17:18	1
m,p-Xylenes	0.0486		0.0100	0.00124 mg/L			02/20/23 17:18	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/20/23 17:18	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/20/23 17:18	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 17:18	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24899-2**

Date Collected: 02/17/23 12:10

Matrix: Water

Date Received: 02/17/23 16:13

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	0.00146		0.00100	0.000498 mg/L			02/20/23 17:18	1
o-Xylene	0.00823		0.00100	0.000551 mg/L			02/20/23 17:18	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 17:18	1
sec-Butylbenzene	0.000616	J	0.00100	0.000468 mg/L			02/20/23 17:18	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/20/23 17:18	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/20/23 17:18	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 17:18	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/20/23 17:18	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/20/23 17:18	1
Toluene	0.00624		0.00100	0.000475 mg/L			02/20/23 17:18	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/20/23 17:18	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 17:18	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/20/23 17:18	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/20/23 17:18	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/20/23 17:18	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/20/23 17:18	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/20/23 17:18	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/20/23 17:18	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/20/23 17:18	1
1,2,4-Trimethylbenzene	0.0151		0.00100	0.000417 mg/L			02/20/23 17:18	1
1,3,5-Trimethylbenzene	0.00385		0.00100	0.000456 mg/L			02/20/23 17:18	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/20/23 17:18	1
Xylenes, Total	0.0568		0.0100	0.00124 mg/L			02/20/23 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		74 - 124		02/20/23 17:18	1
Dibromofluoromethane (Surr)	104		75 - 131		02/20/23 17:18	1
1,2-Dichloroethane-d4 (Surr)	112		63 - 144		02/20/23 17:18	1
Toluene-d8 (Surr)	101		80 - 117		02/20/23 17:18	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1.24	J	4.82	0.953 mg/L			02/20/23 19:28	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1.24	J	4.82	0.953 mg/L		02/21/23 16:14	02/22/23 11:23	1
Diesel Range Organics (Over C10-C28)	<0.953	U	4.82	0.953 mg/L		02/21/23 16:14	02/22/23 11:23	1
Oil Range Organics (Over C28-C36)	<0.920	U	4.82	0.920 mg/L		02/21/23 16:14	02/22/23 11:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 135	02/21/23 16:14	02/22/23 11:23	1
o-Terphenyl	131		70 - 135	02/21/23 16:14	02/22/23 11:23	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89.9		0.500	0.200 mg/L			02/18/23 18:39	1
Nitrate as N	0.194		0.100	0.0391 mg/L			02/18/23 18:39	1
Fluoride	0.226	J	0.500	0.100 mg/L			02/18/23 18:39	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24899-2**

Date Collected: 02/17/23 12:10

Matrix: Water

Date Received: 02/17/23 16:13

**Method: EPA 300.0 - Anions, Ion Chromatography (Continued)**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.178		0.100	0.0293	mg/L			02/18/23 18:39	1
Sulfate	96.2		0.500	0.109	mg/L			02/18/23 18:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	1300		4.00	4.00	mg/L			02/20/23 15:40	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	1300		4.00	4.00	mg/L			02/20/23 15:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00	mg/L			02/20/23 15:40	1
Carbon dioxide (SM 4500 CO2 D)	2180				mg/L			02/20/23 09:20	1
Carbon Dioxide, Free (SM 4500 CO2 D)	1040				mg/L			02/20/23 09:20	1
pH (SM 4500 H+ B)	6.4	HF			SU			02/20/23 13:16	1
Temperature (SM 4500 H+ B)	20.0	HF			Degrees C			02/20/23 13:16	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495	mg/L			02/21/23 12:03	1

### Surrogate Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-24899-1	MW-1	108	103	109	100
880-24899-2	MW-2	107	104	112	101
LCS 860-90731/3	Lab Control Sample	103	106	107	100
LCSD 860-90731/4	Lab Control Sample Dup	103	104	107	100
MB 860-90731/10	Method Blank	107	103	107	101

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane (Surr)  
 DCA = 1,2-Dichloroethane-d4 (Surr)  
 TOL = Toluene-d8 (Surr)

**Method: 8015B NM - Diesel Range Organics (DRO) (GC)**

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-135)	OTPH1 (70-135)
880-24899-1	MW-1	101	111
880-24899-2	MW-2	104	131
LCS 860-91113/2-A	Lab Control Sample	97	119
LCSD 860-91113/3-A	Lab Control Sample Dup	108	115
MB 860-91113/1-A	Method Blank	108	119

**Surrogate Legend**

1CO = 1-Chlorooctane  
 OTPH = o-Terphenyl

### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-90731/10  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/20/23 11:50	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/20/23 11:50	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/20/23 11:50	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/20/23 11:50	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/20/23 11:50	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/20/23 11:50	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/20/23 11:50	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/20/23 11:50	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/20/23 11:50	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/20/23 11:50	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/20/23 11:50	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/20/23 11:50	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/20/23 11:50	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/20/23 11:50	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/20/23 11:50	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/20/23 11:50	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/20/23 11:50	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/20/23 11:50	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/20/23 11:50	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/20/23 11:50	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 11:50	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/20/23 11:50	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 11:50	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/20/23 11:50	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/20/23 11:50	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/20/23 11:50	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/20/23 11:50	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/20/23 11:50	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/20/23 11:50	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/20/23 11:50	1
Ethylbenzene	<0.000411	U	0.00100	0.000411 mg/L			02/20/23 11:50	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/20/23 11:50	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613 mg/L			02/20/23 11:50	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/20/23 11:50	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124 mg/L			02/20/23 11:50	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/20/23 11:50	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/20/23 11:50	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 11:50	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498 mg/L			02/20/23 11:50	1
o-Xylene	<0.000551	U	0.00100	0.000551 mg/L			02/20/23 11:50	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/20/23 11:50	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/20/23 11:50	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/20/23 11:50	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/20/23 11:50	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/20/23 11:50	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/20/23 11:50	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/20/23 11:50	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/20/23 11:50	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

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

Lab Sample ID: MB 860-90731/10  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945	mg/L		02/20/23 11:50	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127	mg/L		02/20/23 11:50	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217	mg/L		02/20/23 11:50	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175	mg/L		02/20/23 11:50	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169	mg/L		02/20/23 11:50	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511	mg/L		02/20/23 11:50	1
Trichloroethene	<0.000791	U	0.00500	0.000791	mg/L		02/20/23 11:50	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638	mg/L		02/20/23 11:50	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490	mg/L		02/20/23 11:50	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417	mg/L		02/20/23 11:50	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456	mg/L		02/20/23 11:50	1
Vinyl chloride	<0.000638	U	0.00200	0.000638	mg/L		02/20/23 11:50	1
Xylenes, Total	<0.00124	U	0.0100	0.00124	mg/L		02/20/23 11:50	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		74 - 124		02/20/23 11:50	1
Dibromofluoromethane (Surr)	103		75 - 131		02/20/23 11:50	1
1,2-Dichloroethane-d4 (Surr)	107		63 - 144		02/20/23 11:50	1
Toluene-d8 (Surr)	101		80 - 117		02/20/23 11:50	1

Lab Sample ID: LCS 860-90731/3  
 Matrix: Water  
 Analysis Batch: 90731

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	0.0500	0.05027		mg/L		101	75 - 125
Bromobenzene	0.0500	0.05200		mg/L		104	75 - 125
Bromochloromethane	0.0500	0.05432		mg/L		109	60 - 140
Bromodichloromethane	0.0500	0.05564		mg/L		111	75 - 125
Bromoform	0.0500	0.04879		mg/L		98	70 - 130
Bromomethane	0.0500	0.04139		mg/L		83	60 - 140
2-Butanone	0.250	0.2413		mg/L		97	60 - 140
Carbon tetrachloride	0.0500	0.05841		mg/L		117	70 - 130
Chlorobenzene	0.0500	0.05080		mg/L		102	65 - 135
Chloroethane	0.0500	0.04062		mg/L		81	60 - 140
Chloroform	0.0500	0.05437		mg/L		109	70 - 121
Chloromethane	0.0500	0.03588		mg/L		72	60 - 140
2-Chlorotoluene	0.0500	0.05219		mg/L		104	73 - 125
4-Chlorotoluene	0.0500	0.05296		mg/L		106	74 - 125
cis-1,2-Dichloroethene	0.0500	0.05411		mg/L		108	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05399		mg/L		108	74 - 125
Dibromochloromethane	0.0500	0.05535		mg/L		111	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.05729		mg/L		115	59 - 125
1,2-Dibromoethane	0.0500	0.05367		mg/L		107	73 - 125
1,2-Dichlorobenzene	0.0500	0.05247		mg/L		105	75 - 125
1,3-Dichlorobenzene	0.0500	0.05173		mg/L		103	75 - 125
1,4-Dichlorobenzene	0.0500	0.05169		mg/L		103	75 - 125
Dichlorodifluoromethane	0.0500	0.02317	*	mg/L		46	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

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

Lab Sample ID: LCS 860-90731/3

Matrix: Water

Analysis Batch: 90731

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethane	0.0500	0.05356		mg/L		107	70 - 130
1,2-Dichloroethane	0.0500	0.05581		mg/L		112	72 - 130
1,1-Dichloroethene	0.0500	0.04573		mg/L		91	50 - 150
1,2-Dichloropropane	0.0500	0.05323		mg/L		106	74 - 125
1,3-Dichloropropane	0.0500	0.05163		mg/L		103	75 - 125
2,2-Dichloropropane	0.0500	0.05789		mg/L		116	75 - 125
1,1-Dichloropropene	0.0500	0.05518		mg/L		110	75 - 125
Ethylbenzene	0.0500	0.05139		mg/L		103	75 - 125
Hexachlorobutadiene	0.0500	0.05772		mg/L		115	75 - 125
Isopropylbenzene	0.0500	0.05204		mg/L		104	75 - 125
Methylene Chloride	0.0500	0.04886		mg/L		98	75 - 125
m,p-Xylenes	0.0500	0.05092		mg/L		102	75 - 125
MTBE	0.0500	0.05242		mg/L		105	65 - 135
Naphthalene	0.0500	0.05485		mg/L		110	70 - 130
n-Butylbenzene	0.0500	0.05594		mg/L		112	75 - 125
N-Propylbenzene	0.0500	0.05301		mg/L		106	75 - 125
o-Xylene	0.0500	0.05100		mg/L		102	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05345		mg/L		107	75 - 125
sec-Butylbenzene	0.0500	0.05348		mg/L		107	75 - 125
Styrene	0.0500	0.05170		mg/L		103	75 - 125
tert-Butylbenzene	0.0500	0.05205		mg/L		104	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.05368		mg/L		107	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.05282		mg/L		106	74 - 125
Tetrachloroethene	0.0500	0.05314		mg/L		106	71 - 125
Toluene	0.0500	0.05057		mg/L		101	70 - 130
trans-1,2-Dichloroethene	0.0500	0.05139		mg/L		103	75 - 125
trans-1,3-Dichloropropene	0.0500	0.05562		mg/L		111	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05469		mg/L		109	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05368		mg/L		107	75 - 135
1,1,1-Trichloroethane	0.0500	0.05642		mg/L		113	70 - 130
1,1,2-Trichloroethane	0.0500	0.05216		mg/L		104	70 - 130
Trichloroethene	0.0500	0.05167		mg/L		103	75 - 135
Trichlorofluoromethane	0.0500	0.04799		mg/L		96	60 - 140
1,2,3-Trichloropropane	0.0500	0.05290		mg/L		106	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05249		mg/L		105	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.05253		mg/L		105	60 - 140
Vinyl chloride	0.0500	0.03812		mg/L		76	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	106		75 - 131
1,2-Dichloroethane-d4 (Surr)	107		63 - 144
Toluene-d8 (Surr)	100		80 - 117

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

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

Lab Sample ID: LCSD 860-90731/4

Matrix: Water

Analysis Batch: 90731

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Benzene	0.0500	0.04933		mg/L		99	75 - 125	2	25
Bromobenzene	0.0500	0.05145		mg/L		103	75 - 125	1	25
Bromochloromethane	0.0500	0.05337		mg/L		107	60 - 140	2	25
Bromodichloromethane	0.0500	0.05447		mg/L		109	75 - 125	2	25
Bromoform	0.0500	0.04962		mg/L		99	70 - 130	2	25
Bromomethane	0.0500	0.04038		mg/L		81	60 - 140	2	25
2-Butanone	0.250	0.2497		mg/L		100	60 - 140	3	25
Carbon tetrachloride	0.0500	0.05502		mg/L		110	70 - 130	6	25
Chlorobenzene	0.0500	0.04996		mg/L		100	65 - 135	2	25
Chloroethane	0.0500	0.03988		mg/L		80	60 - 140	2	25
Chloroform	0.0500	0.05296		mg/L		106	70 - 121	3	25
Chloromethane	0.0500	0.03451		mg/L		69	60 - 140	4	25
2-Chlorotoluene	0.0500	0.05153		mg/L		103	73 - 125	1	25
4-Chlorotoluene	0.0500	0.05236		mg/L		105	74 - 125	1	25
cis-1,2-Dichloroethene	0.0500	0.05196		mg/L		104	75 - 125	4	25
cis-1,3-Dichloropropene	0.0500	0.05349		mg/L		107	74 - 125	1	25
Dibromochloromethane	0.0500	0.05483		mg/L		110	73 - 125	1	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05901		mg/L		118	59 - 125	3	25
1,2-Dibromoethane	0.0500	0.05370		mg/L		107	73 - 125	0	25
1,2-Dichlorobenzene	0.0500	0.05162		mg/L		103	75 - 125	2	25
1,3-Dichlorobenzene	0.0500	0.05086		mg/L		102	75 - 125	2	25
1,4-Dichlorobenzene	0.0500	0.05091		mg/L		102	75 - 125	2	25
Dichlorodifluoromethane	0.0500	0.02183	*	mg/L		44	70 - 130	6	25
1,1-Dichloroethane	0.0500	0.05158		mg/L		103	70 - 130	4	25
1,2-Dichloroethane	0.0500	0.05549		mg/L		111	72 - 130	1	25
1,1-Dichloroethene	0.0500	0.04402		mg/L		88	50 - 150	4	25
1,2-Dichloropropane	0.0500	0.05252		mg/L		105	74 - 125	1	25
1,3-Dichloropropane	0.0500	0.05228		mg/L		105	75 - 125	1	25
2,2-Dichloropropane	0.0500	0.05473		mg/L		109	75 - 125	6	25
1,1-Dichloropropene	0.0500	0.05257		mg/L		105	75 - 125	5	25
Ethylbenzene	0.0500	0.05052		mg/L		101	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.05572		mg/L		111	75 - 125	4	25
Isopropylbenzene	0.0500	0.05095		mg/L		102	75 - 125	2	25
Methylene Chloride	0.0500	0.04819		mg/L		96	75 - 125	1	25
m,p-Xylenes	0.0500	0.05056		mg/L		101	75 - 125	1	25
MTBE	0.0500	0.05195		mg/L		104	65 - 135	1	25
Naphthalene	0.0500	0.05738		mg/L		115	70 - 130	5	25
n-Butylbenzene	0.0500	0.05410		mg/L		108	75 - 125	3	25
N-Propylbenzene	0.0500	0.05136		mg/L		103	75 - 125	3	25
o-Xylene	0.0500	0.05031		mg/L		101	75 - 125	1	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.05197		mg/L		104	75 - 125	3	25
sec-Butylbenzene	0.0500	0.05179		mg/L		104	75 - 125	3	25
Styrene	0.0500	0.05101		mg/L		102	75 - 125	1	25
tert-Butylbenzene	0.0500	0.05107		mg/L		102	75 - 125	2	25
1,1,1,2-Tetrachloroethane	0.0500	0.05324		mg/L		106	72 - 125	1	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.05386		mg/L		108	74 - 125	2	25
Tetrachloroethene	0.0500	0.05121		mg/L		102	71 - 125	4	25
Toluene	0.0500	0.04970		mg/L		99	70 - 130	2	25

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### QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

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

Lab Sample ID: LCSD 860-90731/4  
Matrix: Water  
Analysis Batch: 90731

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	RPD	Limit
	Added	Result	Qualifier				Limits		
trans-1,2-Dichloroethene	0.0500	0.04880		mg/L		98	75 - 125	5	25
trans-1,3-Dichloropropene	0.0500	0.05547		mg/L		111	66 - 125	0	25
1,2,3-Trichlorobenzene	0.0500	0.05541		mg/L		111	75 - 137	1	25
1,2,4-Trichlorobenzene	0.0500	0.05398		mg/L		108	75 - 135	1	25
1,1,1-Trichloroethane	0.0500	0.05344		mg/L		107	70 - 130	5	25
1,1,2-Trichloroethane	0.0500	0.05249		mg/L		105	70 - 130	1	25
Trichloroethene	0.0500	0.05059		mg/L		101	75 - 135	2	25
Trichlorofluoromethane	0.0500	0.04572		mg/L		91	60 - 140	5	25
1,2,3-Trichloropropane	0.0500	0.05402		mg/L		108	75 - 125	2	25
1,2,4-Trimethylbenzene	0.0500	0.05135		mg/L		103	75 - 125	2	25
1,3,5-Trimethylbenzene	0.0500	0.05138		mg/L		103	60 - 140	2	25
Vinyl chloride	0.0500	0.03604		mg/L		72	60 - 140	6	25

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	104		75 - 131
1,2-Dichloroethane-d4 (Surr)	107		63 - 144
Toluene-d8 (Surr)	100		80 - 117

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 860-91113/1-A  
Matrix: Water  
Analysis Batch: 91024

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 91113

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<0.988	U	5.00	0.988	mg/L	02/21/23 16:14	02/21/23 18:36	1
Diesel Range Organics (Over C10-C28)	<0.988	U	5.00	0.988	mg/L	02/21/23 16:14	02/21/23 18:36	1
Oil Range Organics (Over C28-C36)	<0.954	U	5.00	0.954	mg/L	02/21/23 16:14	02/21/23 18:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	108		70 - 135	02/21/23 16:14	02/21/23 18:36	1
o-Terphenyl	119		70 - 135	02/21/23 16:14	02/21/23 18:36	1

Lab Sample ID: LCS 860-91113/2-A  
Matrix: Water  
Analysis Batch: 91024

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 91113

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Gasoline Range Organics (GRO)-C6-C10	99.8	119.3		mg/L		120	70 - 135
Diesel Range Organics (Over C10-C28)	99.6	103.9		mg/L		104	70 - 135

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	97		70 - 135
o-Terphenyl	119		70 - 135

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: LCSD 860-91113/3-A  
 Matrix: Water  
 Analysis Batch: 91024

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 91113

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	99.8	113.0		mg/L		113	70 - 135	5	35
Diesel Range Organics (Over C10-C28)	99.6	100.5		mg/L		101	70 - 135	3	35
<b>Surrogate</b>		<b>LCSD Result</b>	<b>LCSD Qualifier</b>						
1-Chlorooctane		108					70 - 135		
o-Terphenyl		115					70 - 135		

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-90785/3  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.200	U	0.500	0.200 mg/L			02/18/23 17:00	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/18/23 17:00	1
Sulfate	<0.109	U	0.500	0.109 mg/L			02/18/23 17:00	1

Lab Sample ID: LCS 860-90785/4  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.34		mg/L		103	90 - 110
Fluoride	10.0	10.50		mg/L		105	90 - 110
Sulfate	10.0	10.59		mg/L		106	90 - 110

Lab Sample ID: LCSD 860-90785/5  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Chloride	10.0	10.32		mg/L		103	90 - 110	0	20
Fluoride	10.0	10.60		mg/L		106	90 - 110	1	20
Sulfate	10.0	10.63		mg/L		106	90 - 110	0	20

Lab Sample ID: LLCS 860-90785/7  
 Matrix: Water  
 Analysis Batch: 90785

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.5472		mg/L		109	50 - 150
Fluoride	0.500	0.5089		mg/L		102	50 - 150
Sulfate	0.500	0.5169		mg/L		103	50 - 150

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-24899-1 MS  
 Matrix: Water  
 Analysis Batch: 90785

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chloride	102		10.0	108.2	4	mg/L		63		90 - 110
Fluoride	0.763		10.0	11.70		mg/L		109		90 - 110
Sulfate	65.2		10.0	75.58	4	mg/L		104		90 - 110

Lab Sample ID: 880-24899-1 MSD  
 Matrix: Water  
 Analysis Batch: 90785

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Chloride	102		10.0	108.4	4	mg/L		65		90 - 110	0	20
Fluoride	0.763		10.0	11.70		mg/L		109		90 - 110	0	20
Sulfate	65.2		10.0	75.87	4	mg/L		107		90 - 110	0	20

Lab Sample ID: MB 860-90786/3  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Nitrate as N	<0.0391	U	0.100	0.0391	mg/L		02/18/23 17:00	1
Nitrite as N	<0.0293	U	0.100	0.0293	mg/L		02/18/23 17:00	1

Lab Sample ID: LCS 860-90786/4  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
Nitrate as N	10.0	10.15		mg/L		101		80 - 120
Nitrite as N	10.0	10.33		mg/L		103		80 - 120

Lab Sample ID: LCSD 860-90786/5  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
Nitrate as N	10.0	10.18		mg/L		102		80 - 120	0	20
Nitrite as N	10.0	10.36		mg/L		104		80 - 120	0	20

Lab Sample ID: LLCS 860-90786/6  
 Matrix: Water  
 Analysis Batch: 90786

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

Analyte	Spike	LLCS	LLCS	Unit	D	%Rec	%Rec	Limits
Nitrate as N	0.100	0.1303		mg/L		130		50 - 150
Nitrite as N	0.100	0.09259	J	mg/L		93		50 - 150

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-24899-1 MS  
 Matrix: Water  
 Analysis Batch: 90786

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Nitrate as N	<0.0391	U	10.0	10.17		mg/L		102		80 - 120
Nitrite as N	<0.0293	U F1	2.50	3.048	F1	mg/L		122		80 - 120

Lab Sample ID: 880-24899-1 MSD  
 Matrix: Water  
 Analysis Batch: 90786

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier								
Nitrate as N	<0.0391	U	10.0	10.27		mg/L		103		80 - 120	1	15	
Nitrite as N	<0.0293	U F1	2.50	3.026	F1	mg/L		121		80 - 120	1	15	

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-90901/3  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Alkalinity	<4.00	U	4.00	4.00			02/20/23 11:19	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00			02/20/23 11:19	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00			02/20/23 11:19	1

Lab Sample ID: LCS 860-90901/4  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
Alkalinity	250	253.8		mg/L		102		85 - 115

Lab Sample ID: LCSD 860-90901/5  
 Matrix: Water  
 Analysis Batch: 90901

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD	Limit
Alkalinity	250	256.8		mg/L		103		85 - 115	1	20	

#### Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 860-91040/10  
 Matrix: Water  
 Analysis Batch: 91040

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Sulfide	<0.495	U	5.00	0.495			02/21/23 12:03	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Method: SM 4500 S2 F - Sulfide, Total (Continued)**

Lab Sample ID: LCS 860-91040/11  
 Matrix: Water  
 Analysis Batch: 91040

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	50.0	45.40		mg/L		91	80 - 120

Lab Sample ID: LCSD 860-91040/12  
 Matrix: Water  
 Analysis Batch: 91040

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	50.0	45.20		mg/L		90	80 - 120	0	20

Lab Sample ID: 880-24899-1 MS  
 Matrix: Water  
 Analysis Batch: 91040

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	<0.495	U	50.0	43.80		mg/L		88	80 - 120

Lab Sample ID: 880-24899-1 MSD  
 Matrix: Water  
 Analysis Batch: 91040

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<0.495	U	50.0	43.80		mg/L		88	80 - 120	0	20



### QC Association Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### GC/MS VOA

##### Analysis Batch: 90731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	8260C	
880-24899-2	MW-2	Total/NA	Water	8260C	
MB 860-90731/10	Method Blank	Total/NA	Water	8260C	
LCS 860-90731/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-90731/4	Lab Control Sample Dup	Total/NA	Water	8260C	

#### GC Semi VOA

##### Analysis Batch: 80443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	8015 NM	
880-24899-2	MW-2	Total/NA	Water	8015 NM	

##### Analysis Batch: 91024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	8015B NM	91113
MB 860-91113/1-A	Method Blank	Total/NA	Water	8015B NM	91113
LCS 860-91113/2-A	Lab Control Sample	Total/NA	Water	8015B NM	91113
LCSD 860-91113/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	91113

##### Prep Batch: 91113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	8015NM Aq Prep	
880-24899-2	MW-2	Total/NA	Water	8015NM Aq Prep	
MB 860-91113/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 860-91113/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 860-91113/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	

##### Analysis Batch: 91210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-2	MW-2	Total/NA	Water	8015B NM	91113

#### HPLC/IC

##### Analysis Batch: 90785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	300.0	
880-24899-2	MW-2	Total/NA	Water	300.0	
MB 860-90785/3	Method Blank	Total/NA	Water	300.0	
LCS 860-90785/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-90785/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-90785/7	Lab Control Sample	Total/NA	Water	300.0	
880-24899-1 MS	MW-1	Total/NA	Water	300.0	
880-24899-1 MSD	MW-1	Total/NA	Water	300.0	

##### Analysis Batch: 90786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	300.0	
880-24899-2	MW-2	Total/NA	Water	300.0	
MB 860-90786/3	Method Blank	Total/NA	Water	300.0	
LCS 860-90786/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-90786/5	Lab Control Sample Dup	Total/NA	Water	300.0	

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## QC Association Summary

Client: Ensolum

Job ID: 880-24899-1

Project/Site: South Hobbs - 03B1417002

## HPLC/IC (Continued)

## Analysis Batch: 90786 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LLCS 860-90786/6	Lab Control Sample	Total/NA	Water	300.0	
880-24899-1 MS	MW-1	Total/NA	Water	300.0	
880-24899-1 MSD	MW-1	Total/NA	Water	300.0	

## General Chemistry

## Analysis Batch: 90772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	SM 4500 CO2 D	
880-24899-2	MW-2	Total/NA	Water	SM 4500 CO2 D	

## Analysis Batch: 90844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	SM 4500 H+ B	
880-24899-2	MW-2	Total/NA	Water	SM 4500 H+ B	

## Analysis Batch: 90901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	SM 2320B	
880-24899-2	MW-2	Total/NA	Water	SM 2320B	
MB 860-90901/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-90901/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-90901/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

## Analysis Batch: 91040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-24899-1	MW-1	Total/NA	Water	SM 4500 S2 F	
880-24899-2	MW-2	Total/NA	Water	SM 4500 S2 F	
MB 860-91040/10	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 860-91040/11	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
LCSD 860-91040/12	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 F	
880-24899-1 MS	MW-1	Total/NA	Water	SM 4500 S2 F	
880-24899-1 MSD	MW-1	Total/NA	Water	SM 4500 S2 F	

Eurofins Midland

### Lab Chronicle

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-24899-1**

Date Collected: 02/17/23 10:55

Matrix: Water

Date Received: 02/17/23 16:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	90731	AN	EET HOU	02/20/23 16:58
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/20/23 19:28
Total/NA	Prep	8015NM Aq Prep			91113	SAR	EET HOU	02/21/23 16:14
Total/NA	Analysis	8015B NM		1	91024	T1S	EET HOU	02/21/23 18:55
Total/NA	Analysis	300.0		1	90785	AA	EET HOU	02/18/23 18:02
Total/NA	Analysis	300.0		1	90786	AA	EET HOU	02/18/23 18:02
Total/NA	Analysis	SM 2320B		1	90901	TL	EET HOU	02/20/23 15:24
Total/NA	Analysis	SM 4500 CO2 D		1	90772	SC	EET HOU	02/20/23 09:20
Total/NA	Analysis	SM 4500 H+ B		1	90844	TL	EET HOU	02/20/23 13:00
Total/NA	Analysis	SM 4500 S2 F		1	91040	SCI	EET HOU	02/21/23 12:03

**Client Sample ID: MW-2**

**Lab Sample ID: 880-24899-2**

Date Collected: 02/17/23 12:10

Matrix: Water

Date Received: 02/17/23 16:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	90731	AN	EET HOU	02/20/23 17:18
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/20/23 19:28
Total/NA	Prep	8015NM Aq Prep			91113	SAR	EET HOU	02/21/23 16:14
Total/NA	Analysis	8015B NM		1	91210	SAR	EET HOU	02/22/23 11:23
Total/NA	Analysis	300.0		1	90785	AA	EET HOU	02/18/23 18:39
Total/NA	Analysis	300.0		1	90786	AA	EET HOU	02/18/23 18:39
Total/NA	Analysis	SM 2320B		1	90901	TL	EET HOU	02/20/23 15:40
Total/NA	Analysis	SM 4500 CO2 D		1	90772	SC	EET HOU	02/20/23 09:20
Total/NA	Analysis	SM 4500 H+ B		1	90844	TL	EET HOU	02/20/23 13:16
Total/NA	Analysis	SM 4500 S2 F		1	91040	SCI	EET HOU	02/21/23 12:03

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

### Accreditation/Certification Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
8015 NM		Water	Total TPH
8015B NM	8015NM Aq Prep	Water	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Aq Prep	Water	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Aq Prep	Water	Oil Range Organics (Over C28-C36)
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 4500 CO2 D		Water	Carbon dioxide
SM 4500 CO2 D		Water	Carbon Dioxide, Free
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 4500 CO2 D	Carbon Dioxide and Forms of Alkalinity by Calculation	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 4500 S2 F	Sulfide, Total	SM	EET HOU
5030C	Purge and Trap	SW846	EET HOU
8015NM Aq Prep	Microextraction	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-24899-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-24899-1	MW-1	Water	02/17/23 10:55	02/17/23 16:13
880-24899-2	MW-2	Water	02/17/23 12:10	02/17/23 16:13

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296  
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-820-2000)

Chain of Custody

Work Order No: 24899

Project Manager: Beaux Jennings  
Company Name: Ensolum LLC  
Address: 601 Marnefield #400  
City, State ZIP: Midland TX 79701  
Phone: 432-230-3344  
Email: bjennings@ensolum.com  
Bill to: (if different)  
Company Name:  
Address:  
City, State ZIP  
Project Name: South Hobbs  
Turn Around  
Project Number: 03B1417002  
Routine   
P. O. Number: 03B1417002  
Rush 24 Hr  
Sampler's Name: Shane Diller  
Due Date  
SAMPLE RECEIPT  
Temp Blank: Yes  No   
Temperature (°C): 29.2  
Thermometer ID: FPE  
Received Intact: Yes  No   
Cooler Custody Seals: Yes  No   
Sample Custody Seals: Yes  No   
Correction Factor: 1.30  
Total Containers: 7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Dissolved Carbon Dioxide 4500 CO2 c	Dissolved Sulfide SW-846 #376.2	VOC SW-846 #8260	TPH EPA Method #8015	Chloride EPA Method #846 300	pH EPA SW-846 Method 150.1	Work Order Notes
MMW-1	GW	2-17-23	1055	-	7	X	X	X	X	X	X	TAT starts the day received by the lab, if received by 4:30pm
MMW-2	GW	2-17-23	1210	-	7	X	X	X	X	X	X	24 Hr



880-24899 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$8 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Received by: (Signature)  
Date/Time: 2/17/23 Date/Time: 2/17/23  
Relinquished by: (Signature) Received by: (Signature)  
Date/Time: 2/17/23 Date/Time: 2/17/23  
Relinquished by: (Signature) Received by: (Signature)  
Date/Time: 2/17/23 Date/Time: 2/17/23

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**Eurofins Midland**

1211 W Florida Ave  
Midland TX 79701  
Phone: 432-704-5440

**Chain of Custody Record**



JFins  
Environment Testing

880-24899 Chain of Custody

**Client Information (Sub Contract Lab)**

Client Contact: \_\_\_\_\_  
 Shipping/Receiving: \_\_\_\_\_  
 Company: Eurofins Environment Testing South Cent  
 Address: 4145 Greenbriar Dr  
 City: Stafford  
 State/Zip: TX, 77477  
 Phone: 281-240-4200 (Tel)  
 Email: \_\_\_\_\_

Sampler: \_\_\_\_\_

Lab P#: \_\_\_\_\_

Phone: \_\_\_\_\_

Lab P#: \_\_\_\_\_

Lab P#: \_\_\_\_\_

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Due Date Requested: 2/21/2023  
 TAT Requested (days): \_\_\_\_\_

Project #: 88000023

SSOW#: \_\_\_\_\_

Project #: 88000023

SSOW#: \_\_\_\_\_

Project #: 88000023

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Project #: 88000023

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Project #: 88000023

SSOW#: \_\_\_\_\_

**Sample Identification - Client ID (Lab ID)**

MW-1 (880-24899-1) 2/17/23 10:35 Mountain Water  
 MW-2 (880-24899-2) 2/17/23 12:10 Mountain Water

Sample Date

Sample Time

Sample Type (C=Comp, G=Grab)

Matrix (Weather Specific, Inorganic, AsAR)

Preservation Code

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

SM4600\_CO2\_D/ (MOD) Carbon Dioxide

SM4600\_H+

SM4500\_S2\_F/ Sulfide, Total

8260C/5030C (MOD) Full List VOCs

8015MOD\_NM/8015NM\_Aq\_Prep (MOD) Full TPH

300\_ORGFMS\_2BD/ (MOD) Custom List

300\_ORGFMS/ (MOD) Custom List

2320B/ (MOD) Copy Analytes

8015MOD\_Calc

Temp: 1.5 IR ID-HOU-343

C/F: 0.4

Corrected Temp: 1.1

DISSOLVED SULFIDE

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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyze & 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/shipment 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.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client  Dispose By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/OC Requirements:

Primary Deliverable Rank: 2

Unconfirmed

Deliverable Requested: I II III IV Other (specify)

Empty Kit/Reinquisitioned by \_\_\_\_\_

Reinquisitioned by \_\_\_\_\_

Reinquisitioned by \_\_\_\_\_

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Reinquisitioned by \_\_\_\_\_

Project Name: South Hobbs  
 Site: South Hobbs  
 Project #: 88000023  
 SSOW#: \_\_\_\_\_

Project Name: South Hobbs

Site: South Hobbs

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Project Name: South Hobbs

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Project #: 88000023

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Project Name: South Hobbs

Site: South Hobbs

Project #: 88000023

SSOW#: \_\_\_\_\_

Project Name: South Hobbs

Custody Seals Intact:  Yes  No  
 Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Custody Seal No. \_\_\_\_\_

Custody Seals Intact:  Yes  No

Ver: 06/08/2021



### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24899-1

Login Number: 24899

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-24899-1

**Login Number: 24899**

**List Number: 2**

**Creator: Torres, Sandra**

**List Source: Eurofins Houston**

**List Creation: 02/18/23 10:45 AM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
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.	True	
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	

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Beaux Jennings  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701

Generated 2/28/2023 5:23:21 PM

## JOB DESCRIPTION

South Hobbs - 03B1417002  
South Hobbs

## JOB NUMBER

880-25084-1

Eurofins Midland  
1211 W. Florida Ave  
Midland TX 79701



# Eurofins Midland

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
2/28/2023 5:23:21 PM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Laboratory Job ID: 880-25084-1

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## Definitions/Glossary

Client: Ensolum

Job ID: 880-25084-1

Project/Site: South Hobbs - 03B1417002

## Qualifiers

## GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

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

Eurofins Midland

### Definitions/Glossary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

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### Case Narrative

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

**Job ID: 880-25084-1**

**Laboratory: Eurofins Midland**

**Narrative**

**Job Narrative  
880-25084-1**

**Receipt**

The samples were received on 2/22/2023 3:47 PM. 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 3.0°C

**GC/MS VOA**

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 860-91344 recovered outside control limits for the following analyte(s): Dichloro difluoromethane. Dichloro difluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 860-91344 were outside control limits. Sample matrix interference is suspected.

