



**SOUTH HOBBS G/SA UNIT
GAS MITIGATION WORK PLAN**

Property:

**South Hobbs G/SA Unit
Operations Unit F, Section 5,
T19S, R38E
Lea County, New Mexico**

New Mexico EMNRD OCD Order No. R-4934-F

March 24, 2021

Prepared for:

**Occidental Permian LTD
6001 Deauville Blvd.
Midland, Texas 79706
Attn: Mr. Dusty Wilson**

Prepared by:

Elizabeth Scaggs
Principal

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Gas Mitigation Work Plan
South Hobbs G/SA Unit Operations
Order No. R-4934-F dated July 18, 2013, Case No. 14981
Unit F, Section 5, Township 19 South, Range 38 East
Latitude 32.690683, Longitude -103.173158
Lea County, New Mexico

1.0 INTRODUCTION

1.1 Site Description & Background

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

This Gas Mitigation Work Plan proposes to address the remaining free gas at the site. 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-1 water well and the two (2) monitoring wells 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 monitoring wells and the Levey-1 water well in relation to pertinent structures and general Site boundaries, is included as **Figure 1 of Appendix A**.

On June 30, 2019, elevated pressure was observed at the Levey-1 water well. At NMOCD's request, all localized area wells were "shut in" from operational use. Over time, the pressure being observed at the Levey-1 water well declined until pressure was no longer recorded. Observations and water analysis of the Levey-1 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-1 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-1 well. In response, OXY plugged the SHU # 183 well to surface. No other anomalies were observed in the adjacent area oil and gas wells.

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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 for free gas migration.

In February of 2020, permission was gained from the NMOCD to drill two (2) monitoring wells for analysis and observation purposes, one near the Levey-1 water well (MW-1) and one near SHU # 183 (MW-2).

During initial pre-start up background sampling of wells Levey-1, MW-1 and MW-2 on two (2) separate events, May 25th and June 20th of 2020, gas with lower explosive limits (LEL's) at or over 60% were observed in wells Levey-1 and MW-2. This finding was consistent with previous analysis and findings within the Levey-1 water 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-1 water 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-1 water well has been sampled consistently from December 6, 2019 March 4, 2021. 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 CO₂ C, dissolved sulfide utilizing EPA Method SW-846 #376.2, chloride using EPA Method #846 300 and pH utilizing EPA Method SW-846 #150.1. The groundwater samples collected from the Levey-1 water 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.

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, nitrite as N and TDS. Benzene concentrations ranged from non-detect in monitoring well MW-1 to 0.0167 milligrams per liter (mg/l) in the Levey-1 water well. However, the trendline shows benzene concentrations are decreasing overall in the Levey-1 water well. Chloride concentrations in the Levey-1 water well were highly variable ranging from 190 mg/l to 635 mg/l with an average chloride concentration over the sampling period of 366 mg/l. Chloride concentrations in MW-1 ranged from 339 mg/l to 363 mg/l. TDS analytical results ranged from 1,100 mg/l to 2,570 mg/l, which exceeds the applicable WQCC GQS of 1,000 mg/l. 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**.

OXY utilized automated processes to compile and monitor data 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.

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To mitigate potential exposures, the Levey residence was purchased by OXY and remains unoccupied. A passive vent was installed on the Levey-1 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-1 water well, or MW-1 and MW-2. Hydrogen sulfide (H_2S) has not been detected in any of the three (3) aforementioned wells since July 15, 2020. All detections of H_2S prior to July 15th were within the well bore. No H_2S above permissible exposure limits was observed outside of the well bores.

OXY installed pressure reading charts at the Levey-1 water 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-1 water 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 2/24/2021, with no pressure observed in either monitoring well.

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-1 water supply 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 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-1 and 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 is proposed to release the free gas pool from the subsurface red bed.

1.2 Evacuation of Levey-1 Water Well

OXY requests approval to move forward with technologies sufficient to remove these gases from the subsurface. OXY proposes that this can be accomplished by attaching a vacuum pump truck to the Levey-1 water 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 take several applications and OXY proposes to create a vacuum on the wellbore once every two weeks until the sampling results of the air (VOCs) is minimal after displacement of the overlying pressure or the process proves to become ineffective.

OXY has conducted one (1) pilot test event to date with excellent results as shown on **Table 4, Appendix B**. The air samples on January 25, 2021 were taken prior to and during the vacuum event. The vacuum was applied to the Levey-1 water well for a duration of approximately four (4) hours. No water was recovered during the vacuum event. The air sample obtained on January 28, 2021 was subsequent to the vacuum event. The air sampling events on February 10 and 24, 2021, were utilized to compare the previous data.



2.0 AIR AND GROUNDWATER MONITORING

2.1 Air Sampling Program

Levey -1 Water Well

Air sampling will be performed subsequent to the vacuum events on opposite weeks from the evacuation event utilizing a pre-evacuated Summa passivated canister. The canister, which will be evacuated to 0.05 mm Hg and fitted with a flow restricting device and tubing will be placed in the well bore of Levey-1 water well. A sample of the wellbore ambient air will be drawn through a sampling train comprised of components that regulate the rate and duration of the sampling. After the air sample is collected, the canister valve will be closed, an identification tag attached to the canister, and the canister will be transported to an analytical laboratory for analysis of VOCs.

The Summa canister will be shipped under proper chain-of-custody to Pace Analytical Laboratory in Mount Juliet, TN for analysis of VOCs by Method TO-15. Previous laboratory analytical results are summarized in **Table 4** in **Appendix B**. The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix C**.

2.2 Groundwater Sampling Program

Groundwater sampling events will be conducted on opposite weeks from the vacuum events on the Levey-1 water well and monitoring wells MW-1 and MW-2. The groundwater sampling program will be based on requirements from NMOCD and will consist of the following:

Levey-1 Water Well

Prior to sample collection, the existing pump in the water well will be ran to a frac tank staged on-Site for approximately 10 minutes. Once the Levey-1 water well has been properly purged, groundwater samples will be collected.

Monitoring Wells MW-1 and MW-2

Prior to sample collection, the depth to fluids in each monitoring well (MW-1 and MW-2) will be gauged using an interface probe capable of detecting non-aqueous phase liquids (NAPL). Each monitoring well will be sampled utilizing micro-purge low-flow sampling techniques. Subsequent to the completion of the micro-purge process, one (1) groundwater sample will be collected from each monitoring well.

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 (3) to five (5) minutes. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for three (3) successive readings.

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Groundwater samples will be 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 will be relinquished to the courier for Eurofins Xenco (formerly Xenco) of Midland, Texas under proper chain-of-custody procedures.

The groundwater samples collected from the Levey-1 water well will be 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.

The groundwater samples collected from the monitoring wells will be 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 #846 300 and pH utilizing EPA Method SW-846 #150.1.

Previous laboratory analytical results are summarized in **Tables 1 through 3** in **Appendix B**. The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix C**. All data regarding the evacuation events, and air and groundwater monitoring will be provided to the NMOCD on a monthly basis.

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3.0 REFERENCES

GSI Environmental. 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 11th, 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.

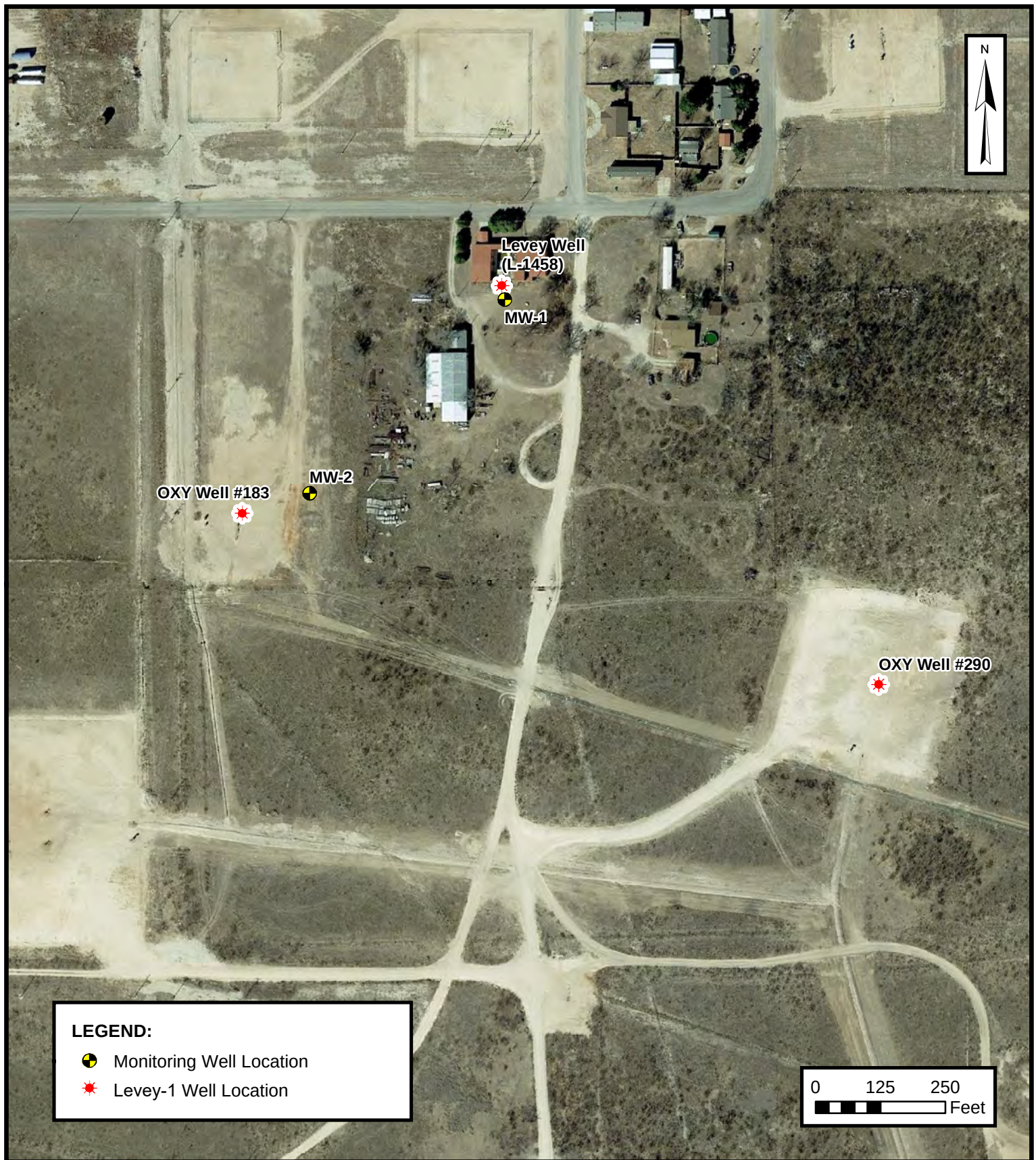
Gorody, A.W., 2012. Factors affecting the variability of stray gas concentration and composition ingroundwater. Environ. Geosci. 19, 17–31.
<https://doi.org/10.1306/eg.12081111013>

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>



Attachment A

Figures



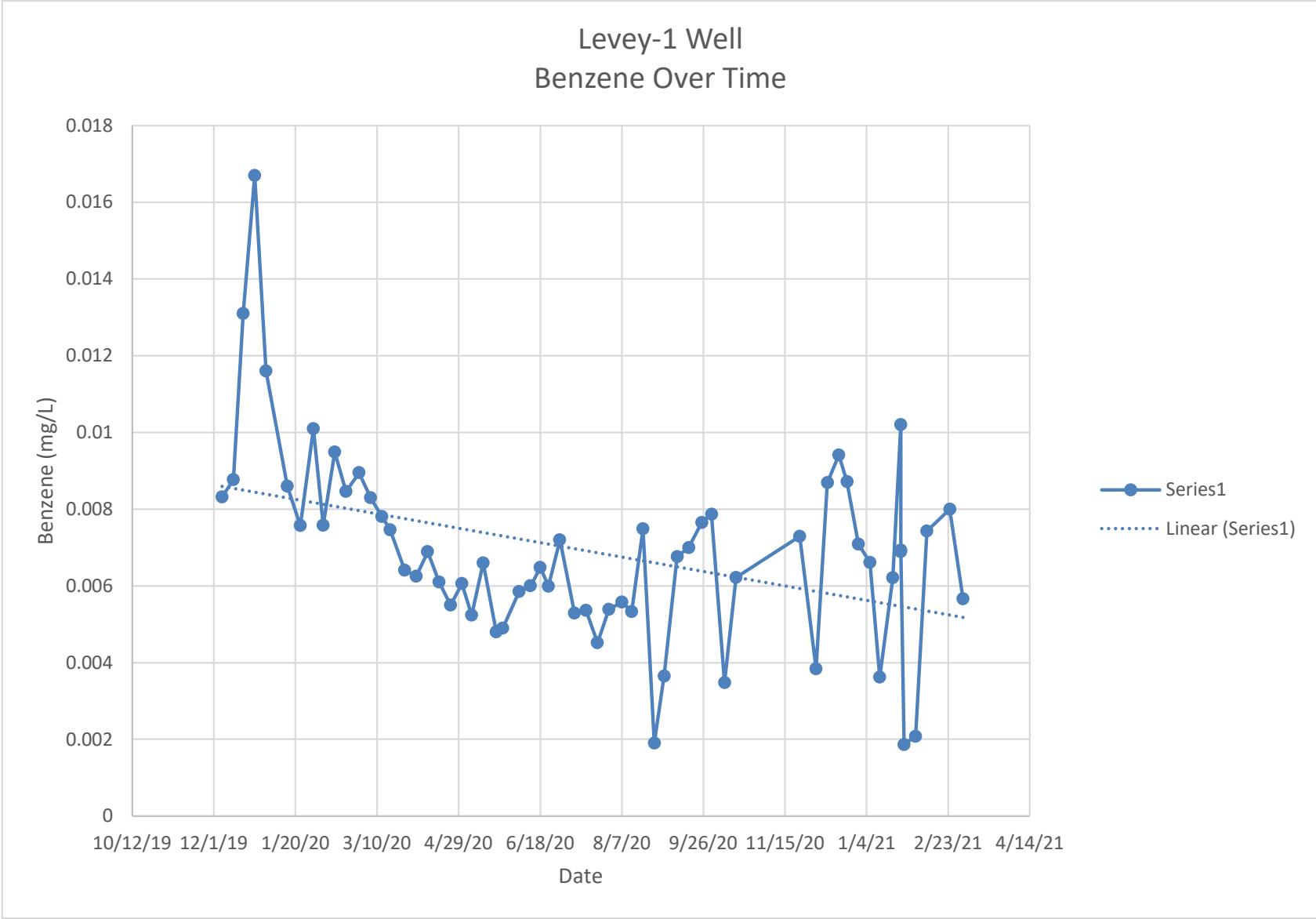
SITE MAP

PERMIAN EOR, INC
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: 03B1417002