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

**GC Semi VOA**

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

**HPLC/IC**

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-91496 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery was within acceptance limits.

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

**General Chemistry**

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

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

Client Sample ID: MW-1

Lab Sample ID: 880-25084-1

Date Collected: 02/22/23 12:10

Matrix: Water

Date Received: 02/22/23 15:47

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/23/23 16:28	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/23/23 16:28	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/23/23 16:28	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/23/23 16:28	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/23/23 16:28	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/23/23 16:28	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/23/23 16:28	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/23/23 16:28	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/23/23 16:28	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/23/23 16:28	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/23/23 16:28	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/23/23 16:28	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/23/23 16:28	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/23/23 16:28	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/23/23 16:28	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/23/23 16:28	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/23/23 16:28	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 16:28	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/23/23 16:28	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/23/23 16:28	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 16:28	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 16:28	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/23/23 16:28	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/23/23 16:28	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/23/23 16:28	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/23/23 16:28	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/23/23 16:28	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/23/23 16:28	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/23/23 16:28	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/23/23 16:28	1
Ethylbenzene	<0.000411	U	0.00100	0.000411 mg/L			02/23/23 16:28	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/23/23 16:28	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613 mg/L			02/23/23 16:28	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/23/23 16:28	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124 mg/L			02/23/23 16:28	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/23/23 16:28	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/23/23 16:28	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 16:28	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498 mg/L			02/23/23 16:28	1
o-Xylene	<0.000551	U	0.00100	0.000551 mg/L			02/23/23 16:28	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/23/23 16:28	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/23/23 16:28	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/23/23 16:28	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/23/23 16:28	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 16:28	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/23/23 16:28	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/23/23 16:28	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/23/23 16:28	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/23/23 16:28	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-25084-1**

Date Collected: 02/22/23 12:10

Matrix: Water

Date Received: 02/22/23 15:47

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 16:28	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/23/23 16:28	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/23/23 16:28	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/23/23 16:28	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/23/23 16:28	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/23/23 16:28	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/23/23 16:28	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/23/23 16:28	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/23/23 16:28	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/23/23 16:28	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/23/23 16:28	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/23/23 16:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		74 - 124				02/23/23 16:28	1
Dibromofluoromethane (Surr)	104		75 - 131				02/23/23 16:28	1
1,2-Dichloroethane-d4 (Surr)	110		63 - 144				02/23/23 16:28	1
Toluene-d8 (Surr)	100		80 - 117				02/23/23 16:28	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<0.906	U	4.59	0.906 mg/L			02/28/23 15:41	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.906	U	4.59	0.906 mg/L		02/28/23 13:39	02/28/23 16:14	1
Diesel Range Organics (Over C10-C28)	<0.906	U	4.59	0.906 mg/L		02/28/23 13:39	02/28/23 16:14	1
Oil Range Organics (Over C28-C36)	<0.875	U	4.59	0.875 mg/L		02/28/23 13:39	02/28/23 16:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 135			02/28/23 13:39	02/28/23 16:14	1
o-Terphenyl	85		70 - 135			02/28/23 13:39	02/28/23 16:14	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	87.3		0.500	0.200 mg/L			02/23/23 21:07	1
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/23/23 21:07	1
Fluoride	0.528		0.500	0.100 mg/L			02/23/23 21:07	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/23/23 21:07	1
Sulfate	55.6		0.500	0.109 mg/L			02/23/23 21:07	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	418		4.00	4.00 mg/L			02/23/23 18:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	418		4.00	4.00 mg/L			02/23/23 18:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00 mg/L			02/23/23 18:12	1
Carbon dioxide (SM 4500 CO2 D)	433			mg/L			02/27/23 17:20	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-25084-1**

Date Collected: 02/22/23 12:10

Matrix: Water

Date Received: 02/22/23 15:47

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free (SM 4500 CO2 D)	66.3			mg/L			02/27/23 17:20	1
pH (SM 4500 H+ B)	7.1	HF		SU			02/24/23 16:11	1
Temperature (SM 4500 H+ B)	18.7	HF		Celsius			02/24/23 16:11	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495 mg/L			02/28/23 16:36	1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-25084-2**

Date Collected: 02/22/23 13:15

Matrix: Water

Date Received: 02/22/23 15:47

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0153		0.00100	0.000533 mg/L			02/23/23 16:48	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/23/23 16:48	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/23/23 16:48	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/23/23 16:48	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/23/23 16:48	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/23/23 16:48	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/23/23 16:48	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/23/23 16:48	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/23/23 16:48	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/23/23 16:48	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/23/23 16:48	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/23/23 16:48	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/23/23 16:48	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/23/23 16:48	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/23/23 16:48	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/23/23 16:48	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/23/23 16:48	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 16:48	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/23/23 16:48	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/23/23 16:48	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 16:48	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 16:48	1
Dichlorodifluoromethane	<0.000919	U *	0.00100	0.000919 mg/L			02/23/23 16:48	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/23/23 16:48	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/23/23 16:48	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/23/23 16:48	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/23/23 16:48	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/23/23 16:48	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/23/23 16:48	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/23/23 16:48	1
Ethylbenzene	0.0152		0.00100	0.000411 mg/L			02/23/23 16:48	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/23/23 16:48	1
Isopropylbenzene	0.00543		0.00100	0.000613 mg/L			02/23/23 16:48	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/23/23 16:48	1
m,p-Xylenes	0.0637		0.0100	0.00124 mg/L			02/23/23 16:48	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/23/23 16:48	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/23/23 16:48	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 16:48	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

Client Sample ID: MW-2

Lab Sample ID: 880-25084-2

Date Collected: 02/22/23 13:15

Matrix: Water

Date Received: 02/22/23 15:47

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>N-Propylbenzene</b>	<b>0.00151</b>		0.00100	0.000498 mg/L			02/23/23 16:48	1
<b>o-Xylene</b>	<b>0.0146</b>		0.00100	0.000551 mg/L			02/23/23 16:48	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/23/23 16:48	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/23/23 16:48	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/23/23 16:48	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/23/23 16:48	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 16:48	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/23/23 16:48	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/23/23 16:48	1
<b>Toluene</b>	<b>0.0274</b>		0.00100	0.000475 mg/L			02/23/23 16:48	1
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/23/23 16:48	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 16:48	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/23/23 16:48	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/23/23 16:48	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/23/23 16:48	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/23/23 16:48	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/23/23 16:48	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/23/23 16:48	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/23/23 16:48	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.0132</b>		0.00100	0.000417 mg/L			02/23/23 16:48	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.00357</b>		0.00100	0.000456 mg/L			02/23/23 16:48	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/23/23 16:48	1
<b>Xylenes, Total</b>	<b>0.0783</b>		0.0100	0.00124 mg/L			02/23/23 16:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		74 - 124		02/23/23 16:48	1
Dibromofluoromethane (Surr)	103		75 - 131		02/23/23 16:48	1
1,2-Dichloroethane-d4 (Surr)	114		63 - 144		02/23/23 16:48	1
Toluene-d8 (Surr)	100		80 - 117		02/23/23 16:48	1

**Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>1.97</b>	<b>J</b>	4.69	0.926 mg/L			02/28/23 15:41	1

**Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline Range Organics (GRO)-C6-C10</b>	<b>1.97</b>	<b>J</b>	4.69	0.926 mg/L		02/24/23 12:44	02/24/23 13:13	1
Diesel Range Organics (Over C10-C28)	<0.926	U	4.69	0.926 mg/L		02/24/23 12:44	02/24/23 13:13	1
Oil Range Organics (Over C28-C36)	<0.894	U	4.69	0.894 mg/L		02/24/23 12:44	02/24/23 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 135	02/24/23 12:44	02/24/23 13:13	1
o-Terphenyl	120		70 - 135	02/24/23 12:44	02/24/23 13:13	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>98.9</b>		0.500	0.200 mg/L			02/23/23 18:49	1
<b>Nitrate as N</b>	<b>0.606</b>		0.100	0.0391 mg/L			02/23/23 18:49	1
<b>Fluoride</b>	<b>0.113</b>	<b>J</b>	0.500	0.100 mg/L			02/23/23 18:49	1

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### Client Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

**Client Sample ID: MW-2**

**Lab Sample ID: 880-25084-2**

Date Collected: 02/22/23 13:15

Matrix: Water

Date Received: 02/22/23 15:47

**Method: EPA 300.0 - Anions, Ion Chromatography (Continued)**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.162		0.100	0.0293	mg/L			02/23/23 18:49	1
Sulfate	70.9		0.500	0.109	mg/L			02/23/23 18:49	1

**General Chemistry**

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	1310		4.00	4.00	mg/L			02/23/23 18:28	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	1310		4.00	4.00	mg/L			02/23/23 18:28	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00	mg/L			02/23/23 18:28	1
Carbon dioxide (SM 4500 CO2 D)	3220				mg/L			02/27/23 17:20	1
Carbon Dioxide, Free (SM 4500 CO2 D)	2070				mg/L			02/27/23 17:20	1
pH (SM 4500 H+ B)	6.1	HF			SU			02/24/23 16:11	1
Temperature (SM 4500 H+ B)	18.7	HF			Celsius			02/24/23 16:11	1
Sulfide (SM 4500 S2 F)	<0.495	U	5.00	0.495	mg/L			02/28/23 16:36	1

## Surrogate Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-117)
880-25084-1	MW-1	107	104	110	100
880-25084-2	MW-2	104	103	114	100
LCS 860-91344/3	Lab Control Sample	104	108	108	100
LCSD 860-91344/4	Lab Control Sample Dup	102	106	108	100
MB 860-91344/10	Method Blank	108	103	109	101

## Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-135)	OTPH1 (70-135)
880-25084-1	MW-1	76	85
880-25084-2	MW-2	85	120
880-25084-2 MS	MW-2	74	113
LCS 860-91635/2-A	Lab Control Sample	86	103
LCS 860-92049/2-A	Lab Control Sample	91	98
LCSD 860-91635/3-A	Lab Control Sample Dup	85	102
LCSD 860-92049/3-A	Lab Control Sample Dup	93	100
MB 860-91635/1-A	Method Blank	85	101
MB 860-92049/1-A	Method Blank	86	95

## Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-91344/10  
 Matrix: Water  
 Analysis Batch: 91344

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000533	U	0.00100	0.000533 mg/L			02/23/23 10:42	1
Bromobenzene	<0.000665	U	0.00100	0.000665 mg/L			02/23/23 10:42	1
Bromochloromethane	<0.000657	U	0.00100	0.000657 mg/L			02/23/23 10:42	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552 mg/L			02/23/23 10:42	1
Bromoform	<0.000633	U	0.00500	0.000633 mg/L			02/23/23 10:42	1
Bromomethane	<0.00142	U	0.00500	0.00142 mg/L			02/23/23 10:42	1
2-Butanone	<0.00828	U	0.0500	0.00828 mg/L			02/23/23 10:42	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896 mg/L			02/23/23 10:42	1
Chlorobenzene	<0.000530	U	0.00100	0.000530 mg/L			02/23/23 10:42	1
Chloroethane	<0.00198	U	0.0100	0.00198 mg/L			02/23/23 10:42	1
Chloroform	<0.000643	U	0.00100	0.000643 mg/L			02/23/23 10:42	1
Chloromethane	<0.00204	U	0.0100	0.00204 mg/L			02/23/23 10:42	1
2-Chlorotoluene	<0.00118	U	0.00200	0.00118 mg/L			02/23/23 10:42	1
4-Chlorotoluene	<0.000472	U	0.00100	0.000472 mg/L			02/23/23 10:42	1
cis-1,2-Dichloroethene	<0.000714	U	0.00100	0.000714 mg/L			02/23/23 10:42	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107 mg/L			02/23/23 10:42	1
Dibromochloromethane	<0.000547	U	0.00500	0.000547 mg/L			02/23/23 10:42	1
1,2-Dibromo-3-Chloropropane	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 10:42	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999 mg/L			02/23/23 10:42	1
1,2-Dichlorobenzene	<0.000509	U	0.00100	0.000509 mg/L			02/23/23 10:42	1
1,3-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 10:42	1
1,4-Dichlorobenzene	<0.000513	U	0.00100	0.000513 mg/L			02/23/23 10:42	1
Dichlorodifluoromethane	<0.000919	U	0.00100	0.000919 mg/L			02/23/23 10:42	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635 mg/L			02/23/23 10:42	1
1,2-Dichloroethane	<0.000590	U	0.00100	0.000590 mg/L			02/23/23 10:42	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738 mg/L			02/23/23 10:42	1
1,2-Dichloropropane	<0.000667	U	0.00500	0.000667 mg/L			02/23/23 10:42	1
1,3-Dichloropropane	<0.000514	U	0.00500	0.000514 mg/L			02/23/23 10:42	1
2,2-Dichloropropane	<0.000780	U	0.00500	0.000780 mg/L			02/23/23 10:42	1
1,1-Dichloropropene	<0.00160	U	0.00500	0.00160 mg/L			02/23/23 10:42	1
Ethylbenzene	<0.000411	U	0.00100	0.000411 mg/L			02/23/23 10:42	1
Hexachlorobutadiene	<0.00126	U	0.00500	0.00126 mg/L			02/23/23 10:42	1
Isopropylbenzene	<0.000613	U	0.00100	0.000613 mg/L			02/23/23 10:42	1
Methylene Chloride	<0.00173	U	0.00500	0.00173 mg/L			02/23/23 10:42	1
m,p-Xylenes	<0.00124	U	0.0100	0.00124 mg/L			02/23/23 10:42	1
MTBE	<0.00139	U	0.00500	0.00139 mg/L			02/23/23 10:42	1
Naphthalene	<0.00135	U	0.0100	0.00135 mg/L			02/23/23 10:42	1
n-Butylbenzene	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 10:42	1
N-Propylbenzene	<0.000498	U	0.00100	0.000498 mg/L			02/23/23 10:42	1
o-Xylene	<0.000551	U	0.00100	0.000551 mg/L			02/23/23 10:42	1
p-Cymene (p-Isopropyltoluene)	<0.000919	U	0.00100	0.000919 mg/L			02/23/23 10:42	1
sec-Butylbenzene	<0.000468	U	0.00100	0.000468 mg/L			02/23/23 10:42	1
Styrene	<0.000655	U	0.00100	0.000655 mg/L			02/23/23 10:42	1
tert-Butylbenzene	<0.000442	U	0.00100	0.000442 mg/L			02/23/23 10:42	1
1,1,1,2-Tetrachloroethane	<0.000644	U	0.00100	0.000644 mg/L			02/23/23 10:42	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470 mg/L			02/23/23 10:42	1
Tetrachloroethene	<0.000801	U	0.00100	0.000801 mg/L			02/23/23 10:42	1
Toluene	<0.000475	U	0.00100	0.000475 mg/L			02/23/23 10:42	1

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

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

Lab Sample ID: MB 860-91344/10

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 91344

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.000945	U	0.00100	0.000945 mg/L			02/23/23 10:42	1
trans-1,3-Dichloropropene	<0.00127	U	0.00500	0.00127 mg/L			02/23/23 10:42	1
1,2,3-Trichlorobenzene	<0.00217	U	0.00500	0.00217 mg/L			02/23/23 10:42	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175 mg/L			02/23/23 10:42	1
1,1,1-Trichloroethane	<0.00169	U	0.00500	0.00169 mg/L			02/23/23 10:42	1
1,1,2-Trichloroethane	<0.000511	U	0.00100	0.000511 mg/L			02/23/23 10:42	1
Trichloroethene	<0.000791	U	0.00500	0.000791 mg/L			02/23/23 10:42	1
Trichlorofluoromethane	<0.000638	U	0.00100	0.000638 mg/L			02/23/23 10:42	1
1,2,3-Trichloropropane	<0.000490	U	0.00100	0.000490 mg/L			02/23/23 10:42	1
1,2,4-Trimethylbenzene	<0.000417	U	0.00100	0.000417 mg/L			02/23/23 10:42	1
1,3,5-Trimethylbenzene	<0.000456	U	0.00100	0.000456 mg/L			02/23/23 10:42	1
Vinyl chloride	<0.000638	U	0.00200	0.000638 mg/L			02/23/23 10:42	1
Xylenes, Total	<0.00124	U	0.0100	0.00124 mg/L			02/23/23 10:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		74 - 124		02/23/23 10:42	1
Dibromofluoromethane (Surr)	103		75 - 131		02/23/23 10:42	1
1,2-Dichloroethane-d4 (Surr)	109		63 - 144		02/23/23 10:42	1
Toluene-d8 (Surr)	101		80 - 117		02/23/23 10:42	1

Lab Sample ID: LCS 860-91344/3

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 91344

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0500	0.04822		mg/L		96	75 - 125
Bromobenzene	0.0500	0.05075		mg/L		102	75 - 125
Bromochloromethane	0.0500	0.05434		mg/L		109	60 - 140
Bromodichloromethane	0.0500	0.05358		mg/L		107	75 - 125
Bromoform	0.0500	0.04723		mg/L		94	70 - 130
Bromomethane	0.0500	0.03780		mg/L		76	60 - 140
2-Butanone	0.250	0.2537		mg/L		101	60 - 140
Carbon tetrachloride	0.0500	0.05377		mg/L		108	70 - 130
Chlorobenzene	0.0500	0.04907		mg/L		98	65 - 135
Chloroethane	0.0500	0.04318		mg/L		86	60 - 140
Chloroform	0.0500	0.05357		mg/L		107	70 - 121
Chloromethane	0.0500	0.03748		mg/L		75	60 - 140
2-Chlorotoluene	0.0500	0.05093		mg/L		102	73 - 125
4-Chlorotoluene	0.0500	0.05143		mg/L		103	74 - 125
cis-1,2-Dichloroethene	0.0500	0.05201		mg/L		104	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05198		mg/L		104	74 - 125
Dibromochloromethane	0.0500	0.05266		mg/L		105	73 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.05629		mg/L		113	59 - 125
1,2-Dibromoethane	0.0500	0.05311		mg/L		106	73 - 125
1,2-Dichlorobenzene	0.0500	0.05096		mg/L		102	75 - 125
1,3-Dichlorobenzene	0.0500	0.05033		mg/L		101	75 - 125
1,4-Dichlorobenzene	0.0500	0.05018		mg/L		100	75 - 125
Dichlorodifluoromethane	0.0500	0.02901	*	mg/L		58	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

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

Lab Sample ID: LCS 860-91344/3

Matrix: Water

Analysis Batch: 91344

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	0.0500	0.05126		mg/L		103	70 - 130
1,2-Dichloroethane	0.0500	0.05511		mg/L		110	72 - 130
1,1-Dichloroethene	0.0500	0.04323		mg/L		86	50 - 150
1,2-Dichloropropane	0.0500	0.05108		mg/L		102	74 - 125
1,3-Dichloropropane	0.0500	0.05104		mg/L		102	75 - 125
2,2-Dichloropropane	0.0500	0.05477		mg/L		110	75 - 125
1,1-Dichloropropene	0.0500	0.05198		mg/L		104	75 - 125
Ethylbenzene	0.0500	0.04944		mg/L		99	75 - 125
Hexachlorobutadiene	0.0500	0.05249		mg/L		105	75 - 125
Isopropylbenzene	0.0500	0.04949		mg/L		99	75 - 125
Methylene Chloride	0.0500	0.04847		mg/L		97	75 - 125
m,p-Xylenes	0.0500	0.04969		mg/L		99	75 - 125
MTBE	0.0500	0.05184		mg/L		104	65 - 135
Naphthalene	0.0500	0.05305		mg/L		106	70 - 130
n-Butylbenzene	0.0500	0.05249		mg/L		105	75 - 125
N-Propylbenzene	0.0500	0.05076		mg/L		102	75 - 125
o-Xylene	0.0500	0.04919		mg/L		98	75 - 125
p-Cymene (p-Isopropyltoluene)	0.0500	0.05066		mg/L		101	75 - 125
sec-Butylbenzene	0.0500	0.05045		mg/L		101	75 - 125
Styrene	0.0500	0.05029		mg/L		101	75 - 125
tert-Butylbenzene	0.0500	0.04920		mg/L		98	75 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.05155		mg/L		103	72 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.05348		mg/L		107	74 - 125
Tetrachloroethene	0.0500	0.04944		mg/L		99	71 - 125
Toluene	0.0500	0.04839		mg/L		97	70 - 130
trans-1,2-Dichloroethene	0.0500	0.04861		mg/L		97	75 - 125
trans-1,3-Dichloropropene	0.0500	0.05363		mg/L		107	66 - 125
1,2,3-Trichlorobenzene	0.0500	0.05155		mg/L		103	75 - 137
1,2,4-Trichlorobenzene	0.0500	0.05107		mg/L		102	75 - 135
1,1,1-Trichloroethane	0.0500	0.05336		mg/L		107	70 - 130
1,1,2-Trichloroethane	0.0500	0.05148		mg/L		103	70 - 130
Trichloroethene	0.0500	0.04971		mg/L		99	75 - 135
Trichlorofluoromethane	0.0500	0.04949		mg/L		99	60 - 140
1,2,3-Trichloropropane	0.0500	0.05365		mg/L		107	75 - 125
1,2,4-Trimethylbenzene	0.0500	0.05046		mg/L		101	75 - 125
1,3,5-Trimethylbenzene	0.0500	0.04978		mg/L		100	60 - 140
Vinyl chloride	0.0500	0.04049		mg/L		81	60 - 140

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	104		74 - 124
Dibromofluoromethane (Surr)	108		75 - 131
1,2-Dichloroethane-d4 (Surr)	108		63 - 144
Toluene-d8 (Surr)	100		80 - 117

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## QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

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

Lab Sample ID: LCSD 860-91344/4

Matrix: Water

Analysis Batch: 91344

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Benzene	0.0500	0.04774		mg/L		95	75 - 125	1	25
Bromobenzene	0.0500	0.04925		mg/L		99	75 - 125	3	25
Bromochloromethane	0.0500	0.05327		mg/L		107	60 - 140	2	25
Bromodichloromethane	0.0500	0.05285		mg/L		106	75 - 125	1	25
Bromoform	0.0500	0.04738		mg/L		95	70 - 130	0	25
Bromomethane	0.0500	0.03659		mg/L		73	60 - 140	3	25
2-Butanone	0.250	0.2569		mg/L		103	60 - 140	1	25
Carbon tetrachloride	0.0500	0.05212		mg/L		104	70 - 130	3	25
Chlorobenzene	0.0500	0.04841		mg/L		97	65 - 135	1	25
Chloroethane	0.0500	0.04218		mg/L		84	60 - 140	2	25
Chloroform	0.0500	0.05207		mg/L		104	70 - 121	3	25
Chloromethane	0.0500	0.03658		mg/L		73	60 - 140	2	25
2-Chlorotoluene	0.0500	0.04901		mg/L		98	73 - 125	4	25
4-Chlorotoluene	0.0500	0.04983		mg/L		100	74 - 125	3	25
cis-1,2-Dichloroethene	0.0500	0.05087		mg/L		102	75 - 125	2	25
cis-1,3-Dichloropropene	0.0500	0.05156		mg/L		103	74 - 125	1	25
Dibromochloromethane	0.0500	0.05275		mg/L		106	73 - 125	0	25
1,2-Dibromo-3-Chloropropane	0.0500	0.05793		mg/L		116	59 - 125	3	25
1,2-Dibromoethane	0.0500	0.05315		mg/L		106	73 - 125	0	25
1,2-Dichlorobenzene	0.0500	0.04946		mg/L		99	75 - 125	3	25
1,3-Dichlorobenzene	0.0500	0.04889		mg/L		98	75 - 125	3	25
1,4-Dichlorobenzene	0.0500	0.04875		mg/L		97	75 - 125	3	25
Dichlorodifluoromethane	0.0500	0.02766	*	mg/L		55	70 - 130	5	25
1,1-Dichloroethane	0.0500	0.04986		mg/L		100	70 - 130	3	25
1,2-Dichloroethane	0.0500	0.05527		mg/L		111	72 - 130	0	25
1,1-Dichloroethene	0.0500	0.04159		mg/L		83	50 - 150	4	25
1,2-Dichloropropane	0.0500	0.05101		mg/L		102	74 - 125	0	25
1,3-Dichloropropane	0.0500	0.05128		mg/L		103	75 - 125	0	25
2,2-Dichloropropane	0.0500	0.05217		mg/L		104	75 - 125	5	25
1,1-Dichloropropene	0.0500	0.05034		mg/L		101	75 - 125	3	25
Ethylbenzene	0.0500	0.04827		mg/L		97	75 - 125	2	25
Hexachlorobutadiene	0.0500	0.05152		mg/L		103	75 - 125	2	25
Isopropylbenzene	0.0500	0.04820		mg/L		96	75 - 125	3	25
Methylene Chloride	0.0500	0.04756		mg/L		95	75 - 125	2	25
m,p-Xylenes	0.0500	0.04836		mg/L		97	75 - 125	3	25
MTBE	0.0500	0.05196		mg/L		104	65 - 135	0	25
Naphthalene	0.0500	0.05582		mg/L		112	70 - 130	5	25
n-Butylbenzene	0.0500	0.05044		mg/L		101	75 - 125	4	25
N-Propylbenzene	0.0500	0.04894		mg/L		98	75 - 125	4	25
o-Xylene	0.0500	0.04835		mg/L		97	75 - 125	2	25
p-Cymene (p-Isopropyltoluene)	0.0500	0.04892		mg/L		98	75 - 125	3	25
sec-Butylbenzene	0.0500	0.04873		mg/L		97	75 - 125	3	25
Styrene	0.0500	0.04946		mg/L		99	75 - 125	2	25
tert-Butylbenzene	0.0500	0.04783		mg/L		96	75 - 125	3	25
1,1,1,2-Tetrachloroethane	0.0500	0.05085		mg/L		102	72 - 125	1	25
1,1,1,2,2-Tetrachloroethane	0.0500	0.05330		mg/L		107	74 - 125	0	25
Tetrachloroethene	0.0500	0.04887		mg/L		98	71 - 125	1	25
Toluene	0.0500	0.04761		mg/L		95	70 - 130	2	25

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

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

Lab Sample ID: LCSD 860-91344/4  
 Matrix: Water  
 Analysis Batch: 91344

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.0500	0.04775		mg/L		96	75 - 125	2	25
trans-1,3-Dichloropropene	0.0500	0.05335		mg/L		107	66 - 125	1	25
1,2,3-Trichlorobenzene	0.0500	0.05335		mg/L		107	75 - 137	3	25
1,2,4-Trichlorobenzene	0.0500	0.05127		mg/L		103	75 - 135	0	25
1,1,1-Trichloroethane	0.0500	0.05142		mg/L		103	70 - 130	4	25
1,1,2-Trichloroethane	0.0500	0.05223		mg/L		104	70 - 130	1	25
Trichloroethene	0.0500	0.04904		mg/L		98	75 - 135	1	25
Trichlorofluoromethane	0.0500	0.04763		mg/L		95	60 - 140	4	25
1,2,3-Trichloropropane	0.0500	0.05357		mg/L		107	75 - 125	0	25
1,2,4-Trimethylbenzene	0.0500	0.04886		mg/L		98	75 - 125	3	25
1,3,5-Trimethylbenzene	0.0500	0.04843		mg/L		97	60 - 140	3	25
Vinyl chloride	0.0500	0.03931		mg/L		79	60 - 140	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	102		74 - 124
Dibromofluoromethane (Surr)	106		75 - 131
1,2-Dichloroethane-d4 (Surr)	108		63 - 144
Toluene-d8 (Surr)	100		80 - 117

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 860-91635/1-A  
 Matrix: Water  
 Analysis Batch: 91623

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 91635

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.988	U	5.00	0.988 mg/L		02/24/23 12:44	02/24/23 14:32	1
Diesel Range Organics (Over C10-C28)	<0.988	U	5.00	0.988 mg/L		02/24/23 12:44	02/24/23 14:32	1
Oil Range Organics (Over C28-C36)	<0.954	U	5.00	0.954 mg/L		02/24/23 12:44	02/24/23 14:32	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 135	02/24/23 12:44	02/24/23 14:32	1
o-Terphenyl	101		70 - 135	02/24/23 12:44	02/24/23 14:32	1

Lab Sample ID: LCS 860-91635/2-A  
 Matrix: Water  
 Analysis Batch: 91623

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 91635

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	99.8	115.7		mg/L		116	70 - 135
Diesel Range Organics (Over C10-C28)	99.6	92.66		mg/L		93	70 - 135

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1-Chlorooctane	86		70 - 135
o-Terphenyl	103		70 - 135

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### QC Sample Results

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: LCSD 860-91635/3-A  
Matrix: Water  
Analysis Batch: 91623

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 91635

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	99.8	113.6		mg/L		114	70 - 135	2	35	
Diesel Range Organics (Over C10-C28)	99.6	94.84		mg/L		95	70 - 135	2	35	
<b>LCSD LCSD</b>										
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	85		70 - 135							
o-Terphenyl	102		70 - 135							

Lab Sample ID: 880-25084-2 MS  
Matrix: Water  
Analysis Batch: 91624

Client Sample ID: MW-2  
Prep Type: Total/NA  
Prep Batch: 91635

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	1.97	J	93.0	99.02		mg/L		104	70 - 135	
Diesel Range Organics (Over C10-C28)	<0.926	U	92.7	93.28		mg/L		101	70 - 135	
<b>MS MS</b>										
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	74		70 - 135							
o-Terphenyl	113		70 - 135							

Lab Sample ID: MB 860-92049/1-A  
Matrix: Water  
Analysis Batch: 92010

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 92049

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Gasoline Range Organics (GRO)-C6-C10	<0.988	U	5.00	0.988 mg/L		02/28/23 13:39	02/28/23 15:54	1		
Diesel Range Organics (Over C10-C28)	<0.988	U	5.00	0.988 mg/L		02/28/23 13:39	02/28/23 15:54	1		
Oil Range Organics (Over C28-C36)	<0.954	U	5.00	0.954 mg/L		02/28/23 13:39	02/28/23 15:54	1		
<b>MB MB</b>										
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
1-Chlorooctane	86		70 - 135	02/28/23 13:39	02/28/23 15:54	1				
o-Terphenyl	95		70 - 135	02/28/23 13:39	02/28/23 15:54	1				

Lab Sample ID: LCS 860-92049/2-A  
Matrix: Water  
Analysis Batch: 92011

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 92049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	99.8	126.1		mg/L		126	70 - 135
Diesel Range Organics (Over C10-C28)	99.6	107.8		mg/L		108	70 - 135

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 860-92049/2-A  
 Matrix: Water  
 Analysis Batch: 92011

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 92049

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	91		70 - 135
o-Terphenyl	98		70 - 135

Lab Sample ID: LCSD 860-92049/3-A  
 Matrix: Water  
 Analysis Batch: 92011

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 92049

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	99.8	131.5		mg/L		132	70 - 135	4	35	
Diesel Range Organics (Over C10-C28)	99.6	111.3		mg/L		112	70 - 135	3	35	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	93		70 - 135
o-Terphenyl	100		70 - 135

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-91496/3  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<0.200	U	0.500	0.200 mg/L			02/23/23 17:18	1
Fluoride	<0.100	U	0.500	0.100 mg/L			02/23/23 17:18	1
Sulfate	<0.109	U	0.500	0.109 mg/L			02/23/23 17:18	1

Lab Sample ID: LCS 860-91496/4  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	RPD
Chloride	10.0	9.822		mg/L		98	90 - 110	
Fluoride	10.0	10.52		mg/L		105	90 - 110	
Sulfate	10.0	9.333		mg/L		93	90 - 110	

Lab Sample ID: LCSD 860-91496/5  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Chloride	10.0	9.829		mg/L		98	90 - 110	0	20	
Fluoride	10.0	10.51		mg/L		105	90 - 110	0	20	
Sulfate	10.0	9.373		mg/L		94	90 - 110	0	20	

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LLCS 860-91496/7  
 Matrix: Water  
 Analysis Batch: 91496

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5.00	5.755		mg/L		115	50 - 150
Fluoride	5.00	4.941	J	mg/L		99	50 - 150
Sulfate	5.00	3.710	J	mg/L		74	50 - 150

Lab Sample ID: 880-25084-1 MS  
 Matrix: Water  
 Analysis Batch: 91496

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	87.3		10.0	95.80	4	mg/L		85	90 - 110
Fluoride	0.528		10.0	11.05		mg/L		105	90 - 110
Sulfate	55.6		10.0	64.96	4	mg/L		94	90 - 110

Lab Sample ID: 880-25084-1 MSD  
 Matrix: Water  
 Analysis Batch: 91496

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	87.3		10.0	95.87	4	mg/L		85	90 - 110	0	20
Fluoride	0.528		10.0	11.04		mg/L		105	90 - 110	0	20
Sulfate	55.6		10.0	65.12	4	mg/L		95	90 - 110	0	20

Lab Sample ID: MB 860-91497/3  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391 mg/L			02/23/23 17:18	1
Nitrite as N	<0.0293	U	0.100	0.0293 mg/L			02/23/23 17:18	1

Lab Sample ID: LCS 860-91497/4  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.26		mg/L		103	80 - 120
Nitrite as N	10.0	9.717		mg/L		97	80 - 120

Lab Sample ID: LCSD 860-91497/5  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.26		mg/L		103	80 - 120	0	20
Nitrite as N	10.0	9.752		mg/L		98	80 - 120	0	20

### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LLCS 860-91497/6  
 Matrix: Water  
 Analysis Batch: 91497

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	1.00	1.163		mg/L		116	50 - 150
Nitrite as N	1.00	0.9709	J	mg/L		97	50 - 150

Lab Sample ID: 880-25084-1 MS  
 Matrix: Water  
 Analysis Batch: 91497

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	<0.0391	U	10.0	10.03		mg/L		100	80 - 120
Nitrite as N	<0.0293	U	2.50	2.409		mg/L		96	80 - 120

Lab Sample ID: 880-25084-1 MSD  
 Matrix: Water  
 Analysis Batch: 91497

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	<0.0391	U	10.0	10.03		mg/L		100	80 - 120	0	15
Nitrite as N	<0.0293	U	2.50	2.410		mg/L		96	80 - 120	0	15

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-91564/3  
 Matrix: Water  
 Analysis Batch: 91564

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00 mg/L			02/23/23 17:21	1

Lab Sample ID: LCS 860-91564/4  
 Matrix: Water  
 Analysis Batch: 91564

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	254.4		mg/L		102	85 - 115

Lab Sample ID: LCSD 860-91564/5  
 Matrix: Water  
 Analysis Batch: 91564

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	256.4		mg/L		103	85 - 115	1	20

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### QC Sample Results

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 860-92101/1  
 Matrix: Water  
 Analysis Batch: 92101

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.495	U	5.00	0.495 mg/L			02/28/23 16:36	1

Lab Sample ID: LCS 860-92101/2  
 Matrix: Water  
 Analysis Batch: 92101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	50.0	47.00		mg/L		94	80 - 120

Lab Sample ID: LCSD 860-92101/3  
 Matrix: Water  
 Analysis Batch: 92101

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	50.0	47.00		mg/L		94	80 - 120	0	20

Lab Sample ID: 880-25084-1 MS  
 Matrix: Water  
 Analysis Batch: 92101

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	<0.495	U	50.0	47.20		mg/L		94	80 - 120

Lab Sample ID: 880-25084-1 MSD  
 Matrix: Water  
 Analysis Batch: 92101

Client Sample ID: MW-1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<0.495	U	50.0	47.20		mg/L		94	80 - 120	0	20



## QC Association Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

## GC/MS VOA

## Analysis Batch: 91344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	8260C	
880-25084-2	MW-2	Total/NA	Water	8260C	
MB 860-91344/10	Method Blank	Total/NA	Water	8260C	
LCS 860-91344/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-91344/4	Lab Control Sample Dup	Total/NA	Water	8260C	

## GC Semi VOA

## Analysis Batch: 80443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	8015 NM	
880-25084-2	MW-2	Total/NA	Water	8015 NM	

## Analysis Batch: 91623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-91635/1-A	Method Blank	Total/NA	Water	8015B NM	91635
LCS 860-91635/2-A	Lab Control Sample	Total/NA	Water	8015B NM	91635
LCSD 860-91635/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	91635

## Analysis Batch: 91624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-2	MW-2	Total/NA	Water	8015B NM	91635
880-25084-2 MS	MW-2	Total/NA	Water	8015B NM	91635

## Prep Batch: 91635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-2	MW-2	Total/NA	Water	8015NM Aq Prep	
MB 860-91635/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 860-91635/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 860-91635/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	
880-25084-2 MS	MW-2	Total/NA	Water	8015NM Aq Prep	

## Analysis Batch: 92010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	8015B NM	92049
MB 860-92049/1-A	Method Blank	Total/NA	Water	8015B NM	92049

## Analysis Batch: 92011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-92049/2-A	Lab Control Sample	Total/NA	Water	8015B NM	92049
LCSD 860-92049/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	92049

## Prep Batch: 92049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	8015NM Aq Prep	
MB 860-92049/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 860-92049/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 860-92049/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	

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## QC Association Summary

Client: Ensolum

Job ID: 880-25084-1

Project/Site: South Hobbs - 03B1417002

## HPLC/IC

## Analysis Batch: 91496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	300.0	
880-25084-2	MW-2	Total/NA	Water	300.0	
MB 860-91496/3	Method Blank	Total/NA	Water	300.0	
LCS 860-91496/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-91496/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-91496/7	Lab Control Sample	Total/NA	Water	300.0	
880-25084-1 MS	MW-1	Total/NA	Water	300.0	
880-25084-1 MSD	MW-1	Total/NA	Water	300.0	

## Analysis Batch: 91497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	300.0	
880-25084-2	MW-2	Total/NA	Water	300.0	
MB 860-91497/3	Method Blank	Total/NA	Water	300.0	
LCS 860-91497/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-91497/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-91497/6	Lab Control Sample	Total/NA	Water	300.0	
880-25084-1 MS	MW-1	Total/NA	Water	300.0	
880-25084-1 MSD	MW-1	Total/NA	Water	300.0	

## General Chemistry

## Analysis Batch: 91564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	SM 2320B	
880-25084-2	MW-2	Total/NA	Water	SM 2320B	
MB 860-91564/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-91564/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-91564/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

## Analysis Batch: 91683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	SM 4500 H+ B	
880-25084-2	MW-2	Total/NA	Water	SM 4500 H+ B	

## Analysis Batch: 91916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	SM 4500 CO2 D	
880-25084-2	MW-2	Total/NA	Water	SM 4500 CO2 D	

## Analysis Batch: 92101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-25084-1	MW-1	Total/NA	Water	SM 4500 S2 F	
880-25084-2	MW-2	Total/NA	Water	SM 4500 S2 F	
MB 860-92101/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 860-92101/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
LCSD 860-92101/3	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 F	
880-25084-1 MS	MW-1	Total/NA	Water	SM 4500 S2 F	
880-25084-1 MSD	MW-1	Total/NA	Water	SM 4500 S2 F	

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### Lab Chronicle

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

**Client Sample ID: MW-1**

**Lab Sample ID: 880-25084-1**

Date Collected: 02/22/23 12:10

Matrix: Water

Date Received: 02/22/23 15:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	91344	TTD	EET HOU	02/23/23 16:28
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/28/23 15:41
Total/NA	Prep	8015NM Aq Prep			92049	SAR	EET HOU	02/28/23 13:39
Total/NA	Analysis	8015B NM		1	92010	SAR	EET HOU	02/28/23 16:14
Total/NA	Analysis	300.0		1	91496	A1S	EET HOU	02/23/23 21:07
Total/NA	Analysis	300.0		1	91497	A1S	EET HOU	02/23/23 21:07
Total/NA	Analysis	SM 2320B		1	91564	TL	EET HOU	02/23/23 18:12
Total/NA	Analysis	SM 4500 CO2 D		1	91916	AA	EET HOU	02/27/23 17:20
Total/NA	Analysis	SM 4500 H+ B		1	91683	TL	EET HOU	02/24/23 16:11
Total/NA	Analysis	SM 4500 S2 F		1	92101	SCI	EET HOU	02/28/23 16:36

**Client Sample ID: MW-2**

**Lab Sample ID: 880-25084-2**

Date Collected: 02/22/23 13:15

Matrix: Water

Date Received: 02/22/23 15:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	91344	TTD	EET HOU	02/23/23 16:48
Total/NA	Analysis	8015 NM		1	80443	DD	EET HOU	02/28/23 15:41
Total/NA	Prep	8015NM Aq Prep			91635	CZT	EET HOU	02/24/23 12:44
Total/NA	Analysis	8015B NM		1	91624	T1S	EET HOU	02/24/23 13:13
Total/NA	Analysis	300.0		1	91496	A1S	EET HOU	02/23/23 18:49
Total/NA	Analysis	300.0		1	91497	A1S	EET HOU	02/23/23 18:49
Total/NA	Analysis	SM 2320B		1	91564	TL	EET HOU	02/23/23 18:28
Total/NA	Analysis	SM 4500 CO2 D		1	91916	AA	EET HOU	02/27/23 17:20
Total/NA	Analysis	SM 4500 H+ B		1	91683	TL	EET HOU	02/24/23 16:11
Total/NA	Analysis	SM 4500 S2 F		1	92101	SCI	EET HOU	02/28/23 16:36

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

### Accreditation/Certification Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

#### Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

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
8015 NM		Water	Total TPH
8015B NM	8015NM Aq Prep	Water	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Aq Prep	Water	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Aq Prep	Water	Oil Range Organics (Over C28-C36)
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 4500 CO2 D		Water	Carbon dioxide
SM 4500 CO2 D		Water	Carbon Dioxide, Free
SM 4500 H+ B		Water	Temperature

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### Method Summary

Client: Ensolum  
 Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 4500 CO2 D	Carbon Dioxide and Forms of Alkalinity by Calculation	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 4500 S2 F	Sulfide, Total	SM	EET HOU
5030C	Purge and Trap	SW846	EET HOU
8015NM Aq Prep	Microextraction	SW846	EET HOU

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



### Sample Summary

Client: Ensolum  
Project/Site: South Hobbs - 03B1417002

Job ID: 880-25084-1

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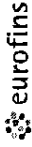
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-25084-1	MW-1	Water	02/22/23 12:10	02/22/23 15:47
880-25084-2	MW-2	Water	02/22/23 13:15	02/22/23 15:47

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**Eurofins Midland**  
1211 W Florida Ave  
Midland, TX 79701  
Phone: 432-704-5440

# Chain of Custody Record



Environment Test, ng



<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab P.M.	Carrier Tracking No(s)	COC No											
Eurofins Environment Testing South Centre		Kramer Jessica	Kramer Jessica	880-6365-1	880-6365-1											
Shipping/Receiving		Phone:	E-Mail	State of Origin:	Page:											
Company: Eurofins Environment Testing South Centre		4145 Greenbriar Dr	Jessica.Kramer@et.eurofins.com	New Mexico	Page 1 of 1											
Address:		City:	Accreditations Required (See note):	Job #:	Preservation Codes:											
4145 Greenbriar Dr		Stafford	NELAP Texas	880-25084-1	A HCL M Hexane B NaOH N None O AsNaO2 P Na2OAS Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X Trizma Y Z other (specify)											
City:		State, Zip:	Due Date Requested:	Analysis Requested												
TX, 77477		TX, 77477	2/24/2023	Total Number of Containers												
Phone:		PO #	TAT Requested (days):	8015MOD_Calc												
281-240-4200(Tel)				2220I (MOD) Copy Analytes												
Email:		WO #		300_ORGFMS (MOD) Custom List												
				300_ORGFMS_28D (MOD) Custom List												
Project Name:		Project #		8015MOD_NM/8015NM_Aq_Prep (MOD) Full TPH												
South Hobbs 03B1417002		88000023		8260C/6030C (MOD) Full List VOCs												
Site:		SSOW#		SM4500_S2_F/Sulfide, Total												
South Hobbs				SM4500_H+												
Sample Identification		Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Newcar, Solid, Overstabil, BT-Tissue, A=Al)	Blind Filtered Sample (Yes or No)	Performance MS/MSD (Yes or No)	SM4500_CO2_D (MOD) Carbon Dioxide	8015MOD_NM/8015NM_Aq_Prep (MOD) Full TPH	300_ORGFMS_28D (MOD) Custom List	300_ORGFMS (MOD) Custom List	2220I (MOD) Copy Analytes	8015MOD_Calc	Total Number of Containers	Special Instructions/Note:
MW-1 (880-25084-1)			2/22/23	12:10 Mountain	Water	Water		X	X	X	X	X	X	X	7	DISSOLVED SULFIDE
MW-2 (880-25084-2)			2/22/23	13:15 Mountain	Water	Water		X	X	X	X	X	X	X	7	DISSOLVED SULFIDE

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Centre, 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Centre, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Centre, 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 Centre, LLC.

**Possible Hazard Identification**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements.

Unconfirmed  
 Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank: 2  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: *[Signature]* Date/Time: \_\_\_\_\_ Company: **FedEX**  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ (Custody Seal No. \_\_\_\_\_)  
 Δ Yes Δ No  
 Temp: IR ID:HOU-344  
 C/F: -0.2 2.2  
 Corrected Temp: 2.0  
 Ver: 06/08/2021





### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-25084-1

**Login Number: 25084**

**List Source: Eurofins Midland**

**List Number: 1**

**Creator: Rodriguez, Leticia**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-25084-1

Login Number: 25084

List Source: Eurofins Houston

List Number: 2

List Creation: 02/23/23 02:30 PM

Creator: Pena, Jesiel

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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.	True	
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	

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# ANALYTICAL REPORT

February 09, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

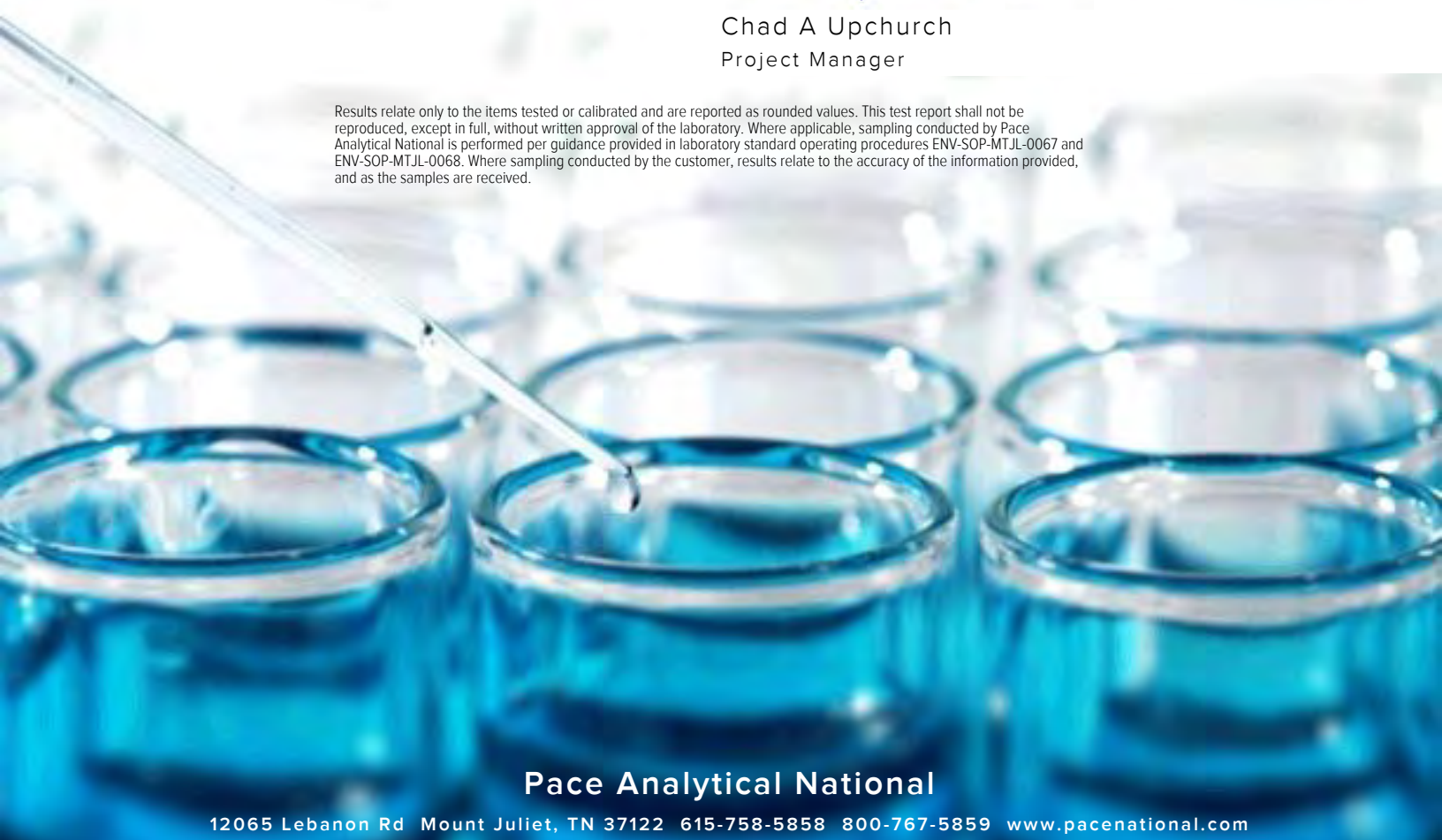
## Ensolum, LLC

Sample Delivery Group: L1582347  
 Samples Received: 02/04/2023  
 Project Number: 03B1417001  
 Description: Levey Well  
 Site: 03B1417001  
 Report To: Beaux Jennings  
 601 N Marienfeld Street, Ste. 400  
 Midland, TX 79701

Entire Report Reviewed By:











Chad A Upchurch  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Tr: TRRP Summary</b>	<b>5</b>	
TRRP form R	<b>6</b>	
TRRP form S	<b>7</b>	
TRRP Exception Reports	<b>8</b>	
<b>Sr: Sample Results</b>	<b>9</b>	
<b>LEVEY WELL L1582347-01</b>	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>11</b>	
<b>Volatile Organic Compounds (MS) by Method TO-15</b>	<b>11</b>	
<b>Gl: Glossary of Terms</b>	<b>16</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>17</b>	
<b>Sc: Sample Chain of Custody</b>	<b>18</b>	
		

LEVEY WELL L1582347-01 Air

Collected by: Shane Diller  
Collected date/time: 02/02/23 12:05  
Received date/time: 02/04/23 10:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2002337	1000	02/08/23 12:17	02/08/23 12:17	SDS	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2003185	10000	02/09/23 11:43	02/09/23 11:43	SDS	Mt. Juliet, TN

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chad A Upchurch  
Project Manager

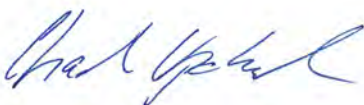
- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Tr
- <sup>6</sup> Sr
- <sup>7</sup> Qc
- <sup>8</sup> Gl
- <sup>9</sup> Al
- <sup>10</sup> Sc

# Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 - Field chain-of-custody documentation;
- R2 - Sample identification cross-reference;
- R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- R5 - Test reports/summary forms for blank samples;
- R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Chad A Upchurch  
Project Manager

# Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 02/09/2023 12:58					
Project Name: Levey Well		Laboratory Job Number: L1582347-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2002337 and WG2003185					
#1	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.  
 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);  
 3. NA = Not applicable;  
 4. NR = Not reviewed;  
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



# Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 02/09/2023 12:58					
Project Name: Levey Well		Laboratory Job Number: L1582347-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2002337 and WG2003185					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 02/09/2023 12:58
Project Name: Levey Well	Laboratory Job Number: L1582347-01
Reviewer Name: Chad A Upchurch	Prep Batch Number(s): WG2002337 and WG2003185

ER # <sup>1</sup>	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.
	<ol style="list-style-type: none"><li>1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li><li>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li><li>3. NA = Not applicable;</li><li>4. NR = Not reviewed;</li><li>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li></ol>

Collected date/time: 02/02/23 12:05

L1582347

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1250	2970	4540	10800		1000	WG2002337
Allyl chloride	107-05-1	76.53	200	626	ND	ND		1000	WG2002337
Benzene	71-43-2	78.10	200	639	ND	ND		1000	WG2002337
Benzyl Chloride	100-44-7	127	200	1040	ND	ND		1000	WG2002337
Bromodichloromethane	75-27-4	164	200	1340	921	6180		1000	WG2002337
Bromoform	75-25-2	253	600	6210	ND	ND		1000	WG2002337
Bromomethane	74-83-9	94.90	200	776	ND	ND		1000	WG2002337
1,3-Butadiene	106-99-0	54.10	2000	4430	ND	ND		1000	WG2002337
Carbon disulfide	75-15-0	76.10	200	622	ND	ND		1000	WG2002337
Carbon tetrachloride	56-23-5	154	200	1260	ND	ND		1000	WG2002337
Chlorobenzene	108-90-7	113	200	924	ND	ND		1000	WG2002337
Chloroethane	75-00-3	64.50	200	528	ND	ND		1000	WG2002337
Chloroform	67-66-3	119	200	973	ND	ND		1000	WG2002337
Chloromethane	74-87-3	50.50	200	413	ND	ND		1000	WG2002337
2-Chlorotoluene	95-49-8	126	200	1030	ND	ND		1000	WG2002337
Cyclohexane	110-82-7	84.20	2000	6890	120000	413000		10000	WG2003185
Dibromochloromethane	124-48-1	208	200	1700	ND	ND		1000	WG2002337
1,2-Dibromoethane	106-93-4	188	200	1540	ND	ND		1000	WG2002337
1,2-Dichlorobenzene	95-50-1	147	200	1200	ND	ND		1000	WG2002337
1,3-Dichlorobenzene	541-73-1	147	200	1200	ND	ND		1000	WG2002337
1,4-Dichlorobenzene	106-46-7	147	200	1200	ND	ND		1000	WG2002337
1,2-Dichloroethane	107-06-2	99	200	810	ND	ND		1000	WG2002337
1,1-Dichloroethane	75-34-3	98	200	802	ND	ND		1000	WG2002337
1,1-Dichloroethene	75-35-4	96.90	200	793	ND	ND		1000	WG2002337
cis-1,2-Dichloroethene	156-59-2	96.90	200	793	ND	ND		1000	WG2002337
trans-1,2-Dichloroethene	156-60-5	96.90	200	793	ND	ND		1000	WG2002337
1,2-Dichloropropane	78-87-5	113	200	924	ND	ND		1000	WG2002337
cis-1,3-Dichloropropene	10061-01-5	111	200	908	ND	ND		1000	WG2002337
trans-1,3-Dichloropropene	10061-02-6	111	200	908	ND	ND		1000	WG2002337
1,4-Dioxane	123-91-1	88.10	200	721	ND	ND		1000	WG2002337
Ethanol	64-17-5	46.10	1250	2360	ND	ND		1000	WG2002337
Ethylbenzene	100-41-4	106	200	867	ND	ND		1000	WG2002337
4-Ethyltoluene	622-96-8	120	200	982	ND	ND		1000	WG2002337
Trichlorofluoromethane	75-69-4	137.40	200	1120	ND	ND		1000	WG2002337
Dichlorodifluoromethane	75-71-8	120.92	200	989	ND	ND		1000	WG2002337
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	200	1530	ND	ND		1000	WG2002337
1,2-Dichlorotetrafluoroethane	76-14-2	171	200	1400	ND	ND		1000	WG2002337
Heptane	142-82-5	100	200	818	16000	65400		1000	WG2002337
Hexachloro-1,3-butadiene	87-68-3	261	630	6730	ND	ND		1000	WG2002337
n-Hexane	110-54-3	86.20	6300	22200	208000	733000		10000	WG2003185
Isopropylbenzene	98-82-8	120.20	200	983	ND	ND		1000	WG2002337
Methylene Chloride	75-09-2	84.90	200	694	ND	ND		1000	WG2002337
Methyl Butyl Ketone	591-78-6	100	1250	5110	ND	ND		1000	WG2002337
2-Butanone (MEK)	78-93-3	72.10	1250	3690	ND	ND		1000	WG2002337
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1250	5120	ND	ND		1000	WG2002337
Methyl methacrylate	80-62-6	100.12	200	819	ND	ND		1000	WG2002337
MTBE	1634-04-4	88.10	200	721	ND	ND		1000	WG2002337
Naphthalene	91-20-3	128	630	3300	ND	ND		1000	WG2002337
2-Propanol	67-63-0	60.10	1250	3070	7790	19100		1000	WG2002337
Propene	115-07-1	42.10	1250	2150	ND	ND		1000	WG2002337
Styrene	100-42-5	104	200	851	ND	ND		1000	WG2002337
1,1,2,2-Tetrachloroethane	79-34-5	168	200	1370	ND	ND		1000	WG2002337
Tetrachloroethylene	127-18-4	166	200	1360	ND	ND		1000	WG2002337
Tetrahydrofuran	109-99-9	72.10	200	590	ND	ND		1000	WG2002337
Toluene	108-88-3	92.10	500	1880	ND	ND		1000	WG2002337
1,2,4-Trichlorobenzene	120-82-1	181	630	4660	ND	ND		1000	WG2002337

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Collected date/time: 02/02/23 12:05

L1582347

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	200	1090	ND	ND		1000	<a href="#">WG2002337</a>
1,1,2-Trichloroethane	79-00-5	133	200	1090	ND	ND		1000	<a href="#">WG2002337</a>
Trichloroethylene	79-01-6	131	200	1070	ND	ND		1000	<a href="#">WG2002337</a>
1,2,4-Trimethylbenzene	95-63-6	120	200	982	ND	ND		1000	<a href="#">WG2002337</a>
1,3,5-Trimethylbenzene	108-67-8	120	200	982	ND	ND		1000	<a href="#">WG2002337</a>
2,2,4-Trimethylpentane	540-84-1	114.22	200	934	ND	ND		1000	<a href="#">WG2002337</a>
Vinyl chloride	75-01-4	62.50	200	511	ND	ND		1000	<a href="#">WG2002337</a>
Vinyl Bromide	593-60-2	106.95	200	875	ND	ND		1000	<a href="#">WG2002337</a>
Vinyl acetate	108-05-4	86.10	200	704	ND	ND		1000	<a href="#">WG2002337</a>
m&p-Xylene	1330-20-7	106	400	1730	ND	ND		1000	<a href="#">WG2002337</a>
o-Xylene	95-47-6	106	200	867	ND	ND		1000	<a href="#">WG2002337</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200000	826000	1250000	5160000		1000	<a href="#">WG2002337</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.6				<a href="#">WG2002337</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.4				<a href="#">WG2003185</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1582347-01](#)

Method Blank (MB)

(MB) R3888971-3 02/08/23 10:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1582347-01](#)

Method Blank (MB)

(MB) R3888971-3 02/08/23 10:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	0.169	U	0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	94.1			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3888971-1 02/08/23 09:02 • (LCSD) R3888971-2 02/08/23 09:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	4.54	4.53	121	121	70.0-130			0.221	25
Allyl Chloride	3.75	3.59	4.19	95.7	112	70.0-130			15.4	25
Benzene	3.75	4.26	4.20	114	112	70.0-130			1.42	25
Benzyl Chloride	3.75	4.16	4.10	111	109	70.0-152			1.45	25
Bromodichloromethane	3.75	4.29	4.29	114	114	70.0-130			0.000	25
Bromoform	3.75	4.11	4.08	110	109	70.0-130			0.733	25

Volatile Organic Compounds (MS) by Method TO-15

L1582347-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3888971-1 02/08/23 09:02 • (LCSD) R3888971-2 02/08/23 09:46

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromomethane	3.75	4.18	4.20	111	112	70.0-130			0.477	25
1,3-Butadiene	3.75	4.21	4.21	112	112	70.0-130			0.000	25
Carbon disulfide	3.75	4.28	4.24	114	113	70.0-130			0.939	25
Carbon tetrachloride	3.75	4.26	4.24	114	113	70.0-130			0.471	25
Chlorobenzene	3.75	4.24	4.17	113	111	70.0-130			1.66	25
Chloroethane	3.75	4.11	4.05	110	108	70.0-130			1.47	25
Chloroform	3.75	4.28	4.25	114	113	70.0-130			0.703	25
Chloromethane	3.75	4.14	4.15	110	111	70.0-130			0.241	25
2-Chlorotoluene	3.75	4.13	4.02	110	107	70.0-130			2.70	25
Dibromochloromethane	3.75	4.17	4.16	111	111	70.0-130			0.240	25
1,2-Dibromoethane	3.75	4.21	4.13	112	110	70.0-130			1.92	25
1,2-Dichlorobenzene	3.75	4.06	4.03	108	107	70.0-130			0.742	25
1,3-Dichlorobenzene	3.75	4.05	4.02	108	107	70.0-130			0.743	25
1,4-Dichlorobenzene	3.75	3.97	3.94	106	105	70.0-130			0.759	25
1,2-Dichloroethane	3.75	4.23	4.16	113	111	70.0-130			1.67	25
1,1-Dichloroethane	3.75	4.29	4.27	114	114	70.0-130			0.467	25
1,1-Dichloroethene	3.75	4.23	4.19	113	112	70.0-130			0.950	25
cis-1,2-Dichloroethene	3.75	4.20	4.27	112	114	70.0-130			1.65	25
trans-1,2-Dichloroethene	3.75	4.23	4.24	113	113	70.0-130			0.236	25
1,2-Dichloropropane	3.75	4.30	4.20	115	112	70.0-130			2.35	25
cis-1,3-Dichloropropene	3.75	4.18	4.16	111	111	70.0-130			0.480	25
trans-1,3-Dichloropropene	3.75	4.20	4.20	112	112	70.0-130			0.000	25
1,4-Dioxane	3.75	4.45	4.37	119	117	70.0-140			1.81	25
Ethanol	3.75	3.89	3.93	104	105	55.0-148			1.02	25
Ethylbenzene	3.75	4.28	4.21	114	112	70.0-130			1.65	25
4-Ethyltoluene	3.75	4.24	4.25	113	113	70.0-130			0.236	25
Trichlorofluoromethane	3.75	4.22	4.10	113	109	70.0-130			2.88	25
Dichlorodifluoromethane	3.75	3.39	3.40	90.4	90.7	64.0-139			0.295	25
1,1,2-Trichlorotrifluoroethane	3.75	4.19	4.09	112	109	70.0-130			2.42	25
1,2-Dichlorotetrafluoroethane	3.75	4.38	4.31	117	115	70.0-130			1.61	25
Heptane	3.75	3.97	3.94	106	105	70.0-130			0.759	25
Hexachloro-1,3-butadiene	3.75	4.21	4.19	112	112	70.0-151			0.476	25
Isopropylbenzene	3.75	4.22	4.18	113	111	70.0-130			0.952	25
Methylene Chloride	3.75	4.09	4.25	109	113	70.0-130			3.84	25
Methyl Butyl Ketone	3.75	4.23	4.12	113	110	70.0-149			2.63	25
Methyl Ethyl Ketone	3.75	4.22	4.41	113	118	70.0-130			4.40	25
4-Methyl-2-pentanone (MIBK)	3.75	4.32	4.34	115	116	70.0-139			0.462	25
Methyl Methacrylate	3.75	4.20	4.02	112	107	70.0-130			4.38	25
MTBE	3.75	4.24	4.08	113	109	70.0-130			3.85	25
Naphthalene	3.75	4.18	4.08	111	109	70.0-159			2.42	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

L1582347-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3888971-1 02/08/23 09:02 • (LCSD) R3888971-2 02/08/23 09:46

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Propanol	3.75	4.31	4.33	115	115	70.0-139			0.463	25
Propene	3.75	4.08	4.09	109	109	64.0-144			0.245	25
Styrene	3.75	4.26	4.17	114	111	70.0-130			2.14	25
1,1,2,2-Tetrachloroethane	3.75	4.30	4.28	115	114	70.0-130			0.466	25
Tetrachloroethylene	3.75	4.21	4.10	112	109	70.0-130			2.65	25
Tetrahydrofuran	3.75	4.27	4.24	114	113	70.0-137			0.705	25
Toluene	3.75	4.24	4.28	113	114	70.0-130			0.939	25
1,2,4-Trichlorobenzene	3.75	4.19	4.11	112	110	70.0-160			1.93	25
1,1,1-Trichloroethane	3.75	4.24	4.22	113	113	70.0-130			0.473	25
1,1,2-Trichloroethane	3.75	4.13	4.21	110	112	70.0-130			1.92	25
Trichloroethylene	3.75	4.27	4.29	114	114	70.0-130			0.467	25
1,2,4-Trimethylbenzene	3.75	4.26	4.20	114	112	70.0-130			1.42	25
1,3,5-Trimethylbenzene	3.75	4.20	4.26	112	114	70.0-130			1.42	25
2,2,4-Trimethylpentane	3.75	4.31	4.28	115	114	70.0-130			0.698	25
Vinyl chloride	3.75	4.29	4.21	114	112	70.0-130			1.88	25
Vinyl Bromide	3.75	4.23	4.18	113	111	70.0-130			1.19	25
Vinyl acetate	3.75	4.06	4.17	108	111	70.0-130			2.67	25
m&p-Xylene	7.50	8.55	8.44	114	113	70.0-130			1.29	25
o-Xylene	3.75	4.23	4.12	113	110	70.0-130			2.63	25
TPH (GC/MS) Low Fraction	203	233	231	115	114	70.0-130			0.862	25
(S) 1,4-Bromofluorobenzene				97.7	96.9	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc



Volatile Organic Compounds (MS) by Method TO-15

L1582347-01

Method Blank (MB)

(MB) R3889096-2 02/09/23 10:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Cyclohexane	U		0.0753	0.200
n-Hexane	U		0.206	0.630
(S) 1,4-Bromofluorobenzene	96.1			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889096-1 02/09/23 09:39 • (LCSD) R3889096-3 02/09/23 11:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Cyclohexane	3.75	4.40	4.30	117	115	70.0-130			2.30	25
n-Hexane	3.75	4.46	4.51	119	120	70.0-130			1.11	25
(S) 1,4-Bromofluorobenzene				97.4	96.5	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
---	---

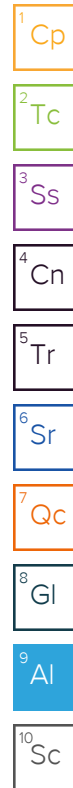
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.