FIGURE

1





Attachment B

Summary Tables

TABLE 1 - GROUNDWATER SAMPLING (VOCs) ANALYTICAL DATA SUMMARY																								
Permian EOR - Levey Well Hobbs, New Mexico																								
Well ID	Date	VOCs (mg/l)																						
		Benzene	Toluene	Ethylbenzene	o-Xylene	m,p-Xylenes	Total Xylenes	Methyl ethyl ketone (2-Butanone)	n-Butylbenzene	Sec-Butylbenzene	tert-Butylbenzene	2-Chlorotoluene	4-Chlorotoluene	p-Cymene (p-Isopropyltoluene)	1,2-Dichloroethane	cis-1,2-Dichloroethylene	1,1-Dichloropropene	Isopropylbenzene	Naphthalene	n-Propylbenzene	1,1,2-Trichloroethane	Styrene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards		0.005	1	0.7	NE	NE	0.62	NE	NE	NE	NE	NE	NE	0.005	NE	NE	NE	NE	0.03	NE	0.01	0.1	NE	NE
Levey Well	12/6/2019	0.00832	0.0708	0.0296	0.0242	0.129	0.153	<0.0500	0.00151	0.00206	<0.00100	<0.00100	0.00138	<0.00100	<0.00100	<0.00500	0.0126	<0.0100	0.00566	<0.00100	<0.00100	0.0358	0.0106	
	12/13/2019	0.00877	0.0654	0.0271	0.0233	0.121	0.144	<0.0500	0.00118	0.00171	<0.00100	<0.00100	0.00112	<0.00100	<0.00100	<0.00500	0.0112	<0.0100	0.00470	<0.00100	<0.00100	0.0315	0.00944	
	12/19/2019	0.0131	0.0861	0.0385	0.0318	0.170	0.202	0.0125 J	0.00187	0.00257	<0.000195	<0.000214	0.00173	<0.000295	<0.000174	<0.000481	0.0170	<0.00200	0.00747	<0.000228	<0.000162	0.0469	0.0144	
	12/26/2019	0.0167	0.112	0.0514	0.0459	0.210	0.256	<0.0500	0.00211	0.00320	<0.00100	<0.00100	0.00183	<0.00100	<0.00100	<0.00500	0.0235	<0.0100	0.00934	<0.00100	<0.00100	0.0672	0.0168	
	1/2/2020	0.0116	0.0644	0.0551	0.0805	0.232	0.313	<0.0500	0.00231	0.00164	<0.00100	<0.00100	0.00127	<0.00100	<0.00100	<0.00500	0.0107	0.0120	0.00544	<0.00100	0.00243	0.0377	0.0106	
	1/15/2020	0.00860	0.0528	0.0318	0.0219	0.119	0.141	<0.0500	0.00259	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00500	0.0148	<0.0100	0.0104	<0.00100	<0.00100	0.0547	0.0172	
	1/23/2020	0.00757	0.0462	0.0318	0.0224	0.119	0.141	<0.0500	0.00233	0.00295	<0.00100	<0.00100	<0.00100	0.00180	<0.00100	<0.00100	<0.00500	0.0158	<0.0100	0.0166	<0.00100	<0.00100	0.103	0.0300
	1/31/2020	0.0101	0.0567	0.0462	0.0385	0.166	0.205	<0.500	<0.0100	<0.0100	0.0438	0.0343	0.0344	<0.100	<0.100	<0.100	0.0584	0.0262	<0.100	<0.100	<0.100	0.323	0.0847	
	2/6/2020	0.00758	0.0489	0.0306	0.0242	0.116	0.140	<0.0500	0.00234	0.00299	<0.00100	<0.00100	<0.00100	0.00165	<0.00100	<0.00100	<0.00500	0.0174	<0.0100	0.0237	<0.00100	<0.00100	0.285	0.0451
	2/13/2020	0.00949	0.0498	0.0397	0.0337	0.145	0.179	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00251	<0.00100	<0.00100	<0.00500	0.0251	<0.0100	0.0450	<0.00100	<0.00100	0.349	0.0898
	2/20/2020	0.00846	0.0326	0.0313	0.0248	0.113	0.138	<0.0500	<0.00100	0.00407	<0.00100	<0.00100	<0.00100	0.00229	<0.00100	<0.00100	<0.00500	0.0208	<0.0100	0.0431	<0.00100	<0.00100	0.322	0.0918
	2/28/2020	0.00895	0.0351	0.0374	0.0251	0.124	0.149	<0.250	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0250	0.0249	<0.0500	0.0488	<0.00500	<0.00500	0.358	0.0989
	3/6/2020	0.00830	0.0313	0.0346	0.0228	0.114	0.137	<0.0500	0.00374	0.00467	<0.00100	<0.00100	<0.00100	0.00254	<0.00100	<0.00100	<0.00500	0.0231	<0.0100	0.0472	<0.00100	<0.00100	0.378	0.0948
	3/13/2020	0.00781	0.0302	0.0330	0.0203	0.109	0.129	<0.0500	0.00153	<0.00100	<0.00100	<0.00100	<0.00100	0.00247	<0.00100	<0.00100	<0.00500	0.0224	<0.0100	0.0428	<0.00100	<0.00100	0.277	0.0875
	3/18/2020	0.00746	0.0279	0.0304	0.0174	0.0981	0.116	<0.0500	0.00311	0.00400	<0.00100	<0.00100	<0.00100	0.00224	<0.00100	<0.00100	<0.00500	0.0199	<0.0100	0.0365	<0.00100	<0.00100	0.275	0.0777
	3/27/2020	0.00641	0.0151	0.0247	0.0132	0.0737	0.0869	<0.0500	0.00122	0.00345	<0.00100	<0.00100	<0.00100	0.00189	<0.00100	<0.00100	<0.00500	0.0166	<0.0100	0.0336	<0.00100	<0.00100	0.261	0.0721
	4/3/2020	0.00625	0.0129	0.0250	0.0130	0.0745	0.0875	<0.0500	0.00120	<0.00100	<0.00100	<0.00100	<0.00100	0.00209	<0.00100	<0.00100	<0.00500	0.0174	<0.0100	0.0363	<0.00100	<0.00100	0.273	0.0756
	4/10/2020	0.00699	0.0327	0.0277	0.0159	0.0924	0.108	<0.0500	0.00253	0.00338	<0.00100	<0.00100	<0.00100	0.00188	<0.00100	<0.00100	<0.00500	0.0171	<0.0100	0.0300	<0.00100	<0.00100	0.264	0.0580
	4/17/2020	0.00610	0.0258	0.0253	0.0141	0.0814	0.0955	<0.0500	0.00238	0.00321	<0.00100	<0.00100	<0.00100	0.00175	<0.00100	<0.00100	<0.00500	0.0164	<0.0100	0.0280	<0.00100	<0.00100	0.220	0.0562
	4/24/2020	0.00550	0.0241	0.0225	0.0125	0.0756	0.0881	<0.0500	<0.00100	0.00297	<0.00100	<0.00100	<0.00100	0.00179	<0.00100	<0.00100	<0.00500	0.0148	<0.0100	0.0251	<0.00100	<0.00100	0.199	0.0526
	5/1/2020	0.00606	0.0277	0.0237	0.0129	0.0773	0.0902	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00159	<0.00100	<0.00100	<0.00500	0.0143	<0.0100	0.0242	<0.00100	<0.00100	0.185	0.0513
	5/7/2020	0.00524	0.0168	0.0211	0.0108	0.0655	0.0763	<0.0500	<0.00100	0.00306	<0.00100	<0.00100	<0.00100	0.00171	<0.00100	<0.00100	<0.00500	0.0138	<0.0100	0.0270	<0.00100	<0.00100	0.202	0.0582
	5/14/2020	0.00660	0.0357	0.0268	0.0141	0.0882	0.102	<0.0500	0.00236	0.00324	<0.00100	<0.00100	<0.00100	0.00191	<0.00100	<0.00100	<0.00500	0.0165	<0.0100	0.0236	<0.00100	<0.00100	0.201	0.0453
	5/22/2020	0.00480	0.00851	0.0193	0.00896	0.0567	0.0657	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00194	<0.00100	<0.00100	<0.00500	0.0137	<0.0100	0.0276	<0.00100	<0.00100	0.187	0.0597
	5/29/2020	0.00490	0.0169	0.0210	0.0109	0.0637	0.0746	<0.0500	0.00122	0.00300	<0.00100	<0.00100	<0.00100	0.00164	<0.00100	<0.00100	<0.00500	0.0138	<0.0100	0.0256	<0.00100	<0.00100	0.192	0.0532
	6/5/2020	0.00585	0.0317	0.0228	0.0117	0.0744	0.0861	<0.0500	0.00183	0.00271	<0.00100	<0.00100	<0.00100	0.00155	<0.00100	<0.00100	<0.00500	0.0134	<0.0100	0.0182	<0.00100	<0.00100	0.129	0.0367
	6/12/2020	0.00600	0.0299	0.0231	0.0122	0.0757	0.0879	<0.0500	<0.00100	0.00283	<0.00100	<0.00100	<0.00100	0.00154	<0.00100	<0.00100	<0.00500	0.0135	<0.0100	0.0211	<0.00100	<0.00100	0.150	0.0429
	6/18/2020	0.00648	0.0374	0.0236	0.0129	0.0818	0.0947	<0.0500	<0.00100	0.00256	<0.00100	<0.00100	<0.00100	0.00145	<0.00100	<0.00100	<0.00500	0.0130	<0.0100	0.0162	<0.00100	<0.00100	0.121	0.0336
	6/23/2020	0.00599	0.0311	0.0232	0.0116	0.0771	0.0887	<0.0500	0.00103	<0.00100	<0.00100	<0.00100	<0.00100	0.00153	<0.00100	<0.00100	<0.00500	0.0137	<0.0100	0.0193	<0.00100	<0.00100	0.135	0.0385
	6/30/2020	0.00720	0.0450	0.0276	0.0138	0.0923	0.106	<0.0500	0.00105	0.00306	<0.00100	<0.00100	<0.00100	0.00176	<0.00100	<0.00100	<0.00500	0.0152	<0.0100	0.0169	<0.00100	<0.00100	0.119	0.0339
	7/9/2020	0.00529	0.0272	0.0203	0.0103	0.0700	0.0803	<0.0500	<0.00100	0.00253	<0.00100	<0.00100	<0.00100	0.00136	<0.00100	<0.00100	<0.00500	0.0118	<0.0100	0.0156	<0.00100	<0.00100	0.118	0.0328
	7/16/2020	0.00536	0.0316	0.0294	0.0103	0.0684	0.0787	<0.0500	0.00148	0.00252	<0.00100	<0.00100	<0.00100	0.00133	<0.00100	<0.00100	<0.00500	0.0117	<0.0100	0.0142	<0.00100	<0.00100	0.0944	0.0273
	7/23/2020	0.00452	0.0268	0.0174	0.00895	0.0602	0.0692	<0.0500	<0.00100	0.00199	<0.00100	<0.00100	<0.00100	0.00112	<0.00100	<0.00100	<0.00500	0.00991	<0.0100	0.0113	<0.00100	<0.00100	0.0775	0.0224
	7/30/2020	0.00539	0.0302	0.0197	0.0100	0.0641	0.0741	<0.0500	<0.00100	0.00210	<0.00100	<0.00100	<0.00100	0.00123	<0.00100	<0.00100	<							

TABLE 1 - GROUNDWATER SAMPLING (VOCs) ANALYTICAL DATA SUMMARY																								
Permian EOR - Levey Well Hobbs, New Mexico																								
Well ID	Date	VOCs (mg/l)																						
		Benzene	Toluene	Ethylbenzene	o-Xylene	m,p-Xylenes	Total Xylenes	Methyl ethyl ketone (2-Butanone)	n-Butylbenzene	Sec-Butylbenzene	tert-Butylbenzene	2-Chlorotoluene	4-Chlorotoluene	p-Cymene (p-Isopropyltoluene)	1,2-Dichloroethane	cis-1,2-Dichloroethylene	1,1-Dichloropropene	Isopropylbenzene	Naphthalene	n-Propylbenzene	1,1,2-Trichloroethane	Styrene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards		0.005	1	0.7	NE	NE	0.62	NE	NE	NE	NE	NE	NE	0.005	NE	NE	NE	NE	0.03	NE	0.01	0.1	NE	NE
MW-1	5/26/2020	0.000500 J	<0.000500	<0.000146	<0.000192	0.00215 J	0.00215	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	<0.000161	<0.00200	<0.000179	<0.000228	<0.000162	0.00101	0.0005 J
	6/30/2020	0.00275	<0.00100	<0.00100	<0.00100	0.0136	0.0136	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00500	<0.00100	<0.0100	<0.00100	<0.00100	<0.00100	0.00665	0.00271
	8/20/2020	0.00222	<0.00100	<0.00100	<0.00100	<0.0100	<0.0100	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00500	<0.00100	<0.0100	<0.00100	<0.00100	<0.00100	0.00388	0.00175
	10/23/2020	0.00353	<0.000367	<0.000657	<0.000642	0.00246 J	0.00246																	
	11/24/2020	0.00241	<0.000500	0.000310 J	<0.000192	0.00133 J	0.001330	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	<0.000161	<0.00200	<0.000179	<0.000228	<0.000162	0.00151	0.000820 J
	12/18/2020	0.00257	<0.000500	0.000580 J	<0.000192	0.00145 J	0.00145	<0.002270	<0.000286	0.000350 J	<0.000195	<0.000214	<0.000183	0.000270 J	<0.000285	<0.000174	<0.000481	0.000320 J	<0.00200	0.000230 J	<0.000228	<0.000162	0.00234	0.00111
	12/23/2020	0.00159	<0.000500	0.000380 J	<0.000192	0.000970 J	0.000970 J	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	0.000230 J	<0.000481	<0.000161	<0.00200	<0.000179	<0.000228	<0.000162	0.000720 J	0.000360 J
	12/30/2020	0.00194	<0.000500	0.000470 J	<0.000192	0.00148 J	0.00148	<0.002270	<0.000286	0.000230 J	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000240 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00154	0.000750 J
	1/6/2021	0.00209	<0.000500	0.000330 J	<0.000192	0.00122 J	0.00122	<0.002270	<0.000286	0.000310 J	<0.000195	<0.000214	<0.000183	0.000260 J	<0.000285	<0.000174	<0.000481	0.000190 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00219	0.00103
	1/12/2021	0.00211	0.000690 J	0.000540 J	<0.000192	0.00163 J	0.00163	<0.002270	<0.000286	0.000220 J	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000200 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00143	0.000670 J
	1/20/2021	0.00222	<0.000500	0.000430 J	<0.000192	0.00137 J	0.00137	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000210 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00140	0.000720 J
	1/27/2021	0.00157	<0.000500	0.000400 J	<0.000192	0.00123 J	0.00123	0.000398 J	<0.000286	0.000270 J	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000210 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00153	0.000830 J
	2/3/2021	0.00203	<0.000500	0.000430 J	<0.000192	0.00100 J	0.00100 J	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000180 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00105	0.000510 J
	2/10/2021	0.00196	<0.000500	0.000560 J	<0.000192	0.00143 J	0.00143	<0.00575	<0.000286	0.000240 J	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000300 J	<0.00200	<0.000179	<0.000228	<0.000162	0.00143	0.000740 J
	2/24/2021	0.00158	<0.000500	0.000460 J	<0.000192	0.00110 J	0.0011	<0.00575	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000210 J	<0.00200	<0.000179	<0.000228	<0.000162	0.000930 J	0.000490 J
	3/4/2021	0.00139	<0.000500	0.00102	<0.000192	0.00211 J	0.00211	<0.00575	<0.000286	0.000240 J	<0.000195	<0.000214	<0.000183	<0.000233	<0.000285	<0.000174	<0.000481	0.000440 J	<0.00200	0.000240 J	<0.000228	<0.000162	0.00131	0.000680 J
MW-2	5/26/2020	0.00901	0.0299	0.0069	0.0186	0.0545	0.0731	<0.002270	<0.000286	0.000270 J	<0.000195	<0.000214	<0.000183	0.000660	<0.000285	<0.000174	<0.000481	0.00223	<0.00200	0.000570 J	<0.000228	<0.000162	0.0125	0.00704
	6/30/2020	0.0124	0.0193	0.0187	0.0196	0.0903	0.110	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00500	0.00667	<0.0100	0.00243	<0.00100	<0.00100	0.0231	0.00815
	8/20/2020	0.0148	0.0172	0.0182	0.0160	0.0802	0.0962	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00500	0.00640	<0.0100	0.00170	<0.00100	<0.00100	0.0145	0.00421
	10/23/2020	0.0250	0.00730	0.0248	0.0186	0.110	0.129																	
	11/24/2020	0.0358	0.0613	0.0503	0.0465	0.221	0.2675	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	0.00143	<0.000285	<0.000174	<0.000481	0.0189	0.00242 J	<0.000179	<0.000228	<0.000162	0.0590	0.0149
	12/18/2020	0.0263	0.0260	0.0369	0.0240	0.165	0.189	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	0.00113	<0.000285	<0.000174	<0.000481	0.0148	<0.00200	0.00486	<0.000228	<0.000162	0.0467	0.0121
	12/23/2020	0.0299	0.0358	0.0381	0.0266	0.156	0.183	<0.002270	<0.000286	<0.000199	<0.000195	<0.000214	<0.000183	0.00101	<0.000285	<0.000174	<0.000481	0.0135	<0.00200	0.00408	<0.000228	<0.000162	0.0406	0.0102
	12/30/2020	0.0200	0.0242	0.0185	0.0146	0.0592	0.0738	<0.002270	0.000550 J	0.000680 J	<0.000195	<0.000214	<0.000183	0.000540 J	<0.000285	<0.000174	<0.000481	0.00603	<0.00200	0.00170	<0.000228	<0.000162	0.0116	0.00533
	1/6/2021	0.0200	0.0169	0.0231	0.0169	0.118	0.135	<0.002270	0.000390 J	0.00117	<0.000195	<0.000214	<0.000183	0.00105	0.000500 J	<0.000174	<0.000481	0.00815	<0.00200	0.00267	0.000800 J	<0.000162	0.0339	0.0103
	1/12/2021	0.0193	0.0185	0.0198	0.0144	0.0922	0.107	<0.002270	0.000690 J	<0.000199	<0.000195	<0.000214	<0.000183	0.000710 J	<0.000285	<0.000174	<0.000481	0.00756	<0.00200	0.00242	<0.000228	<0.000162	0.0259	0.00698
	1/20/2021	0.0229	0.0169	0.0190	0.0136	0.0829	0.0965	0.00394 J	0.000400 J	<0.000199	<0.000195	<0.000214	<0.000183	0.000470 J	<0.000285	<0.000174	<0.000481	0.00640	<0.00200	0.00177	<0.000228	<0.000162	0.0202	0.00517
	1/27/2021	0.0298	0.0276	0.0282	0.0269	0.155	0.182	0.00504 J	0.00103	<0.000199	<0.000195	<0.000214	<0.000183	0.00116	<0.000285	<0.000174	<0.000481	0.0117	<0.00200	0.00343	<0.000228	<0.000162	0.0500	0.0129
	2/3/2021	0.0286	0.0392	0.0258	0.0236	0.111	0.135	<0.002270	<0.000286	0.000850 J	<0.000195	<0.000214	<0.000183	0.000590 J	<0.000285	<0.000174	<0.000481	0.00817	<0.00200	0.00240	<0.000228	<0.000162	0.0267	0.00674
	2/10/2021	0.0307	0.0201	0.0329	0.0210	0.159	0.180	<0.00575	0.000870 J	<0.000199	<0.000195	<0.000214	<0.000183	0.000940 J	<0.000285	<0.000174	<0.000481	0.0120	<0.00200	0.00331	<0.000228	<0.000162	0.0407	0.00994
	2/24/2021	0.0218	0.0122	0.0164	0.0111	0.0749	0.086	<0.00575	0.000370 J	0.000640 J	<0.000195	<0.000214	<0.000183	0.000480 J	<0.000285	<0.000174	<0.000481	0.0060	<0.00200	0.00175	<0.000228	<0.000162	0.0191	0.00496
	3/4/2021	0.0264	0.0232	0.0320	0.0212	0.142	0.163	<0.00575	0.000430 J	0.00131	<0.000195	<0.000214	<0.000183	0.000930 J	<0.000285	<0.000174	<0.000481	0.0115	<0.00200	0.00390	<0.000228	<0.000162	0.0403	0.0100

NOTES:

VOCs - volatile organic compounds

mg/l - milligrams per liter

NA - not analyzed

NE - not established

J - The target analyte was positively identified below the quantitation limit and above the detection limit.

Concentrations highlighted in yellow exceed the NMACH Human Health Standards

TABLE 2 - GROUNDWATER SAMPLING (General Water Chemistry) ANALYTICAL DATA SUMMARY																
Permian EOR - Levey Well																
Hobbs, New Mexico																
Well ID	Date	(mg/l)													%	SU
		Bromide	Chloride	Fluoride	Nitrate as N	Nitrite as N	Sulfate	Calcium	Magnesium	Potassium	Sodium	Total Dissolved Solids	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	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	12/6/2019	<0.500	253	<0.500	0.594	0.199	61.5	405	65.0	5.27	83.7	1,680	1,260	<4.00	2.70	6.45
	12/13/2019	<0.500	315	<0.500	0.744	0.222	72.9	450	80.1	6.71	110	1,900	1,230	<4.00	2.00	7.02
	12/19/2019	0.414 J	311	0.381 J	0.539	<0.0293	62.9	411	72.2	5.61	101	1,640	1,140	<4.00	0.200	6.57
	12/26/2019	<0.500	257	<0.500	0.617	0.204	61.7	418	68.8	5.82	88.5	1,760	1,280	<4.00	1.30	6.44
	1/2/2020	<0.500	302	<0.500	0.331	<0.100	60.6	375	70.5	5.96	98.8	1,630	1,150	<4.00	2.40	6.83
	1/15/2020	<0.500	190	0.559	0.129	0.930	53.5	401	66.8	4.82	82.9	1,570	1,260	<4.00	0	6.35
	1/23/2020	<0.500	195	0.617	0.126	0.128	46.2	426	76.3	8.84	86.4	1,530	1,230	<4.00	1.60	6.21
	1/31/2020	<0.500	197	0.616	0.129	<0.100	48.5	446	79.1	7.43	89.5	1,440	1,230	<4.00	3.20	6.15
	2/6/2020	<0.500	316	<0.500	0.179	<0.100	64.2	430	76.0	7.60	101	1,100	1,180	<4.00	1.10	6.07
	2/13/2020	<2.50	293	0.623	0.178	<0.500	57.3	409	74.5	6.80	95.7	1,640	1,200	<4.00	0.300	6.04
	2/20/2020	<0.500	272	0.586	0.157	<0.100	49.6	421	71.4	6.38	91.4	1,690	1,220	<4.00	0.300	5.93
	2/28/2020	<0.500	307	<0.500	1.05	1.35	56.6	438	74.0	5.98	97.4	1,620	1,230	<4.00	0.400	6.12
	3/6/2020	<0.500	284	0.621	0.107	1.27	56.2	418	67.9	5.60	92.7	1,880	1,230	<4.00	0.800	6.26
	3/13/2020	<0.500	316	0.629	<0.100	<0.100	59.3	393	63.3	5.32	91.2	1,770	1,200	<4.00	4.30	6.23
	3/18/2020	0.533	332	0.642	0.128	<0.100	63.5	391	67.4	5.56	95.7	1,680	1,180	<4.00	3.80	6.44
	3/27/2020	0.533	324	0.728	<0.100	<0.100	57.6	418	70.3	5.91	105	1,610	1,180	<4.00	0.200	6.57
	4/3/2020	<0.500	304	0.807	0.110	<0.100	57.3	417	69.0	5.91	101	1,960	1,180	<4.00	0.200	6.37
	4/10/2020	0.575	351	0.612	0.172	<0.100	61.8	431	72.3	6.17	104	1,930	1,190	<4.00	0.600	6.73
	4/17/2020	0.590	353	0.691	0.165	<0.100	59.7	406	73.2	5.40	108	1,750	1,180	<4.00	1.70	6.51
	4/24/2020	0.595	370	0.723	0.152	<0.100	61.2	408	75.2	5.55	113	1,810	1,130	<4.00	0.600	6.32
	5/1/2020	0.576	376	0.686	0.140	<0.100	61.8	402	74.6	5.39	106	1,750	1,130	<4.00	1.90	6.37
	5/7/2020	0.517	365	0.675	0.163	<0.100	58.8	425	70.5	5.57	108	1,640	1,140	<4.00	0.00	6.55
	5/14/2020	0.571	409	0.585	0.160	<0.100	56.0	412	76.5	6.23	107	1,900	1,200	<4.00	3.70	6.34
	5/22/2020	0.531	319	0.561	1.550	<0.100	30.1	354	63.7	5.24	97.4	1,360	1,190	<4.00	6.10	6.54
	5/26/2020	0.549	357	0.688	0.153	<0.100	44.5	356	69.6	5.67	102	1,650	1,170	<4.00	6.30	6.42
	6/5/2020	0.640	417	0.535	0.139	<0.100	39.9	379	73.3	5.92	108	1,670	1,160	<4.00	5.90	6.30
	6/12/2020	0.602	359	0.697	0.145	<0.100	43.9	386	72.4	6.70	106	1,670	1,140	<4.00	2.40	6.22
	6/18/2020	0.576	431	<5.00	0.144	<0.100	39.5	418	78.8	6.23	115	1,800	1,180	<4.00	2.40	6.28
	6/23/2020	0.586	398	<5.00	0.136	<0.100	33.3	361	66.3	5.48	98.2	1,920	1,190	<4.00	8.40	6.23
	6/30/2020	0.695	431	<5.00	0.149	<0.100	37.9	437	78.6	6.70	113	1,830	1,170	<4.00	2.60	6.39
	7/9/2020	0.647	413	<5.00	0.147	0.215	40.5	421	78.5	6.58	114	1,790	1,170	<4.00	1.50	6.37
	7/16/2020	0.657	390	<5.00	0.128	<0.100	40.6	402	77.6	7.01	114	1,890	1,170	<4.00	1.90	6.34
	7/23/2020	0.621	396	<5.00	0.175	0.169	36.5	419	74.0	6.58	111	2,000	1,160	<4.00	1.10	6.22
	7/30/2020	0.669	390	0.625	0.181	<0.100	39.3	397	71.4	5.59	103	1,910	1,170	<4.00	3.70	6.18
	8/7/2020	0.631	387	0.526	0.186	1.75	36.1	404	79.5	6.73	111	1,810	1,150	<4.00	0.900	6.12
	8/13/2020	0.713	408	0.505	0.191	1.45	34.9	368	75.1	6.54	115	1,980	1,150	<4.00	5.00	6.26
	8/20/2020	0.690	449	<0.500	0.164	<0.100	38.7	389	69.0	5.99	113	2,000	1,090	<4.00	4.40	6.18
	8/27/2020	0.846	582	<0.500	0.158	1.68	49.4	446	82.6	7.17	161	2,570	973	<4.00	1.50	6.35
	9/2/2020	0.868	635	<0.500	0.159	<0.100	48.1	422	77.9	7.25	168	1,620	1,030	<4.00	3.40	6.30
	9/10/2020	0.714	499	<0.500	<0.100	1.61	41.9	387	79.4	6.53	133	1,980	1,090	<4.00	4.20	6.10
	9/17/2020	0.769	472	<0.500	0.272	1.06	40.8	467	73.4	6.45	119	1,930	1,110	<4.00	1.10	6.14
	9/25/2020	0.779	541	<0.500	0.150	<0.100	44.0	386	75.9	5.86	133	1,680	1,110	<4.00	6.70	6.17
	10/1/2020	0.721	466	<0.500	0.173	<0.100	41.4	398	75.5	6.25	124	1,940	1,110	<4.00	3.30	6.07
	10/9/2020	0.786	527	<0.500	0.161	<0.100	43.8	426	79.8	6.90	139	2,220	1,090	<4.00	1.90	6.21
	10/16/2020	0.595	460	0.511	<0.100	<2.00	45.7	376	72.5	5.90	122	2,020	1,080	<4.00	4.80	6.20
	11/24/2020	0.817	572	<0.500	0.124	2.07	37.5	438	79.6	6.56	141	2,200	1,100	<4.00	2.60	6.45
	12/4/2020	0.687	706	<0.500	0.142	3.27	30.9	405	75.8	7.09	143	2,000	1,050	<4.00	9.30	6.33
	12/11/2020	0.816	487	0.949	0.197	1.80	33.4	445	82.0	6.90	133	1,990	1,160	<4.00	0.200	6.20
	12/18/2020	0.763	497	<5.00	0.129	1.87	37.6	424	79.5	6.97	137	1,910	1,180	<4.00	2.70	6.39
	12/23/2020	0.613	477	<5.00	0.108	<0.100	38.3	416	78.2	7.82	129	1,800	1,290	<4.00	5.70	6.22
	12/30/2020	0.712	493	<0.500	<0.100	<0.100	40.1	448	80.0	6.21	139	2,120	1,340	<4.00	4.40	6.14
	1/6/2021	0.784	504	<0.500	0.155	2.61	23.0	400	79.8	6.14	135	2,210	1,340	<4.00	8.10	6.27
	1/12/2021	0.605	326	<0.500	0.137	1.05	<0.500	324	64.3	5.68	97.8	1,680	1,160	<4.00	7.00	6.57
	1/20/2021	0.796	486	<0.500	0.138	<0.100	7.68	397	73.0	6.00	127	2,170	1,200	<4.00	5.70	6.24
	1/27/2021	0.510	264	0.905	0.137	1.16	23.1	296	55.1	4.75	83.1	1,350	875	<4.00	1.70	6.38
	2/3/2021	0.501	275	0.842	0.122	1.02	20.5	329	59.0	4.76	89.4	1,370	940	<4.00	0.00	6.37
	2/10/2021	0.615	561	<0.500	0.147	0.308	24.9	416	77.9	7.03	156	1,980	1,170	<4.00	4.50	6.31
	2/24/2021	0.695	576	<0.500	0.163	2.6	31.4	450	81.3	7.94	164	2,260	1,190	<4.00	2.50	6.22
	3/4/2021	0.789	585	<0.500	0.121	0.215	54.1	425	77.8	6.41	151	2,090	1,050	<4.00	3.00	6.34

TABLE 2 - GROUNDWATER SAMPLING (General Water Chemistry) ANALYTICAL DATA SUMMARY																			
Permian EOR - Levey Well Hobbs, New Mexico																			
Well ID	Date	(mg/l)													%	SU			
		Bromide	Chloride	Fluoride	Nitrate as N	Nitrite as N	Sulfate	Calcium	Magnesium	Potassium	Sodium	Total Dissolved Solids	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Cation-Anion Balance	pl			
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	5/26/2020	NA	363	0.913	0.998	1.03	283	NA											7.21
	6/30/2020	0.591	342	<0.500	0.145	<0.100	88.8	401	84.7	6.41	191	1,890	1,290	<4.00	NA	6.75			
	8/20/2020	0.634	339	<0.500	<0.100	<0.100	68.3	401	90.3	5.38	147	1,760	1,210	<4.00	NA	6.30			
	10/23/2020	NA	353	NA															
	11/24/2020	0.629	345	0.309 J	0.161	2.00	73.2	412	82.8	5.61	124	1,630	1,200	<4.00	0.400	6.45			
	12/18/2020	NA	375	NA				414	79.7	5.41	117	1,380	1,160	<4.00	1.30	6.58			
	12/23/2020	0.627	339	0.316 J	0.117	<0.0293	73.2	408	82.5	6.58	119	1,600	1,130	<4.00	2.10	6.56			
	12/30/2020	NA	347	NA														6.37	
	1/6/2021	NA	325	NA														6.51	
	1/12/2021	NA	359												1,160	<4.00	NA	6.42	
	1/20/2021	NA	353												1,160	<4.00	NA	6.34	
	1/27/2021	NA	334												1,010	<4.00	NA	6.44	
	2/3/2021	NA	368												1,130	<4.00	NA	6.38	
	2/10/2021	NA	339												1,160	<4.00	NA	6.45	
	2/24/2021	NA	343												1,070	<4.00	NA	6.45	
	3/4/2021	NA	339												1,070	<4.00	NA	6.38	
MW-2	5/26/2020	NA	106	0.341 J	1.920	0.639	120	NA											6.32
	6/30/2020	0.535	115	<0.500	1.13	0.656	111	478	59.6	6.66	102	1,320	1,320	<4.00	NA	6.36			
	8/20/2020	0.603	150	<0.500	1.10	0.439	122	559	73.5	7.46	102	1,700	1,350	<4.00	NA	6.01			
	10/23/2020	NA	107	NA															
	11/24/2020	0.565	180	0.172 J	1.08	0.557	136	841	85.5	12.8	116	1,670	1,450	<4.00	15.4	6.30			
	12/18/2020	NA	153	NA				494	64.9	6.63	98.0	1,410	1,380	<4.00	3.20	6.29			
	12/23/2020	0.621	165	0.179 J	1.11	0.639	126	472	65.7	5.96	101	1,810	1,430	<4.00	0.300	6.27			
	12/30/2020	NA	153	NA														6.15	
	1/6/2021	NA	124	NA														6.24	
	1/12/2021	NA	141													1,350	<4.00	NA	6.20
	1/20/2021	NA	133													1,360	<4.00	NA	6.12
	1/27/2021	NA	140													1,360	<4.00	NA	6.24
	2/3/2021	NA	178													1,390	<4.00	NA	6.17
	2/10/2021	NA	133													1,380	<4.00	NA	6.19
	2/24/2021	NA	146													1,370	<4.00	NA	6.17
	3/4/2021	NA	166													1,380	<4.00	NA	6.07

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
 Permian EOR - South Hobbs G/SA Unit
 Hobbs, New Mexico

Well ID	Date	(mg/l)						°C
		Sulfide	Carbon Dioxide (Free)	TPH GRO	TPH DRO	TPH MRO	Total TPH	Temperature
20 NMAC 6.2 Water Quality - Ground and Surface Water Protection Human Health Standards		NE	NE	NE	NE	NE	NE	NE
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
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

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

Permian EOR - Levey Well
Hobbs, New Mexico

Well ID	Date	Time	(ug/m3)																										
			Acetone	Bromomethane	Carbon disulfide	Chloromethane	2-Chlorotoluene	Cyclohexane	cis-1,2-Dichloroethene	Ethanol	Ethylbenzene	4-Ethyltoluene	Dichlorodifluoromethane	Heptane	n-Hexane	Isopropylbenzene	Methyl Butyl Ketone	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Napthalene	2-Propanol	Tetrachloroethylene	Toluene	Trichloroethylene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m&p-Xylene	o-Xylene	TPH (GC/MS) Low Fraction
Levey Well	1/25/2021	0823	229	<7.76	9.52	<4.13	<10.3	575	<7.93	324	<8.67	<9.82	<17.0	299	980	<9.83	<51.1	<36.9	<51.2	<33.0	<30.7	<13.6	<18.8	22.2	<9.82	<9.82	<17.3	<8.67	17,500
	1/25/2021	1213	<2.97	<0.776	<0.622	<0.413	<1.03	2.01	<0.793	4.98	<0.867	<0.982	<1.70	1.44	3.20	<0.983	<5.11	<3.69	<5.12	<33.0	<3.07	<1.36	<1.88	<1.36	1.14	1.29	<1.73	<0.867	<826
	1/28/2021	1316	14,800	2.96	246	22.5	42.5	1,770	<0.793	2,410	53.8	298	2.03	1,220	2,890	150	101	2,340	53.2	<33.0	438	72.6	95.7	<1.07	445	375	246	147	61,100
	2/10/2021	1300	1,140	<15.5	181	<8.26	<20.6	10,800	<15.9	<23.8	44.2	426	<19.8	4,040	14,000	92.4	<102	79.0	<102	<66.0	<61.5	<27.2	66.3	<21.4	334	584	361	218	315,000
	2/24/2021	1045	<2.97	<0.776	161	<0.413	<1.03	4,510	9.83	<1.19	88.4	491	<0.989	2,200	5,610	249	<5.11	<3.69	<5.12	<33.0	<3.07	5.47	101	1.14	218	305	633	388	114,000
	3/4/2021	1402	375	<3.88	67.9	<2.07	<5.15	2,620	<3.96	88.6	56.4	<4.91	<4.95	847	4,690	176	<25.6	72.0	<25.6	22.8	<15.4	<6.79	49.3	<5.36	1,460	913	533	198	83,400

NOTES:

ug/m3 - micrograms per cubic meter of air

NE - not established



Appendix C

Laboratory Analytical Reports



ANALYTICAL REPORT

January 29, 2021

Ensolum, LLC

Sample Delivery Group: L1310706
Samples Received: 01/27/2021
Project Number: 03B1417001
Description: 03B1417001 Levey Well

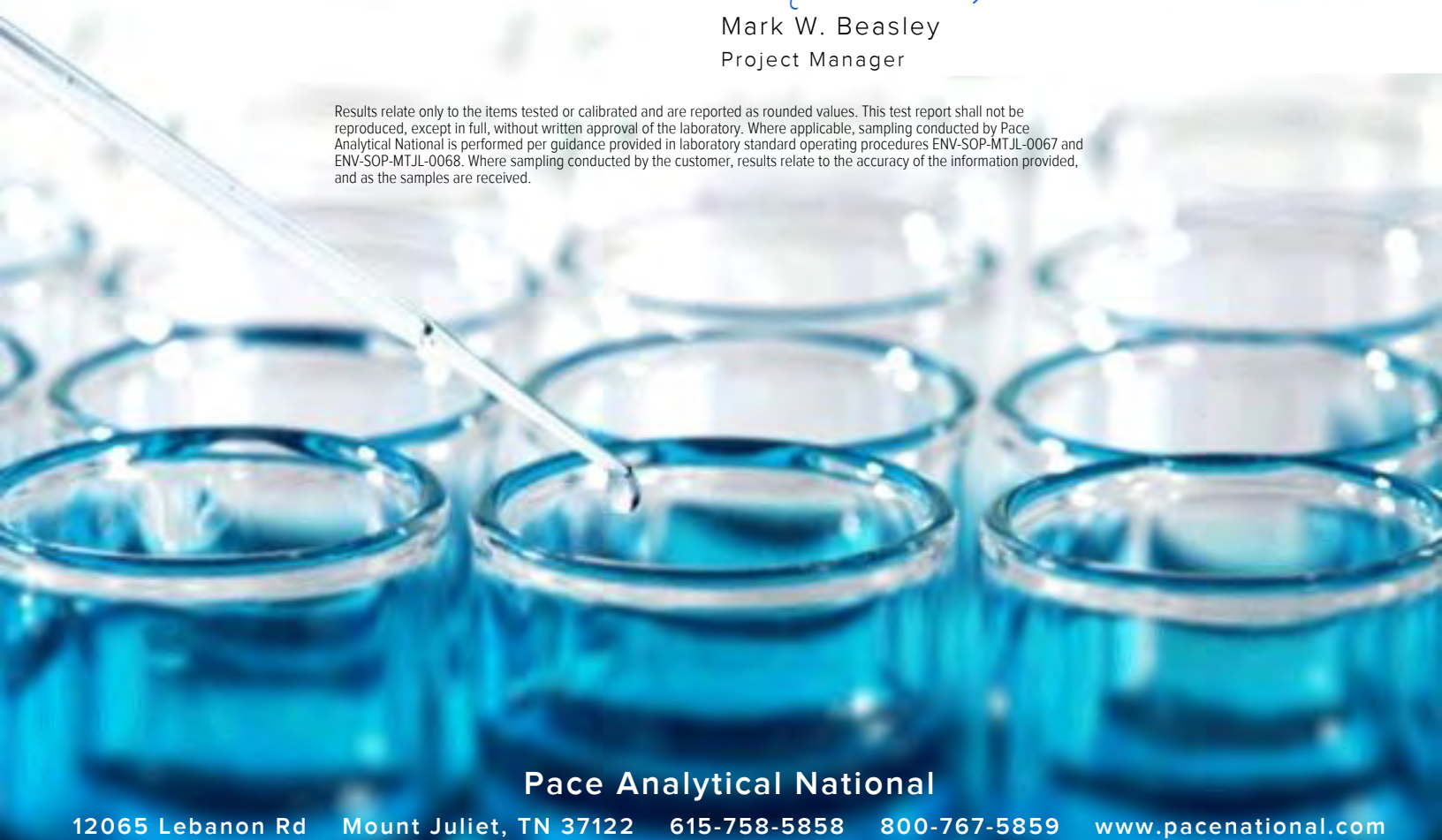
Report To: Beaux Jennings
705 W. Wadley Ave, Ste 210
Midland, TX 79705



Entire Report Reviewed By:

Mark W. Beasley
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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Tr: TRRP Summary	5	³ Ss
TRRP form R	6	
TRRP form S	7	⁴ Cn
TRRP Exception Reports	8	⁵ Tr
Sr: Sample Results	9	
LEVEY WELL L1310706-01	9	⁶ Sr
LEVEY WELL L1310706-02	11	
Qc: Quality Control Summary	13	⁷ Qc
Volatile Organic Compounds (MS) by Method TO-15	13	
Gl: Glossary of Terms	21	⁸ Gl
Al: Accreditations & Locations	22	⁹ Al
Sc: Sample Chain of Custody	23	¹⁰ Sc

LEVEY WELL L1310706-01 Air

Collected by
Shane Diller

Collected date/time
01/25/21 08:23

Received date/time
01/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1613430	10	01/29/21 12:12	01/29/21 12:12	MBF	Mt. Juliet, TN

LEVEY WELL L1310706-02 Air

Collected by
Shane Diller

Collected date/time
01/25/21 12:13

Received date/time
01/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1612810	1	01/28/21 18:26	01/28/21 18:26	MBF	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

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.