Company Name/Address:  
**Ensolum, LLC**  
 601 Marienfeld #400  
 Midland, TX 79701

Billing Information:  
**Accounts Payable**  
 2351 W Northwest Hwy. Ste.  
 1203  
 Dallas, TX 75220

Pres  
 Chk

Analysis / Container / Preservative									

Chain of Custody Page    of   



12065 Lebanon Road Mt Juliet, TN 37122  
 Phone: 615-758-5858 Alt: 800-767-5859  
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Report to:  
**Beaux Jennings**

Email To: **bjennings@ensolum.com**

Project Description:  
 Levey Well

City/State Collected: **Hobbs NM**

Please Circle:  
 PT MT CT ET

Phone: **210-219-8858**


Client Project #  
 03B1417001

Lab Project #  
**ENSOLUMTX-SUMMA**

Collected by (print):  
 Shane Diller

Site/Facility ID #  
 03B1417001

P.O. #  
 03B1417001

Collected by (signature):  
  
 Immediately  
 Packed on Ice  N  X  Y

**Rush?** (Lab MUST Be Notified)  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Date Results Needed

No. of  
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
Levey Well	G	Air	---	2-2-23	1205	1
<del>NFE 2-2-23</del>						

TO-15 Summa

SDG # **U587347**  
**K087**  
 Acctnum: **ENSOLUMMTX**  
 Template: **T180734**  
 Prelogin: **P827709**  
 PM: **134 - Mark W. Beasley**  
 PB:  
 Shipped Via:  
 Remarks Sample # (lab only)  
 -01

\* Matrix:  
 SS - Soil **AIR** - Air **F** - Filter  
 GW - Groundwater **B** - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

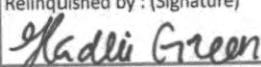
Remarks:  
 pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

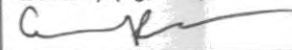
Tracking #

**Sample Receipt Checklist**  
 COC Seal Present/Intact:  Y  NP  N  
 COC Signed/Accurate:  Y  N  
 Bottles arrive intact:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N

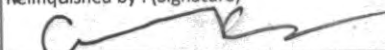
**If Applicable**  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature)  



Date: **2/3/23**  
 Time: **0855**

Received by: (Signature)  


Trip Blank Received: Yes  No   
 HCL/MeOH  
 TBR

Relinquished by: (Signature)  


Date: **2/3/23**  
 Time: **1700**

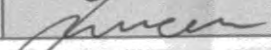
Received by: (Signature)  


Temp: \_\_\_\_\_ °C  
 Bottles Received: **1**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

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

Received for lab by: (Signature)  


Date: **2/4/23**  
 Time: **1020**

Hold: \_\_\_\_\_  
 Condition: **NCF / OK**



# ANALYTICAL REPORT

February 14, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

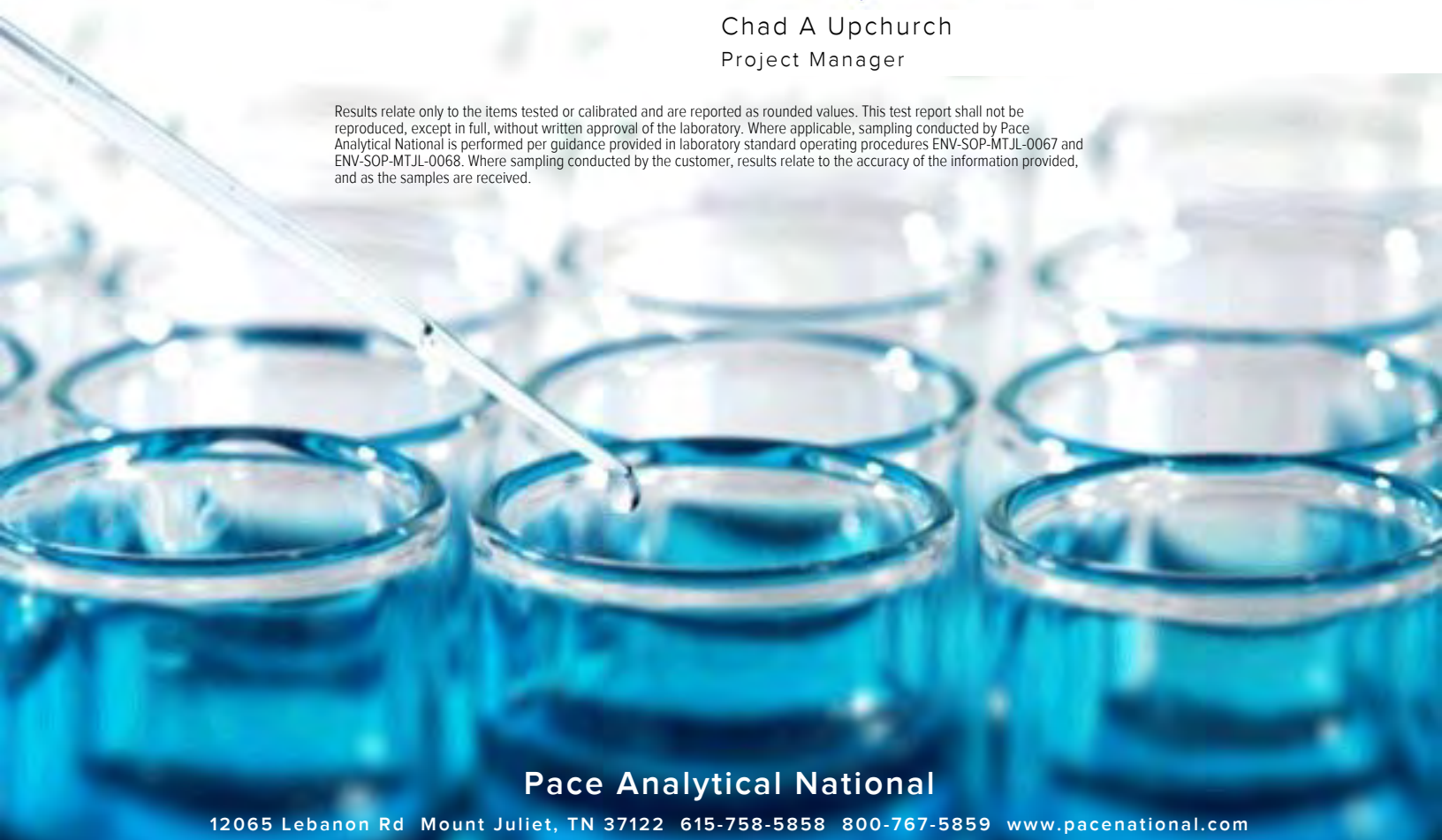
## Ensolum, LLC

Sample Delivery Group: L1583943  
 Samples Received: 02/09/2023  
 Project Number: 03B1417001  
 Description: Levey Well  
 Site: 03B1417001  
 Report To: Beaux Jennings  
 601 N Marienfeld Street, Ste. 400  
 Midland, TX 79701

Entire Report Reviewed By:

Chad A Upchurch  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

**Cp: Cover Page** 1

**Tc: Table of Contents** 2

**Ss: Sample Summary** 3

**Cn: Case Narrative** 4

**Tr: TRRP Summary** 5

    TRRP form R 6

    TRRP form S 7

    TRRP Exception Reports 8

**Sr: Sample Results** 9

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    LEVEY WELL L1583943-02 11

    LEVEY WELL L1583943-03 13

    LEVEY WELL L1583943-04 15

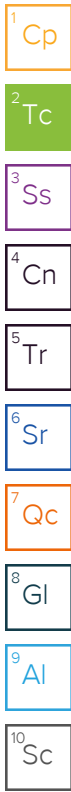
**Qc: Quality Control Summary** 17

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**Gl: Glossary of Terms** 26

**Al: Accreditations & Locations** 27

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LEVEY WELL L1583943-01 Air

Collected by Shane Diller  
 Collected date/time 02/07/23 11:05  
 Received date/time 02/09/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2004743	1000	02/13/23 02:47	02/13/23 02:47	CEP	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

LEVEY WELL L1583943-02 Air

Collected by Shane Diller  
 Collected date/time 02/07/23 12:48  
 Received date/time 02/09/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2004493	10	02/11/23 21:04	02/11/23 21:04	CEP	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2005753	20	02/14/23 15:27	02/14/23 15:27	CEP	Mt. Juliet, TN

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

LEVEY WELL L1583943-03 Air

Collected by Shane Diller  
 Collected date/time 02/07/23 13:48  
 Received date/time 02/09/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2004493	10	02/11/23 21:40	02/11/23 21:40	DBB	Mt. Juliet, TN

<sup>7</sup>Qc

<sup>8</sup>Gl

LEVEY WELL L1583943-04 Air

Collected by Shane Diller  
 Collected date/time 02/07/23 14:49  
 Received date/time 02/09/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2004493	10	02/11/23 22:16	02/11/23 22:16	CEP	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2005753	20	02/14/23 16:04	02/14/23 16:04	CEP	Mt. Juliet, TN

<sup>9</sup>Al

<sup>10</sup>Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chad A Upchurch  
Project Manager

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

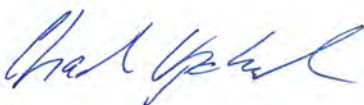


# Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 - Field chain-of-custody documentation;
- R2 - Sample identification cross-reference;
- R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- R5 - Test reports/summary forms for blank samples;
- R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Chad A Upchurch  
Project Manager

# Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 02/14/2023 16:40					
Project Name: Levey Well		Laboratory Job Number: L1583943-01, 02, 03 and 04					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2004493, WG2004743 and WG2005753					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.  
 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);  
 3. NA = Not applicable;  
 4. NR = Not reviewed;  
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 02/14/2023 16:40					
Project Name: Levey Well		Laboratory Job Number: L1583943-01, 02, 03 and 04					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2004493, WG2004743 and WG2005753					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 02/14/2023 16:40
Project Name: Levey Well	Laboratory Job Number: L1583943-01, 02, 03 and 04
Reviewer Name: Chad A Upchurch	Prep Batch Number(s): WG2004493, WG2004743 and WG2005753

ER # <sup>1</sup>	Description
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The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Collected date/time: 02/07/23 11:05

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1250	2970	2500	5940		1000	WG2004743
Allyl chloride	107-05-1	76.53	200	626	ND	ND		1000	WG2004743
Benzene	71-43-2	78.10	200	639	ND	ND		1000	WG2004743
Benzyl Chloride	100-44-7	127	200	1040	ND	ND		1000	WG2004743
Bromodichloromethane	75-27-4	164	200	1340	ND	ND		1000	WG2004743
Bromoform	75-25-2	253	600	6210	ND	ND		1000	WG2004743
Bromomethane	74-83-9	94.90	200	776	ND	ND		1000	WG2004743
1,3-Butadiene	106-99-0	54.10	2000	4430	ND	ND		1000	WG2004743
Carbon disulfide	75-15-0	76.10	200	622	ND	ND		1000	WG2004743
Carbon tetrachloride	56-23-5	154	200	1260	ND	ND		1000	WG2004743
Chlorobenzene	108-90-7	113	200	924	ND	ND		1000	WG2004743
Chloroethane	75-00-3	64.50	200	528	ND	ND		1000	WG2004743
Chloroform	67-66-3	119	200	973	ND	ND		1000	WG2004743
Chloromethane	74-87-3	50.50	200	413	ND	ND		1000	WG2004743
2-Chlorotoluene	95-49-8	126	200	1030	ND	ND		1000	WG2004743
Cyclohexane	110-82-7	84.20	200	689	60200	207000		1000	WG2004743
Dibromochloromethane	124-48-1	208	200	1700	ND	ND		1000	WG2004743
1,2-Dibromoethane	106-93-4	188	200	1540	ND	ND		1000	WG2004743
1,2-Dichlorobenzene	95-50-1	147	200	1200	ND	ND		1000	WG2004743
1,3-Dichlorobenzene	541-73-1	147	200	1200	ND	ND		1000	WG2004743
1,4-Dichlorobenzene	106-46-7	147	200	1200	ND	ND		1000	WG2004743
1,2-Dichloroethane	107-06-2	99	200	810	ND	ND		1000	WG2004743
1,1-Dichloroethane	75-34-3	98	200	802	ND	ND		1000	WG2004743
1,1-Dichloroethene	75-35-4	96.90	200	793	ND	ND		1000	WG2004743
cis-1,2-Dichloroethene	156-59-2	96.90	200	793	ND	ND		1000	WG2004743
trans-1,2-Dichloroethene	156-60-5	96.90	200	793	ND	ND		1000	WG2004743
1,2-Dichloropropane	78-87-5	113	200	924	ND	ND		1000	WG2004743
cis-1,3-Dichloropropene	10061-01-5	111	200	908	ND	ND		1000	WG2004743
trans-1,3-Dichloropropene	10061-02-6	111	200	908	ND	ND		1000	WG2004743
1,4-Dioxane	123-91-1	88.10	200	721	ND	ND		1000	WG2004743
Ethanol	64-17-5	46.10	1250	2360	ND	ND		1000	WG2004743
Ethylbenzene	100-41-4	106	200	867	ND	ND		1000	WG2004743
4-Ethyltoluene	622-96-8	120	200	982	ND	ND		1000	WG2004743
Trichlorofluoromethane	75-69-4	137.40	200	1120	ND	ND		1000	WG2004743
Dichlorodifluoromethane	75-71-8	120.92	200	989	ND	ND		1000	WG2004743
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	200	1530	ND	ND		1000	WG2004743
1,2-Dichlorotetrafluoroethane	76-14-2	171	200	1400	ND	ND		1000	WG2004743
Heptane	142-82-5	100	200	818	8350	34200		1000	WG2004743
Hexachloro-1,3-butadiene	87-68-3	261	630	6730	ND	ND		1000	WG2004743
n-Hexane	110-54-3	86.20	630	2220	60500	213000		1000	WG2004743
Isopropylbenzene	98-82-8	120.20	200	983	ND	ND		1000	WG2004743
Methylene Chloride	75-09-2	84.90	200	694	ND	ND		1000	WG2004743
Methyl Butyl Ketone	591-78-6	100	1250	5110	ND	ND		1000	WG2004743
2-Butanone (MEK)	78-93-3	72.10	1250	3690	ND	ND		1000	WG2004743
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1250	5120	ND	ND		1000	WG2004743
Methyl methacrylate	80-62-6	100.12	200	819	ND	ND		1000	WG2004743
MTBE	1634-04-4	88.10	200	721	ND	ND		1000	WG2004743
Naphthalene	91-20-3	128	630	3300	ND	ND		1000	WG2004743
2-Propanol	67-63-0	60.10	1250	3070	4300	10600		1000	WG2004743
Propene	115-07-1	42.10	1250	2150	ND	ND		1000	WG2004743
Styrene	100-42-5	104	200	851	ND	ND		1000	WG2004743
1,1,2,2-Tetrachloroethane	79-34-5	168	200	1370	ND	ND		1000	WG2004743
Tetrachloroethylene	127-18-4	166	200	1360	ND	ND		1000	WG2004743
Tetrahydrofuran	109-99-9	72.10	200	590	ND	ND		1000	WG2004743
Toluene	108-88-3	92.10	500	1880	ND	ND		1000	WG2004743
1,2,4-Trichlorobenzene	120-82-1	181	630	4660	ND	ND		1000	WG2004743

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/07/23 11:05

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	200	1090	ND	ND		1000	<a href="#">WG2004743</a>
1,1,2-Trichloroethane	79-00-5	133	200	1090	ND	ND		1000	<a href="#">WG2004743</a>
Trichloroethylene	79-01-6	131	200	1070	ND	ND		1000	<a href="#">WG2004743</a>
1,2,4-Trimethylbenzene	95-63-6	120	200	982	ND	ND		1000	<a href="#">WG2004743</a>
1,3,5-Trimethylbenzene	108-67-8	120	200	982	ND	ND		1000	<a href="#">WG2004743</a>
2,2,4-Trimethylpentane	540-84-1	114.22	200	934	ND	ND		1000	<a href="#">WG2004743</a>
Vinyl chloride	75-01-4	62.50	200	511	ND	ND		1000	<a href="#">WG2004743</a>
Vinyl Bromide	593-60-2	106.95	200	875	ND	ND		1000	<a href="#">WG2004743</a>
Vinyl acetate	108-05-4	86.10	200	704	ND	ND		1000	<a href="#">WG2004743</a>
m&p-Xylene	1330-20-7	106	400	1730	ND	ND		1000	<a href="#">WG2004743</a>
o-Xylene	95-47-6	106	200	867	ND	ND		1000	<a href="#">WG2004743</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200000	826000	855000	3530000		1000	<a href="#">WG2004743</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.1				<a href="#">WG2004743</a>

Sample Narrative:

L1583943-01 WG2004743: Non-target compounds too high to run at a lower dilution.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/07/23 12:48

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	12.5	29.7	59.0	140		10	WG2004493
Allyl chloride	107-05-1	76.53	2.00	6.26	ND	ND		10	WG2004493
Benzene	71-43-2	78.10	2.00	6.39	ND	ND		10	WG2004493
Benzyl Chloride	100-44-7	127	2.00	10.4	ND	ND		10	WG2004493
Bromodichloromethane	75-27-4	164	2.00	13.4	ND	ND		10	WG2004493
Bromoform	75-25-2	253	6.00	62.1	ND	ND		10	WG2004493
Bromomethane	74-83-9	94.90	2.00	7.76	ND	ND		10	WG2004493
1,3-Butadiene	106-99-0	54.10	20.0	44.3	ND	ND		10	WG2004493
Carbon disulfide	75-15-0	76.10	2.00	6.22	ND	ND		10	WG2004493
Carbon tetrachloride	56-23-5	154	2.00	12.6	ND	ND		10	WG2004493
Chlorobenzene	108-90-7	113	2.00	9.24	ND	ND		10	WG2004493
Chloroethane	75-00-3	64.50	2.00	5.28	ND	ND		10	WG2004493
Chloroform	67-66-3	119	2.00	9.73	ND	ND		10	WG2004493
Chloromethane	74-87-3	50.50	2.00	4.13	ND	ND		10	WG2004493
2-Chlorotoluene	95-49-8	126	2.00	10.3	ND	ND		10	WG2004493
Cyclohexane	110-82-7	84.20	4.00	13.8	519	1790		20	WG2005753
Dibromochloromethane	124-48-1	208	2.00	17.0	ND	ND		10	WG2004493
1,2-Dibromoethane	106-93-4	188	2.00	15.4	ND	ND		10	WG2004493
1,2-Dichlorobenzene	95-50-1	147	2.00	12.0	ND	ND		10	WG2004493
1,3-Dichlorobenzene	541-73-1	147	2.00	12.0	ND	ND		10	WG2004493
1,4-Dichlorobenzene	106-46-7	147	2.00	12.0	ND	ND		10	WG2004493
1,2-Dichloroethane	107-06-2	99	2.00	8.10	ND	ND		10	WG2004493
1,1-Dichloroethane	75-34-3	98	2.00	8.02	ND	ND		10	WG2004493
1,1-Dichloroethene	75-35-4	96.90	2.00	7.93	ND	ND		10	WG2004493
cis-1,2-Dichloroethene	156-59-2	96.90	2.00	7.93	ND	ND		10	WG2004493
trans-1,2-Dichloroethene	156-60-5	96.90	2.00	7.93	ND	ND		10	WG2004493
1,2-Dichloropropane	78-87-5	113	2.00	9.24	ND	ND		10	WG2004493
cis-1,3-Dichloropropene	10061-01-5	111	2.00	9.08	ND	ND		10	WG2004493
trans-1,3-Dichloropropene	10061-02-6	111	2.00	9.08	ND	ND		10	WG2004493
1,4-Dioxane	123-91-1	88.10	2.00	7.21	ND	ND		10	WG2004493
Ethanol	64-17-5	46.10	12.5	23.6	12.8	24.1		10	WG2004493
Ethylbenzene	100-41-4	106	2.00	8.67	ND	ND		10	WG2004493
4-Ethyltoluene	622-96-8	120	2.00	9.82	ND	ND		10	WG2004493
Trichlorofluoromethane	75-69-4	137.40	2.00	11.2	ND	ND		10	WG2004493
Dichlorodifluoromethane	75-71-8	120.92	2.00	9.89	ND	ND		10	WG2004493
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	2.00	15.3	ND	ND		10	WG2004493
1,2-Dichlorotetrafluoroethane	76-14-2	171	2.00	14.0	ND	ND		10	WG2004493
Heptane	142-82-5	100	2.00	8.18	ND	ND		10	WG2004493
Hexachloro-1,3-butadiene	87-68-3	261	6.30	67.3	ND	ND		10	WG2004493
n-Hexane	110-54-3	86.20	6.30	22.2	364	1280		10	WG2004493
Isopropylbenzene	98-82-8	120.20	2.00	9.83	ND	ND		10	WG2004493
Methylene Chloride	75-09-2	84.90	2.00	6.94	ND	ND		10	WG2004493
Methyl Butyl Ketone	591-78-6	100	12.5	51.1	ND	ND		10	WG2004493
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	14.7	43.3		10	WG2004493
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	12.5	51.2	ND	ND		10	WG2004493
Methyl methacrylate	80-62-6	100.12	2.00	8.19	ND	ND		10	WG2004493
MTBE	1634-04-4	88.10	2.00	7.21	ND	ND		10	WG2004493
Naphthalene	91-20-3	128	6.30	33.0	ND	ND		10	WG2004493
2-Propanol	67-63-0	60.10	12.5	30.7	ND	ND		10	WG2004493
Propene	115-07-1	42.10	12.5	21.5	ND	ND		10	WG2004493
Styrene	100-42-5	104	2.00	8.51	ND	ND		10	WG2004493
1,1,2,2-Tetrachloroethane	79-34-5	168	2.00	13.7	ND	ND		10	WG2004493
Tetrachloroethylene	127-18-4	166	2.00	13.6	ND	ND		10	WG2004493
Tetrahydrofuran	109-99-9	72.10	2.00	5.90	ND	ND		10	WG2004493
Toluene	108-88-3	92.10	5.00	18.8	ND	ND		10	WG2004493
1,2,4-Trichlorobenzene	120-82-1	181	6.30	46.6	ND	ND		10	WG2004493

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/07/23 12:48

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	2.00	10.9	ND	ND		10	<a href="#">WG2004493</a>
1,1,2-Trichloroethane	79-00-5	133	2.00	10.9	ND	ND		10	<a href="#">WG2004493</a>
Trichloroethylene	79-01-6	131	2.00	10.7	ND	ND		10	<a href="#">WG2004493</a>
1,2,4-Trimethylbenzene	95-63-6	120	2.00	9.82	ND	ND		10	<a href="#">WG2004493</a>
1,3,5-Trimethylbenzene	108-67-8	120	2.00	9.82	ND	ND		10	<a href="#">WG2004493</a>
2,2,4-Trimethylpentane	540-84-1	114.22	2.00	9.34	ND	ND		10	<a href="#">WG2004493</a>
Vinyl chloride	75-01-4	62.50	2.00	5.11	ND	ND		10	<a href="#">WG2004493</a>
Vinyl Bromide	593-60-2	106.95	2.00	8.75	ND	ND		10	<a href="#">WG2004493</a>
Vinyl acetate	108-05-4	86.10	2.00	7.04	ND	ND		10	<a href="#">WG2004493</a>
m&p-Xylene	1330-20-7	106	4.00	17.3	ND	ND		10	<a href="#">WG2004493</a>
o-Xylene	95-47-6	106	2.00	8.67	ND	ND		10	<a href="#">WG2004493</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	2000	8260	5930	24500		10	<a href="#">WG2004493</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		103				<a href="#">WG2004493</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.1				<a href="#">WG2005753</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc



Collected date/time: 02/07/23 13:48

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	12.5	29.7	48.5	115		10	WG2004493
Allyl chloride	107-05-1	76.53	2.00	6.26	ND	ND		10	WG2004493
Benzene	71-43-2	78.10	2.00	6.39	ND	ND		10	WG2004493
Benzyl Chloride	100-44-7	127	2.00	10.4	ND	ND		10	WG2004493
Bromodichloromethane	75-27-4	164	2.00	13.4	ND	ND		10	WG2004493
Bromoform	75-25-2	253	6.00	62.1	ND	ND		10	WG2004493
Bromomethane	74-83-9	94.90	2.00	7.76	ND	ND		10	WG2004493
1,3-Butadiene	106-99-0	54.10	20.0	44.3	ND	ND		10	WG2004493
Carbon disulfide	75-15-0	76.10	2.00	6.22	ND	ND		10	WG2004493
Carbon tetrachloride	56-23-5	154	2.00	12.6	ND	ND		10	WG2004493
Chlorobenzene	108-90-7	113	2.00	9.24	ND	ND		10	WG2004493
Chloroethane	75-00-3	64.50	2.00	5.28	ND	ND		10	WG2004493
Chloroform	67-66-3	119	2.00	9.73	ND	ND		10	WG2004493
Chloromethane	74-87-3	50.50	2.00	4.13	ND	ND		10	WG2004493
2-Chlorotoluene	95-49-8	126	2.00	10.3	ND	ND		10	WG2004493
Cyclohexane	110-82-7	84.20	2.00	6.89	276	950		10	WG2004493
Dibromochloromethane	124-48-1	208	2.00	17.0	ND	ND		10	WG2004493
1,2-Dibromoethane	106-93-4	188	2.00	15.4	ND	ND		10	WG2004493
1,2-Dichlorobenzene	95-50-1	147	2.00	12.0	ND	ND		10	WG2004493
1,3-Dichlorobenzene	541-73-1	147	2.00	12.0	ND	ND		10	WG2004493
1,4-Dichlorobenzene	106-46-7	147	2.00	12.0	ND	ND		10	WG2004493
1,2-Dichloroethane	107-06-2	99	2.00	8.10	ND	ND		10	WG2004493
1,1-Dichloroethane	75-34-3	98	2.00	8.02	ND	ND		10	WG2004493
1,1-Dichloroethene	75-35-4	96.90	2.00	7.93	ND	ND		10	WG2004493
cis-1,2-Dichloroethene	156-59-2	96.90	2.00	7.93	ND	ND		10	WG2004493
trans-1,2-Dichloroethene	156-60-5	96.90	2.00	7.93	ND	ND		10	WG2004493
1,2-Dichloropropane	78-87-5	113	2.00	9.24	ND	ND		10	WG2004493
cis-1,3-Dichloropropene	10061-01-5	111	2.00	9.08	ND	ND		10	WG2004493
trans-1,3-Dichloropropene	10061-02-6	111	2.00	9.08	ND	ND		10	WG2004493
1,4-Dioxane	123-91-1	88.10	2.00	7.21	ND	ND		10	WG2004493
Ethanol	64-17-5	46.10	12.5	23.6	ND	ND		10	WG2004493
Ethylbenzene	100-41-4	106	2.00	8.67	ND	ND		10	WG2004493
4-Ethyltoluene	622-96-8	120	2.00	9.82	ND	ND		10	WG2004493
Trichlorofluoromethane	75-69-4	137.40	2.00	11.2	ND	ND		10	WG2004493
Dichlorodifluoromethane	75-71-8	120.92	2.00	9.89	ND	ND		10	WG2004493
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	2.00	15.3	ND	ND		10	WG2004493
1,2-Dichlorotetrafluoroethane	76-14-2	171	2.00	14.0	ND	ND		10	WG2004493
Heptane	142-82-5	100	2.00	8.18	ND	ND		10	WG2004493
Hexachloro-1,3-butadiene	87-68-3	261	6.30	67.3	ND	ND		10	WG2004493
n-Hexane	110-54-3	86.20	6.30	22.2	151	532		10	WG2004493
Isopropylbenzene	98-82-8	120.20	2.00	9.83	ND	ND		10	WG2004493
Methylene Chloride	75-09-2	84.90	2.00	6.94	ND	ND		10	WG2004493
Methyl Butyl Ketone	591-78-6	100	12.5	51.1	ND	ND		10	WG2004493
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	ND	ND		10	WG2004493
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	12.5	51.2	ND	ND		10	WG2004493
Methyl methacrylate	80-62-6	100.12	2.00	8.19	ND	ND		10	WG2004493
MTBE	1634-04-4	88.10	2.00	7.21	ND	ND		10	WG2004493
Naphthalene	91-20-3	128	6.30	33.0	ND	ND		10	WG2004493
2-Propanol	67-63-0	60.10	12.5	30.7	ND	ND		10	WG2004493
Propene	115-07-1	42.10	12.5	21.5	ND	ND		10	WG2004493
Styrene	100-42-5	104	2.00	8.51	ND	ND		10	WG2004493
1,1,2,2-Tetrachloroethane	79-34-5	168	2.00	13.7	ND	ND		10	WG2004493
Tetrachloroethylene	127-18-4	166	2.00	13.6	ND	ND		10	WG2004493
Tetrahydrofuran	109-99-9	72.10	2.00	5.90	ND	ND		10	WG2004493
Toluene	108-88-3	92.10	5.00	18.8	ND	ND		10	WG2004493
1,2,4-Trichlorobenzene	120-82-1	181	6.30	46.6	ND	ND		10	WG2004493

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Collected date/time: 02/07/23 13:48

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	2.00	10.9	ND	ND		10	<a href="#">WG2004493</a>
1,1,2-Trichloroethane	79-00-5	133	2.00	10.9	ND	ND		10	<a href="#">WG2004493</a>
Trichloroethylene	79-01-6	131	2.00	10.7	ND	ND		10	<a href="#">WG2004493</a>
1,2,4-Trimethylbenzene	95-63-6	120	2.00	9.82	ND	ND		10	<a href="#">WG2004493</a>
1,3,5-Trimethylbenzene	108-67-8	120	2.00	9.82	ND	ND		10	<a href="#">WG2004493</a>
2,2,4-Trimethylpentane	540-84-1	114.22	2.00	9.34	ND	ND		10	<a href="#">WG2004493</a>
Vinyl chloride	75-01-4	62.50	2.00	5.11	ND	ND		10	<a href="#">WG2004493</a>
Vinyl Bromide	593-60-2	106.95	2.00	8.75	ND	ND		10	<a href="#">WG2004493</a>
Vinyl acetate	108-05-4	86.10	2.00	7.04	ND	ND		10	<a href="#">WG2004493</a>
m&p-Xylene	1330-20-7	106	4.00	17.3	ND	ND		10	<a href="#">WG2004493</a>
o-Xylene	95-47-6	106	2.00	8.67	ND	ND		10	<a href="#">WG2004493</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	2000	8260	3320	13700	B	10	<a href="#">WG2004493</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		105				<a href="#">WG2004493</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/07/23 14:49

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	12.5	29.7	92.6	220		10	WG2004493
Allyl chloride	107-05-1	76.53	2.00	6.26	ND	ND		10	WG2004493
Benzene	71-43-2	78.10	2.00	6.39	ND	ND		10	WG2004493
Benzyl Chloride	100-44-7	127	2.00	10.4	ND	ND		10	WG2004493
Bromodichloromethane	75-27-4	164	2.00	13.4	ND	ND		10	WG2004493
Bromoform	75-25-2	253	6.00	62.1	ND	ND		10	WG2004493
Bromomethane	74-83-9	94.90	2.00	7.76	ND	ND		10	WG2004493
1,3-Butadiene	106-99-0	54.10	20.0	44.3	ND	ND		10	WG2004493
Carbon disulfide	75-15-0	76.10	2.00	6.22	ND	ND		10	WG2004493
Carbon tetrachloride	56-23-5	154	2.00	12.6	ND	ND		10	WG2004493
Chlorobenzene	108-90-7	113	2.00	9.24	ND	ND		10	WG2004493
Chloroethane	75-00-3	64.50	2.00	5.28	ND	ND		10	WG2004493
Chloroform	67-66-3	119	2.00	9.73	ND	ND		10	WG2004493
Chloromethane	74-87-3	50.50	2.00	4.13	ND	ND		10	WG2004493
2-Chlorotoluene	95-49-8	126	2.00	10.3	ND	ND		10	WG2004493
Cyclohexane	110-82-7	84.20	4.00	13.8	773	2660		20	WG2005753
Dibromochloromethane	124-48-1	208	2.00	17.0	ND	ND		10	WG2004493
1,2-Dibromoethane	106-93-4	188	2.00	15.4	ND	ND		10	WG2004493
1,2-Dichlorobenzene	95-50-1	147	2.00	12.0	ND	ND		10	WG2004493
1,3-Dichlorobenzene	541-73-1	147	2.00	12.0	ND	ND		10	WG2004493
1,4-Dichlorobenzene	106-46-7	147	2.00	12.0	ND	ND		10	WG2004493
1,2-Dichloroethane	107-06-2	99	2.00	8.10	ND	ND		10	WG2004493
1,1-Dichloroethane	75-34-3	98	2.00	8.02	ND	ND		10	WG2004493
1,1-Dichloroethene	75-35-4	96.90	2.00	7.93	ND	ND		10	WG2004493
cis-1,2-Dichloroethene	156-59-2	96.90	2.00	7.93	ND	ND		10	WG2004493
trans-1,2-Dichloroethene	156-60-5	96.90	2.00	7.93	ND	ND		10	WG2004493
1,2-Dichloropropane	78-87-5	113	2.00	9.24	ND	ND		10	WG2004493
cis-1,3-Dichloropropene	10061-01-5	111	2.00	9.08	ND	ND		10	WG2004493
trans-1,3-Dichloropropene	10061-02-6	111	2.00	9.08	ND	ND		10	WG2004493
1,4-Dioxane	123-91-1	88.10	2.00	7.21	ND	ND		10	WG2004493
Ethanol	64-17-5	46.10	12.5	23.6	ND	ND		10	WG2004493
Ethylbenzene	100-41-4	106	2.00	8.67	ND	ND		10	WG2004493
4-Ethyltoluene	622-96-8	120	2.00	9.82	ND	ND		10	WG2004493
Trichlorofluoromethane	75-69-4	137.40	2.00	11.2	ND	ND		10	WG2004493
Dichlorodifluoromethane	75-71-8	120.92	2.00	9.89	ND	ND		10	WG2004493
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	2.00	15.3	ND	ND		10	WG2004493
1,2-Dichlorotetrafluoroethane	76-14-2	171	2.00	14.0	ND	ND		10	WG2004493
Heptane	142-82-5	100	2.00	8.18	ND	ND		10	WG2004493
Hexachloro-1,3-butadiene	87-68-3	261	6.30	67.3	ND	ND		10	WG2004493
n-Hexane	110-54-3	86.20	12.6	44.4	511	1800		20	WG2005753
Isopropylbenzene	98-82-8	120.20	2.00	9.83	ND	ND		10	WG2004493
Methylene Chloride	75-09-2	84.90	2.00	6.94	ND	ND		10	WG2004493
Methyl Butyl Ketone	591-78-6	100	12.5	51.1	ND	ND		10	WG2004493
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	ND	ND		10	WG2004493
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	12.5	51.2	ND	ND		10	WG2004493
Methyl methacrylate	80-62-6	100.12	2.00	8.19	ND	ND		10	WG2004493
MTBE	1634-04-4	88.10	2.00	7.21	ND	ND		10	WG2004493
Naphthalene	91-20-3	128	6.30	33.0	ND	ND		10	WG2004493
2-Propanol	67-63-0	60.10	12.5	30.7	ND	ND		10	WG2004493
Propene	115-07-1	42.10	12.5	21.5	ND	ND		10	WG2004493
Styrene	100-42-5	104	2.00	8.51	ND	ND		10	WG2004493
1,1,2,2-Tetrachloroethane	79-34-5	168	2.00	13.7	ND	ND		10	WG2004493
Tetrachloroethylene	127-18-4	166	2.00	13.6	ND	ND		10	WG2004493
Tetrahydrofuran	109-99-9	72.10	2.00	5.90	ND	ND		10	WG2004493
Toluene	108-88-3	92.10	5.00	18.8	ND	ND		10	WG2004493
1,2,4-Trichlorobenzene	120-82-1	181	6.30	46.6	ND	ND		10	WG2004493

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/07/23 14:49

L1583943

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	2.00	10.9	ND	ND		10	<a href="#">WG2004493</a>
1,1,2-Trichloroethane	79-00-5	133	2.00	10.9	ND	ND		10	<a href="#">WG2004493</a>
Trichloroethylene	79-01-6	131	2.00	10.7	ND	ND		10	<a href="#">WG2004493</a>
1,2,4-Trimethylbenzene	95-63-6	120	2.00	9.82	ND	ND		10	<a href="#">WG2004493</a>
1,3,5-Trimethylbenzene	108-67-8	120	2.00	9.82	ND	ND		10	<a href="#">WG2004493</a>
2,2,4-Trimethylpentane	540-84-1	114.22	2.00	9.34	ND	ND		10	<a href="#">WG2004493</a>
Vinyl chloride	75-01-4	62.50	2.00	5.11	ND	ND		10	<a href="#">WG2004493</a>
Vinyl Bromide	593-60-2	106.95	2.00	8.75	ND	ND		10	<a href="#">WG2004493</a>
Vinyl acetate	108-05-4	86.10	2.00	7.04	ND	ND		10	<a href="#">WG2004493</a>
m&p-Xylene	1330-20-7	106	4.00	17.3	ND	ND		10	<a href="#">WG2004493</a>
o-Xylene	95-47-6	106	2.00	8.67	ND	ND		10	<a href="#">WG2004493</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	2000	8260	7730	31900		10	<a href="#">WG2004493</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		103				<a href="#">WG2004493</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.1				<a href="#">WG2005753</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1583943-02,03,04](#)

Method Blank (MB)

(MB) R3889767-3 02/11/23 08:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1583943-02,03,04](#)

Method Blank (MB)

(MB) R3889767-3 02/11/23 08:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	43.1	U	39.7	200
(S) 1,4-Bromofluorobenzene	100			60.0-140

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889767-1 02/11/23 07:09 • (LCSD) R3889767-2 02/11/23 07:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	4.11	3.91	110	104	70.0-130			4.99	25
Allyl Chloride	3.75	4.15	3.88	111	103	70.0-130			6.72	25
Benzene	3.75	4.00	3.97	107	106	70.0-130			0.753	25
Benzyl Chloride	3.75	3.83	3.75	102	100	70.0-152			2.11	25

Volatile Organic Compounds (MS) by Method TO-15

[L1583943-02.03.04](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889767-1 02/11/23 07:09 • (LCSD) R3889767-2 02/11/23 07:47

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	3.99	3.85	106	103	70.0-130			3.57	25
Bromoform	3.75	4.13	3.98	110	106	70.0-130			3.70	25
Bromomethane	3.75	3.92	3.52	105	93.9	70.0-130			10.8	25
1,3-Butadiene	3.75	4.46	4.39	119	117	70.0-130			1.58	25
Carbon disulfide	3.75	4.09	3.86	109	103	70.0-130			5.79	25
Carbon tetrachloride	3.75	4.14	3.98	110	106	70.0-130			3.94	25
Chlorobenzene	3.75	3.99	3.89	106	104	70.0-130			2.54	25
Chloroethane	3.75	3.48	3.53	92.8	94.1	70.0-130			1.43	25
Chloroform	3.75	4.19	4.09	112	109	70.0-130			2.42	25
Chloromethane	3.75	4.17	4.16	111	111	70.0-130			0.240	25
2-Chlorotoluene	3.75	4.05	4.04	108	108	70.0-130			0.247	25
Cyclohexane	3.75	4.22	4.25	113	113	70.0-130			0.708	25
Dibromochloromethane	3.75	4.18	3.92	111	105	70.0-130			6.42	25
1,2-Dibromoethane	3.75	4.10	3.98	109	106	70.0-130			2.97	25
1,2-Dichlorobenzene	3.75	3.96	3.93	106	105	70.0-130			0.760	25
1,3-Dichlorobenzene	3.75	4.09	3.98	109	106	70.0-130			2.73	25
1,4-Dichlorobenzene	3.75	4.15	4.12	111	110	70.0-130			0.726	25
1,2-Dichloroethane	3.75	3.87	3.96	103	106	70.0-130			2.30	25
1,1-Dichloroethane	3.75	4.22	4.03	113	107	70.0-130			4.61	25
1,1-Dichloroethene	3.75	4.15	4.37	111	117	70.0-130			5.16	25
cis-1,2-Dichloroethene	3.75	3.65	3.84	97.3	102	70.0-130			5.07	25
trans-1,2-Dichloroethene	3.75	4.36	4.05	116	108	70.0-130			7.37	25
1,2-Dichloropropane	3.75	4.08	3.98	109	106	70.0-130			2.48	25
cis-1,3-Dichloropropene	3.75	3.96	3.86	106	103	70.0-130			2.56	25
trans-1,3-Dichloropropene	3.75	3.92	3.86	105	103	70.0-130			1.54	25
1,4-Dioxane	3.75	3.45	3.33	92.0	88.8	70.0-140			3.54	25
Ethanol	3.75	3.85	3.60	103	96.0	55.0-148			6.71	25
Ethylbenzene	3.75	4.00	4.00	107	107	70.0-130			0.000	25
4-Ethyltoluene	3.75	4.01	4.05	107	108	70.0-130			0.993	25
Trichlorofluoromethane	3.75	4.27	4.08	114	109	70.0-130			4.55	25
Dichlorodifluoromethane	3.75	4.35	4.30	116	115	64.0-139			1.16	25
1,1,2-Trichlorotrifluoroethane	3.75	4.07	4.51	109	120	70.0-130			10.3	25
1,2-Dichlorotetrafluoroethane	3.75	4.33	4.19	115	112	70.0-130			3.29	25
Heptane	3.75	4.29	4.22	114	113	70.0-130			1.65	25
Hexachloro-1,3-butadiene	3.75	3.88	4.04	103	108	70.0-151			4.04	25
n-Hexane	3.75	4.20	4.30	112	115	70.0-130			2.35	25
Isopropylbenzene	3.75	4.20	4.03	112	107	70.0-130			4.13	25
Methylene Chloride	3.75	3.95	3.88	105	103	70.0-130			1.79	25
Methyl Butyl Ketone	3.75	3.99	3.91	106	104	70.0-149			2.03	25
2-Butanone (MEK)	3.75	3.96	3.81	106	102	70.0-130			3.86	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1583943-02,03,04](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889767-1 02/11/23 07:09 • (LCSD) R3889767-2 02/11/23 07:47

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	4.04	4.01	108	107	70.0-139			0.745	25
Methyl Methacrylate	3.75	3.91	3.69	104	98.4	70.0-130			5.79	25
MTBE	3.75	4.00	4.03	107	107	70.0-130			0.747	25
Naphthalene	3.75	3.84	3.77	102	101	70.0-159			1.84	25
2-Propanol	3.75	3.94	3.99	105	106	70.0-139			1.26	25
Propene	3.75	4.23	4.17	113	111	64.0-144			1.43	25
Styrene	3.75	4.24	4.17	113	111	70.0-130			1.66	25
1,1,2,2-Tetrachloroethane	3.75	3.73	3.79	99.5	101	70.0-130			1.60	25
Tetrachloroethylene	3.75	4.26	3.98	114	106	70.0-130			6.80	25
Tetrahydrofuran	3.75	4.00	4.03	107	107	70.0-137			0.747	25
Toluene	3.75	4.15	3.95	111	105	70.0-130			4.94	25
1,2,4-Trichlorobenzene	3.75	3.90	4.08	104	109	70.0-160			4.51	25
1,1,1-Trichloroethane	3.75	4.13	4.05	110	108	70.0-130			1.96	25
1,1,2-Trichloroethane	3.75	4.10	3.75	109	100	70.0-130			8.92	25
Trichloroethylene	3.75	3.93	3.73	105	99.5	70.0-130			5.22	25
1,2,4-Trimethylbenzene	3.75	4.20	4.19	112	112	70.0-130			0.238	25
1,3,5-Trimethylbenzene	3.75	4.23	4.16	113	111	70.0-130			1.67	25
2,2,4-Trimethylpentane	3.75	4.49	4.25	120	113	70.0-130			5.49	25
Vinyl chloride	3.75	4.63	4.69	123	125	70.0-130			1.29	25
Vinyl Bromide	3.75	4.25	4.07	113	109	70.0-130			4.33	25
Vinyl acetate	3.75	4.09	4.01	109	107	70.0-130			1.98	25
m&p-Xylene	7.50	8.29	8.14	111	109	70.0-130			1.83	25
o-Xylene	3.75	4.10	4.09	109	109	70.0-130			0.244	25
TPH (GC/MS) Low Fraction	203	229	224	113	110	70.0-130			2.21	25
(S) 1,4-Bromofluorobenzene				104	103	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc



Volatile Organic Compounds (MS) by Method TO-15

[L1583943-01](#)

Method Blank (MB)

(MB) R3889974-3 02/12/23 10:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Tr

6  
Sr

7  
Qc

8  
Gl

9  
Al

10  
Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1583943-01](#)

Method Blank (MB)

(MB) R3889974-3 02/12/23 10:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	0.151	U	0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	90.8			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889974-1 02/12/23 09:00 • (LCSD) R3889974-2 02/12/23 09:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	4.77	4.89	127	130	70.0-130			2.48	25
Allyl Chloride	3.75	4.49	4.75	120	127	70.0-130			5.63	25
Benzene	3.75	4.47	4.37	119	117	70.0-130			2.26	25
Benzyl Chloride	3.75	4.32	4.37	115	117	70.0-152			1.15	25

Volatile Organic Compounds (MS) by Method TO-15

L1583943-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889974-1 02/12/23 09:00 • (LCSD) R3889974-2 02/12/23 09:46

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	4.42	4.47	118	119	70.0-130			1.12	25
Bromoform	3.75	4.37	4.31	117	115	70.0-130			1.38	25
Bromomethane	3.75	4.65	4.63	124	123	70.0-130			0.431	25
1,3-Butadiene	3.75	4.47	4.46	119	119	70.0-130			0.224	25
Carbon disulfide	3.75	4.51	4.56	120	122	70.0-130			1.10	25
Carbon tetrachloride	3.75	4.38	4.45	117	119	70.0-130			1.59	25
Chlorobenzene	3.75	4.45	4.42	119	118	70.0-130			0.676	25
Chloroethane	3.75	4.47	4.56	119	122	70.0-130			1.99	25
Chloroform	3.75	4.44	4.45	118	119	70.0-130			0.225	25
Chloromethane	3.75	4.44	4.49	118	120	70.0-130			1.12	25
2-Chlorotoluene	3.75	4.35	4.27	116	114	70.0-130			1.86	25
Cyclohexane	3.75	4.48	4.45	119	119	70.0-130			0.672	25
Dibromochloromethane	3.75	4.28	4.37	114	117	70.0-130			2.08	25
1,2-Dibromoethane	3.75	4.42	4.46	118	119	70.0-130			0.901	25
1,2-Dichlorobenzene	3.75	4.29	4.37	114	117	70.0-130			1.85	25
1,3-Dichlorobenzene	3.75	4.33	4.32	115	115	70.0-130			0.231	25
1,4-Dichlorobenzene	3.75	4.18	4.24	111	113	70.0-130			1.43	25
1,2-Dichloroethane	3.75	4.38	4.28	117	114	70.0-130			2.31	25
1,1-Dichloroethane	3.75	4.50	4.55	120	121	70.0-130			1.10	25
1,1-Dichloroethene	3.75	4.48	4.56	119	122	70.0-130			1.77	25
cis-1,2-Dichloroethene	3.75	4.58	4.58	122	122	70.0-130			0.000	25
trans-1,2-Dichloroethene	3.75	4.54	4.51	121	120	70.0-130			0.663	25
1,2-Dichloropropane	3.75	4.51	4.49	120	120	70.0-130			0.444	25
cis-1,3-Dichloropropene	3.75	4.44	4.31	118	115	70.0-130			2.97	25
trans-1,3-Dichloropropene	3.75	4.48	4.53	119	121	70.0-130			1.11	25
1,4-Dioxane	3.75	4.61	4.67	123	125	70.0-140			1.29	25
Ethanol	3.75	4.09	4.25	109	113	55.0-148			3.84	25
Ethylbenzene	3.75	4.51	4.48	120	119	70.0-130			0.667	25
4-Ethyltoluene	3.75	4.50	4.46	120	119	70.0-130			0.893	25
Trichlorofluoromethane	3.75	4.45	4.52	119	121	70.0-130			1.56	25
Dichlorodifluoromethane	3.75	3.09	3.18	82.4	84.8	64.0-139			2.87	25
1,1,2-Trichlorotrifluoroethane	3.75	4.40	4.46	117	119	70.0-130			1.35	25
1,2-Dichlorotetrafluoroethane	3.75	4.40	4.44	117	118	70.0-130			0.905	25
Heptane	3.75	4.20	4.06	112	108	70.0-130			3.39	25
Hexachloro-1,3-butadiene	3.75	4.38	4.38	117	117	70.0-151			0.000	25
n-Hexane	3.75	4.51	4.60	120	123	70.0-130			1.98	25
Isopropylbenzene	3.75	4.43	4.46	118	119	70.0-130			0.675	25
Methylene Chloride	3.75	4.53	4.46	121	119	70.0-130			1.56	25
Methyl Butyl Ketone	3.75	4.63	4.66	123	124	70.0-149			0.646	25
Methyl Ethyl Ketone	3.75	4.56	4.72	122	126	70.0-130			3.45	25

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

L1583943-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889974-1 02/12/23 09:00 • (LCSD) R3889974-2 02/12/23 09:46

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	4.59	4.60	122	123	70.0-139			0.218	25
Methyl Methacrylate	3.75	4.34	4.47	116	119	70.0-130			2.95	25
MTBE	3.75	4.42	4.51	118	120	70.0-130			2.02	25
Naphthalene	3.75	4.60	4.55	123	121	70.0-159			1.09	25
2-Propanol	3.75	4.67	4.70	125	125	70.0-139			0.640	25
Propene	3.75	4.33	4.30	115	115	64.0-144			0.695	25
Styrene	3.75	4.57	4.52	122	121	70.0-130			1.10	25
1,1,2,2-Tetrachloroethane	3.75	4.50	4.51	120	120	70.0-130			0.222	25
Tetrachloroethylene	3.75	4.35	4.35	116	116	70.0-130			0.000	25
Tetrahydrofuran	3.75	4.50	4.62	120	123	70.0-137			2.63	25
Toluene	3.75	4.45	4.43	119	118	70.0-130			0.450	25
1,2,4-Trichlorobenzene	3.75	4.48	4.49	119	120	70.0-160			0.223	25
1,1,1-Trichloroethane	3.75	4.43	4.40	118	117	70.0-130			0.679	25
1,1,2-Trichloroethane	3.75	4.40	4.37	117	117	70.0-130			0.684	25
Trichloroethylene	3.75	4.47	4.58	119	122	70.0-130			2.43	25
1,2,4-Trimethylbenzene	3.75	4.49	4.50	120	120	70.0-130			0.222	25
1,3,5-Trimethylbenzene	3.75	4.48	4.57	119	122	70.0-130			1.99	25
2,2,4-Trimethylpentane	3.75	4.54	4.59	121	122	70.0-130			1.10	25
Vinyl chloride	3.75	4.52	4.58	121	122	70.0-130			1.32	25
Vinyl Bromide	3.75	4.52	4.66	121	124	70.0-130			3.05	25
Vinyl acetate	3.75	4.48	4.51	119	120	70.0-130			0.667	25
m&p-Xylene	7.50	9.09	9.14	121	122	70.0-130			0.549	25
o-Xylene	3.75	4.51	4.41	120	118	70.0-130			2.24	25
TPH (GC/MS) Low Fraction	203	246	245	121	121	70.0-130			0.407	25
(S) 1,4-Bromofluorobenzene				97.3	96.6	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1583943-02.04](#)

Method Blank (MB)

(MB) R3890612-3 02/14/23 12:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Cyclohexane	U		0.0753	0.200
n-Hexane	U		0.206	0.630
(S) 1,4-Bromofluorobenzene	97.2			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3890612-1 02/14/23 10:45 • (LCSD) R3890612-2 02/14/23 11:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Cyclohexane	3.75	4.34	4.34	116	116	70.0-130			0.000	25
n-Hexane	3.75	4.28	4.23	114	113	70.0-130			1.18	25
(S) 1,4-Bromofluorobenzene				97.7	97.1	60.0-140				

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Qualifier Description

B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

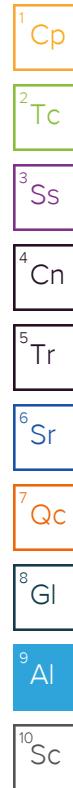
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:  
**Ensolum, LLC**  
 601 Marienfeld #400  
 Midland, TX 79701

Billing Information:  
**Accounts Payable**  
 2351 W Northwest Hwy. Ste.  
 1203  
 Dallas, TX 75220

Report to:  
**Beaux Jennings**

Project Description:  
 Levey Well

City/State Collected: Hobbs NM

Please Circle:  
 PT MT CT ET

Email To: **bjennings@ensolum.com**

Client Project #  
 03B1417001

Lab Project #  
**ENSOLUMTX-SUMMA**

Site/Facility ID #  
 03B1417001

P.O. #  
 03B1417001

Collected by (signature):  
*[Signature]*

Rush? (Lab MUST Be Notified)  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Date Results Needed

Immediately Packed on Ice

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
Levey Well	G	Air	-	2-7-23	1105	1 X
Levey Well	G	Air	-	2-7-23	1248	1 X
Levey Well	G	Air	-	2-7-23	1348	1 X
Levey Well	G	Air	-	2-7-23	1449	1 X
<del>NFC 2-7-23</del>						

Analysis / Container / Preservative									
TO-15 Summa									

Chain of Custody Page 1 of 1

**Pace Analytical**  
 National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122  
 Phone: 615-758-5858 Alt: 800-767-5859  
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

SDG # **L 1583043**

**E160**

Acctnum: ENSOL...

Template: **T180734**

Prelogin: **P827709**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via:

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks:

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

Relinquished by: (Signature)  
*[Signature]* Date: 2/8/23 Time: 11:05

Relinquished by: (Signature)  
*[Signature]* Date: 2/8/23 Time: 5:00

Relinquished by: (Signature)  
*[Signature]*

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Trip Blank Received: Yes / No  
 HCL / MeOH  
 TBR

Temp: °C Bottles Received:

If preservation required by Login: Date/Time

Hold: Condition: **NCF / OK**

Date: 2/9/23 Time: 0900

**Sample Receipt Checklist**

COC Seal Present/Intact:  NP  Y  N

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

If Applicable

VOA Zero Headspace:  Y  N

Preservation Correct/Checked:  Y  N

RAD Screen <0.5 mR/hr:  Y  N





# ANALYTICAL REPORT

February 15, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

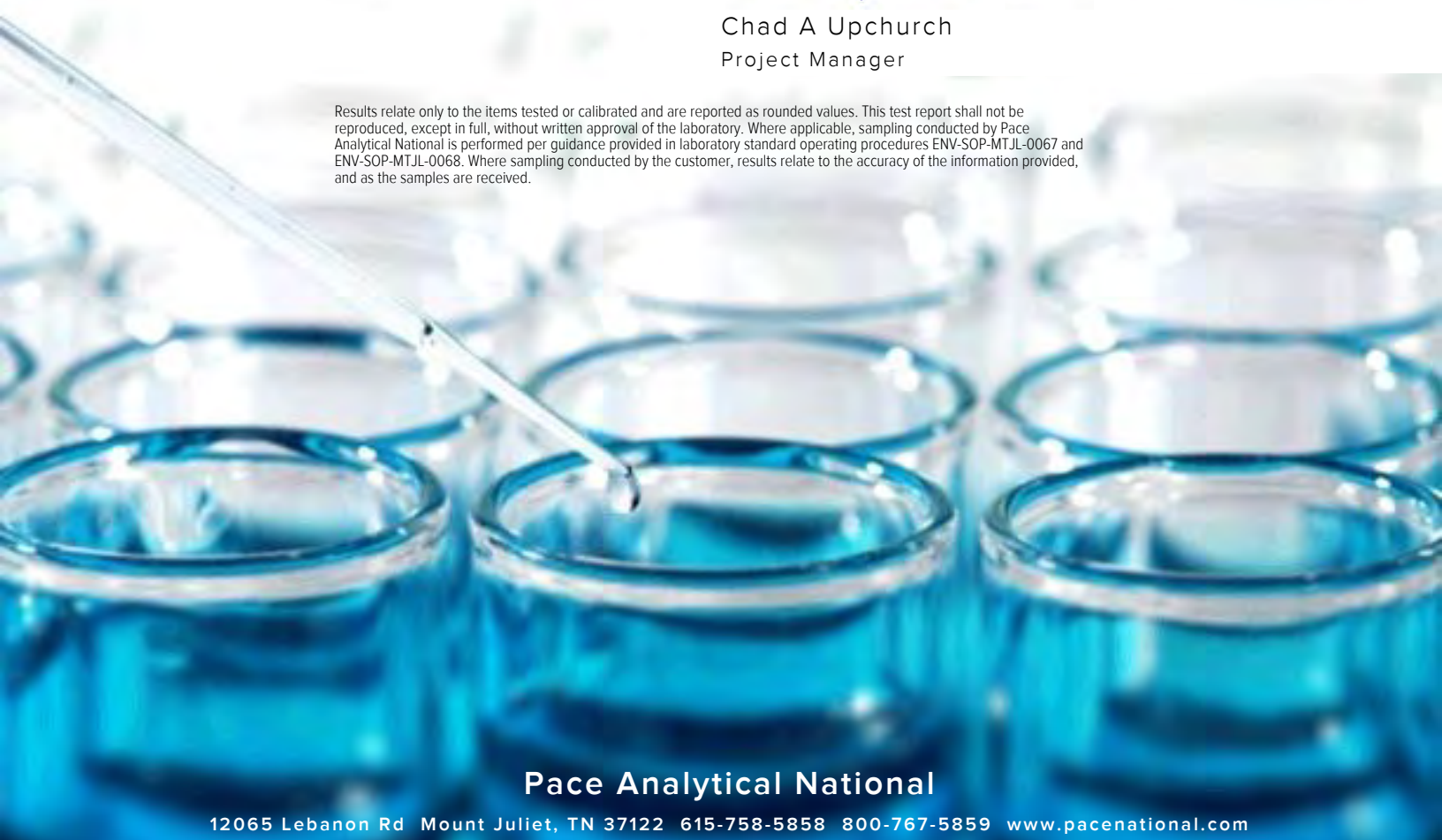
## Ensolum, LLC

Sample Delivery Group: L1584466  
 Samples Received: 02/10/2023  
 Project Number: 03B1417001  
 Description: Levey Well  
 Site: 03B1417001  
 Report To: Beaux Jennings  
 601 N Marienfeld Street, Ste. 400  
 Midland, TX 79701

Entire Report Reviewed By:











Chad A Upchurch  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Tr: TRRP Summary</b>	<b>5</b>	
TRRP form R	<b>6</b>	
TRRP form S	<b>7</b>	
TRRP Exception Reports	<b>8</b>	
<b>Sr: Sample Results</b>	<b>9</b>	
<b>LEVEY WELL L1584466-01</b>	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>11</b>	
<b>Volatile Organic Compounds (MS) by Method TO-15</b>	<b>11</b>	
<b>Gl: Glossary of Terms</b>	<b>15</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>16</b>	
<b>Sc: Sample Chain of Custody</b>	<b>17</b>	
		

# SAMPLE SUMMARY

LEVEY WELL L1584466-01 Air

Collected by	Collected date/time	Received date/time
Shane Diller	02/08/23 13:27	02/10/23 08:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2004551	100	02/11/23 23:38	02/11/23 23:38	DAH	Mt. Juliet, TN

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



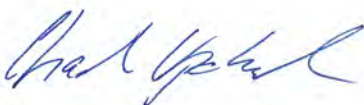
Chad A Upchurch  
Project Manager

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 - Field chain-of-custody documentation;
- R2 - Sample identification cross-reference;
- R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- R5 - Test reports/summary forms for blank samples;
- R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Chad A Upchurch  
Project Manager

# Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National			LRC Date: 02/15/2023 09:06				
Project Name: Levey Well			Laboratory Job Number: L1584466-01				
Reviewer Name: Chad A Upchurch			Prep Batch Number(s): WG2004551				
#1	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.  
 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);  
 3. NA = Not applicable;  
 4. NR = Not reviewed;  
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 02/15/2023 09:06					
Project Name: Levey Well		Laboratory Job Number: L1584466-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2004551					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 02/15/2023 09:06
Project Name: Levey Well	Laboratory Job Number: L1584466-01
Reviewer Name: Chad A Upchurch	Prep Batch Number(s): WG2004551