Mark W. Beasley
Project Manager



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.



Mark W. Beasley
Project Manager

Laboratory Name: Pace Analytical National		LRC Date: 01/29/2021 16:12					
Project Name: 03B1417001 Levey Well		Laboratory Job Number: L1310706-01 and 02					
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1612810 and WG1613430					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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 Name: Pace Analytical National		LRC Date: 01/29/2021 16:12					
Project Name: 03B1417001 Levey Well		Laboratory Job Number: L1310706-01 and 02					
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1612810 and WG1613430					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 01/29/2021 16:12	
Project Name: 03B1417001 Levey Well		Laboratory Job Number: L1310706-01 and 02	
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1612810 and WG1613430	
ER # ¹	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: 01/25/21 08:23

L1310706

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	96.2	229		10	WG1613430
Allyl chloride	107-05-1	76.53	2.00	6.26	ND	ND		10	WG1613430
Benzene	71-43-2	78.10	2.00	6.39	ND	ND		10	WG1613430
Benzyl Chloride	100-44-7	127	2.00	10.4	ND	ND		10	WG1613430
Bromodichloromethane	75-27-4	164	2.00	13.4	ND	ND		10	WG1613430
Bromoform	75-25-2	253	6.00	62.1	ND	ND		10	WG1613430
Bromomethane	74-83-9	94.90	2.00	7.76	ND	ND		10	WG1613430
1,3-Butadiene	106-99-0	54.10	20.0	44.3	ND	ND		10	WG1613430
Carbon disulfide	75-15-0	76.10	2.00	6.22	3.06	9.52		10	WG1613430
Carbon tetrachloride	56-23-5	154	2.00	12.6	ND	ND		10	WG1613430
Chlorobenzene	108-90-7	113	2.00	9.24	ND	ND		10	WG1613430
Chloroethane	75-00-3	64.50	2.00	5.28	ND	ND		10	WG1613430
Chloroform	67-66-3	119	2.00	9.73	ND	ND		10	WG1613430
Chloromethane	74-87-3	50.50	2.00	4.13	ND	ND		10	WG1613430
2-Chlorotoluene	95-49-8	126	2.00	10.3	ND	ND		10	WG1613430
Cyclohexane	110-82-7	84.20	2.00	6.89	167	575		10	WG1613430
Dibromochloromethane	124-48-1	208	2.00	17.0	ND	ND		10	WG1613430
1,2-Dibromoethane	106-93-4	188	2.00	15.4	ND	ND		10	WG1613430
1,2-Dichlorobenzene	95-50-1	147	2.00	12.0	ND	ND		10	WG1613430
1,3-Dichlorobenzene	541-73-1	147	2.00	12.0	ND	ND		10	WG1613430
1,4-Dichlorobenzene	106-46-7	147	2.00	12.0	ND	ND		10	WG1613430
1,2-Dichloroethane	107-06-2	99	2.00	8.10	ND	ND		10	WG1613430
1,1-Dichloroethane	75-34-3	98	2.00	8.02	ND	ND		10	WG1613430
1,1-Dichloroethene	75-35-4	96.90	2.00	7.93	ND	ND		10	WG1613430
cis-1,2-Dichloroethene	156-59-2	96.90	2.00	7.93	ND	ND		10	WG1613430
trans-1,2-Dichloroethene	156-60-5	96.90	2.00	7.93	ND	ND		10	WG1613430
1,2-Dichloropropane	78-87-5	113	2.00	9.24	ND	ND		10	WG1613430
cis-1,3-Dichloropropene	10061-01-5	111	2.00	9.08	ND	ND		10	WG1613430
trans-1,3-Dichloropropene	10061-02-6	111	2.00	9.08	ND	ND		10	WG1613430
1,4-Dioxane	123-91-1	88.10	2.00	7.21	ND	ND		10	WG1613430
Ethanol	64-17-5	46.10	6.30	11.9	172	324		10	WG1613430
Ethylbenzene	100-41-4	106	2.00	8.67	ND	ND		10	WG1613430
4-Ethyltoluene	622-96-8	120	2.00	9.82	ND	ND		10	WG1613430
Trichlorofluoromethane	75-69-4	137.40	2.00	11.2	ND	ND		10	WG1613430
Dichlorodifluoromethane	75-71-8	120.92	2.00	9.89	ND	ND		10	WG1613430
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	2.00	15.3	ND	ND		10	WG1613430
1,2-Dichlorotetrafluoroethane	76-14-2	171	2.00	14.0	ND	ND		10	WG1613430
Heptane	142-82-5	100	2.00	8.18	73.1	299		10	WG1613430
Hexachloro-1,3-butadiene	87-68-3	261	6.30	67.3	ND	ND		10	WG1613430
n-Hexane	110-54-3	86.20	6.30	22.2	278	980		10	WG1613430
Isopropylbenzene	98-82-8	120.20	2.00	9.83	ND	ND		10	WG1613430
Methylene Chloride	75-09-2	84.90	2.00	6.94	ND	ND		10	WG1613430
Methyl Butyl Ketone	591-78-6	100	12.5	51.1	ND	ND		10	WG1613430
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	ND	ND		10	WG1613430
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	12.5	51.2	ND	ND		10	WG1613430
Methyl methacrylate	80-62-6	100.12	2.00	8.19	ND	ND		10	WG1613430
MTBE	1634-04-4	88.10	2.00	7.21	ND	ND		10	WG1613430
Naphthalene	91-20-3	128	6.30	33.0	ND	ND		10	WG1613430
2-Propanol	67-63-0	60.10	12.5	30.7	ND	ND		10	WG1613430
Propene	115-07-1	42.10	4.00	6.89	ND	ND		10	WG1613430
Styrene	100-42-5	104	2.00	8.51	ND	ND		10	WG1613430
1,1,2,2-Tetrachloroethane	79-34-5	168	2.00	13.7	ND	ND		10	WG1613430
Tetrachloroethylene	127-18-4	166	2.00	13.6	ND	ND		10	WG1613430
Tetrahydrofuran	109-99-9	72.10	2.00	5.90	ND	ND		10	WG1613430
Toluene	108-88-3	92.10	5.00	18.8	ND	ND		10	WG1613430
1,2,4-Trichlorobenzene	120-82-1	181	6.30	46.6	ND	ND		10	WG1613430

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Collected date/time: 01/25/21 08:23

L1310706

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	WG1613430
1,1,2-Trichloroethane	79-00-5	133	2.00	10.9	ND	ND		10	WG1613430
Trichloroethylene	79-01-6	131	2.00	10.7	4.15	22.2		10	WG1613430
1,2,4-Trimethylbenzene	95-63-6	120	2.00	9.82	ND	ND		10	WG1613430
1,3,5-Trimethylbenzene	108-67-8	120	2.00	9.82	ND	ND		10	WG1613430
2,2,4-Trimethylpentane	540-84-1	114.22	2.00	9.34	ND	ND		10	WG1613430
Vinyl chloride	75-01-4	62.50	2.00	5.11	ND	ND		10	WG1613430
Vinyl Bromide	593-60-2	106.95	2.00	8.75	ND	ND		10	WG1613430
Vinyl acetate	108-05-4	86.10	2.00	7.04	ND	ND		10	WG1613430
m&p-Xylene	1330-20-7	106	4.00	17.3	ND	ND		10	WG1613430
o-Xylene	95-47-6	106	2.00	8.67	ND	ND		10	WG1613430
TPH (GC/MS) Low Fraction	8006-61-9	101	2000	8260	4230	17500		10	WG1613430
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		92.5				WG1613430

¹ Cp² Tc³ Ss⁴ Cn⁵ Tr⁶ Sr⁷ Qc⁸ Gl⁹ Al¹⁰ Sc

Collected date/time: 01/25/21 12:13

L1310706

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	1.25	2.97	ND	ND		1	WG1612810
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1612810
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1612810
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1612810
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1612810
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1612810
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1612810
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1612810
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1612810
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1612810
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1612810
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1612810
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1612810
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1612810
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1612810
Cyclohexane	110-82-7	84.20	0.200	0.689	0.584	2.01		1	WG1612810
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1612810
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1612810
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1612810
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1612810
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1612810
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1612810
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1612810
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1612810
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1612810
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1612810
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1612810
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1612810
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1612810
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1612810
Ethanol	64-17-5	46.10	0.630	1.19	2.64	4.98		1	WG1612810
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1612810
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1612810
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1612810
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	ND	ND		1	WG1612810
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1612810
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1612810
Heptane	142-82-5	100	0.200	0.818	0.352	1.44		1	WG1612810
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1612810
n-Hexane	110-54-3	86.20	0.630	2.22	0.908	3.20		1	WG1612810
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1612810
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1612810
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1612810
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1612810
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1612810
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1612810
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1612810
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1612810
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1612810
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1612810
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1612810
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1612810
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1612810
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1612810
Toluene	108-88-3	92.10	0.500	1.88	ND	ND		1	WG1612810
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1612810

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Collected date/time: 01/25/21 12:13

L1310706

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	0.200	1.09	ND	ND		1	WG1612810
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1612810
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1612810
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.233	1.14		1	WG1612810
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.263	1.29		1	WG1612810
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1612810
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1612810
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1612810
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1612810
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1612810
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1612810
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1612810
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.9				WG1612810

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 [L1310706-02](#)

Method Blank (MB)

(MB) R3617188-3 01/28/21 10:42

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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
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
Isopropylbenzene	U		0.0777	0.200

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

Method Blank (MB)

(MB) R3617188-3 01/28/21 10:42

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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	0.209	U	0.0932	0.400
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
Ethanol	U		0.265	0.630
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	101			60.0-140

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617188-1 01/28/21 09:19 • (LCSD) R3617188-2 01/28/21 10:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.80	4.13	101	110	55.0-148			8.32	25
Propene	3.75	3.72	3.27	99.2	87.2	64.0-144			12.9	25
Dichlorodifluoromethane	3.75	3.71	3.73	98.9	99.5	64.0-139			0.538	25
1,2-Dichlorotetrafluoroethane	3.75	3.66	3.61	97.6	96.3	70.0-130			1.38	25

Volatile Organic Compounds (MS) by Method TO-15

L1310706-02

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617188-1 01/28/21 09:19 • (LCSD) R3617188-2 01/28/21 10:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloromethane	3.75	3.26	3.27	86.9	87.2	70.0-130			0.306	25
Vinyl chloride	3.75	3.57	3.56	95.2	94.9	70.0-130			0.281	25
1,3-Butadiene	3.75	3.59	3.43	95.7	91.5	70.0-130			4.56	25
Bromomethane	3.75	3.54	3.55	94.4	94.7	70.0-130			0.282	25
Chloroethane	3.75	3.36	3.63	89.6	96.8	70.0-130			7.73	25
Trichlorofluoromethane	3.75	3.69	3.56	98.4	94.9	70.0-130			3.59	25
1,1,2-Trichlorotrifluoroethane	3.75	3.59	3.57	95.7	95.2	70.0-130			0.559	25
1,1-Dichloroethene	3.75	3.88	3.73	103	99.5	70.0-130			3.94	25
1,1-Dichloroethane	3.75	3.74	3.75	99.7	100	70.0-130			0.267	25
Acetone	3.75	3.59	3.63	95.7	96.8	70.0-130			1.11	25
2-Propanol	3.75	3.75	3.87	100	103	70.0-139			3.15	25
Carbon disulfide	3.75	3.65	3.77	97.3	101	70.0-130			3.23	25
Methylene Chloride	3.75	3.46	3.53	92.3	94.1	70.0-130			2.00	25
MTBE	3.75	3.93	3.76	105	100	70.0-130			4.42	25
trans-1,2-Dichloroethene	3.75	3.74	3.73	99.7	99.5	70.0-130			0.268	25
n-Hexane	3.75	3.97	4.06	106	108	70.0-130			2.24	25
Vinyl acetate	3.75	3.83	3.81	102	102	70.0-130			0.524	25
Methyl Ethyl Ketone	3.75	3.74	3.49	99.7	93.1	70.0-130			6.92	25
cis-1,2-Dichloroethene	3.75	3.57	3.84	95.2	102	70.0-130			7.29	25
Chloroform	3.75	3.50	3.63	93.3	96.8	70.0-130			3.65	25
Cyclohexane	3.75	3.78	3.68	101	98.1	70.0-130			2.68	25
1,1,1-Trichloroethane	3.75	3.71	3.73	98.9	99.5	70.0-130			0.538	25
Carbon tetrachloride	3.75	3.66	3.64	97.6	97.1	70.0-130			0.548	25
Benzene	3.75	3.59	3.65	95.7	97.3	70.0-130			1.66	25
1,2-Dichloroethane	3.75	3.50	3.65	93.3	97.3	70.0-130			4.20	25
Heptane	3.75	3.92	4.03	105	107	70.0-130			2.77	25
Trichloroethylene	3.75	3.67	3.88	97.9	103	70.0-130			5.56	25
1,2-Dichloropropane	3.75	3.67	3.70	97.9	98.7	70.0-130			0.814	25
1,4-Dioxane	3.75	3.90	3.94	104	105	70.0-140			1.02	25
Bromodichloromethane	3.75	3.59	3.67	95.7	97.9	70.0-130			2.20	25
cis-1,3-Dichloropropene	3.75	3.81	3.81	102	102	70.0-130			0.000	25
4-Methyl-2-pentanone (MIBK)	3.75	3.91	4.11	104	110	70.0-139			4.99	25
Toluene	3.75	3.66	3.74	97.6	99.7	70.0-130			2.16	25
trans-1,3-Dichloropropene	3.75	3.88	4.08	103	109	70.0-130			5.03	25
1,1,2-Trichloroethane	3.75	3.63	3.60	96.8	96.0	70.0-130			0.830	25
Tetrachloroethylene	3.75	3.65	3.57	97.3	95.2	70.0-130			2.22	25
Methyl Butyl Ketone	3.75	4.16	4.32	111	115	70.0-149			3.77	25
Dibromochloromethane	3.75	3.65	3.68	97.3	98.1	70.0-130			0.819	25
1,2-Dibromoethane	3.75	3.80	3.86	101	103	70.0-130			1.57	25
Chlorobenzene	3.75	3.67	3.69	97.9	98.4	70.0-130			0.543	25

Cp

Tc

Ss

Cn

Tr

Sr

Qc

Gl

Al

Sc

Volatile Organic Compounds (MS) by Method TO-15 L1310706-02

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617188-1 01/28/21 09:19 • (LCSD) R3617188-2 01/28/21 10:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	3.75	3.76	3.59	100	95.7	70.0-130			4.63	25
m&p-Xylene	7.50	7.59	7.51	101	100	70.0-130			1.06	25
o-Xylene	3.75	3.91	3.77	104	101	70.0-130			3.65	25
Styrene	3.75	3.90	3.91	104	104	70.0-130			0.256	25
Bromoform	3.75	3.86	3.70	103	98.7	70.0-130			4.23	25
1,1,2,2-Tetrachloroethane	3.75	3.67	3.61	97.9	96.3	70.0-130			1.65	25
4-Ethyltoluene	3.75	3.82	3.80	102	101	70.0-130			0.525	25
1,3,5-Trimethylbenzene	3.75	3.85	3.73	103	99.5	70.0-130			3.17	25
1,2,4-Trimethylbenzene	3.75	4.01	3.97	107	106	70.0-130			1.00	25
1,3-Dichlorobenzene	3.75	3.67	3.71	97.9	98.9	70.0-130			1.08	25
1,4-Dichlorobenzene	3.75	3.72	3.67	99.2	97.9	70.0-130			1.35	25
Benzyl Chloride	3.75	3.90	3.95	104	105	70.0-152			1.27	25
1,2-Dichlorobenzene	3.75	3.66	3.69	97.6	98.4	70.0-130			0.816	25
1,2,4-Trichlorobenzene	3.75	3.77	3.82	101	102	70.0-160			1.32	25
Hexachloro-1,3-butadiene	3.75	3.67	3.65	97.9	97.3	70.0-151			0.546	25
Naphthalene	3.75	3.87	3.89	103	104	70.0-159			0.515	25
TPH (GC/MS) Low Fraction	203	220	220	108	108	70.0-130			0.000	25
Allyl Chloride	3.75	4.20	3.70	112	98.7	70.0-130			12.7	25
2-Chlorotoluene	3.75	3.72	3.70	99.2	98.7	70.0-130			0.539	25
Methyl Methacrylate	3.75	3.62	3.63	96.5	96.8	70.0-130			0.276	25
Tetrahydrofuran	3.75	3.74	3.78	99.7	101	70.0-137			1.06	25
2,2,4-Trimethylpentane	3.75	4.01	4.10	107	109	70.0-130			2.22	25
Vinyl Bromide	3.75	3.62	3.62	96.5	96.5	70.0-130			0.000	25
Isopropylbenzene	3.75	3.91	3.95	104	105	70.0-130			1.02	25
(S) 1,4-Bromofluorobenzene				99.8	100	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 [L1310706-01](#)