ER # <sup>1</sup>	Description
-------------------	-------------

The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



Collected date/time: 02/08/23 13:27

L1584466

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	214	509		100	WG2004551
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2004551
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG2004551
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2004551
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2004551
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2004551
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2004551
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2004551
Carbon disulfide	75-15-0	76.10	20.0	62.2	ND	ND		100	WG2004551
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2004551
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2004551
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2004551
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2004551
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2004551
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2004551
Cyclohexane	110-82-7	84.20	20.0	68.9	1930	6650		100	WG2004551
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2004551
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2004551
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2004551
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2004551
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2004551
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2004551
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2004551
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2004551
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2004551
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2004551
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2004551
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2004551
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2004551
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG2004551
Ethanol	64-17-5	46.10	125	236	128	241		100	WG2004551
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG2004551
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG2004551
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2004551
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2004551
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2004551
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2004551
Heptane	142-82-5	100	20.0	81.8	593	2430		100	WG2004551
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2004551
n-Hexane	110-54-3	86.20	63.0	222	1690	5960		100	WG2004551
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG2004551
Methylene Chloride	75-09-2	84.90	20.0	69.4	ND	ND		100	WG2004551
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2004551
2-Butanone (MEK)	78-93-3	72.10	125	369	ND	ND		100	WG2004551
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2004551
Methyl methacrylate	80-62-6	100.12	20.0	81.9	ND	ND		100	WG2004551
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2004551
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2004551
2-Propanol	67-63-0	60.10	125	307	306	752		100	WG2004551
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2004551
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG2004551
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2004551
Tetrachloroethylene	127-18-4	166	20.0	136	ND	ND		100	WG2004551
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2004551
Toluene	108-88-3	92.10	50.0	188	ND	ND		100	WG2004551
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2004551

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Collected date/time: 02/08/23 13:27

L1584466

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	<a href="#">WG2004551</a>
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	<a href="#">WG2004551</a>
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	<a href="#">WG2004551</a>
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	<a href="#">WG2004551</a>
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	<a href="#">WG2004551</a>
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	<a href="#">WG2004551</a>
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	<a href="#">WG2004551</a>
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	<a href="#">WG2004551</a>
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	<a href="#">WG2004551</a>
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	<a href="#">WG2004551</a>
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	<a href="#">WG2004551</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	20700	85500		100	<a href="#">WG2004551</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.4				<a href="#">WG2004551</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1584466-01](#)

Method Blank (MB)

(MB) R3889761-3 02/11/23 08:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1584466-01](#)

Method Blank (MB)

(MB) R3889761-3 02/11/23 08:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	95.9			60.0-140

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889761-1 02/11/23 07:19 • (LCSD) R3889761-2 02/11/23 08:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	3.48	3.59	92.8	95.7	70.0-130			3.11	25
Allyl Chloride	3.75	3.51	3.62	93.6	96.5	70.0-130			3.09	25
Benzene	3.75	3.60	3.63	96.0	96.8	70.0-130			0.830	25
Benzyl Chloride	3.75	3.80	3.81	101	102	70.0-152			0.263	25

Volatile Organic Compounds (MS) by Method TO-15

L1584466-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889761-1 02/11/23 07:19 • (LCSD) R3889761-2 02/11/23 08:02

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	3.64	3.62	97.1	96.5	70.0-130			0.551	25
Bromoform	3.75	3.36	3.51	89.6	93.6	70.0-130			4.37	25
Bromomethane	3.75	3.42	3.49	91.2	93.1	70.0-130			2.03	25
1,3-Butadiene	3.75	3.69	3.77	98.4	101	70.0-130			2.14	25
Carbon disulfide	3.75	3.47	3.50	92.5	93.3	70.0-130			0.861	25
Carbon tetrachloride	3.75	3.70	3.72	98.7	99.2	70.0-130			0.539	25
Chlorobenzene	3.75	3.59	3.55	95.7	94.7	70.0-130			1.12	25
Chloroethane	3.75	3.78	3.64	101	97.1	70.0-130			3.77	25
Chloroform	3.75	3.57	3.61	95.2	96.3	70.0-130			1.11	25
Chloromethane	3.75	3.64	3.76	97.1	100	70.0-130			3.24	25
2-Chlorotoluene	3.75	3.55	3.80	94.7	101	70.0-130			6.80	25
Cyclohexane	3.75	3.44	3.57	91.7	95.2	70.0-130			3.71	25
Dibromochloromethane	3.75	3.56	3.53	94.9	94.1	70.0-130			0.846	25
1,2-Dibromoethane	3.75	3.50	3.44	93.3	91.7	70.0-130			1.73	25
1,2-Dichlorobenzene	3.75	3.59	3.74	95.7	99.7	70.0-130			4.09	25
1,3-Dichlorobenzene	3.75	3.62	3.79	96.5	101	70.0-130			4.59	25
1,4-Dichlorobenzene	3.75	3.70	3.82	98.7	102	70.0-130			3.19	25
1,2-Dichloroethane	3.75	3.66	3.74	97.6	99.7	70.0-130			2.16	25
1,1-Dichloroethane	3.75	3.64	3.71	97.1	98.9	70.0-130			1.90	25
1,1-Dichloroethene	3.75	3.70	3.72	98.7	99.2	70.0-130			0.539	25
cis-1,2-Dichloroethene	3.75	3.58	3.61	95.5	96.3	70.0-130			0.834	25
trans-1,2-Dichloroethene	3.75	3.65	3.63	97.3	96.8	70.0-130			0.549	25
1,2-Dichloropropane	3.75	3.56	3.58	94.9	95.5	70.0-130			0.560	25
cis-1,3-Dichloropropene	3.75	3.53	3.54	94.1	94.4	70.0-130			0.283	25
trans-1,3-Dichloropropene	3.75	3.50	3.50	93.3	93.3	70.0-130			0.000	25
1,4-Dioxane	3.75	3.29	3.31	87.7	88.3	70.0-140			0.606	25
Ethanol	3.75	3.94	3.90	105	104	55.0-148			1.02	25
Ethylbenzene	3.75	3.37	3.50	89.9	93.3	70.0-130			3.78	25
4-Ethyltoluene	3.75	3.56	3.78	94.9	101	70.0-130			5.99	25
Trichlorofluoromethane	3.75	3.78	3.81	101	102	70.0-130			0.791	25
Dichlorodifluoromethane	3.75	3.71	3.80	98.9	101	64.0-139			2.40	25
1,1,2-Trichlorotrifluoroethane	3.75	3.54	3.64	94.4	97.1	70.0-130			2.79	25
1,2-Dichlorotetrafluoroethane	3.75	3.66	3.69	97.6	98.4	70.0-130			0.816	25
Heptane	3.75	3.78	3.71	101	98.9	70.0-130			1.87	25
Hexachloro-1,3-butadiene	3.75	3.42	3.62	91.2	96.5	70.0-151			5.68	25
n-Hexane	3.75	3.59	3.64	95.7	97.1	70.0-130			1.38	25
Isopropylbenzene	3.75	3.51	3.64	93.6	97.1	70.0-130			3.64	25
Methylene Chloride	3.75	3.59	3.57	95.7	95.2	70.0-130			0.559	25
Methyl Butyl Ketone	3.75	3.70	3.74	98.7	99.7	70.0-149			1.08	25
Methyl Ethyl Ketone	3.75	3.50	3.48	93.3	92.8	70.0-130			0.573	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

L1584466-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3889761-1 02/11/23 07:19 • (LCSD) R3889761-2 02/11/23 08:02

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	3.80	3.87	101	103	70.0-139			1.83	25
Methyl Methacrylate	3.75	3.67	3.68	97.9	98.1	70.0-130			0.272	25
MTBE	3.75	3.53	3.59	94.1	95.7	70.0-130			1.69	25
Naphthalene	3.75	3.38	3.48	90.1	92.8	70.0-159			2.92	25
2-Propanol	3.75	3.45	3.58	92.0	95.5	70.0-139			3.70	25
Propene	3.75	3.70	3.64	98.7	97.1	64.0-144			1.63	25
Styrene	3.75	3.50	3.65	93.3	97.3	70.0-130			4.20	25
1,1,2,2-Tetrachloroethane	3.75	3.51	3.61	93.6	96.3	70.0-130			2.81	25
Tetrachloroethylene	3.75	3.43	3.42	91.5	91.2	70.0-130			0.292	25
Tetrahydrofuran	3.75	3.47	3.63	92.5	96.8	70.0-137			4.51	25
Toluene	3.75	3.56	3.54	94.9	94.4	70.0-130			0.563	25
1,2,4-Trichlorobenzene	3.75	3.70	3.98	98.7	106	70.0-160			7.29	25
1,1,1-Trichloroethane	3.75	3.61	3.69	96.3	98.4	70.0-130			2.19	25
1,1,2-Trichloroethane	3.75	3.52	3.56	93.9	94.9	70.0-130			1.13	25
Trichloroethylene	3.75	3.52	3.49	93.9	93.1	70.0-130			0.856	25
1,2,4-Trimethylbenzene	3.75	3.70	3.85	98.7	103	70.0-130			3.97	25
1,3,5-Trimethylbenzene	3.75	3.57	3.88	95.2	103	70.0-130			8.32	25
2,2,4-Trimethylpentane	3.75	3.61	3.65	96.3	97.3	70.0-130			1.10	25
Vinyl chloride	3.75	3.64	3.80	97.1	101	70.0-130			4.30	25
Vinyl Bromide	3.75	3.61	3.72	96.3	99.2	70.0-130			3.00	25
Vinyl acetate	3.75	3.68	3.66	98.1	97.6	70.0-130			0.545	25
m&p-Xylene	7.50	6.87	7.30	91.6	97.3	70.0-130			6.07	25
o-Xylene	3.75	3.34	3.49	89.1	93.1	70.0-130			4.39	25
TPH (GC/MS) Low Fraction	203	165	168	81.3	82.8	70.0-130			1.80	25
(S) 1,4-Bromofluorobenzene				96.9	97.7	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.



Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		


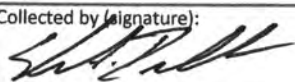
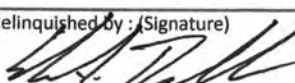
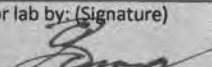
<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





Company Name/Address: <b>Ensolum, LLC</b>  <b>601 Marienfeld #400</b> <b>Midland, TX 79701</b>		Billing Information: <b>Accounts Payable</b> <b>2351 W Northwest Hwy. Ste.</b> <b>1203</b> <b>Dallas, TX 75220</b>		Pres Chk	Analysis / Container / Preservative							Chain of Custody Page <u>  </u> of <u>  </u>
Report to: <b>Beaux Jennings</b>		Email To: <b>bjennings@ensolum.com</b>			TO-15 Summa							 12065 Lebanon Road Mt Juliet, TN 37122 Phone: 615-758-5858 Alt: 800-767-5859 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <a href="https://info.pacelabs.com/hubfs/pas-standard-terms.pdf">https://info.pacelabs.com/hubfs/pas-standard-terms.pdf</a> SDG # <b>L158 4466</b> <b>C189</b> Acctnum: <b>ENSOLUMMTX</b> Template: <b>T180734</b> Prelogin: <b>P827709</b> PM: <b>134 - Mark W. Beasley</b> PB: Shipped Via: Remarks      Sample # (lab only)
Project Description: Levey Well		City/State Collected: Hobbs NM	Please Circle: PT MT CT ET									
Phone: <b>210-219-8858</b>	Client Project # 03B1417001	Lab Project # <b>ENSOLUMMTX-SUMMA</b>										
Collected by (print): Shane Diller	Site/Facility ID # 03B1417001	P.O. # 03B1417001										
Collected by (signature): 	<b>Rush?</b> (Lab MUST Be Notified) ___ Same Day    ___ Five Day ___ Next Day    ___ 5 Day (Rad Only) ___ Two Day     ___ 10 Day (Rad Only) ___ X Three Day		Quote #		No. of Cntrs							
Immediately Packed on Ice: N <u>  </u> X <u>  </u> Y <u>  </u>	Date Results Needed											
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time							
Levey Well	G	Air	-	2-8-23	1327	1	X					
<del>                     WIFE                      2-8-23                 </del>												
* Matrix: SS - Soil   AIR - Air   F - Filter GW - Groundwater   B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____		Remarks:				pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <u>  </u> NP <u>  </u> Y <u>  </u> N COC Signed/Accurate: <u>  </u> Y <u>  </u> N Bottles arrive intact: <u>  </u> Y <u>  </u> N Correct bottles used: <u>  </u> Y <u>  </u> N Sufficient volume sent: <u>  </u> Y <u>  </u> N If Applicable VOA Zero Headspace: <u>  </u> Y <u>  </u> N Preservation Correct/Checked: <u>  </u> Y <u>  </u> N RAD Screen <0.5 mR/hr: <u>  </u> Y <u>  </u> N				
Relinquished by: (Signature) 		Date: 2/9/23	Time: 1:20pm	Received by: (Signature) Kendrell Lumpkin		Trip Blank Received: Yes / No HCL/MeOH TBR						
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: °C    Bottles Received: <u>  </u>		If preservation required by Login: Date/Time				
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) 		Date: 2.10.23    Time: 0850		Hold:		Condition: NCF / OK		



# ANALYTICAL REPORT

February 23, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

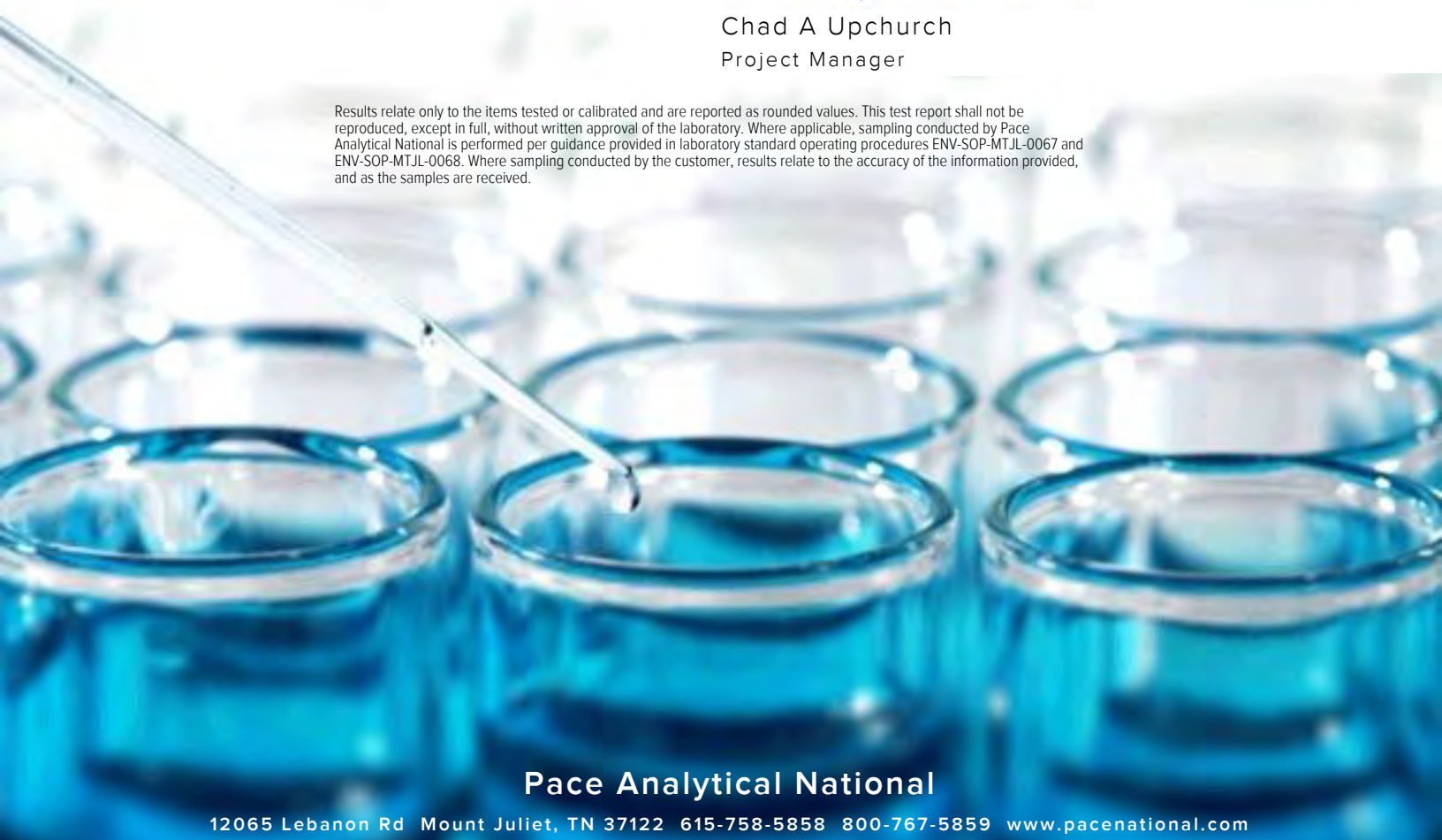
## Ensolum, LLC

Sample Delivery Group: L1587649  
 Samples Received: 02/21/2023  
 Project Number: 03B1417001  
 Description: Levey Well  
 Site: 03B1417001  
 Report To: Beaux Jennings  
 601 N Marienfeld Street, Ste. 400  
 Midland, TX 79701

Entire Report Reviewed By:











Chad A Upchurch  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Tr: TRRP Summary</b>	<b>5</b>	
TRRP form R	<b>6</b>	
TRRP form S	<b>7</b>	
TRRP Exception Reports	<b>8</b>	
<b>Sr: Sample Results</b>	<b>9</b>	
<b>LEVEY WELL L1587649-01</b>	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>11</b>	
<b>Volatile Organic Compounds (MS) by Method TO-15</b>	<b>11</b>	
<b>Gl: Glossary of Terms</b>	<b>16</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>17</b>	
<b>Sc: Sample Chain of Custody</b>	<b>18</b>	
		

LEVEY WELL L1587649-01 Air

Collected by: Shane Diller  
Collected date/time: 02/17/23 13:47  
Received date/time: 02/21/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2009869	100	02/21/23 20:04	02/21/23 20:04	DBB	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2010767	2000	02/22/23 14:33	02/22/23 14:33	DBB	Mt. Juliet, TN

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chad A Upchurch  
Project Manager

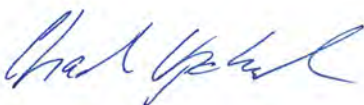
- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Tr
- <sup>6</sup> Sr
- <sup>7</sup> Qc
- <sup>8</sup> Gl
- <sup>9</sup> Al
- <sup>10</sup> Sc

# Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 - Field chain-of-custody documentation;
- R2 - Sample identification cross-reference;
- R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- R5 - Test reports/summary forms for blank samples;
- R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Chad A Upchurch  
Project Manager

# Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 02/23/2023 10:30					
Project Name: Levey Well		Laboratory Job Number: L1587649-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2009869 and WG2010767					
#1	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.  
 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);  
 3. NA = Not applicable;  
 4. NR = Not reviewed;  
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 02/23/2023 10:30					
Project Name: Levey Well		Laboratory Job Number: L1587649-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2009869 and WG2010767					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							



# Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National		LRC Date: 02/23/2023 10:30	
Project Name: Levey Well		Laboratory Job Number: L1587649-01	
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2009869 and WG2010767	
ER # <sup>1</sup>	Description		
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.		
<p>1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</p> <p>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</p> <p>3. NA = Not applicable;</p> <p>4. NR = Not reviewed;</p> <p>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</p>			

Collected date/time: 02/17/23 13:47

L1587649

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	ND	ND		100	WG2009869
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2009869
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG2009869
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2009869
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2009869
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2009869
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2009869
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2009869
Carbon disulfide	75-15-0	76.10	20.0	62.2	51.2	159		100	WG2009869
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2009869
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2009869
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2009869
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2009869
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2009869
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2009869
Cyclohexane	110-82-7	84.20	20.0	68.9	7230	24900		100	WG2009869
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2009869
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2009869
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2009869
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2009869
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2009869
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2009869
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2009869
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2009869
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2009869
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2009869
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2009869
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2009869
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2009869
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG2009869
Ethanol	64-17-5	46.10	125	236	1700	3210		100	WG2009869
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG2009869
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG2009869
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2009869
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2009869
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2009869
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2009869
Heptane	142-82-5	100	20.0	81.8	3450	14100		100	WG2009869
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2009869
n-Hexane	110-54-3	86.20	1260	4440	ND	ND		2000	WG2010767
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG2009869
Methylene Chloride	75-09-2	84.90	20.0	69.4	ND	ND		100	WG2009869
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2009869
2-Butanone (MEK)	78-93-3	72.10	125	369	473	1390		100	WG2009869
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2009869
Methyl methacrylate	80-62-6	100.12	20.0	81.9	ND	ND		100	WG2009869
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2009869
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2009869
2-Propanol	67-63-0	60.10	125	307	459	1130		100	WG2009869
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2009869
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG2009869
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2009869
Tetrachloroethylene	127-18-4	166	20.0	136	ND	ND		100	WG2009869
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2009869
Toluene	108-88-3	92.10	50.0	188	ND	ND		100	WG2009869
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2009869

- 1 Cp
- 2 Tc
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Collected date/time: 02/17/23 13:47

L1587649

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	<a href="#">WG2009869</a>
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	<a href="#">WG2009869</a>
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	<a href="#">WG2009869</a>
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	<a href="#">WG2009869</a>
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	<a href="#">WG2009869</a>
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	<a href="#">WG2009869</a>
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	<a href="#">WG2009869</a>
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	<a href="#">WG2009869</a>
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	<a href="#">WG2009869</a>
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	<a href="#">WG2009869</a>
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	<a href="#">WG2009869</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	187000	772000		100	<a href="#">WG2009869</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		117				<a href="#">WG2009869</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.8				<a href="#">WG2010767</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1587649-01](#)

Method Blank (MB)

(MB) R3893044-3 02/21/23 09:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
Isopropylbenzene	U		0.0777	0.200

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1587649-01](#)

Method Blank (MB)

(MB) R3893044-3 02/21/23 09:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	57.7	↓	39.7	200
(S) 1,4-Bromofluorobenzene	102			60.0-140

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3893044-1 02/21/23 08:44 • (LCSD) R3893044-2 02/21/23 09:13

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	3.54	3.55	94.4	94.7	70.0-130			0.282	25
Allyl Chloride	3.75	3.82	3.91	102	104	70.0-130			2.33	25
Benzene	3.75	3.66	3.66	97.6	97.6	70.0-130			0.000	25
Benzyl Chloride	3.75	3.72	3.54	99.2	94.4	70.0-152			4.96	25
Bromodichloromethane	3.75	3.71	3.62	98.9	96.5	70.0-130			2.46	25

Volatile Organic Compounds (MS) by Method TO-15

L1587649-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3893044-1 02/21/23 08:44 • (LCSD) R3893044-2 02/21/23 09:13

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	3.75	3.77	3.82	101	102	70.0-130			1.32	25
Bromomethane	3.75	3.79	3.73	101	99.5	70.0-130			1.60	25
1,3-Butadiene	3.75	3.47	3.50	92.5	93.3	70.0-130			0.861	25
Carbon disulfide	3.75	3.62	3.59	96.5	95.7	70.0-130			0.832	25
Carbon tetrachloride	3.75	3.85	3.83	103	102	70.0-130			0.521	25
Chlorobenzene	3.75	3.95	3.80	105	101	70.0-130			3.87	25
Chloroethane	3.75	3.58	3.63	95.5	96.8	70.0-130			1.39	25
Chloroform	3.75	3.77	3.80	101	101	70.0-130			0.793	25
Chloromethane	3.75	3.83	3.73	102	99.5	70.0-130			2.65	25
2-Chlorotoluene	3.75	4.07	4.00	109	107	70.0-130			1.73	25
Cyclohexane	3.75	3.66	3.61	97.6	96.3	70.0-130			1.38	25
Dibromochloromethane	3.75	3.80	3.85	101	103	70.0-130			1.31	25
1,2-Dibromoethane	3.75	4.15	3.70	111	98.7	70.0-130			11.5	25
1,2-Dichlorobenzene	3.75	3.57	3.47	95.2	92.5	70.0-130			2.84	25
1,3-Dichlorobenzene	3.75	3.71	3.58	98.9	95.5	70.0-130			3.57	25
1,4-Dichlorobenzene	3.75	3.64	3.64	97.1	97.1	70.0-130			0.000	25
1,2-Dichloroethane	3.75	3.79	3.57	101	95.2	70.0-130			5.98	25
1,1-Dichloroethane	3.75	3.87	3.78	103	101	70.0-130			2.35	25
1,1-Dichloroethene	3.75	3.80	3.84	101	102	70.0-130			1.05	25
cis-1,2-Dichloroethene	3.75	3.72	3.68	99.2	98.1	70.0-130			1.08	25
trans-1,2-Dichloroethene	3.75	3.84	3.59	102	95.7	70.0-130			6.73	25
1,2-Dichloropropane	3.75	3.75	3.76	100	100	70.0-130			0.266	25
cis-1,3-Dichloropropene	3.75	3.83	3.67	102	97.9	70.0-130			4.27	25
trans-1,3-Dichloropropene	3.75	3.92	3.76	105	100	70.0-130			4.17	25
1,4-Dioxane	3.75	3.46	3.32	92.3	88.5	70.0-140			4.13	25
Ethanol	3.75	3.43	3.20	91.5	85.3	55.0-148			6.94	25
Ethylbenzene	3.75	3.79	3.64	101	97.1	70.0-130			4.04	25
4-Ethyltoluene	3.75	3.62	3.68	96.5	98.1	70.0-130			1.64	25
Trichlorofluoromethane	3.75	3.91	3.78	104	101	70.0-130			3.38	25
Dichlorodifluoromethane	3.75	4.02	4.03	107	107	64.0-139			0.248	25
1,1,2-Trichlorotrifluoroethane	3.75	3.70	3.61	98.7	96.3	70.0-130			2.46	25
1,2-Dichlorotetrafluoroethane	3.75	3.81	3.79	102	101	70.0-130			0.526	25
Heptane	3.75	3.67	3.58	97.9	95.5	70.0-130			2.48	25
Hexachloro-1,3-butadiene	3.75	3.92	3.74	105	99.7	70.0-151			4.70	25
Isopropylbenzene	3.75	3.83	3.62	102	96.5	70.0-130			5.64	25
Methylene Chloride	3.75	3.69	3.57	98.4	95.2	70.0-130			3.31	25
Methyl Butyl Ketone	3.75	3.95	3.70	105	98.7	70.0-149			6.54	25
Methyl Ethyl Ketone	3.75	3.30	3.08	88.0	82.1	70.0-130			6.90	25
4-Methyl-2-pentanone (MIBK)	3.75	3.52	3.42	93.9	91.2	70.0-139			2.88	25
Methyl Methacrylate	3.75	3.35	3.39	89.3	90.4	70.0-130			1.19	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

L1587649-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3893044-1 02/21/23 08:44 • (LCSD) R3893044-2 02/21/23 09:13

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
MTBE	3.75	4.31	3.81	115	102	70.0-130			12.3	25
Naphthalene	3.75	3.75	3.53	100	94.1	70.0-159			6.04	25
2-Propanol	3.75	3.50	3.66	93.3	97.6	70.0-139			4.47	25
Propene	3.75	3.87	3.85	103	103	64.0-144			0.518	25
Styrene	3.75	3.77	3.79	101	101	70.0-130			0.529	25
1,1,2,2-Tetrachloroethane	3.75	3.61	3.57	96.3	95.2	70.0-130			1.11	25
Tetrachloroethylene	3.75	3.50	3.57	93.3	95.2	70.0-130			1.98	25
Tetrahydrofuran	3.75	3.19	3.34	85.1	89.1	70.0-137			4.59	25
Toluene	3.75	3.61	3.83	96.3	102	70.0-130			5.91	25
1,2,4-Trichlorobenzene	3.75	3.73	3.66	99.5	97.6	70.0-160			1.89	25
1,1,1-Trichloroethane	3.75	3.72	3.81	99.2	102	70.0-130			2.39	25
1,1,2-Trichloroethane	3.75	3.78	3.72	101	99.2	70.0-130			1.60	25
Trichloroethylene	3.75	3.69	3.72	98.4	99.2	70.0-130			0.810	25
1,2,4-Trimethylbenzene	3.75	3.68	3.56	98.1	94.9	70.0-130			3.31	25
1,3,5-Trimethylbenzene	3.75	3.52	3.59	93.9	95.7	70.0-130			1.97	25
2,2,4-Trimethylpentane	3.75	4.00	3.91	107	104	70.0-130			2.28	25
Vinyl chloride	3.75	3.89	3.71	104	98.9	70.0-130			4.74	25
Vinyl Bromide	3.75	3.87	3.62	103	96.5	70.0-130			6.68	25
Vinyl acetate	3.75	4.04	3.97	108	106	70.0-130			1.75	25
m&p-Xylene	7.50	7.50	7.28	100	97.1	70.0-130			2.98	25
o-Xylene	3.75	3.84	3.59	102	95.7	70.0-130			6.73	25
TPH (GC/MS) Low Fraction	203	226	223	111	110	70.0-130			1.34	25
(S) 1,4-Bromofluorobenzene				100	101	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1587649-01](#)

Method Blank (MB)

(MB) R3893682-3 02/22/23 10:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
n-Hexane	U		0.206	0.630
(S) 1,4-Bromofluorobenzene	98.1			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3893682-1 02/22/23 08:46 • (LCSD) R3893682-2 02/22/23 09:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
n-Hexane	3.75	4.09	4.12	109	110	70.0-130			0.731	25
(S) 1,4-Bromofluorobenzene				97.6	97.7	60.0-140				

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
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Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:  
**Ensolum, LLC**  
 601 Marienfeld #400  
 Midland, TX 79701

Billing Information:  
**Accounts Payable**  
 2351 W Northwest Hwy. Ste.  
 1203  
 Dallas, TX 75220

Report to:  
**Beaux Jennings**

Email To: **bjennings@ensolum.com**

Project Description:  
 Levey Well

City/State Collected: **Hobbs NM**

Please Circle:  
 PT MT CT ET

Phone: **210-219-8858**

Client Project #  
 03B1417001

Lab Project #  
**ENSOLUMMTX-SUMMA**

Collected by (print):  
 Shane Diller

Site/Facility ID #  
 03B1417001

P.O. #  
 03B1417001

Collected by (signature):

**Rush?** (Lab MUST Be Notified)  
 \_\_\_ Same Day \_\_\_ Five Day  
 \_\_\_ Next Day \_\_\_ 5 Day (Rad Only)  
 \_\_\_ Two Day \_\_\_ 10 Day (Rad Only)  
 Three Day

Date Results Needed

Immediately Packed on Ice  N  X  Y

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
Levey Well	G	Air	-	2-17-23	1347	1
<del>WFE 2-17-23 SL</del>						

Analysis / Container / Preservative						
TO-15 Summa						

Chain of Custody

**Pace Analytical**  
 National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122  
 Phone: 615-758-5858 Alt: 800-767-5859  
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG # **L5507649**

**D137**

Acctnum: **ENSOLUMMTX**

Template: **T180734**

Prelogin: **P827709**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via:

Remarks | Sample # (lab only)

-01

- \* Matrix:
- SS - Soil AIR - Air F - Filter
  - GW - Groundwater B - Bioassay
  - WW - WasteWater
  - DW - Drinking Water
  - OT - Other

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  UPS  FedEx  Courier

Tracking # **5913 6272 3494**

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

If Applicable

VOA Zero Headspace:  Y  N

Preservation Correct/Checked:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature) <i>Shane Diller</i>	Date: 01/20/23	Time: 11:00	Received by: (Signature) <i>Carroll</i>	Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	HCL/MeOH TBR
Relinquished by: (Signature) <i>Carroll</i>	Date: 01/20/23	Time: 1700	Received by: (Signature) <i>FedEx</i>	Temp: °C <b>amb</b>	Bottles Received: <b>1</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Kayce</i>	Date: <b>2/21/23</b>	Time: <b>845</b>

Hold: \_\_\_\_\_ Condition: **NCF / OK**



# ANALYTICAL REPORT

February 28, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

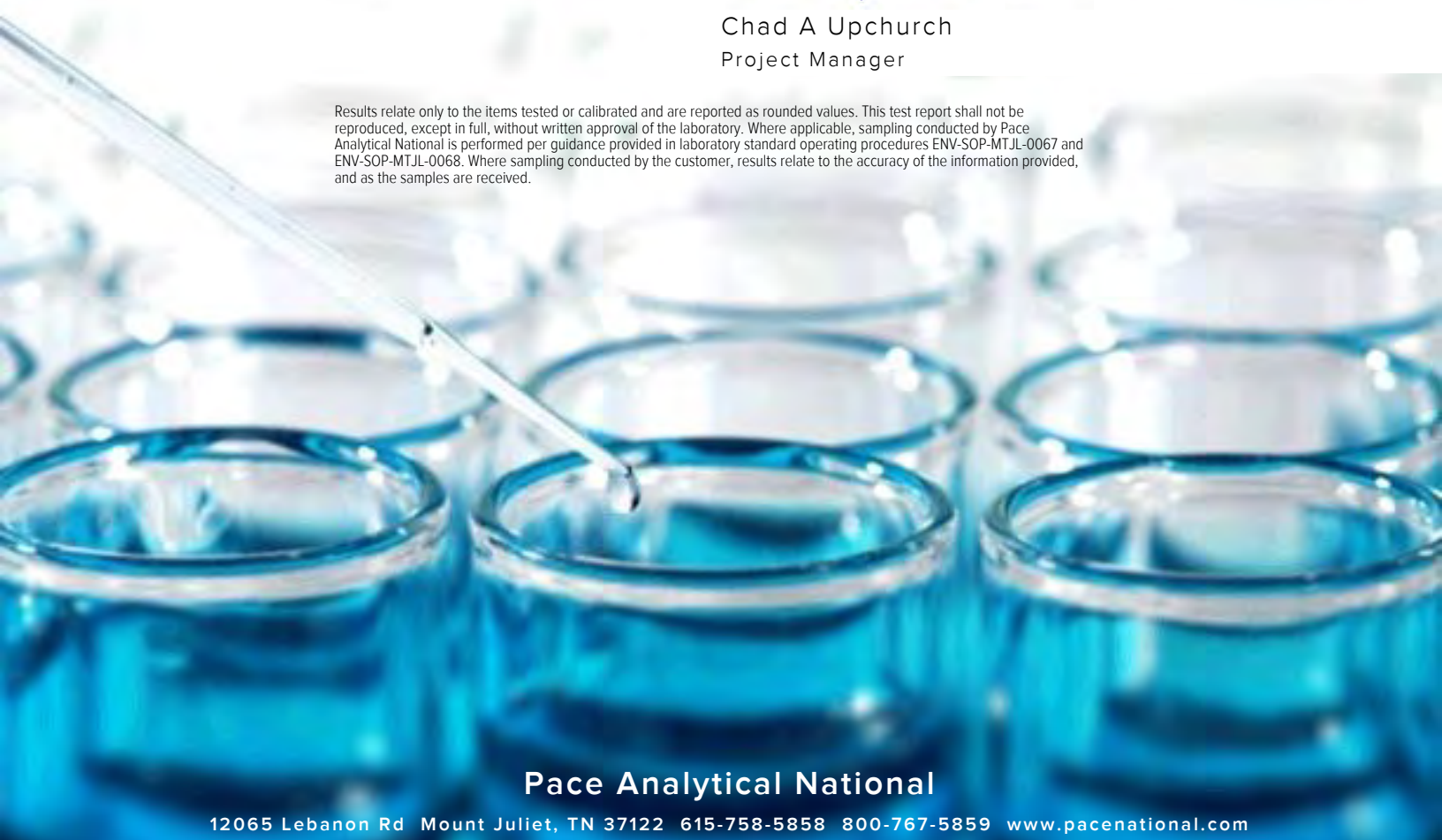
## Ensolum, LLC

Sample Delivery Group: L1588933  
 Samples Received: 02/23/2023  
 Project Number: 03B1417001  
 Description: Levey Well  
 Site: 03B1417001  
 Report To: Beaux Jennings  
 601 N Marienfeld Street, Ste. 400  
 Midland, TX 79701

Entire Report Reviewed By:

Chad A Upchurch  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Tr: TRRP Summary</b>	5	
TRRP form R	6	
TRRP form S	7	
TRRP Exception Reports	8	
<b>Sr: Sample Results</b>	9	
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LEVEY WELL 020068 L1588933-02	11	
LEVEY WELL 022063 L1588933-03	13	
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LEVEY WELL 022981 L1588933-01 Air

Collected by Shane Diller  
 Collected date/time 02/20/23 14:08  
 Received date/time 02/23/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2012847	100	02/25/23 17:17	02/25/23 17:17	MBF	Mt. Juliet, TN

1 Cp

2 Tc

LEVEY WELL 020068 L1588933-02 Air

Collected by Shane Diller  
 Collected date/time 02/20/23 13:00  
 Received date/time 02/23/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2012847	100	02/25/23 17:47	02/25/23 17:47	MBF	Mt. Juliet, TN

3 Ss

4 Cn

5 Tr

LEVEY WELL 022063 L1588933-03 Air

Collected by Shane Diller  
 Collected date/time 02/20/23 10:52  
 Received date/time 02/23/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2012847	100	02/25/23 18:17	02/25/23 18:17	MBF	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2013536	1000	02/27/23 11:57	02/27/23 11:57	SDS	Mt. Juliet, TN

6 Sr

7 Qc

8 Gl

LEVEY WELL 021435 L1588933-04 Air

Collected by Shane Diller  
 Collected date/time 02/20/23 12:03  
 Received date/time 02/23/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2013536	20	02/27/23 13:20	02/27/23 13:20	SDS	Mt. Juliet, TN

9 Al

10 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chad A Upchurch  
Project Manager

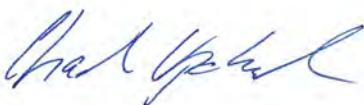
- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

# Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 - Field chain-of-custody documentation;
- R2 - Sample identification cross-reference;
- R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- R5 - Test reports/summary forms for blank samples;
- R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Chad A Upchurch  
Project Manager



# Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 02/28/2023 14:25					
Project Name: Levey Well		Laboratory Job Number: L1588933-01, 02, 03 and 04					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2012847 and WG2013536					
#1	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?		X			1
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.  
 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);  
 3. NA = Not applicable;  
 4. NR = Not reviewed;  
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 02/28/2023 14:25					
Project Name: Levey Well		Laboratory Job Number: L1588933-01, 02, 03 and 04					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2012847 and WG2013536					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National		LRC Date: 02/28/2023 14:25	
Project Name: Levey Well		Laboratory Job Number: L1588933-01, 02, 03 and 04	
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2012847 and WG2013536	
ER # <sup>1</sup>	Description		
1	TO-15 WG2013536 L1588933-03: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).		
<p>1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</p> <p>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</p> <p>3. NA = Not applicable;</p> <p>4. NR = Not reviewed;</p> <p>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</p>			

Collected date/time: 02/20/23 14:08

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	ND	ND		100	WG2012847
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2012847
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG2012847
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2012847
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2012847
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2012847
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2012847
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2012847
Carbon disulfide	75-15-0	76.10	20.0	62.2	ND	ND		100	WG2012847
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2012847
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2012847
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2012847
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2012847
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2012847
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2012847
Cyclohexane	110-82-7	84.20	20.0	68.9	703	2420		100	WG2012847
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2012847
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2012847
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2012847
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2012847
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2012847
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2012847
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2012847
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2012847
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2012847
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2012847
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2012847
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2012847
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2012847
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG2012847
Ethanol	64-17-5	46.10	125	236	1020	1920		100	WG2012847
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG2012847
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG2012847
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2012847
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2012847
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2012847
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2012847
Heptane	142-82-5	100	20.0	81.8	455	1860		100	WG2012847
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2012847
n-Hexane	110-54-3	86.20	63.0	222	2620	9240		100	WG2012847
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG2012847
Methylene Chloride	75-09-2	84.90	20.0	69.4	38.5	134		100	WG2012847
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2012847
2-Butanone (MEK)	78-93-3	72.10	125	369	150	442		100	WG2012847
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2012847
Methyl methacrylate	80-62-6	100.12	20.0	81.9	188	770		100	WG2012847
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2012847
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2012847
2-Propanol	67-63-0	60.10	125	307	3230	7940		100	WG2012847
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2012847
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG2012847
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2012847
Tetrachloroethylene	127-18-4	166	20.0	136	30.1	204		100	WG2012847
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2012847
Toluene	108-88-3	92.10	50.0	188	70.4	265		100	WG2012847
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2012847

1 Cp  
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Collected date/time: 02/20/23 14:08

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	<a href="#">WG2012847</a>
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	<a href="#">WG2012847</a>
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	<a href="#">WG2012847</a>
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	<a href="#">WG2012847</a>
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	<a href="#">WG2012847</a>
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	<a href="#">WG2012847</a>
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	<a href="#">WG2012847</a>
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	<a href="#">WG2012847</a>
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	<a href="#">WG2012847</a>
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	<a href="#">WG2012847</a>
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	<a href="#">WG2012847</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	27700	114000	B	100	<a href="#">WG2012847</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.3				<a href="#">WG2012847</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/20/23 13:00

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	ND	ND		100	WG2012847
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2012847
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG2012847
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2012847
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2012847
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2012847
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2012847
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2012847
Carbon disulfide	75-15-0	76.10	20.0	62.2	ND	ND		100	WG2012847
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2012847
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2012847
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2012847
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2012847
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2012847
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2012847
Cyclohexane	110-82-7	84.20	20.0	68.9	32.1	111		100	WG2012847
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2012847
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2012847
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2012847
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2012847
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2012847
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2012847
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2012847
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2012847
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2012847
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2012847
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2012847
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2012847
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2012847
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG2012847
Ethanol	64-17-5	46.10	125	236	952	1790		100	WG2012847
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG2012847
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG2012847
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2012847
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2012847
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2012847
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2012847
Heptane	142-82-5	100	20.0	81.8	23.8	97.3		100	WG2012847
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2012847
n-Hexane	110-54-3	86.20	63.0	222	1270	4480		100	WG2012847
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG2012847
Methylene Chloride	75-09-2	84.90	20.0	69.4	34.7	120		100	WG2012847
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2012847
2-Butanone (MEK)	78-93-3	72.10	125	369	ND	ND		100	WG2012847
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2012847
Methyl methacrylate	80-62-6	100.12	20.0	81.9	113	463		100	WG2012847
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2012847
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2012847
2-Propanol	67-63-0	60.10	125	307	5260	12900		100	WG2012847
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2012847
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG2012847
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2012847
Tetrachloroethylene	127-18-4	166	20.0	136	31.2	212		100	WG2012847
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2012847
Toluene	108-88-3	92.10	50.0	188	67.1	253		100	WG2012847
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2012847

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/20/23 13:00

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	<a href="#">WG2012847</a>
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	<a href="#">WG2012847</a>
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	<a href="#">WG2012847</a>
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	<a href="#">WG2012847</a>
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	<a href="#">WG2012847</a>
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	<a href="#">WG2012847</a>
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	<a href="#">WG2012847</a>
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	<a href="#">WG2012847</a>
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	<a href="#">WG2012847</a>
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	<a href="#">WG2012847</a>
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	<a href="#">WG2012847</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	ND	ND		100	<a href="#">WG2012847</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.1				<a href="#">WG2012847</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/20/23 10:52

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1250	2970	161000	383000	E	1000	WG2013536
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2012847
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG2012847
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2012847
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2012847
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2012847
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2012847
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2012847
Carbon disulfide	75-15-0	76.10	20.0	62.2	ND	ND		100	WG2012847
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2012847
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2012847
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2012847
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2012847
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2012847
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2012847
Cyclohexane	110-82-7	84.20	20.0	68.9	2890	9950		100	WG2012847
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2012847
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2012847
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2012847
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2012847
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2012847
1,2-Dichloroethane	107-06-2	99	20.0	81.0	45.8	185		100	WG2012847
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2012847
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2012847
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2012847
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2012847
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2012847
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2012847
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2012847
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG2012847
Ethanol	64-17-5	46.10	125	236	2890	5450		100	WG2012847
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG2012847
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG2012847
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2012847
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2012847
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2012847
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2012847
Heptane	142-82-5	100	20.0	81.8	1500	6130		100	WG2012847
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2012847
n-Hexane	110-54-3	86.20	630	2220	19000	67000		1000	WG2013536
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG2012847
Methylene Chloride	75-09-2	84.90	20.0	69.4	52.5	182		100	WG2012847
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2012847
2-Butanone (MEK)	78-93-3	72.10	125	369	543	1600		100	WG2012847
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2012847
Methyl methacrylate	80-62-6	100.12	20.0	81.9	130	532		100	WG2012847
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2012847
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2012847
2-Propanol	67-63-0	60.10	125	307	8900	21900		100	WG2012847
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2012847
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG2012847
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2012847
Tetrachloroethylene	127-18-4	166	20.0	136	27.0	183		100	WG2012847
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2012847
Toluene	108-88-3	92.10	50.0	188	111	418		100	WG2012847
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2012847

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc



Collected date/time: 02/20/23 10:52

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	<a href="#">WG2012847</a>
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	<a href="#">WG2012847</a>
Trichloroethylene	79-01-6	131	20.0	107	ND	ND		100	<a href="#">WG2012847</a>
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	<a href="#">WG2012847</a>
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	<a href="#">WG2012847</a>
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	<a href="#">WG2012847</a>
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	<a href="#">WG2012847</a>
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	<a href="#">WG2012847</a>
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	<a href="#">WG2012847</a>
m&p-Xylene	1330-20-7	106	40.0	173	43.7	189		100	<a href="#">WG2012847</a>
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	<a href="#">WG2012847</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	88800	367000		100	<a href="#">WG2012847</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		102				<a href="#">WG2012847</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.9				<a href="#">WG2013536</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/20/23 12:03

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	25.0	59.4	ND	ND		20	WG2013536
Allyl chloride	107-05-1	76.53	4.00	12.5	ND	ND		20	WG2013536
Benzene	71-43-2	78.10	4.00	12.8	ND	ND		20	WG2013536
Benzyl Chloride	100-44-7	127	4.00	20.8	ND	ND		20	WG2013536
Bromodichloromethane	75-27-4	164	4.00	26.8	ND	ND		20	WG2013536
Bromoform	75-25-2	253	12.0	124	ND	ND		20	WG2013536
Bromomethane	74-83-9	94.90	4.00	15.5	ND	ND		20	WG2013536
1,3-Butadiene	106-99-0	54.10	40.0	88.5	ND	ND		20	WG2013536
Carbon disulfide	75-15-0	76.10	4.00	12.4	ND	ND		20	WG2013536
Carbon tetrachloride	56-23-5	154	4.00	25.2	ND	ND		20	WG2013536
Chlorobenzene	108-90-7	113	4.00	18.5	ND	ND		20	WG2013536
Chloroethane	75-00-3	64.50	4.00	10.6	ND	ND		20	WG2013536
Chloroform	67-66-3	119	4.00	19.5	ND	ND		20	WG2013536
Chloromethane	74-87-3	50.50	4.00	8.26	ND	ND		20	WG2013536
2-Chlorotoluene	95-49-8	126	4.00	20.6	ND	ND		20	WG2013536
Cyclohexane	110-82-7	84.20	4.00	13.8	64.7	223		20	WG2013536
Dibromochloromethane	124-48-1	208	4.00	34.0	ND	ND		20	WG2013536
1,2-Dibromoethane	106-93-4	188	4.00	30.8	ND	ND		20	WG2013536
1,2-Dichlorobenzene	95-50-1	147	4.00	24.0	ND	ND		20	WG2013536
1,3-Dichlorobenzene	541-73-1	147	4.00	24.0	ND	ND		20	WG2013536
1,4-Dichlorobenzene	106-46-7	147	4.00	24.0	ND	ND		20	WG2013536
1,2-Dichloroethane	107-06-2	99	4.00	16.2	ND	ND		20	WG2013536
1,1-Dichloroethane	75-34-3	98	4.00	16.0	ND	ND		20	WG2013536
1,1-Dichloroethene	75-35-4	96.90	4.00	15.9	ND	ND		20	WG2013536
cis-1,2-Dichloroethene	156-59-2	96.90	4.00	15.9	ND	ND		20	WG2013536
trans-1,2-Dichloroethene	156-60-5	96.90	4.00	15.9	ND	ND		20	WG2013536
1,2-Dichloropropane	78-87-5	113	4.00	18.5	ND	ND		20	WG2013536
cis-1,3-Dichloropropene	10061-01-5	111	4.00	18.2	ND	ND		20	WG2013536
trans-1,3-Dichloropropene	10061-02-6	111	4.00	18.2	ND	ND		20	WG2013536
1,4-Dioxane	123-91-1	88.10	4.00	14.4	ND	ND		20	WG2013536
Ethanol	64-17-5	46.10	25.0	47.1	25.1	47.3		20	WG2013536
Ethylbenzene	100-41-4	106	4.00	17.3	ND	ND		20	WG2013536
4-Ethyltoluene	622-96-8	120	4.00	19.6	ND	ND		20	WG2013536
Trichlorofluoromethane	75-69-4	137.40	4.00	22.5	ND	ND		20	WG2013536
Dichlorodifluoromethane	75-71-8	120.92	4.00	19.8	ND	ND		20	WG2013536
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	4.00	30.7	ND	ND		20	WG2013536
1,2-Dichlorotetrafluoroethane	76-14-2	171	4.00	28.0	ND	ND		20	WG2013536
Heptane	142-82-5	100	4.00	16.4	48.9	200		20	WG2013536
Hexachloro-1,3-butadiene	87-68-3	261	12.6	135	ND	ND		20	WG2013536
n-Hexane	110-54-3	86.20	12.6	44.4	169	596		20	WG2013536
Isopropylbenzene	98-82-8	120.20	4.00	19.7	ND	ND		20	WG2013536
Methylene Chloride	75-09-2	84.90	4.00	13.9	ND	ND		20	WG2013536
Methyl Butyl Ketone	591-78-6	100	25.0	102	ND	ND		20	WG2013536
2-Butanone (MEK)	78-93-3	72.10	25.0	73.7	ND	ND		20	WG2013536
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	25.0	102	ND	ND		20	WG2013536
Methyl methacrylate	80-62-6	100.12	4.00	16.4	ND	ND		20	WG2013536
MTBE	1634-04-4	88.10	4.00	14.4	ND	ND		20	WG2013536
Naphthalene	91-20-3	128	12.6	66.0	ND	ND		20	WG2013536
2-Propanol	67-63-0	60.10	25.0	61.5	ND	ND		20	WG2013536
Propene	115-07-1	42.10	25.0	43.0	522	899		20	WG2013536
Styrene	100-42-5	104	4.00	17.0	ND	ND		20	WG2013536
1,1,2,2-Tetrachloroethane	79-34-5	168	4.00	27.5	ND	ND		20	WG2013536
Tetrachloroethylene	127-18-4	166	4.00	27.2	ND	ND		20	WG2013536
Tetrahydrofuran	109-99-9	72.10	4.00	11.8	ND	ND		20	WG2013536
Toluene	108-88-3	92.10	10.0	37.7	ND	ND		20	WG2013536
1,2,4-Trichlorobenzene	120-82-1	181	12.6	93.3	ND	ND		20	WG2013536

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Collected date/time: 02/20/23 12:03

L1588933

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	4.00	21.8	ND	ND		20	<a href="#">WG2013536</a>
1,1,2-Trichloroethane	79-00-5	133	4.00	21.8	ND	ND		20	<a href="#">WG2013536</a>
Trichloroethylene	79-01-6	131	4.00	21.4	ND	ND		20	<a href="#">WG2013536</a>
1,2,4-Trimethylbenzene	95-63-6	120	4.00	19.6	ND	ND		20	<a href="#">WG2013536</a>
1,3,5-Trimethylbenzene	108-67-8	120	4.00	19.6	ND	ND		20	<a href="#">WG2013536</a>
2,2,4-Trimethylpentane	540-84-1	114.22	4.00	18.7	ND	ND		20	<a href="#">WG2013536</a>
Vinyl chloride	75-01-4	62.50	4.00	10.2	ND	ND		20	<a href="#">WG2013536</a>
Vinyl Bromide	593-60-2	106.95	4.00	17.5	ND	ND		20	<a href="#">WG2013536</a>
Vinyl acetate	108-05-4	86.10	4.00	14.1	ND	ND		20	<a href="#">WG2013536</a>
m&p-Xylene	1330-20-7	106	8.00	34.7	ND	ND		20	<a href="#">WG2013536</a>
o-Xylene	95-47-6	106	4.00	17.3	ND	ND		20	<a href="#">WG2013536</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	4000	16500	ND	ND		20	<a href="#">WG2013536</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.5				<a href="#">WG2013536</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1588933-01,02,03](#)

Method Blank (MB)

(MB) R3894876-3 02/25/23 07:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Tr

<sup>6</sup> Sr

<sup>7</sup> Qc

<sup>8</sup> Gl

<sup>9</sup> Al

<sup>10</sup> Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1588933-01,02,03](#)

Method Blank (MB)

(MB) R3894876-3 02/25/23 07:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	52.5	U	39.7	200
(S) 1,4-Bromofluorobenzene	92.9			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3894876-1 02/25/23 06:55 • (LCSD) R3894876-2 02/25/23 07:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	3.42	3.64	91.2	97.1	70.0-130			6.23	25
Allyl Chloride	3.75	3.65	3.58	97.3	95.5	70.0-130			1.94	25
Benzene	3.75	3.83	3.83	102	102	70.0-130			0.000	25
Benzyl Chloride	3.75	3.21	3.26	85.6	86.9	70.0-152			1.55	25

Volatile Organic Compounds (MS) by Method TO-15

[L1588933-01,02,03](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3894876-1 02/25/23 06:55 • (LCSD) R3894876-2 02/25/23 07:26

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	3.62	3.81	96.5	102	70.0-130			5.11	25
Bromoform	3.75	3.48	3.31	92.8	88.3	70.0-130			5.01	25
Bromomethane	3.75	3.92	3.88	105	103	70.0-130			1.03	25
1,3-Butadiene	3.75	3.45	3.55	92.0	94.7	70.0-130			2.86	25
Carbon disulfide	3.75	3.73	3.77	99.5	101	70.0-130			1.07	25
Carbon tetrachloride	3.75	3.67	3.88	97.9	103	70.0-130			5.56	25
Chlorobenzene	3.75	3.63	3.67	96.8	97.9	70.0-130			1.10	25
Chloroethane	3.75	3.67	3.63	97.9	96.8	70.0-130			1.10	25
Chloroform	3.75	3.76	3.78	100	101	70.0-130			0.531	25
Chloromethane	3.75	3.66	3.94	97.6	105	70.0-130			7.37	25
2-Chlorotoluene	3.75	3.63	3.53	96.8	94.1	70.0-130			2.79	25
Cyclohexane	3.75	4.02	3.91	107	104	70.0-130			2.77	25
Dibromochloromethane	3.75	3.43	3.59	91.5	95.7	70.0-130			4.56	25
1,2-Dibromoethane	3.75	3.90	3.72	104	99.2	70.0-130			4.72	25
1,2-Dichlorobenzene	3.75	3.40	3.44	90.7	91.7	70.0-130			1.17	25
1,3-Dichlorobenzene	3.75	3.49	3.67	93.1	97.9	70.0-130			5.03	25
1,4-Dichlorobenzene	3.75	3.48	3.54	92.8	94.4	70.0-130			1.71	25
1,2-Dichloroethane	3.75	3.85	3.81	103	102	70.0-130			1.04	25
1,1-Dichloroethane	3.75	3.69	3.89	98.4	104	70.0-130			5.28	25
1,1-Dichloroethene	3.75	3.77	3.90	101	104	70.0-130			3.39	25
cis-1,2-Dichloroethene	3.75	3.72	3.81	99.2	102	70.0-130			2.39	25
trans-1,2-Dichloroethene	3.75	3.79	3.80	101	101	70.0-130			0.264	25
1,2-Dichloropropane	3.75	3.55	3.64	94.7	97.1	70.0-130			2.50	25
cis-1,3-Dichloropropene	3.75	3.76	3.76	100	100	70.0-130			0.000	25
trans-1,3-Dichloropropene	3.75	3.37	3.60	89.9	96.0	70.0-130			6.60	25
1,4-Dioxane	3.75	3.19	3.25	85.1	86.7	70.0-140			1.86	25
Ethanol	3.75	2.89	3.11	77.1	82.9	55.0-148			7.33	25
Ethylbenzene	3.75	3.61	3.60	96.3	96.0	70.0-130			0.277	25
4-Ethyltoluene	3.75	3.56	3.54	94.9	94.4	70.0-130			0.563	25
Trichlorofluoromethane	3.75	3.89	4.00	104	107	70.0-130			2.79	25
Dichlorodifluoromethane	3.75	3.82	3.99	102	106	64.0-139			4.35	25
1,1,2-Trichlorotrifluoroethane	3.75	3.74	3.77	99.7	101	70.0-130			0.799	25
1,2-Dichlorotetrafluoroethane	3.75	3.91	3.91	104	104	70.0-130			0.000	25
Heptane	3.75	3.60	3.58	96.0	95.5	70.0-130			0.557	25
Hexachloro-1,3-butadiene	3.75	3.39	3.49	90.4	93.1	70.0-151			2.91	25
n-Hexane	3.75	3.82	3.62	102	96.5	70.0-130			5.38	25
Isopropylbenzene	3.75	3.69	3.56	98.4	94.9	70.0-130			3.59	25
Methylene Chloride	3.75	3.52	3.63	93.9	96.8	70.0-130			3.08	25
Methyl Butyl Ketone	3.75	3.35	3.20	89.3	85.3	70.0-149			4.58	25
Methyl Ethyl Ketone	3.75	2.93	3.23	78.1	86.1	70.0-130			9.74	25

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1588933-01,02,03](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3894876-1 02/25/23 06:55 • (LCSD) R3894876-2 02/25/23 07:26

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	3.05	2.83	81.3	75.5	70.0-139			7.48	25
Methyl Methacrylate	3.75	3.19	3.04	85.1	81.1	70.0-130			4.82	25
MTBE	3.75	3.50	3.54	93.3	94.4	70.0-130			1.14	25
Naphthalene	3.75	3.33	3.34	88.8	89.1	70.0-159			0.300	25
2-Propanol	3.75	2.96	3.04	78.9	81.1	70.0-139			2.67	25
Propene	3.75	3.90	3.83	104	102	64.0-144			1.81	25
Styrene	3.75	3.92	3.43	105	91.5	70.0-130			13.3	25
1,1,2,2-Tetrachloroethane	3.75	3.33	3.47	88.8	92.5	70.0-130			4.12	25
Tetrachloroethylene	3.75	3.48	3.43	92.8	91.5	70.0-130			1.45	25
Tetrahydrofuran	3.75	3.01	3.02	80.3	80.5	70.0-137			0.332	25
Toluene	3.75	3.47	3.59	92.5	95.7	70.0-130			3.40	25
1,2,4-Trichlorobenzene	3.75	3.11	3.31	82.9	88.3	70.0-160			6.23	25
1,1,1-Trichloroethane	3.75	3.50	3.75	93.3	100	70.0-130			6.90	25
1,1,2-Trichloroethane	3.75	3.40	3.62	90.7	96.5	70.0-130			6.27	25
Trichloroethylene	3.75	3.72	3.75	99.2	100	70.0-130			0.803	25
1,2,4-Trimethylbenzene	3.75	3.62	3.62	96.5	96.5	70.0-130			0.000	25
1,3,5-Trimethylbenzene	3.75	3.46	3.54	92.3	94.4	70.0-130			2.29	25
2,2,4-Trimethylpentane	3.75	3.74	3.80	99.7	101	70.0-130			1.59	25
Vinyl chloride	3.75	3.96	4.11	106	110	70.0-130			3.72	25
Vinyl Bromide	3.75	3.77	3.88	101	103	70.0-130			2.88	25
Vinyl acetate	3.75	3.21	3.22	85.6	85.9	70.0-130			0.311	25
m&p-Xylene	7.50	7.32	7.18	97.6	95.7	70.0-130			1.93	25
o-Xylene	3.75	3.80	3.59	101	95.7	70.0-130			5.68	25
TPH (GC/MS) Low Fraction	203	187	192	92.1	94.6	70.0-130			2.64	25
(S) 1,4-Bromofluorobenzene				96.0	97.2	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1588933-03,04](#)

Method Blank (MB)

(MB) R3895575-2 02/27/23 09:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc



Volatile Organic Compounds (MS) by Method TO-15

[L1588933-03,04](#)

Method Blank (MB)

(MB) R3895575-2 02/27/23 09:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	48.5	↓	39.7	200
(S) 1,4-Bromofluorobenzene	97.2			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3895575-1 02/27/23 09:19 • (LCSD) R3895575-3 02/27/23 11:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	2.96	3.22	78.9	85.9	70.0-130			8.41	25
Allyl Chloride	3.75	3.06	3.22	81.6	85.9	70.0-130			5.10	25
Benzene	3.75	3.04	3.12	81.1	83.2	70.0-130			2.60	25
Benzyl Chloride	3.75	2.80	3.00	74.7	80.0	70.0-152			6.90	25

Volatile Organic Compounds (MS) by Method TO-15

L1588933-03.04

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3895575-1 02/27/23 09:19 • (LCSD) R3895575-3 02/27/23 11:02

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	3.13	3.06	83.5	81.6	70.0-130			2.26	25
Bromoform	3.75	3.10	3.16	82.7	84.3	70.0-130			1.92	25
Bromomethane	3.75	2.83	3.00	75.5	80.0	70.0-130			5.83	25
1,3-Butadiene	3.75	2.96	3.05	78.9	81.3	70.0-130			3.00	25
Carbon disulfide	3.75	2.86	3.14	76.3	83.7	70.0-130			9.33	25
Carbon tetrachloride	3.75	3.09	3.14	82.4	83.7	70.0-130			1.61	25
Chlorobenzene	3.75	3.10	3.11	82.7	82.9	70.0-130			0.322	25
Chloroethane	3.75	3.01	3.22	80.3	85.9	70.0-130			6.74	25
Chloroform	3.75	2.89	3.14	77.1	83.7	70.0-130			8.29	25
Chloromethane	3.75	2.89	3.10	77.1	82.7	70.0-130			7.01	25
2-Chlorotoluene	3.75	3.11	3.19	82.9	85.1	70.0-130			2.54	25
Cyclohexane	3.75	2.89	2.97	77.1	79.2	70.0-130			2.73	25
Dibromochloromethane	3.75	3.10	3.08	82.7	82.1	70.0-130			0.647	25
1,2-Dibromoethane	3.75	3.09	3.11	82.4	82.9	70.0-130			0.645	25
1,2-Dichlorobenzene	3.75	3.20	3.23	85.3	86.1	70.0-130			0.933	25
1,3-Dichlorobenzene	3.75	3.24	3.04	86.4	81.1	70.0-130			6.37	25
1,4-Dichlorobenzene	3.75	3.22	3.10	85.9	82.7	70.0-130			3.80	25
1,2-Dichloroethane	3.75	3.05	3.09	81.3	82.4	70.0-130			1.30	25
1,1-Dichloroethane	3.75	2.84	3.65	75.7	97.3	70.0-130			25.0	25
1,1-Dichloroethene	3.75	2.89	3.03	77.1	80.8	70.0-130			4.73	25
cis-1,2-Dichloroethene	3.75	2.95	3.11	78.7	82.9	70.0-130			5.28	25
trans-1,2-Dichloroethene	3.75	2.78	3.08	74.1	82.1	70.0-130			10.2	25
1,2-Dichloropropane	3.75	2.87	2.90	76.5	77.3	70.0-130			1.04	25
cis-1,3-Dichloropropene	3.75	2.85	2.95	76.0	78.7	70.0-130			3.45	25
trans-1,3-Dichloropropene	3.75	2.91	3.09	77.6	82.4	70.0-130			6.00	25
1,4-Dioxane	3.75	3.26	3.32	86.9	88.5	70.0-140			1.82	25
Ethanol	3.75	2.77	3.05	73.9	81.3	55.0-148			9.62	25
Ethylbenzene	3.75	3.08	3.18	82.1	84.8	70.0-130			3.19	25
4-Ethyltoluene	3.75	3.16	3.18	84.3	84.8	70.0-130			0.631	25
Trichlorofluoromethane	3.75	2.89	3.04	77.1	81.1	70.0-130			5.06	25
Dichlorodifluoromethane	3.75	2.86	3.05	76.3	81.3	64.0-139			6.43	25
1,1,2-Trichlorotrifluoroethane	3.75	2.93	3.14	78.1	83.7	70.0-130			6.92	25
1,2-Dichlorotetrafluoroethane	3.75	2.85	3.13	76.0	83.5	70.0-130			9.36	25
Heptane	3.75	2.97	3.13	79.2	83.5	70.0-130			5.25	25
Hexachloro-1,3-butadiene	3.75	3.37	3.17	89.9	84.5	70.0-151			6.12	25
n-Hexane	3.75	2.95	3.34	78.7	89.1	70.0-130			12.4	25
Isopropylbenzene	3.75	3.16	3.13	84.3	83.5	70.0-130			0.954	25
Methylene Chloride	3.75	2.75	3.05	73.3	81.3	70.0-130			10.3	25
Methyl Butyl Ketone	3.75	2.90	3.08	77.3	82.1	70.0-149			6.02	25
2-Butanone (MEK)	3.75	3.00	3.33	80.0	88.8	70.0-130			10.4	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

L1588933-03.04

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3895575-1 02/27/23 09:19 • (LCSD) R3895575-3 02/27/23 11:02

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	2.84	3.04	75.7	81.1	70.0-139			6.80	25
Methyl Methacrylate	3.75	2.97	3.10	79.2	82.7	70.0-130			4.28	25
MTBE	3.75	2.96	3.26	78.9	86.9	70.0-130			9.65	25
Naphthalene	3.75	3.38	3.31	90.1	88.3	70.0-159			2.09	25
2-Propanol	3.75	2.94	3.14	78.4	83.7	70.0-139			6.58	25
Propene	3.75	2.76	3.08	73.6	82.1	64.0-144			11.0	25
Styrene	3.75	3.09	3.17	82.4	84.5	70.0-130			2.56	25
1,1,2,2-Tetrachloroethane	3.75	3.04	3.19	81.1	85.1	70.0-130			4.82	25
Tetrachloroethylene	3.75	3.01	3.05	80.3	81.3	70.0-130			1.32	25
Tetrahydrofuran	3.75	2.82	3.18	75.2	84.8	70.0-137			12.0	25
Toluene	3.75	3.15	3.15	84.0	84.0	70.0-130			0.000	25
1,2,4-Trichlorobenzene	3.75	3.33	3.16	88.8	84.3	70.0-160			5.24	25
1,1,1-Trichloroethane	3.75	2.89	3.07	77.1	81.9	70.0-130			6.04	25
1,1,2-Trichloroethane	3.75	3.10	3.13	82.7	83.5	70.0-130			0.963	25
Trichloroethylene	3.75	3.12	3.06	83.2	81.6	70.0-130			1.94	25
1,2,4-Trimethylbenzene	3.75	3.16	3.07	84.3	81.9	70.0-130			2.89	25
1,3,5-Trimethylbenzene	3.75	3.10	3.14	82.7	83.7	70.0-130			1.28	25
2,2,4-Trimethylpentane	3.75	2.99	3.28	79.7	87.5	70.0-130			9.25	25
Vinyl chloride	3.75	2.88	3.02	76.8	80.5	70.0-130			4.75	25
Vinyl Bromide	3.75	2.93	3.12	78.1	83.2	70.0-130			6.28	25
Vinyl acetate	3.75	2.75	3.16	73.3	84.3	70.0-130			13.9	25
m&p-Xylene	7.50	6.26	6.42	83.5	85.6	70.0-130			2.52	25
o-Xylene	3.75	3.05	3.16	81.3	84.3	70.0-130			3.54	25
TPH (GC/MS) Low Fraction	203	159	172	78.3	84.7	70.0-130			7.85	25
(S) 1,4-Bromofluorobenzene				98.8	97.8	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Qualifier Description

B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.