Method Blank (MB)

(MB) R3617476-3 01/29/21 09:54

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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	0.0783	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
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
Isopropylbenzene	U		0.0777	0.200

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

L1310706-01

Method Blank (MB)

(MB) R3617476-3 01/29/21 09:54

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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	0.127	J	0.0932	0.400
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
Ethanol	U		0.265	0.630
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	95.0			60.0-140

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617476-1 01/29/21 08:34 • (LCSD) R3617476-2 01/29/21 09:14

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.63	3.56	96.8	94.9	55.0-148			1.95	25
Propene	3.75	3.57	3.50	95.2	93.3	64.0-144			1.98	25
Dichlorodifluoromethane	3.75	3.88	3.82	103	102	64.0-139			1.56	25
1,2-Dichlorotetrafluoroethane	3.75	3.81	3.73	102	99.5	70.0-130			2.12	25

Volatile Organic Compounds (MS) by Method TO-15 L1310706-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617476-1 01/29/21 08:34 • (LCSD) R3617476-2 01/29/21 09:14

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloromethane	3.75	3.65	3.57	97.3	95.2	70.0-130			2.22	25
Vinyl chloride	3.75	3.78	3.69	101	98.4	70.0-130			2.41	25
1,3-Butadiene	3.75	3.60	3.59	96.0	95.7	70.0-130			0.278	25
Bromomethane	3.75	3.90	3.69	104	98.4	70.0-130			5.53	25
Chloroethane	3.75	3.80	3.57	101	95.2	70.0-130			6.24	25
Trichlorofluoromethane	3.75	3.80	3.74	101	99.7	70.0-130			1.59	25
1,1,2-Trichlorotrifluoroethane	3.75	3.94	3.84	105	102	70.0-130			2.57	25
1,1-Dichloroethene	3.75	3.74	3.67	99.7	97.9	70.0-130			1.89	25
1,1-Dichloroethane	3.75	3.70	3.62	98.7	96.5	70.0-130			2.19	25
Acetone	3.75	3.61	3.54	96.3	94.4	70.0-130			1.96	25
2-Propanol	3.75	3.62	3.52	96.5	93.9	70.0-139			2.80	25
Carbon disulfide	3.75	3.87	3.64	103	97.1	70.0-130			6.13	25
Methylene Chloride	3.75	3.61	3.56	96.3	94.9	70.0-130			1.39	25
MTBE	3.75	3.81	3.75	102	100	70.0-130			1.59	25
trans-1,2-Dichloroethene	3.75	3.79	3.70	101	98.7	70.0-130			2.40	25
n-Hexane	3.75	3.73	3.60	99.5	96.0	70.0-130			3.55	25
Vinyl acetate	3.75	3.41	3.33	90.9	88.8	70.0-130			2.37	25
Methyl Ethyl Ketone	3.75	3.80	3.68	101	98.1	70.0-130			3.21	25
cis-1,2-Dichloroethene	3.75	3.68	3.67	98.1	97.9	70.0-130			0.272	25
Chloroform	3.75	3.78	3.68	101	98.1	70.0-130			2.68	25
Cyclohexane	3.75	3.89	3.77	104	101	70.0-130			3.13	25
1,1,1-Trichloroethane	3.75	3.85	3.72	103	99.2	70.0-130			3.43	25
Carbon tetrachloride	3.75	3.87	3.74	103	99.7	70.0-130			3.42	25
Benzene	3.75	3.79	3.85	101	103	70.0-130			1.57	25
1,2-Dichloroethane	3.75	3.81	3.83	102	102	70.0-130			0.524	25
Heptane	3.75	3.25	3.25	86.7	86.7	70.0-130			0.000	25
Trichloroethylene	3.75	3.92	3.85	105	103	70.0-130			1.80	25
1,2-Dichloropropane	3.75	3.76	3.77	100	101	70.0-130			0.266	25
1,4-Dioxane	3.75	3.69	3.65	98.4	97.3	70.0-140			1.09	25
Bromodichloromethane	3.75	3.83	3.83	102	102	70.0-130			0.000	25
cis-1,3-Dichloropropene	3.75	3.84	3.85	102	103	70.0-130			0.260	25
4-Methyl-2-pentanone (MIBK)	3.75	3.71	3.72	98.9	99.2	70.0-139			0.269	25
Toluene	3.75	3.87	3.89	103	104	70.0-130			0.515	25
trans-1,3-Dichloropropene	3.75	3.87	3.94	103	105	70.0-130			1.79	25
1,1,2-Trichloroethane	3.75	3.87	3.95	103	105	70.0-130			2.05	25
Tetrachloroethylene	3.75	4.01	4.01	107	107	70.0-130			0.000	25
Methyl Butyl Ketone	3.75	3.74	3.77	99.7	101	70.0-149			0.799	25
Dibromochloromethane	3.75	3.99	4.08	106	109	70.0-130			2.23	25
1,2-Dibromoethane	3.75	3.97	4.02	106	107	70.0-130			1.25	25
Chlorobenzene	3.75	4.02	3.97	107	106	70.0-130			1.25	25

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Volatile Organic Compounds (MS) by Method TO-15 L1310706-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617476-1 01/29/21 08:34 • (LCSD) R3617476-2 01/29/21 09:14

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	3.75	3.93	3.83	105	102	70.0-130			2.58	25
m&p-Xylene	7.50	7.95	7.67	106	102	70.0-130			3.59	25
o-Xylene	3.75	3.85	3.84	103	102	70.0-130			0.260	25
Styrene	3.75	3.99	3.99	106	106	70.0-130			0.000	25
Bromoform	3.75	4.08	4.00	109	107	70.0-130			1.98	25
1,1,2,2-Tetrachloroethane	3.75	4.00	3.88	107	103	70.0-130			3.05	25
4-Ethyltoluene	3.75	4.22	4.11	113	110	70.0-130			2.64	25
1,3,5-Trimethylbenzene	3.75	3.95	3.88	105	103	70.0-130			1.79	25
1,2,4-Trimethylbenzene	3.75	3.99	3.96	106	106	70.0-130			0.755	25
1,3-Dichlorobenzene	3.75	4.43	4.33	118	115	70.0-130			2.28	25
1,4-Dichlorobenzene	3.75	4.47	4.40	119	117	70.0-130			1.58	25
Benzyl Chloride	3.75	3.98	4.00	106	107	70.0-152			0.501	25
1,2-Dichlorobenzene	3.75	4.33	4.30	115	115	70.0-130			0.695	25
1,2,4-Trichlorobenzene	3.75	3.92	3.97	105	106	70.0-160			1.27	25
Hexachloro-1,3-butadiene	3.75	4.19	4.18	112	111	70.0-151			0.239	25
Naphthalene	3.75	4.07	4.11	109	110	70.0-159			0.978	25
TPH (GC/MS) Low Fraction	203	232	229	114	113	70.0-130			1.30	25
Allyl Chloride	3.75	3.51	3.94	93.6	105	70.0-130			11.5	25
2-Chlorotoluene	3.75	3.89	3.84	104	102	70.0-130			1.29	25
Methyl Methacrylate	3.75	3.86	3.83	103	102	70.0-130			0.780	25
Tetrahydrofuran	3.75	3.59	3.60	95.7	96.0	70.0-137			0.278	25
2,2,4-Trimethylpentane	3.75	3.70	3.64	98.7	97.1	70.0-130			1.63	25
Vinyl Bromide	3.75	3.89	3.74	104	99.7	70.0-130			3.93	25
Isopropylbenzene	3.75	3.93	3.90	105	104	70.0-130			0.766	25
(S) 1,4-Bromofluorobenzene				99.1	99.0	60.0-140				

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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.

QualifierDescription

J	The identification of the analyte is acceptable; the reported value is an estimate.

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* 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 National.

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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	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	LAO00356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	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 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



Ensolum, LLC

705 W. Wadley Ave, Ste 210
Midland, TX 79705

Billing Information:

Accounts Payable
2351 W Northwest Hwy. Ste.
1203
Dallas, TX 75220

Report to:

Project Manager *Beaux Jennings*

Email To: @ensolum.com

bjennings@ensolum.com

Project Description:

03B1417001 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 #

P.O. #

03B1417001

Collected by (signature):

Shane Diller

Rush? (Lab MUST Be Notified)

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☒ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Quote #

Date Results Needed

Immediately

Packed on Ice N ☐ Y ☐No.
of

Cntrs

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

TO-15 Summa

*Levey Well**6*

Air

*-**1-25-21 0823**1**X**Levey Well**6*

Air

*-**1-25-21 1213**1**X**Levey Well**6*

Air

*-**1-25-21**1**X*

* 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 #

9362 4943 1127

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Check

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)

Date:

1-26-21

Time:

12:30

Received by: (Signature)

*John Brunzly*Trip Blank Received: Yes ☐ No ☒HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

1-26-21

Time:

13:30

Received by: (Signature)

FedEx

Temp: °C Bottles Received:

AMB 24/Unused

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

John Brunzly

Date:

1/27/21 9:30

Time:

Hold:

Condition:

NCF *10*



ANALYTICAL REPORT

February 02, 2021

Ensolum, LLC

Sample Delivery Group: L1311619
Samples Received: 01/29/2021
Project Number: 03B1417001
Description: Levey Well

Report To: Beaux Jennings
705 W. Wadley Ave, Ste 210
Midland, TX 79705

Entire Report Reviewed By:

Mark W. Beasley
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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Tr: TRRP Summary	5	³ Ss
TRRP form R	6	
TRRP form S	7	⁴ Cn
TRRP Exception Reports	8	⁵ Tr
Sr: Sample Results	9	
LEVEY WELL L1311619-01	9	⁶ Sr
Qc: Quality Control Summary	11	⁷ Qc
Volatile Organic Compounds (MS) by Method TO-15	11	
Gl: Glossary of Terms	16	⁸ Gl
Al: Accreditations & Locations	17	⁹ Al
Sc: Sample Chain of Custody	18	¹⁰ Sc

LEVEY WELL L1311619-01 Air

Collected by
Shane Diller

Collected date/time
01/28/21 13:16

Received date/time
01/29/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1613421	1	01/29/21 15:29	01/29/21 15:29	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1613941	10	01/30/21 15:44	01/30/21 15:44	DAH	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

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.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Tr

⁶ Sr

⁷ Qc

⁸ Gl

⁹ Al

¹⁰ 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.



Mark W. Beasley
Project Manager

Laboratory Name: Pace Analytical National			LRC Date: 02/02/2021 16:52				
Project Name: Levey Well			Laboratory Job Number: L1311619-01				
Reviewer Name: Mark W. Beasley			Prep Batch Number(s): WG1613421 and WG1613941				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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			2
		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			3
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 Name: Pace Analytical National		LRC Date: 02/02/2021 16:52					
Project Name: Levey Well		Laboratory Job Number: L1311619-01					
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1613421 and WG1613941					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 02/02/2021 16:52	
Project Name: Levey Well		Laboratory Job Number: L1311619-01	
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1613421 and WG1613941	
ER #¹	Description		
1	TO-15 WG1613941 L1311619-01: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).		
2	TO-15 WG1613421 Chloroethane, Vinyl Bromide: Percent Recovery is outside of established control limits. TO-15 WG1613941 TPH (GC/MS) Low Fraction: Percent Recovery is outside of established control limits.		
3	TO-15 WG1613421 Bromomethane, Chloroethane, Trichlorofluoromethane, Vinyl Bromide: Relative Percent Difference is outside of established control limits.		
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: 01/28/21 13:16

L1311619

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	6210	14800	E	10	WG1613941
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1613421
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1613421
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1613421
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1613421
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1613421
Bromomethane	74-83-9	94.90	0.200	0.776	0.763	2.96	J3	1	WG1613421
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1613421
Carbon disulfide	75-15-0	76.10	0.200	0.622	79.1	246		1	WG1613421
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1613421
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1613421
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND	J3 J4	1	WG1613421
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1613421
Chloromethane	74-87-3	50.50	0.200	0.413	10.9	22.5		1	WG1613421
2-Chlorotoluene	95-49-8	126	0.200	1.03	8.24	42.5		1	WG1613421
Cyclohexane	110-82-7	84.20	2.00	6.89	514	1770		10	WG1613941
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1613421
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1613421
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1613421
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1613421
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1613421
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1613421
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1613421
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1613421
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1613421
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1613421
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1613421
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1613421
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1613421
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1613421
Ethanol	64-17-5	46.10	6.30	11.9	1280	2410	E	10	WG1613941
Ethylbenzene	100-41-4	106	0.200	0.867	12.4	53.8		1	WG1613421
4-Ethyltoluene	622-96-8	120	0.200	0.982	60.7	298		1	WG1613421
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND	J3	1	WG1613421
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.410	2.03		1	WG1613421
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1613421
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1613421
Heptane	142-82-5	100	2.00	8.18	299	1220		10	WG1613941
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1613421
n-Hexane	110-54-3	86.20	6.30	22.2	819	2890		10	WG1613941
Isopropylbenzene	98-82-8	120.20	0.200	0.983	30.5	150		1	WG1613421
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1613421
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	24.7	101		1	WG1613421
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	792	2340		10	WG1613941
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	13.0	53.2		1	WG1613421
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1613421
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1613421
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1613421
2-Propanol	67-63-0	60.10	12.5	30.7	178	438		10	WG1613941
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1613421
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1613421
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1613421
Tetrachloroethylene	127-18-4	166	0.200	1.36	10.7	72.6		1	WG1613421
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1613421
Toluene	108-88-3	92.10	0.500	1.88	25.4	95.7		1	WG1613421
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1613421



Collected date/time: 01/28/21 13:16

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	0.200	1.09	ND	ND		1	WG1613421
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1613421
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1613421
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	90.7	445		1	WG1613421
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	76.5	375		1	WG1613421
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1613421
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1613421
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND	J3 J4	1	WG1613421
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1613421
m&p-Xylene	1330-20-7	106	0.400	1.73	56.7	246		1	WG1613421
o-Xylene	95-47-6	106	0.200	0.867	34.0	147		1	WG1613421
TPH (GC/MS) Low Fraction	8006-61-9	101	2000	8260	14800	61100	J4	10	WG1613941
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		127				WG1613421
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		86.7				WG1613941

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1311619-01](#)

Method Blank (MB)

(MB) R3617516-3 01/29/21 09:48

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	0.0688	J	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
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
Hexachloro-1,3-butadiene	U		0.105	0.630
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200

1

Cp

2

Tc

3

Ss

4

Cn

5

Tr

6

Sr

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Qc

8

Gl

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Al

10

Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1311619-01](#)

Method Blank (MB)

(MB) R3617516-3 01/29/21 09:48

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
Propene	0.170	J	0.0932	0.400
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	0.148	J	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
(S) 1,4-Bromofluorobenzene	94.1			60.0-140

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617516-1 01/29/21 08:33 • (LCSD) R3617516-2 01/29/21 09:11

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Propene	3.75	3.39	3.17	90.4	84.5	64.0-144			6.71	25
Dichlorodifluoromethane	3.75	3.63	3.39	96.8	90.4	64.0-139			6.84	25
1,2-Dichlorotetrafluoroethane	3.75	3.61	3.46	96.3	92.3	70.0-130			4.24	25
Chloromethane	3.75	3.64	3.37	97.1	89.9	70.0-130			7.70	25
Vinyl chloride	3.75	3.55	3.52	94.7	93.9	70.0-130			0.849	25
1,3-Butadiene	3.75	3.49	3.34	93.1	89.1	70.0-130			4.39	25
Bromomethane	3.75	3.25	4.82	86.7	129	70.0-130		J3	38.9	25
Chloroethane	3.75	3.25	4.92	86.7	131	70.0-130		J3 J4	40.9	25
Trichlorofluoromethane	3.75	3.36	4.69	89.6	125	70.0-130		J3	33.0	25
1,1,2-Trichlorotrifluoroethane	3.75	4.01	4.74	107	126	70.0-130			16.7	25
1,1-Dichloroethene	3.75	3.73	3.62	99.5	96.5	70.0-130			2.99	25
1,1-Dichloroethane	3.75	3.58	3.59	95.5	95.7	70.0-130			0.279	25

Volatile Organic Compounds (MS) by Method TO-15 L1311619-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617516-1 01/29/21 08:33 • (LCSD) R3617516-2 01/29/21 09:11

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbon disulfide	3.75	3.51	3.37	93.6	89.9	70.0-130			4.07	25
Methylene Chloride	3.75	3.56	3.46	94.9	92.3	70.0-130			2.85	25
MTBE	3.75	3.50	3.57	93.3	95.2	70.0-130			1.98	25
trans-1,2-Dichloroethene	3.75	3.51	3.54	93.6	94.4	70.0-130			0.851	25
Vinyl acetate	3.75	3.47	3.51	92.5	93.6	70.0-130			1.15	25
cis-1,2-Dichloroethene	3.75	3.27	4.15	87.2	111	70.0-130			23.7	25
Chloroform	3.75	3.63	3.64	96.8	97.1	70.0-130			0.275	25
1,1,1-Trichloroethane	3.75	3.55	3.64	94.7	97.1	70.0-130			2.50	25
Carbon tetrachloride	3.75	3.59	3.62	95.7	96.5	70.0-130			0.832	25
Benzene	3.75	3.59	3.54	95.7	94.4	70.0-130			1.40	25
1,2-Dichloroethane	3.75	3.65	3.65	97.3	97.3	70.0-130			0.000	25
Trichloroethylene	3.75	3.65	3.59	97.3	95.7	70.0-130			1.66	25
1,2-Dichloropropane	3.75	3.49	3.54	93.1	94.4	70.0-130			1.42	25
1,4-Dioxane	3.75	3.54	3.32	94.4	88.5	70.0-140			6.41	25
Bromodichloromethane	3.75	3.59	3.63	95.7	96.8	70.0-130			1.11	25
cis-1,3-Dichloropropene	3.75	3.50	3.59	93.3	95.7	70.0-130			2.54	25
4-Methyl-2-pentanone (MIBK)	3.75	3.74	3.42	99.7	91.2	70.0-139			8.94	25
Toluene	3.75	3.57	3.62	95.2	96.5	70.0-130			1.39	25
trans-1,3-Dichloropropene	3.75	3.60	3.67	96.0	97.9	70.0-130			1.93	25
1,1,2-Trichloroethane	3.75	3.57	3.67	95.2	97.9	70.0-130			2.76	25
Tetrachloroethylene	3.75	3.56	3.63	94.9	96.8	70.0-130			1.95	25
Methyl Butyl Ketone	3.75	3.77	3.34	101	89.1	70.0-149			12.1	25
Dibromochloromethane	3.75	3.64	3.64	97.1	97.1	70.0-130			0.000	25
1,2-Dibromoethane	3.75	3.63	3.65	96.8	97.3	70.0-130			0.549	25
Chlorobenzene	3.75	3.65	3.68	97.3	98.1	70.0-130			0.819	25
Ethylbenzene	3.75	3.58	3.62	95.5	96.5	70.0-130			1.11	25
m&p-Xylene	7.50	7.38	7.41	98.4	98.8	70.0-130			0.406	25
o-Xylene	3.75	3.69	3.73	98.4	99.5	70.0-130			1.08	25
Styrene	3.75	3.71	3.75	98.9	100	70.0-130			1.07	25
Bromoform	3.75	3.50	3.61	93.3	96.3	70.0-130			3.09	25
1,1,2,2-Tetrachloroethane	3.75	3.62	3.59	96.5	95.7	70.0-130			0.832	25
4-Ethyltoluene	3.75	3.74	3.71	99.7	98.9	70.0-130			0.805	25
1,3,5-Trimethylbenzene	3.75	3.77	3.74	101	99.7	70.0-130			0.799	25
1,2,4-Trimethylbenzene	3.75	3.79	3.73	101	99.5	70.0-130			1.60	25
1,3-Dichlorobenzene	3.75	3.69	3.69	98.4	98.4	70.0-130			0.000	25
1,4-Dichlorobenzene	3.75	3.76	3.75	100	100	70.0-130			0.266	25
Benzyl Chloride	3.75	3.41	3.38	90.9	90.1	70.0-152			0.884	25
1,2-Dichlorobenzene	3.75	3.72	3.68	99.2	98.1	70.0-130			1.08	25
1,2,4-Trichlorobenzene	3.75	3.30	3.03	88.0	80.8	70.0-160			8.53	25
Hexachloro-1,3-butadiene	3.75	3.74	3.44	99.7	91.7	70.0-151			8.36	25

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1311619-01](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3617516-1 01/29/21 08:33 • (LCSD) R3617516-2 01/29/21 09:11

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	3.75	3.35	3.07	89.3	81.9	70.0-159			8.72	25
Allyl Chloride	3.75	3.51	3.38	93.6	90.1	70.0-130			3.77	25
2-Chlorotoluene	3.75	3.68	3.72	98.1	99.2	70.0-130			1.08	25
Methyl Methacrylate	3.75	3.50	3.46	93.3	92.3	70.0-130			1.15	25
Tetrahydrofuran	3.75	3.61	3.57	96.3	95.2	70.0-137			1.11	25
2,2,4-Trimethylpentane	3.75	3.60	3.63	96.0	96.8	70.0-130			0.830	25
Vinyl Bromide	3.75	3.22	4.95	85.9	132	70.0-130		J3 J4	42.4	25
Isopropylbenzene	3.75	3.66	3.67	97.6	97.9	70.0-130			0.273	25
(S) 1,4-Bromofluorobenzene				97.9	98.7	60.0-140				

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1311619-01](#)

Method Blank (MB)

(MB) R3618099-3 01/30/21 08:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Cyclohexane	U		0.0753	0.200
Heptane	U		0.104	0.200
n-Hexane	U		0.206	0.630
2-Butanone (MEK)	U		0.0814	1.25
2-Propanol	U		0.264	1.25
Ethanol	U		0.265	0.630
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	84.2			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618099-1 01/30/21 07:19 • (LCSD) R3618099-2 01/30/21 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	%	%	%			%	%
Ethanol	3.75	3.66	3.78	97.6	101	55.0-148			3.23	25
Acetone	3.75	4.14	4.07	110	109	70.0-130			1.71	25
2-Propanol	3.75	3.73	3.71	99.5	98.9	70.0-139			0.538	25
n-Hexane	3.75	4.23	4.20	113	112	70.0-130			0.712	25
Methyl Ethyl Ketone	3.75	4.22	4.28	113	114	70.0-130			1.41	25
Cyclohexane	3.75	4.28	4.24	114	113	70.0-130			0.939	25
Heptane	3.75	3.95	3.97	105	106	70.0-130			0.505	25
TPH (GC/MS) Low Fraction	203	273	269	134	133	70.0-130	J4	J4	1.48	25
(S) 1,4-Bromofluorobenzene				86.6	86.1	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

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
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.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

1	Cp
2	Tc
3	Ss
4	Cn
5	Tr
6	Sr
7	Qc
8	Gl
9	Al
10	Sc

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* 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 National.

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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	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	LAO00356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	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 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Ensolum, LLC

705 W. Wadley Ave, Ste 210
Midland, TX 79705Report to:
Project Manager

Project Description:

LEVEY WELL

Phone: 210-219-8858

Client Project #

03B1417001

Collected by (print):

SHANE DILLER

Collected by (signature):

Shane Diller

Immediately
Packed on Ice N ☒ Y ☐

City/State

Collected: H0385 NM

Please Circle:

PT ☒ MT ☐ CT ☐ ET

Rush? (Lab MUST Be Notified)

☐ Same Day ☐ Five Day

☐ Next Day ☐ 5 Day (Rad Only)

☒ Two Day ☐ 10 Day (Rad Only)

☐ Three Day

Lab Project #

ENSOLUMMTX-SUMMA

P.O. #

03B1417001

Quote #

Date Results Needed

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
Levey Well	G	Air		1-28-21	1316	1
NFE 1-28-21						

* 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 # 9362 4943 1127

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Check/ist

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

Relinquished by: (Signature)

Shane Diller

Date:

1-28-21

Time:

1630

Received by: (Signature)

Trip Blank Received: Yes ☒ No ☐HCL/MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received:

AMB 1

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: Time:

1/29/21 0930

Hold:

Condition:
NCF ☒ OK

Billing Information:

Accounts Payable

2351 W Northwest Hwy. Ste.
1203
Dallas, TX 75220Pres
Chk

Email To: @ensolum.com

Analysis / Container / Preservative

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 #

1311619
M209

Table #

Acctnum: ENSOLUMMTX

Template: T180734

Prelogin: P824594

PM: 134 - Mark W. Beasley

PB: CSC-01/25/21

Shipped Via: FedEx Priority

Remarks

Sample # (lab only)



ANALYTICAL REPORT

February 18, 2021

Ensolum, LLC

Sample Delivery Group: L1316797
Samples Received: 02/12/2021
Project Number: 03B1417001
Description: Levey Well

Report To: Beaux Jennings
705 W. Wadley Ave, Ste 210
Midland, TX 79705

Entire Report Reviewed By:

Mark W. Beasley
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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Tr: TRRP Summary	5	³ Ss
TRRP form R	6	
TRRP form S	7	⁴ Cn
TRRP Exception Reports	8	⁵ Tr
Sr: Sample Results	9	
LEVEY WELL L1316797-01	9	⁶ Sr
Qc: Quality Control Summary	11	⁷ Qc
Volatile Organic Compounds (MS) by Method TO-15	11	
Gl: Glossary of Terms	16	⁸ Gl
Al: Accreditations & Locations	17	
Sc: Sample Chain of Custody	18	⁹ Al
		¹⁰ Sc

LEVEY WELL L1316797-01 Air

Collected by
Shane Diller

Collected date/time
02/10/21 13:00

Received date/time
02/12/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1621796	20	02/17/21 13:01	02/17/21 13:01	MBF	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1622077	100	02/18/21 01:12	02/18/21 01:12	MBF	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

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.



Mark W. Beasley
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Tr⁶ Sr⁷ Qc⁸ Gl⁹ Al¹⁰ 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.



Mark W. Beasley
Project Manager

Laboratory Name: Pace Analytical National			LRC Date: 02/18/2021 14:49				
Project Name: Levey Well			Laboratory Job Number: L1316797-01				
Reviewer Name: Mark W. Beasley			Prep Batch Number(s): WG1621796 and WG1622077				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 02/18/2021 14:49				
Project Name: Levey Well			Laboratory Job Number: L1316797-01				
Reviewer Name: Mark W. Beasley			Prep Batch Number(s): WG1621796 and WG1622077				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 02/18/2021 14:49	
Project Name: Levey Well		Laboratory Job Number: L1316797-01	
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1621796 and WG1622077	
ER # ¹	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: 02/10/21 13:00

L1316797

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	481	1140		20	WG1621796
Allyl chloride	107-05-1	76.53	4.00	12.5	ND	ND		20	WG1621796
Benzene	71-43-2	78.10	4.00	12.8	ND	ND		20	WG1621796
Benzyl Chloride	100-44-7	127	4.00	20.8	ND	ND		20	WG1621796
Bromodichloromethane	75-27-4	164	4.00	26.8	ND	ND		20	WG1621796
Bromoform	75-25-2	253	12.0	124	ND	ND		20	WG1621796
Bromomethane	74-83-9	94.90	4.00	15.5	ND	ND		20	WG1621796
1,3-Butadiene	106-99-0	54.10	40.0	88.5	ND	ND		20	WG1621796
Carbon disulfide	75-15-0	76.10	4.00	12.4	58.3	181		20	WG1621796
Carbon tetrachloride	56-23-5	154	4.00	25.2	ND	ND		20	WG1621796
Chlorobenzene	108-90-7	113	4.00	18.5	ND	ND		20	WG1621796
Chloroethane	75-00-3	64.50	4.00	10.6	ND	ND		20	WG1621796
Chloroform	67-66-3	119	4.00	19.5	ND	ND		20	WG1621796
Chloromethane	74-87-3	50.50	4.00	8.26	ND	ND		20	WG1621796
2-Chlorotoluene	95-49-8	126	4.00	20.6	ND	ND		20	WG1621796
Cyclohexane	110-82-7	84.20	20.0	68.9	3140	10800		100	WG1622077
Dibromochloromethane	124-48-1	208	4.00	34.0	ND	ND		20	WG1621796
1,2-Dibromoethane	106-93-4	188	4.00	30.8	ND	ND		20	WG1621796
1,2-Dichlorobenzene	95-50-1	147	4.00	24.0	ND	ND		20	WG1621796
1,3-Dichlorobenzene	541-73-1	147	4.00	24.0	ND	ND		20	WG1621796
1,4-Dichlorobenzene	106-46-7	147	4.00	24.0	ND	ND		20	WG1621796
1,2-Dichloroethane	107-06-2	99	4.00	16.2	ND	ND		20	WG1621796
1,1-Dichloroethane	75-34-3	98	4.00	16.0	ND	ND		20	WG1621796
1,1-Dichloroethene	75-35-4	96.90	4.00	15.9	ND	ND		20	WG1621796
cis-1,2-Dichloroethene	156-59-2	96.90	4.00	15.9	ND	ND		20	WG1621796
trans-1,2-Dichloroethene	156-60-5	96.90	4.00	15.9	ND	ND		20	WG1621796
1,2-Dichloropropane	78-87-5	113	4.00	18.5	ND	ND		20	WG1621796
cis-1,3-Dichloropropene	10061-01-5	111	4.00	18.2	ND	ND		20	WG1621796
trans-1,3-Dichloropropene	10061-02-6	111	4.00	18.2	ND	ND		20	WG1621796
1,4-Dioxane	123-91-1	88.10	4.00	14.4	ND	ND		20	WG1621796
Ethanol	64-17-5	46.10	12.6	23.8	ND	ND		20	WG1621796
Ethylbenzene	100-41-4	106	4.00	17.3	10.2	44.2		20	WG1621796
4-Ethyltoluene	622-96-8	120	4.00	19.6	86.7	426		20	WG1621796
Trichlorofluoromethane	75-69-4	137.40	4.00	22.5	ND	ND		20	WG1621796
Dichlorodifluoromethane	75-71-8	120.92	4.00	19.8	ND	ND		20	WG1621796
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	4.00	30.7	ND	ND		20	WG1621796
1,2-Dichlorotetrafluoroethane	76-14-2	171	4.00	28.0	ND	ND		20	WG1621796
Heptane	142-82-5	100	4.00	16.4	988	4040		20	WG1621796
Hexachloro-1,3-butadiene	87-68-3	261	12.6	135	ND	ND		20	WG1621796
n-Hexane	110-54-3	86.20	63.0	222	3960	14000		100	WG1622077
Isopropylbenzene	98-82-8	120.20	4.00	19.7	18.8	92.4		20	WG1621796
Methylene Chloride	75-09-2	84.90	4.00	13.9	ND	ND		20	WG1621796
Methyl Butyl Ketone	591-78-6	100	25.0	102	ND	ND		20	WG1621796
2-Butanone (MEK)	78-93-3	72.10	25.0	73.7	26.8	79.0		20	WG1621796
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	25.0	102	ND	ND		20	WG1621796
Methyl methacrylate	80-62-6	100.12	4.00	16.4	ND	ND		20	WG1621796
MTBE	1634-04-4	88.10	4.00	14.4	ND	ND		20	WG1621796
Naphthalene	91-20-3	128	12.6	66.0	ND	ND		20	WG1621796
2-Propanol	67-63-0	60.10	25.0	61.5	ND	ND		20	WG1621796
Propene	115-07-1	42.10	8.00	13.8	ND	ND		20	WG1621796
Styrene	100-42-5	104	4.00	17.0	ND	ND		20	WG1621796
1,1,2,2-Tetrachloroethane	79-34-5	168	4.00	27.5	ND	ND		20	WG1621796
Tetrachloroethylene	127-18-4	166	4.00	27.2	ND	ND		20	WG1621796
Tetrahydrofuran	109-99-9	72.10	4.00	11.8	ND	ND		20	WG1621796
Toluene	108-88-3	92.10	10.0	37.7	17.6	66.3		20	WG1621796
1,2,4-Trichlorobenzene	120-82-1	181	12.6	93.3	ND	ND		20	WG1621796



Collected date/time: 02/10/21 13:00

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	WG1621796
1,1,2-Trichloroethane	79-00-5	133	4.00	21.8	ND	ND		20	WG1621796
Trichloroethylene	79-01-6	131	4.00	21.4	ND	ND		20	WG1621796
1,2,4-Trimethylbenzene	95-63-6	120	4.00	19.6	68.0	334		20	WG1621796
1,3,5-Trimethylbenzene	108-67-8	120	4.00	19.6	119	584		20	WG1621796
2,2,4-Trimethylpentane	540-84-1	114.22	4.00	18.7	ND	ND		20	WG1621796
Vinyl chloride	75-01-4	62.50	4.00	10.2	ND	ND		20	WG1621796
Vinyl Bromide	593-60-2	106.95	4.00	17.5	ND	ND		20	WG1621796
Vinyl acetate	108-05-4	86.10	4.00	14.1	ND	ND		20	WG1621796
m&p-Xylene	1330-20-7	106	8.00	34.7	83.2	361		20	WG1621796
o-Xylene	95-47-6	106	4.00	17.3	50.3	218		20	WG1621796
TPH (GC/MS) Low Fraction	8006-61-9	101	4000	16500	76300	315000		20	WG1621796
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.2				WG1621796
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.3				WG1622077

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Volatile Organic Compounds (MS) by Method TO-15 L1316797-01

Method Blank (MB)

(MB) R3622991-3 02/17/21 11:40

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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
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
Methyl Butyl Ketone	U		0.133	1.25

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Volatile Organic Compounds (MS) by Method TO-15

Method Blank (MB)

(MB) R3622991-3 02/17/21 11:40

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
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	0.132	U	0.0932	0.400
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
Ethanol	U		0.265	0.630
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	92.7			60.0-140

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3622991-1 02/17/21 09:37 • (LCSD) R3622991-2 02/17/21 10:18

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.78	3.69	101	98.4	55.0-148			2.41	25
Propene	3.75	3.61	3.66	96.3	97.6	64.0-144			1.38	25
Dichlorodifluoromethane	3.75	4.14	4.19	110	112	64.0-139			1.20	25
1,2-Dichlorotetrafluoroethane	3.75	4.02	4.01	107	107	70.0-130			0.249	25
Chloromethane	3.75	3.75	3.78	100	101	70.0-130			0.797	25
Vinyl chloride	3.75	3.93	3.89	105	104	70.0-130			1.02	25

Volatile Organic Compounds (MS) by Method TO-15 L1316797-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3622991-1 02/17/21 09:37 • (LCSD) R3622991-2 02/17/21 10:18