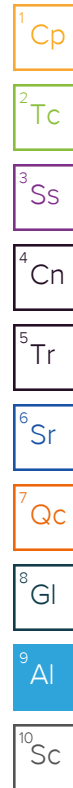
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122



Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: <b>Ensolum, LLC</b>  601 N Marlenfeld Street, Ste. 400 Midland, TX 79701			Billing information: Accounts Payable 601 N Marlenfeld Street, Ste. 400 Midland, TX 79701				Analysis		Chain of Custody Page <u>  </u> of <u>  </u>	
Recpt To: <b>Beaux Jennings</b>			Email To: bjennings@ensolum.com				TO-16 Summa		 HOME LABORATORY SERVICE MTJAJET, TN 2221 Johnson Road, Suite 100, TN Phone: 615-761-0264 Fax: 615-761-0263 Submitting a sample is the start of a timely analytical acknowledgment and compliance of the Pace Terms and Conditions found at: https://www.pace.com/submit/your-sample/	
Project: Description: <i>Long Well</i>		City/State Collected: <i>Hills NM</i>		Please Circle: PT MT ET ET						
Phone: <b>210-219-8858</b>		Client Project #: <i>0381417001</i>		Lab Project #: <b>ENSOLUMTX-SUMMA</b>						
Collected by (print): <i>Steve Dyer</i>		Site/Facility ID #: <i>Long Well</i>		F.O. #: <i>0381417001</i>						
Collected by (signature): 		Rush? (Lab MUST be notified) <input type="checkbox"/> Same Day <input checked="" type="checkbox"/> Next Day <input type="checkbox"/> Five Day <input type="checkbox"/> Two Day		Date Results needed				SDG # <i>L15889333</i>  Table #  Assay: <b>ENSOLUMTX</b> Test code: <b>T150734</b> Protocol: <b>P978695</b> RM: 354 - Chad A. Luchford PE:		
				Collection		Cabinet Pressure/Vacuum				
Sample ID	Can #	Row Cont. #	Date	Time	Initial	Final				
<i>Long Well</i>	<i>022063</i>	<i>011236</i>	<i>2-20-23</i>	<i>1052</i>	<i>-27</i>	<i>0</i>	<input checked="" type="checkbox"/>		<i>-03</i>	
<i>Long Well</i>	<i>021435</i>	<i>010943</i>	<i>2-20-23</i>	<i>1202</i>	<i>-26</i>	<i>0</i>	<input checked="" type="checkbox"/>		<i>-04</i>	
<i>Long Well</i>	<i>20028</i>	<i>007495</i>	<i>2-20-23</i>	<i>1300</i>	<i>-17</i>	<i>0</i>	<input checked="" type="checkbox"/>		<i>-02</i>	
<i>Long Well</i>	<i>022981</i>	<i>010153</i>	<i>2-20-23</i>	<i>1402</i>	<i>-27</i>	<i>0</i>	<input checked="" type="checkbox"/>		<i>-01</i>	

**Sample Receipt Checklist**

COC Seal Present/Intact:  Y  N If Applicable


COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N

Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature) 		Date:	Time:	Received by: (Signature)		Date:	Time:	Tracking #		Hold #	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:			Condition: (lab use only)	
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature)		Date:	Time:			COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N	

### 2/23 NCF- ENSOLUM AIRS L1588933

R5

Time estimate: 0h

Time spent: 0h

#### Members

-  **Nicolle Faulk** (responsible)
-  **CU** **Chad Upchurch**

Due on 2 March 2023 5:00 PM for target *Done*

- Login Clarification needed
- Chain of custody is incomplete
- Please specify Metals requested
- Please specify TCLP requested
- Received additional samples not listed on COC
- Sample IDs on containers do not match IDs on COC
- Client did not "X" analysis
- Chain of Custody is missing
- If no COC; Received by: \_\_\_\_\_
- If no COC; Date/Time: \_\_\_\_\_
- If no COC; Temp./Cont.Rec./pH: \_\_\_\_\_
- If no COC; Carrier: \_\_\_\_\_
- If no COC; Tracking #: \_\_\_\_\_
- Client informed by call
- Client informed by Email
- Client informed by Voicemail
- Date/Time: \_\_\_\_\_
- PM initials: \_\_\_\_\_
- Client Contact: \_\_\_\_\_

#### Comments

- Nicolle Faulk*

Please refer to attached

*23 February 2023 2:46 PM*
- Chad Upchurch*

Request sent to client for COC. I will send the COC once received.

Please log samples as R3 and proceed with analysis.

*24 February 2023 10:08 AM*
- Chad Upchurch*

project: ENSOLUMTX-SUMMA  
T180734

*24 February 2023 10:38 AM*
- Nicolle Faulk*

Updated

*24 February 2023 11:26 AM*

*Chad Upchurch*

Please use attached COC for this sample set.

*24 February 2023 4:20 PM*

*Nicolle Faulk*

done

*28 February 2023 8:00 AM*





# ANALYTICAL REPORT

February 27, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

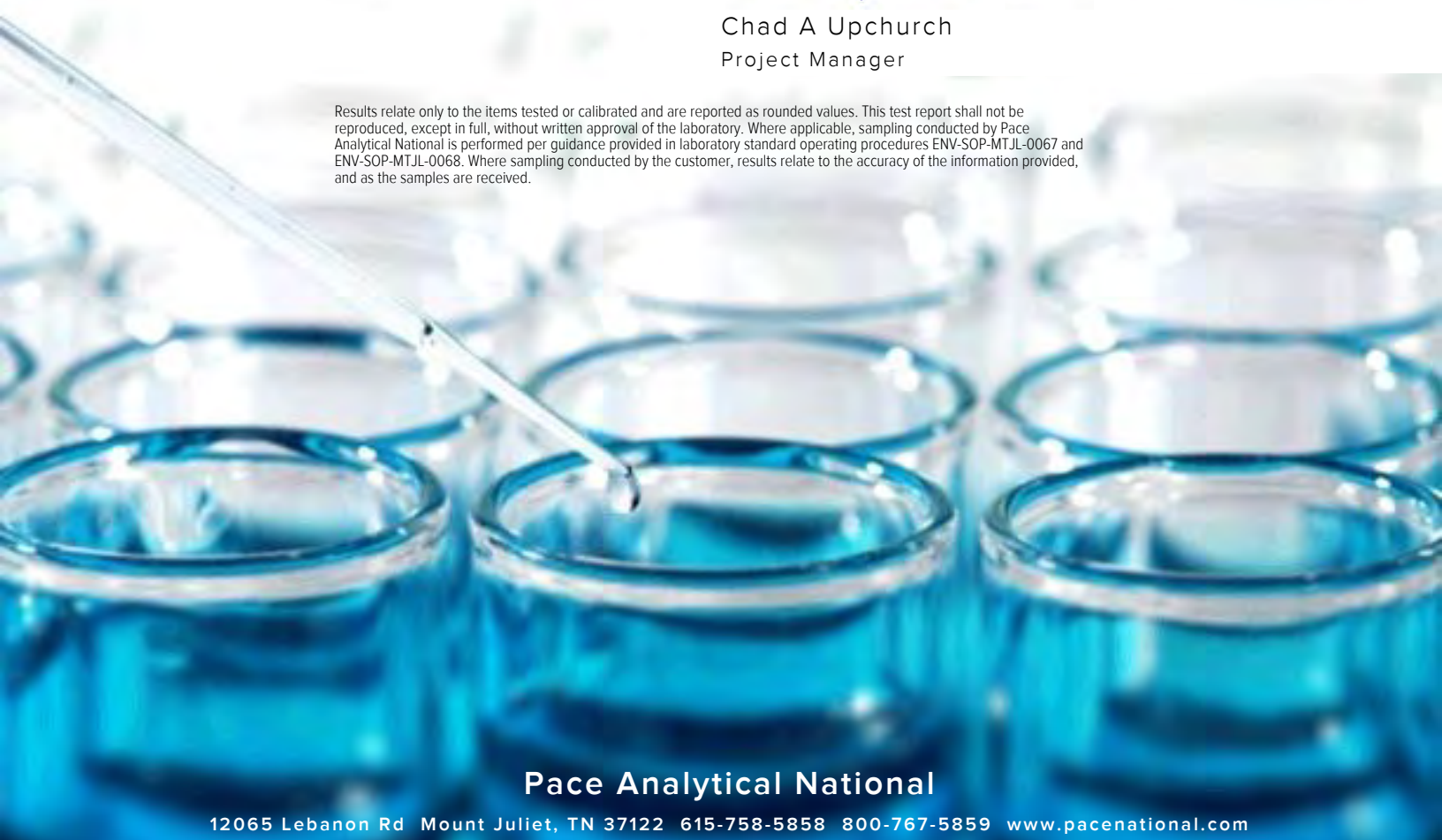
## Ensolum, LLC

Sample Delivery Group: L1589448  
 Samples Received: 02/25/2023  
 Project Number: 03B1417001  
 Description: Levey Well  
 Site: 03B1417001  
 Report To: Beaux Jennings  
 601 N Marienfeld Street, Ste. 400  
 Midland, TX 79701

Entire Report Reviewed By:











Chad A Upchurch  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Tr: TRRP Summary</b>	5	
TRRP form R	6	
TRRP form S	7	
TRRP Exception Reports	8	
<b>Sr: Sample Results</b>	9	
<b>LEVEY WELL L1589448-01</b>	9	
<b>Qc: Quality Control Summary</b>	11	
<b>Volatile Organic Compounds (MS) by Method TO-15</b>	11	
<b>Gl: Glossary of Terms</b>	15	
<b>Al: Accreditations &amp; Locations</b>	16	
<b>Sc: Sample Chain of Custody</b>	17	
		

# SAMPLE SUMMARY

LEVEY WELL L1589448-01 Air

Collected by	Collected date/time	Received date/time
Shane Diller	02/22/23 13:41	02/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2013137	100	02/26/23 22:34	02/26/23 22:34	JAB	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chad A Upchurch  
Project Manager

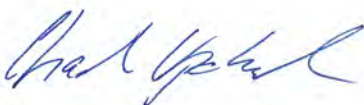
- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Tr
- <sup>6</sup>Sr
- <sup>7</sup>Qc
- <sup>8</sup>Gl
- <sup>9</sup>Al
- <sup>10</sup>Sc

# Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 - Field chain-of-custody documentation;
- R2 - Sample identification cross-reference;
- R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- R5 - Test reports/summary forms for blank samples;
- R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Chad A Upchurch  
Project Manager

# Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 02/27/2023 11:08					
Project Name: Levey Well		Laboratory Job Number: L1589448-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2013137					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.  
 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);  
 3. NA = Not applicable;  
 4. NR = Not reviewed;  
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 02/27/2023 11:08					
Project Name: Levey Well		Laboratory Job Number: L1589448-01					
Reviewer Name: Chad A Upchurch		Prep Batch Number(s): WG2013137					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
<p>1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.                  2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);                  3. NA = Not applicable;                  4. NR = Not reviewed;                  5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</p>							

# Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 02/27/2023 11:08
Project Name: Levey Well	Laboratory Job Number: L1589448-01
Reviewer Name: Chad A Upchurch	Prep Batch Number(s): WG2013137

ER # <sup>1</sup>	Description
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The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



Collected date/time: 02/22/23 13:41

L1589448

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	ND	ND		100	WG2013137
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG2013137
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG2013137
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG2013137
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG2013137
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG2013137
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG2013137
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG2013137
Carbon disulfide	75-15-0	76.10	20.0	62.2	ND	ND		100	WG2013137
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG2013137
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG2013137
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG2013137
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG2013137
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG2013137
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG2013137
Cyclohexane	110-82-7	84.20	20.0	68.9	682	2350		100	WG2013137
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG2013137
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG2013137
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG2013137
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG2013137
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG2013137
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG2013137
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG2013137
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG2013137
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	ND	ND		100	WG2013137
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG2013137
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG2013137
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG2013137
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG2013137
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG2013137
Ethanol	64-17-5	46.10	125	236	920	1730		100	WG2013137
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG2013137
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG2013137
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG2013137
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG2013137
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG2013137
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG2013137
Heptane	142-82-5	100	20.0	81.8	396	1620		100	WG2013137
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG2013137
n-Hexane	110-54-3	86.20	63.0	222	2630	9270		100	WG2013137
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG2013137
Methylene Chloride	75-09-2	84.90	20.0	69.4	24.8	86.1		100	WG2013137
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG2013137
2-Butanone (MEK)	78-93-3	72.10	125	369	266	784		100	WG2013137
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG2013137
Methyl methacrylate	80-62-6	100.12	20.0	81.9	124	508		100	WG2013137
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG2013137
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG2013137
2-Propanol	67-63-0	60.10	125	307	4250	10400		100	WG2013137
Propene	115-07-1	42.10	125	215	ND	ND		100	WG2013137
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG2013137
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG2013137
Tetrachloroethylene	127-18-4	166	20.0	136	ND	ND		100	WG2013137
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG2013137
Toluene	108-88-3	92.10	50.0	188	ND	ND		100	WG2013137
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG2013137

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Collected date/time: 02/22/23 13:41

L1589448

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	<a href="#">WG2013137</a>
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	<a href="#">WG2013137</a>
Trichloroethylene	79-01-6	131	20.0	107	86.0	461		100	<a href="#">WG2013137</a>
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	<a href="#">WG2013137</a>
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	<a href="#">WG2013137</a>
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	<a href="#">WG2013137</a>
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	<a href="#">WG2013137</a>
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	<a href="#">WG2013137</a>
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	<a href="#">WG2013137</a>
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	<a href="#">WG2013137</a>
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	<a href="#">WG2013137</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	20000	82600	ND	ND		100	<a href="#">WG2013137</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.9				<a href="#">WG2013137</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1589448-01](#)

Method Blank (MB)

(MB) R3895105-3 02/26/23 10:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethanol	U		0.265	1.25
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Tr

<sup>6</sup>Sr

<sup>7</sup>Qc

<sup>8</sup>Gl

<sup>9</sup>Al

<sup>10</sup>Sc

Volatile Organic Compounds (MS) by Method TO-15

[L1589448-01](#)

Method Blank (MB)

(MB) R3895105-3 02/26/23 10:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	41.6	U	39.7	200
(S) 1,4-Bromofluorobenzene	94.5			60.0-140

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3895105-1 02/26/23 08:10 • (LCSD) R3895105-2 02/26/23 08:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	3.21	3.21	85.6	85.6	70.0-130			0.000	25
Allyl Chloride	3.75	3.22	3.16	85.9	84.3	70.0-130			1.88	25
Benzene	3.75	3.34	3.34	89.1	89.1	70.0-130			0.000	25
Benzyl Chloride	3.75	4.45	4.33	119	115	70.0-152			2.73	25

Volatile Organic Compounds (MS) by Method TO-15

L1589448-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3895105-1 02/26/23 08:10 • (LCSD) R3895105-2 02/26/23 08:42

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	3.37	3.37	89.9	89.9	70.0-130			0.000	25
Bromoform	3.75	3.29	3.26	87.7	86.9	70.0-130			0.916	25
Bromomethane	3.75	3.37	3.33	89.9	88.8	70.0-130			1.19	25
1,3-Butadiene	3.75	3.14	3.07	83.7	81.9	70.0-130			2.25	25
Carbon disulfide	3.75	3.45	3.37	92.0	89.9	70.0-130			2.35	25
Carbon tetrachloride	3.75	3.36	3.34	89.6	89.1	70.0-130			0.597	25
Chlorobenzene	3.75	3.31	3.37	88.3	89.9	70.0-130			1.80	25
Chloroethane	3.75	3.36	3.21	89.6	85.6	70.0-130			4.57	25
Chloroform	3.75	3.33	3.33	88.8	88.8	70.0-130			0.000	25
Chloromethane	3.75	3.30	3.29	88.0	87.7	70.0-130			0.303	25
2-Chlorotoluene	3.75	3.48	3.51	92.8	93.6	70.0-130			0.858	25
Cyclohexane	3.75	3.30	3.25	88.0	86.7	70.0-130			1.53	25
Dibromochloromethane	3.75	3.34	3.34	89.1	89.1	70.0-130			0.000	25
1,2-Dibromoethane	3.75	3.42	3.40	91.2	90.7	70.0-130			0.587	25
1,2-Dichlorobenzene	3.75	3.50	3.49	93.3	93.1	70.0-130			0.286	25
1,3-Dichlorobenzene	3.75	3.54	3.56	94.4	94.9	70.0-130			0.563	25
1,4-Dichlorobenzene	3.75	3.54	3.50	94.4	93.3	70.0-130			1.14	25
1,2-Dichloroethane	3.75	3.39	3.36	90.4	89.6	70.0-130			0.889	25
1,1-Dichloroethane	3.75	3.40	3.36	90.7	89.6	70.0-130			1.18	25
1,1-Dichloroethene	3.75	3.35	3.31	89.3	88.3	70.0-130			1.20	25
cis-1,2-Dichloroethene	3.75	3.37	3.40	89.9	90.7	70.0-130			0.886	25
trans-1,2-Dichloroethene	3.75	3.37	3.33	89.9	88.8	70.0-130			1.19	25
1,2-Dichloropropane	3.75	3.35	3.34	89.3	89.1	70.0-130			0.299	25
cis-1,3-Dichloropropene	3.75	3.45	3.36	92.0	89.6	70.0-130			2.64	25
trans-1,3-Dichloropropene	3.75	3.45	3.45	92.0	92.0	70.0-130			0.000	25
1,4-Dioxane	3.75	3.42	3.30	91.2	88.0	70.0-140			3.57	25
Ethanol	3.75	3.46	3.31	92.3	88.3	55.0-148			4.43	25
Ethylbenzene	3.75	3.37	3.34	89.9	89.1	70.0-130			0.894	25
4-Ethyltoluene	3.75	3.56	3.56	94.9	94.9	70.0-130			0.000	25
Trichlorofluoromethane	3.75	3.33	3.33	88.8	88.8	70.0-130			0.000	25
Dichlorodifluoromethane	3.75	3.43	3.36	91.5	89.6	64.0-139			2.06	25
1,1,2-Trichlorotrifluoroethane	3.75	3.36	3.34	89.6	89.1	70.0-130			0.597	25
1,2-Dichlorotetrafluoroethane	3.75	3.35	3.30	89.3	88.0	70.0-130			1.50	25
Heptane	3.75	3.43	3.44	91.5	91.7	70.0-130			0.291	25
Hexachloro-1,3-butadiene	3.75	3.23	3.27	86.1	87.2	70.0-151			1.23	25
n-Hexane	3.75	3.39	3.34	90.4	89.1	70.0-130			1.49	25
Isopropylbenzene	3.75	3.38	3.40	90.1	90.7	70.0-130			0.590	25
Methylene Chloride	3.75	3.19	3.16	85.1	84.3	70.0-130			0.945	25
Methyl Butyl Ketone	3.75	3.37	3.36	89.9	89.6	70.0-149			0.297	25
Methyl Ethyl Ketone	3.75	3.33	3.40	88.8	90.7	70.0-130			2.08	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Volatile Organic Compounds (MS) by Method TO-15

L1589448-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3895105-1 02/26/23 08:10 • (LCSD) R3895105-2 02/26/23 08:42

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	3.45	3.46	92.0	92.3	70.0-139			0.289	25
Methyl Methacrylate	3.75	3.43	3.41	91.5	90.9	70.0-130			0.585	25
MTBE	3.75	3.39	3.36	90.4	89.6	70.0-130			0.889	25
Naphthalene	3.75	3.16	3.10	84.3	82.7	70.0-159			1.92	25
2-Propanol	3.75	3.36	3.27	89.6	87.2	70.0-139			2.71	25
Propene	3.75	3.37	3.37	89.9	89.9	64.0-144			0.000	25
Styrene	3.75	3.54	3.49	94.4	93.1	70.0-130			1.42	25
1,1,2,2-Tetrachloroethane	3.75	3.51	3.50	93.6	93.3	70.0-130			0.285	25
Tetrachloroethylene	3.75	3.26	3.22	86.9	85.9	70.0-130			1.23	25
Tetrahydrofuran	3.75	3.36	3.36	89.6	89.6	70.0-137			0.000	25
Toluene	3.75	3.31	3.31	88.3	88.3	70.0-130			0.000	25
1,2,4-Trichlorobenzene	3.75	3.28	3.17	87.5	84.5	70.0-160			3.41	25
1,1,1-Trichloroethane	3.75	3.38	3.35	90.1	89.3	70.0-130			0.892	25
1,1,2-Trichloroethane	3.75	3.39	3.36	90.4	89.6	70.0-130			0.889	25
Trichloroethylene	3.75	3.38	3.31	90.1	88.3	70.0-130			2.09	25
1,2,4-Trimethylbenzene	3.75	3.50	3.55	93.3	94.7	70.0-130			1.42	25
1,3,5-Trimethylbenzene	3.75	3.51	3.53	93.6	94.1	70.0-130			0.568	25
2,2,4-Trimethylpentane	3.75	3.36	3.30	89.6	88.0	70.0-130			1.80	25
Vinyl chloride	3.75	3.34	3.31	89.1	88.3	70.0-130			0.902	25
Vinyl Bromide	3.75	3.36	3.33	89.6	88.8	70.0-130			0.897	25
Vinyl acetate	3.75	3.12	3.17	83.2	84.5	70.0-130			1.59	25
m&p-Xylene	7.50	6.78	6.85	90.4	91.3	70.0-130			1.03	25
o-Xylene	3.75	3.40	3.41	90.7	90.9	70.0-130			0.294	25
TPH (GC/MS) Low Fraction	203	176	175	86.7	86.2	70.0-130			0.570	25
(S) 1,4-Bromofluorobenzene				102	102	60.0-140				

1 Cp  
2 Tc  
3 Ss  
4 Cn  
5 Tr  
6 Sr  
7 Qc  
8 Gl  
9 Al  
10 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
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Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		


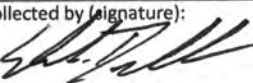
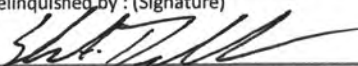
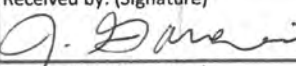
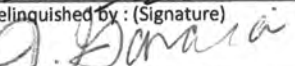
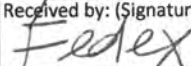
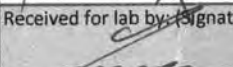
<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





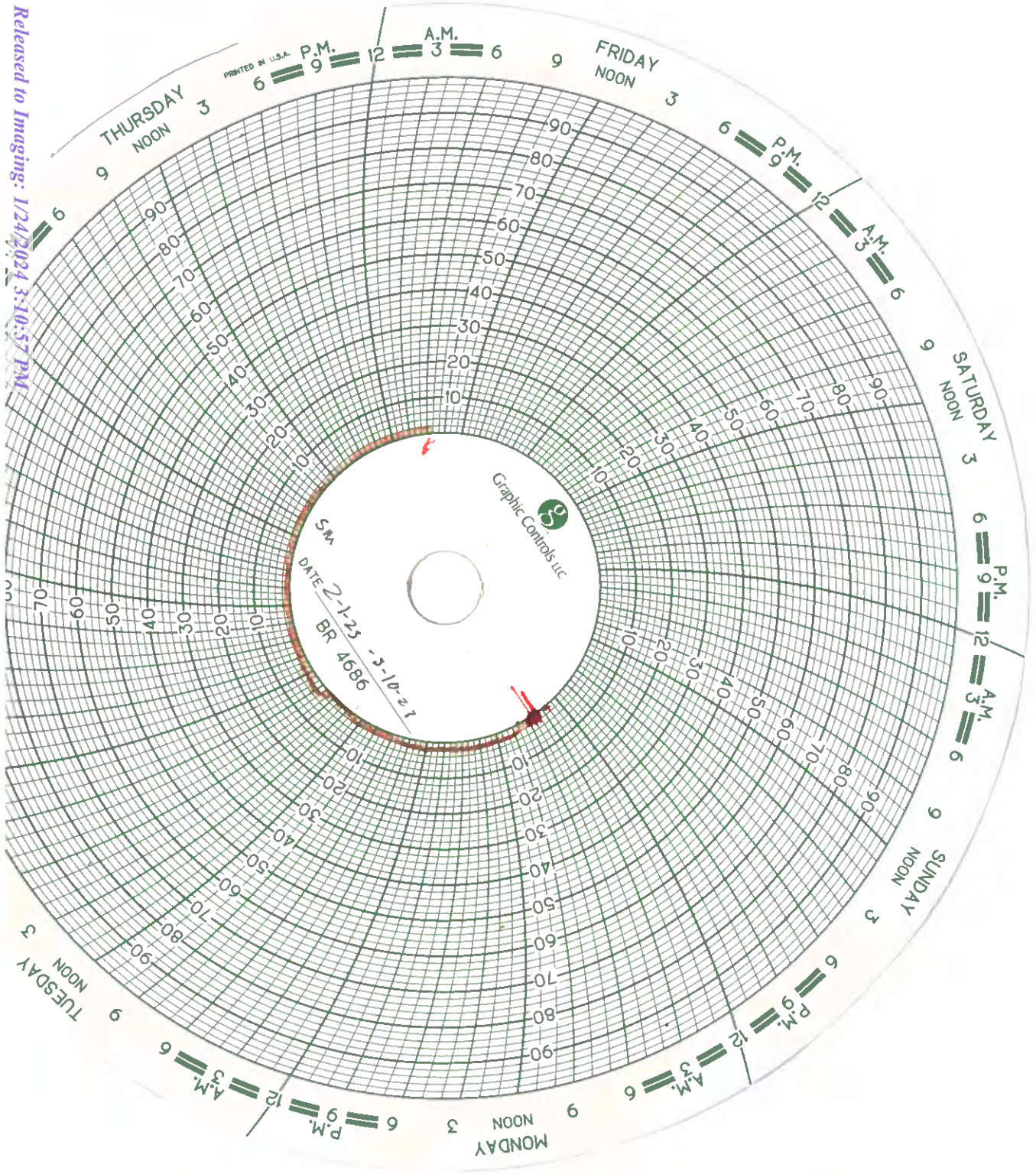
Company Name/Address: <b>Ensolum, LLC</b> <b>601 Marienfeld #400</b> <b>Midland, TX 79701</b>		Billing Information: <b>Accounts Payable</b> <b>2351 W Northwest Hwy. Ste.</b> <b>1203</b> <b>Dallas, TX 75220</b>		Pres Chk	Analysis / Container / Preservative										Chain of Custody Page ___ of ___						
Report to: <b>Beaux Jennings</b>		Email To: <b>bjennings@ensolum.com</b>													 12065 Lebanon Road Mt Juliet, TN 37122 Phone: 615-758-5858 Alt: 800-767-5859 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <a href="https://info.pacelabs.com/hubs/pas-standard-terms.pdf">https://info.pacelabs.com/hubs/pas-standard-terms.pdf</a>						
Project Description: Levey Well		City/State Collected: Hobbs NM		Please Circle: PT MT CT ET												SDG # <b>L1589448</b> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;"><b>E019</b></div>					
Phone: <b>210-219-8858</b>		Client Project # 03B1417001		Lab Project # <b>ENSOLUMMTX-SUMMA</b>												Acctnum: <b>ENSOLUMMTX</b> Template: <b>T180734</b> Prelogin: <b>P827709</b> PM: <b>134 - Mark W. Beasley</b> PB: Shipped Via:					
Collected by (print): Shane Diller		Site/Facility ID # 03B1417001		P.O. # 03B1417001												Remarks   Sample # (lab only)					
Collected by (signature): 		<b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input checked="" type="checkbox"/> Three Day		Quote #  Date Results Needed																	
Immediately Packed on Ice N <input type="checkbox"/> X <input type="checkbox"/> Y <input type="checkbox"/>																					
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs															
Levey Well	G	Air	—	2-22-23	1341	1	X														
<del>                     N/A                      2-22-23                 </del>																					
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks:		Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking #		pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <input type="checkbox"/> NP <input type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero HeadSpace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N											
Relinquished by: (Signature) 		Date: 2/24/23	Time: 10:00	Received by: (Signature) 		Trip Blank Received: Yes / No HCL / MeOH TBR															
Relinquished by: (Signature) 		Date: 2/24/23	Time: 3:00	Received by: (Signature) 		Temp: _____ °C Bottles Received:												If preservation required by Login: Date/Time			
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) 		Date: 2/25/23	Time: 0845	Hold:												Condition: NCF / OK	



## APPENDIX D

### Levey Well Pressure Reading Documentation

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**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 230855

**CONDITIONS**

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID:	157984
	Action Number:	230855
	Action Type:	[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
michael.buchanan	Review of the Gas Mitigation Monthly Report, dated June 20, 2023: Content Satisfactory 1. Continue to monitor the Levey Well and conduct air sampling as prescribed in section 2.1 2. Continue to monitor wells MW-1 and MW-2 at the site until compliance expectations are achieved. 3. Continue to submit reports as scheduled for 2024.	1/24/2024