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,3-Butadiene	3.75	3.81	3.83	102	102	70.0-130			0.524	25
Bromomethane	3.75	4.04	3.97	108	106	70.0-130			1.75	25
Chloroethane	3.75	3.90	3.81	104	102	70.0-130			2.33	25
Trichlorofluoromethane	3.75	4.09	4.16	109	111	70.0-130			1.70	25
1,1,2-Trichlorotrifluoroethane	3.75	4.01	4.02	107	107	70.0-130			0.249	25
1,1-Dichloroethene	3.75	3.95	3.99	105	106	70.0-130			1.01	25
1,1-Dichloroethane	3.75	3.85	3.88	103	103	70.0-130			0.776	25
Acetone	3.75	3.93	3.89	105	104	70.0-130			1.02	25
2-Propanol	3.75	3.84	3.88	102	103	70.0-139			1.04	25
Carbon disulfide	3.75	3.89	3.87	104	103	70.0-130			0.515	25
Methylene Chloride	3.75	3.81	3.78	102	101	70.0-130			0.791	25
MTBE	3.75	3.98	3.93	106	105	70.0-130			1.26	25
trans-1,2-Dichloroethene	3.75	3.91	3.92	104	105	70.0-130			0.255	25
Vinyl acetate	3.75	3.95	3.83	105	102	70.0-130			3.08	25
Methyl Ethyl Ketone	3.75	3.95	3.80	105	101	70.0-130			3.87	25
cis-1,2-Dichloroethene	3.75	3.89	3.95	104	105	70.0-130			1.53	25
Chloroform	3.75	3.95	4.03	105	107	70.0-130			2.01	25
1,1,1-Trichloroethane	3.75	4.11	4.13	110	110	70.0-130			0.485	25
Carbon tetrachloride	3.75	4.18	4.21	111	112	70.0-130			0.715	25
Benzene	3.75	3.91	3.95	104	105	70.0-130			1.02	25
1,2-Dichloroethane	3.75	4.07	4.09	109	109	70.0-130			0.490	25
Heptane	3.75	3.39	3.45	90.4	92.0	70.0-130			1.75	25
Trichloroethylene	3.75	3.96	4.01	106	107	70.0-130			1.25	25
1,2-Dichloropropane	3.75	3.86	3.92	103	105	70.0-130			1.54	25
1,4-Dioxane	3.75	3.82	3.95	102	105	70.0-140			3.35	25
Bromodichloromethane	3.75	4.00	4.08	107	109	70.0-130			1.98	25
cis-1,3-Dichloropropene	3.75	4.00	4.02	107	107	70.0-130			0.499	25
4-Methyl-2-pentanone (MIBK)	3.75	3.87	3.99	103	106	70.0-139			3.05	25
Toluene	3.75	3.94	4.00	105	107	70.0-130			1.51	25
trans-1,3-Dichloropropene	3.75	4.06	4.05	108	108	70.0-130			0.247	25
1,1,2-Trichloroethane	3.75	3.95	4.00	105	107	70.0-130			1.26	25
Tetrachloroethylene	3.75	4.19	4.19	112	112	70.0-130			0.000	25
Methyl Butyl Ketone	3.75	3.83	3.94	102	105	70.0-149			2.83	25
Dibromochloromethane	3.75	4.20	4.10	112	109	70.0-130			2.41	25
1,2-Dibromoethane	3.75	4.07	4.03	109	107	70.0-130			0.988	25
Chlorobenzene	3.75	4.03	4.05	107	108	70.0-130			0.495	25
Ethylbenzene	3.75	4.02	3.98	107	106	70.0-130			1.00	25
m&p-Xylene	7.50	8.09	8.12	108	108	70.0-130			0.370	25
o-Xylene	3.75	3.97	4.11	106	110	70.0-130			3.47	25
Styrene	3.75	4.16	4.25	111	113	70.0-130			2.14	25

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Volatile Organic Compounds (MS) by Method TO-15 L1316797-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3622991-1 02/17/21 09:37 • (LCSD) R3622991-2 02/17/21 10:18

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	4.30	4.30	115	115	70.0-130			0.000	25
1,1,2,2-Tetrachloroethane	3.75	4.06	4.09	108	109	70.0-130			0.736	25
4-Ethyltoluene	3.75	4.41	4.29	118	114	70.0-130			2.76	25
1,3,5-Trimethylbenzene	3.75	4.20	4.34	112	116	70.0-130			3.28	25
1,2,4-Trimethylbenzene	3.75	4.20	4.21	112	112	70.0-130			0.238	25
1,3-Dichlorobenzene	3.75	4.37	4.41	117	118	70.0-130			0.911	25
1,4-Dichlorobenzene	3.75	4.33	4.33	115	115	70.0-130			0.000	25
Benzyl Chloride	3.75	4.28	4.31	114	115	70.0-152			0.698	25
1,2-Dichlorobenzene	3.75	4.34	4.34	116	116	70.0-130			0.000	25
1,2,4-Trichlorobenzene	3.75	4.97	5.09	133	136	70.0-160			2.39	25
Hexachloro-1,3-butadiene	3.75	4.30	4.39	115	117	70.0-151			2.07	25
Naphthalene	3.75	3.93	3.99	105	106	70.0-159			1.52	25
TPH (GC/MS) Low Fraction	203	250	250	123	123	70.0-130			0.000	25
Allyl Chloride	3.75	3.84	3.91	102	104	70.0-130			1.81	25
2-Chlorotoluene	3.75	4.12	4.20	110	112	70.0-130			1.92	25
Methyl Methacrylate	3.75	4.00	4.06	107	108	70.0-130			1.49	25
Tetrahydrofuran	3.75	3.75	3.76	100	100	70.0-137			0.266	25
2,2,4-Trimethylpentane	3.75	3.95	3.93	105	105	70.0-130			0.508	25
Vinyl Bromide	3.75	4.03	4.02	107	107	70.0-130			0.248	25
Isopropylbenzene	3.75	4.16	4.21	111	112	70.0-130			1.19	25
(S) 1,4-Bromofluorobenzene				100	101	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1316797-01](#)

Method Blank (MB)

(MB) R3622993-3 02/17/21 11:40

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Cyclohexane	U		0.0753	0.200
n-Hexane	U		0.206	0.630
(S) 1,4-Bromofluorobenzene	92.7			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3622993-1 02/17/21 09:37 • (LCSD) R3622993-2 02/17/21 10:18

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
n-Hexane	3.75	3.87	3.88	103	103	70.0-130			0.258	25
Cyclohexane	3.75	4.02	4.02	107	107	70.0-130			0.000	25
(S) 1,4-Bromofluorobenzene				100	101	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

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.

QualifierDescription

J	The identification of the analyte is acceptable; the reported value is an estimate.

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* 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 National.

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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	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	LAO00356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	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 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Released to Imaging: 3/21/2024 4:39:37 PM



ANALYTICAL REPORT

March 02, 2021

Ensolum, LLC

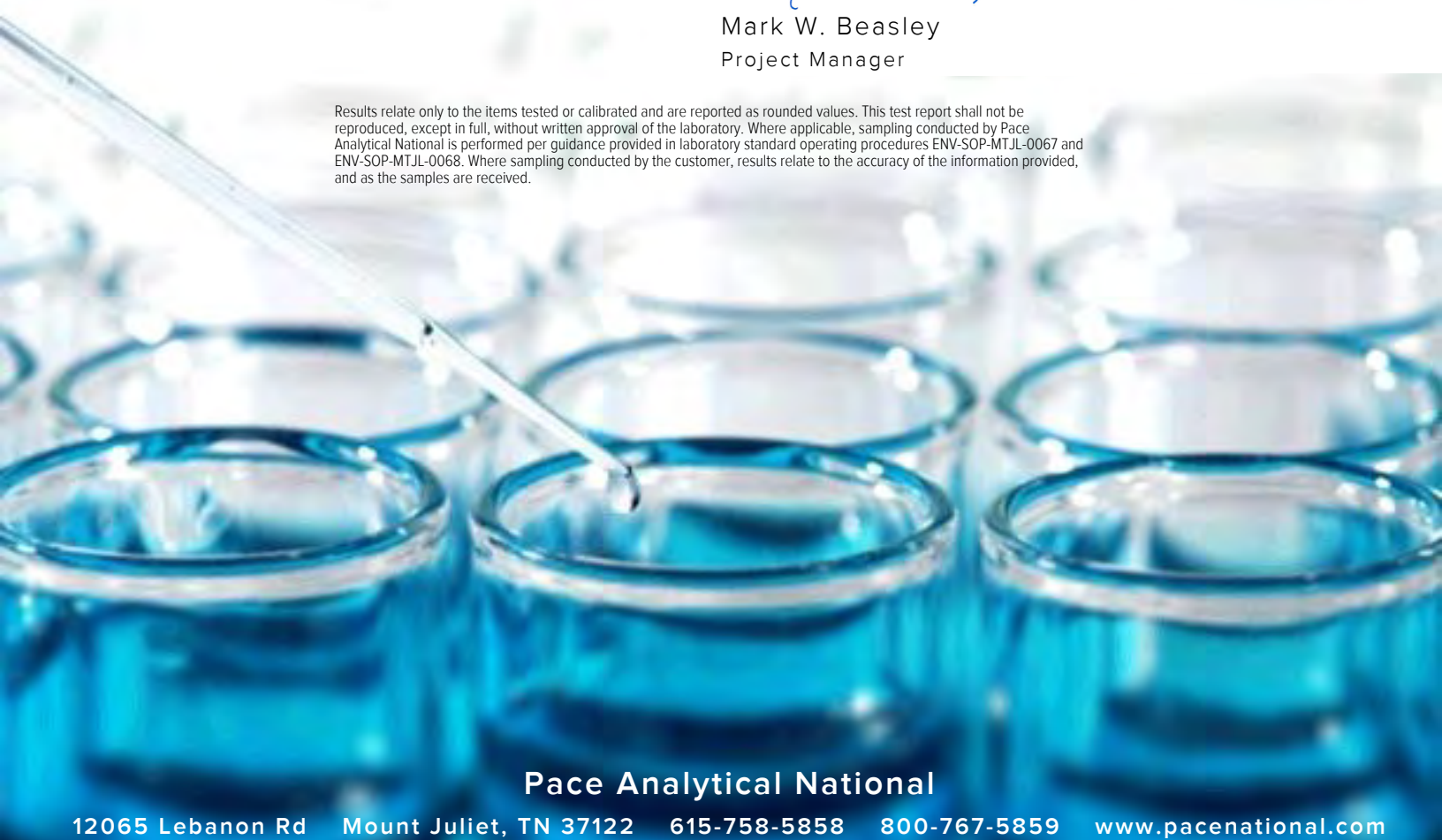
Sample Delivery Group: L1321141
Samples Received: 02/27/2021
Project Number: 03B1417001
Description: Levey Well
Site: LEVEY WELL
Report To: Beaux Jennings
705 W. Wadley Ave, Ste 210
Midland, TX 79705



Entire Report Reviewed By:

Mark W. Beasley
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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Tr: TRRP Summary	5	³ Ss
TRRP form R	6	
TRRP form S	7	⁴ Cn
TRRP Exception Reports	8	⁵ Tr
Sr: Sample Results	9	
LEVEY WELL L1321141-01	9	⁶ Sr
Qc: Quality Control Summary	11	⁷ Qc
Volatile Organic Compounds (MS) by Method TO-15	11	
Gl: Glossary of Terms	16	⁸ Gl
Al: Accreditations & Locations	17	
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		¹⁰ Sc

LEVEY WELL L1321141-01 Air

Collected by
Shane Diller

Collected date/time
02/24/21 10:45

Received date/time
02/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1627100	1	02/28/21 15:08	02/28/21 15:08	FKG	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1627753	50	03/02/21 03:21	03/02/21 03:21	CAW	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

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.



Mark W. Beasley
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Tr⁶ Sr⁷ Qc⁸ Gl⁹ Al¹⁰ 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.



Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National			LRC Date: 03/02/2021 10:14				
Project Name: Levey Well			Laboratory Job Number: L1321141-01				
Reviewer Name: Mark W. Beasley			Prep Batch Number(s): WG1627100 and WG1627753				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 03/02/2021 10:14				
Project Name: Levey Well			Laboratory Job Number: L1321141-01				
Reviewer Name: Mark W. Beasley			Prep Batch Number(s): WG1627100 and WG1627753				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 03/02/2021 10:14	
Project Name: Levey Well		Laboratory Job Number: L1321141-01	
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1627100 and WG1627753	
ER # ¹	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: 02/24/21 10:45

L1321141

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	1.25	2.97	ND	ND		1	WG1627100
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1627100
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1627100
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1627100
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1627100
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1627100
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1627100
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1627100
Carbon disulfide	75-15-0	76.10	0.200	0.622	51.6	161		1	WG1627100
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1627100
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1627100
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1627100
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1627100
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1627100
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1627100
Cyclohexane	110-82-7	84.20	10.0	34.4	1310	4510		50	WG1627753
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1627100
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1627100
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1627100
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1627100
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1627100
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1627100
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1627100
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1627100
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	2.48	9.83		1	WG1627100
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1627100
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1627100
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1627100
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1627100
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1627100
Ethanol	64-17-5	46.10	0.630	1.19	ND	ND		1	WG1627100
Ethylbenzene	100-41-4	106	0.200	0.867	20.4	88.4		1	WG1627100
4-Ethyltoluene	622-96-8	120	0.200	0.982	100	491		1	WG1627100
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1627100
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	ND	ND		1	WG1627100
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1627100
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1627100
Heptane	142-82-5	100	10.0	40.9	539	2200		50	WG1627753
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1627100
n-Hexane	110-54-3	86.20	31.5	111	1590	5610		50	WG1627753
Isopropylbenzene	98-82-8	120.20	0.200	0.983	50.6	249		1	WG1627100
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1627100
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1627100
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1627100
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1627100
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1627100
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1627100
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1627100
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1627100
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1627100
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1627100
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1627100
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.806	5.47		1	WG1627100
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1627100
Toluene	108-88-3	92.10	0.500	1.88	26.9	101		1	WG1627100
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1627100

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Collected date/time: 02/24/21 10:45

L1321141

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	0.200	1.09	ND	ND		1	WG1627100
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1627100
Trichloroethylene	79-01-6	131	0.200	1.07	0.212	1.14		1	WG1627100
1,2,4-Trimethylbenzene	95-63-6	120	10.0	49.1	44.4	218	B	50	WG1627753
1,3,5-Trimethylbenzene	108-67-8	120	10.0	49.1	62.2	305		50	WG1627753
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1627100
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1627100
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1627100
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1627100
m&p-Xylene	1330-20-7	106	0.400	1.73	146	633		1	WG1627100
o-Xylene	95-47-6	106	0.200	0.867	89.6	388		1	WG1627100
TPH (GC/MS) Low Fraction	8006-61-9	101	10000	41300	27700	114000		50	WG1627753
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		130				WG1627100
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.1				WG1627753

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Volatile Organic Compounds (MS) by Method TO-15

L1321141-01

Method Blank (MB)

(MB) R3626192-3 02/28/21 08:38

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	0.0849	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	0.109	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
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
Hexachloro-1,3-butadiene	U		0.105	0.630
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

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Cp

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Tc

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Ss

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Cn

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Tr

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Sr

7

Qc

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Gl

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Al

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Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1321141-01](#)

Method Blank (MB)

(MB) R3626192-3 02/28/21 08:38

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
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	0.400
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
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
Ethanol	U		0.265	0.630
(S) 1,4-Bromofluorobenzene	105			60.0-140

1

Cp

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Tc

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Ss

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Cn

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Tr

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Sr

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Qc

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Gl

9

Al

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Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3626192-1 02/28/21 07:14 • (LCSD) R3626192-2 02/28/21 07:57

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	4.17	4.10	111	109	55.0-148			1.69	25
Propene	3.75	4.06	4.05	108	108	64.0-144			0.247	25
Dichlorodifluoromethane	3.75	4.08	4.12	109	110	64.0-139			0.976	25
1,2-Dichlorotetrafluoroethane	3.75	4.09	4.10	109	109	70.0-130			0.244	25
Chloromethane	3.75	4.28	4.24	114	113	70.0-130			0.939	25
Vinyl chloride	3.75	4.40	4.33	117	115	70.0-130			1.60	25
1,3-Butadiene	3.75	4.43	4.46	118	119	70.0-130			0.675	25
Bromomethane	3.75	4.15	4.19	111	112	70.0-130			0.959	25
Chloroethane	3.75	4.46	4.53	119	121	70.0-130			1.56	25
Trichlorofluoromethane	3.75	4.26	4.33	114	115	70.0-130			1.63	25

Volatile Organic Compounds (MS) by Method TO-15 L1321141-01

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3626192-1 02/28/21 07:14 • (LCSD) R3626192-2 02/28/21 07:57

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1,2-Trichlorotrifluoroethane	3.75	3.92	3.97	105	106	70.0-130			1.27	25
1,1-Dichloroethene	3.75	4.18	4.17	111	111	70.0-130			0.240	25
1,1-Dichloroethane	3.75	4.03	4.06	107	108	70.0-130			0.742	25
Acetone	3.75	4.18	4.21	111	112	70.0-130			0.715	25
2-Propanol	3.75	4.18	4.20	111	112	70.0-139			0.477	25
Carbon disulfide	3.75	3.75	3.71	100	98.9	70.0-130			1.07	25
Methylene Chloride	3.75	4.17	4.28	111	114	70.0-130			2.60	25
MTBE	3.75	3.90	3.92	104	105	70.0-130			0.512	25
trans-1,2-Dichloroethene	3.75	4.10	4.08	109	109	70.0-130			0.489	25
Vinyl acetate	3.75	4.25	4.18	113	111	70.0-130			1.66	25
Methyl Ethyl Ketone	3.75	3.79	3.83	101	102	70.0-130			1.05	25
cis-1,2-Dichloroethene	3.75	4.05	4.05	108	108	70.0-130			0.000	25
Chloroform	3.75	3.99	4.01	106	107	70.0-130			0.500	25
1,1,1-Trichloroethane	3.75	3.90	3.99	104	106	70.0-130			2.28	25
Carbon tetrachloride	3.75	3.88	4.01	103	107	70.0-130			3.30	25
Benzene	3.75	3.91	3.83	104	102	70.0-130			2.07	25
1,2-Dichloroethane	3.75	4.18	4.21	111	112	70.0-130			0.715	25
Trichloroethylene	3.75	3.81	3.74	102	99.7	70.0-130			1.85	25
1,2-Dichloropropane	3.75	4.01	3.97	107	106	70.0-130			1.00	25
1,4-Dioxane	3.75	3.71	3.75	98.9	100	70.0-140			1.07	25
Bromodichloromethane	3.75	3.97	3.94	106	105	70.0-130			0.759	25
cis-1,3-Dichloropropene	3.75	3.86	3.88	103	103	70.0-130			0.517	25
4-Methyl-2-pentanone (MIBK)	3.75	4.15	4.19	111	112	70.0-139			0.959	25
Toluene	3.75	3.76	3.74	100	99.7	70.0-130			0.533	25
trans-1,3-Dichloropropene	3.75	3.96	3.96	106	106	70.0-130			0.000	25
1,1,2-Trichloroethane	3.75	3.83	3.76	102	100	70.0-130			1.84	25
Tetrachloroethylene	3.75	3.53	3.55	94.1	94.7	70.0-130			0.565	25
Methyl Butyl Ketone	3.75	4.28	4.28	114	114	70.0-149			0.000	25
Dibromochloromethane	3.75	3.86	3.84	103	102	70.0-130			0.519	25
1,2-Dibromoethane	3.75	3.84	3.80	102	101	70.0-130			1.05	25
Chlorobenzene	3.75	3.86	3.86	103	103	70.0-130			0.000	25
Ethylbenzene	3.75	3.66	3.70	97.6	98.7	70.0-130			1.09	25
m&p-Xylene	7.50	7.43	7.49	99.1	99.9	70.0-130			0.804	25
o-Xylene	3.75	3.67	3.67	97.9	97.9	70.0-130			0.000	25
Styrene	3.75	3.76	3.73	100	99.5	70.0-130			0.801	25
Bromoform	3.75	3.62	3.66	96.5	97.6	70.0-130			1.10	25
1,1,2,2-Tetrachloroethane	3.75	4.00	4.00	107	107	70.0-130			0.000	25
4-Ethyltoluene	3.75	3.91	3.91	104	104	70.0-130			0.000	25
1,3-Dichlorobenzene	3.75	4.08	4.05	109	108	70.0-130			0.738	25
1,4-Dichlorobenzene	3.75	4.09	4.06	109	108	70.0-130			0.736	25

1

Cp

2

Tc

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Ss

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Cn

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Tr

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Sr

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Qc

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Gl

9

Al

10

Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1321141-01](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3626192-1 02/28/21 07:14 • (LCSD) R3626192-2 02/28/21 07:57

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Benzyl Chloride	3.75	4.24	4.22	113	113	70.0-152			0.473	25
1,2-Dichlorobenzene	3.75	4.09	4.11	109	110	70.0-130			0.488	25
1,2,4-Trichlorobenzene	3.75	3.29	3.26	87.7	86.9	70.0-160			0.916	25
Hexachloro-1,3-butadiene	3.75	3.58	3.48	95.5	92.8	70.0-151			2.83	25
Naphthalene	3.75	3.51	3.41	93.6	90.9	70.0-159			2.89	25
Allyl Chloride	3.75	3.95	3.45	105	92.0	70.0-130			13.5	25
2-Chlorotoluene	3.75	3.95	3.94	105	105	70.0-130			0.253	25
Methyl Methacrylate	3.75	4.16	4.21	111	112	70.0-130			1.19	25
Tetrahydrofuran	3.75	4.23	4.27	113	114	70.0-137			0.941	25
2,2,4-Trimethylpentane	3.75	4.05	4.08	108	109	70.0-130			0.738	25
Vinyl Bromide	3.75	4.15	4.08	111	109	70.0-130			1.70	25
Isopropylbenzene	3.75	3.72	3.71	99.2	98.9	70.0-130			0.269	25
(S) 1,4-Bromofluorobenzene				105	104	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1321141-01](#)

Method Blank (MB)

(MB) R3626344-3 03/01/21 22:06

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Cyclohexane	U		0.0753	0.200
Heptane	0.106	U	0.104	0.200
n-Hexane	U		0.206	0.630
1,2,4-Trimethylbenzene	0.0941	U	0.0764	0.200
1,3,5-Trimethylbenzene	0.108	U	0.0779	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	96.1			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3626344-1 03/01/21 20:46 • (LCSD) R3626344-2 03/01/21 21:27

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
n-Hexane	3.75	3.93	3.77	105	101	70.0-130			4.16	25
Cyclohexane	3.75	3.92	3.98	105	106	70.0-130			1.52	25
Heptane	3.75	3.62	3.81	96.5	102	70.0-130			5.11	25
1,3,5-Trimethylbenzene	3.75	4.01	4.11	107	110	70.0-130			2.46	25
1,2,4-Trimethylbenzene	3.75	4.11	4.20	110	112	70.0-130			2.17	25
TPH (GC/MS) Low Fraction	203	232	235	114	116	70.0-130			1.28	25
(S) 1,4-Bromofluorobenzene				97.4	100	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

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

B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

1	Cp
2	Tc
3	Ss
4	Cn
5	Tr
6	Sr
7	Qc
8	Gl
9	Al
10	Sc

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* 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 National.

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Colorado	TN00003	New York	11742
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Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	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	LAO00356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
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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 ⁵	1461.02	DOD	1461.01
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Texas	T104704328-20-18

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Released to Imaging: 3/21/2024 4:39:37 PM



ANALYTICAL REPORT

March 10, 2021

Ensolum, LLC

Sample Delivery Group: L1323982
Samples Received: 03/06/2021
Project Number: 03B1417001
Description: LEVEY WELL

Report To: Beaux Jennings
705 W. Wadley Ave, Ste 210
Midland, TX 79705

Entire Report Reviewed By:

A blue ink signature of Mark W. Beasley, written in a cursive style.

Mark W. Beasley
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**

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LEVEY WELL L1323982-01 Air

Collected by
Shane Diller

Collected date/time
03/04/21 14:02

Received date/time
03/06/21 10:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1630786	5	03/08/21 01:07	03/08/21 01:07	CAW	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1631579	20	03/09/21 16:51	03/09/21 16:51	FKG	Mt. Juliet, TN

¹Cp

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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.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Tr

⁶ Sr

⁷ Qc

⁸ Gl

⁹ Al

¹⁰ 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.



Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 03/10/2021 10:27					
Project Name: LEVEY WELL		Laboratory Job Number: L1323982-01					
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1630786 and WG1631579					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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			1
		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: 03/10/2021 10:27					
Project Name: LEVEY WELL		Laboratory Job Number: L1323982-01					
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1630786 and WG1631579					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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: 03/10/2021 10:27	
Project Name: LEVEY WELL		Laboratory Job Number: L1323982-01	
Reviewer Name: Mark W. Beasley		Prep Batch Number(s): WG1630786 and WG1631579	
ER #¹	Description		
1	TO-15 WG1630786 1,4-Dichlorobenzene: Percent Recovery is outside of established control limits.		
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: 03/04/21 14:02

L1323982

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	6.25	14.9	158	375		5	WG1630786
Allyl chloride	107-05-1	76.53	1.00	3.13	ND	ND		5	WG1630786
Benzene	71-43-2	78.10	1.00	3.19	ND	ND		5	WG1630786
Benzyl Chloride	100-44-7	127	1.00	5.19	ND	ND		5	WG1630786
Bromodichloromethane	75-27-4	164	1.00	6.71	ND	ND		5	WG1630786
Bromoform	75-25-2	253	3.00	31.0	ND	ND		5	WG1630786
Bromomethane	74-83-9	94.90	1.00	3.88	ND	ND		5	WG1630786
1,3-Butadiene	106-99-0	54.10	10.0	22.1	ND	ND		5	WG1630786
Carbon disulfide	75-15-0	76.10	1.00	3.11	21.8	67.9		5	WG1630786
Carbon tetrachloride	56-23-5	154	1.00	6.30	ND	ND		5	WG1630786
Chlorobenzene	108-90-7	113	1.00	4.62	ND	ND		5	WG1630786
Chloroethane	75-00-3	64.50	1.00	2.64	ND	ND		5	WG1630786
Chloroform	67-66-3	119	1.00	4.87	ND	ND		5	WG1630786
Chloromethane	74-87-3	50.50	1.00	2.07	ND	ND		5	WG1630786
2-Chlorotoluene	95-49-8	126	1.00	5.15	ND	ND		5	WG1630786
Cyclohexane	110-82-7	84.20	4.00	13.8	761	2620		20	WG1631579
Dibromochloromethane	124-48-1	208	1.00	8.51	ND	ND		5	WG1630786
1,2-Dibromoethane	106-93-4	188	1.00	7.69	ND	ND		5	WG1630786
1,2-Dichlorobenzene	95-50-1	147	1.00	6.01	ND	ND		5	WG1630786
1,3-Dichlorobenzene	541-73-1	147	1.00	6.01	ND	ND		5	WG1630786
1,4-Dichlorobenzene	106-46-7	147	1.00	6.01	ND	ND	J4	5	WG1630786
1,2-Dichloroethane	107-06-2	99	1.00	4.05	ND	ND		5	WG1630786
1,1-Dichloroethane	75-34-3	98	1.00	4.01	ND	ND		5	WG1630786
1,1-Dichloroethene	75-35-4	96.90	1.00	3.96	ND	ND		5	WG1630786
cis-1,2-Dichloroethene	156-59-2	96.90	1.00	3.96	ND	ND		5	WG1630786
trans-1,2-Dichloroethene	156-60-5	96.90	1.00	3.96	ND	ND		5	WG1630786
1,2-Dichloropropane	78-87-5	113	1.00	4.62	ND	ND		5	WG1630786
cis-1,3-Dichloropropene	10061-01-5	111	1.00	4.54	ND	ND		5	WG1630786
trans-1,3-Dichloropropene	10061-02-6	111	1.00	4.54	ND	ND		5	WG1630786
1,4-Dioxane	123-91-1	88.10	1.00	3.60	ND	ND		5	WG1630786
Ethanol	64-17-5	46.10	3.15	5.94	47.0	88.6		5	WG1630786
Ethylbenzene	100-41-4	106	1.00	4.34	13.0	56.4		5	WG1630786
4-Ethyltoluene	622-96-8	120	1.00	4.91	ND	ND		5	WG1630786
Trichlorofluoromethane	75-69-4	137.40	1.00	5.62	ND	ND		5	WG1630786
Dichlorodifluoromethane	75-71-8	120.92	1.00	4.95	ND	ND		5	WG1630786
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	1.00	7.66	ND	ND		5	WG1630786
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.00	6.99	ND	ND		5	WG1630786
Heptane	142-82-5	100	1.00	4.09	207	847		5	WG1630786
Hexachloro-1,3-butadiene	87-68-3	261	3.15	33.6	ND	ND		5	WG1630786
n-Hexane	110-54-3	86.20	12.6	44.4	1330	4690		20	WG1631579
Isopropylbenzene	98-82-8	120.20	1.00	4.92	35.8	176		5	WG1630786
Methylene Chloride	75-09-2	84.90	1.00	3.47	ND	ND		5	WG1630786
Methyl Butyl Ketone	591-78-6	100	6.25	25.6	ND	ND		5	WG1630786
2-Butanone (MEK)	78-93-3	72.10	6.25	18.4	24.4	72.0		5	WG1630786
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	6.25	25.6	ND	ND		5	WG1630786
Methyl methacrylate	80-62-6	100.12	1.00	4.09	ND	ND		5	WG1630786
MTBE	1634-04-4	88.10	1.00	3.60	ND	ND		5	WG1630786
Naphthalene	91-20-3	128	3.15	16.5	4.35	22.8		5	WG1630786
2-Propanol	67-63-0	60.10	6.25	15.4	ND	ND		5	WG1630786
Propene	115-07-1	42.10	2.00	3.44	ND	ND		5	WG1630786
Styrene	100-42-5	104	1.00	4.25	ND	ND		5	WG1630786
1,1,2,2-Tetrachloroethane	79-34-5	168	1.00	6.87	ND	ND		5	WG1630786
Tetrachloroethylene	127-18-4	166	1.00	6.79	ND	ND		5	WG1630786
Tetrahydrofuran	109-99-9	72.10	1.00	2.95	ND	ND		5	WG1630786
Toluene	108-88-3	92.10	2.50	9.42	13.1	49.3		5	WG1630786
1,2,4-Trichlorobenzene	120-82-1	181	3.15	23.3	ND	ND		5	WG1630786

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Collected date/time: 03/04/21 14:02

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	1.00	5.44	ND	ND		5	WG1630786
1,1,2-Trichloroethane	79-00-5	133	1.00	5.44	ND	ND		5	WG1630786
Trichloroethylene	79-01-6	131	1.00	5.36	ND	ND		5	WG1630786
1,2,4-Trimethylbenzene	95-63-6	120	1.00	4.91	297	1460		5	WG1630786
1,3,5-Trimethylbenzene	108-67-8	120	1.00	4.91	186	913		5	WG1630786
2,2,4-Trimethylpentane	540-84-1	114.22	1.00	4.67	ND	ND		5	WG1630786
Vinyl chloride	75-01-4	62.50	1.00	2.56	ND	ND		5	WG1630786
Vinyl Bromide	593-60-2	106.95	1.00	4.37	ND	ND		5	WG1630786
Vinyl acetate	108-05-4	86.10	1.00	3.52	ND	ND		5	WG1630786
m&p-Xylene	1330-20-7	106	2.00	8.67	123	533		5	WG1630786
o-Xylene	95-47-6	106	1.00	4.34	45.6	198		5	WG1630786
TPH (GC/MS) Low Fraction	8006-61-9	101	1000	4130	20200	83400		5	WG1630786
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		107				WG1630786
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.0				WG1631579

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Method Blank (MB)

(MB) R3628811-3 03/07/21 09:29

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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	0.0758	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
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
Methyl Butyl Ketone	U		0.133	1.25

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Tr

⁶ Sr

⁷ Qc

⁸ Gl

⁹ Al

¹⁰ Sc

Method Blank (MB)

(MB) R3628811-3 03/07/21 09:29

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
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	0.103	U	0.0932	0.400
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	0.244	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
Ethanol	U		0.265	0.630
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	91.6			60.0-140

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3628811-1 03/07/21 08:10 • (LCSD) R3628811-2 03/07/21 08:50

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.09	3.02	82.4	80.5	55.0-148			2.29	25
Propene	3.75	3.43	3.19	91.5	85.1	64.0-144			7.25	25
Dichlorodifluoromethane	3.75	4.33	4.11	115	110	64.0-139			5.21	25
1,2-Dichlorotetrafluoroethane	3.75	3.92	3.87	105	103	70.0-130			1.28	25
Chloromethane	3.75	3.48	3.42	92.8	91.2	70.0-130			1.74	25
Vinyl chloride	3.75	3.47	3.42	92.5	91.2	70.0-130			1.45	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3628811-1 03/07/21 08:10 • (LCSD) R3628811-2 03/07/21 08:50

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,3-Butadiene	3.75	3.23	3.08	86.1	82.1	70.0-130			4.75	25
Bromomethane	3.75	3.87	3.87	103	103	70.0-130			0.000	25
Chloroethane	3.75	3.68	3.56	98.1	94.9	70.0-130			3.31	25
Trichlorofluoromethane	3.75	4.21	4.05	112	108	70.0-130			3.87	25
1,1,2-Trichlorotrifluoroethane	3.75	4.11	4.08	110	109	70.0-130			0.733	25
1,1-Dichloroethene	3.75	3.85	3.73	103	99.5	70.0-130			3.17	25
1,1-Dichloroethane	3.75	3.83	3.70	102	98.7	70.0-130			3.45	25
Acetone	3.75	3.52	3.39	93.9	90.4	70.0-130			3.76	25
2-Propanol	3.75	3.41	3.31	90.9	88.3	70.0-139			2.98	25
Carbon disulfide	3.75	3.93	3.78	105	101	70.0-130			3.89	25
Methylene Chloride	3.75	3.45	3.47	92.0	92.5	70.0-130			0.578	25
MTBE	3.75	3.81	3.81	102	102	70.0-130			0.000	25
trans-1,2-Dichloroethene	3.75	3.75	3.69	100	98.4	70.0-130			1.61	25
Vinyl acetate	3.75	3.47	3.27	92.5	87.2	70.0-130			5.93	25
Methyl Ethyl Ketone	3.75	3.68	3.73	98.1	99.5	70.0-130			1.35	25
cis-1,2-Dichloroethene	3.75	3.73	3.70	99.5	98.7	70.0-130			0.808	25
Chloroform	3.75	4.03	3.93	107	105	70.0-130			2.51	25
1,1,1-Trichloroethane	3.75	4.18	4.08	111	109	70.0-130			2.42	25
Carbon tetrachloride	3.75	4.28	4.18	114	111	70.0-130			2.36	25
Benzene	3.75	3.93	3.82	105	102	70.0-130			2.84	25
1,2-Dichloroethane	3.75	4.00	3.98	107	106	70.0-130			0.501	25
Heptane	3.75	3.34	3.36	89.1	89.6	70.0-130			0.597	25
Trichloroethylene	3.75	4.20	4.19	112	112	70.0-130			0.238	25
1,2-Dichloropropane	3.75	3.74	3.73	99.7	99.5	70.0-130			0.268	25
1,4-Dioxane	3.75	3.97	3.82	106	102	70.0-140			3.85	25
Bromodichloromethane	3.75	4.10	4.12	109	110	70.0-130			0.487	25
cis-1,3-Dichloropropene	3.75	3.92	3.90	105	104	70.0-130			0.512	25
4-Methyl-2-pentanone (MIBK)	3.75	3.53	3.47	94.1	92.5	70.0-139			1.71	25
Toluene	3.75	4.03	3.99	107	106	70.0-130			0.998	25
trans-1,3-Dichloropropene	3.75	4.01	4.06	107	108	70.0-130			1.24	25
1,1,2-Trichloroethane	3.75	4.18	4.12	111	110	70.0-130			1.45	25
Tetrachloroethylene	3.75	4.44	4.39	118	117	70.0-130			1.13	25
Methyl Butyl Ketone	3.75	3.59	3.57	95.7	95.2	70.0-149			0.559	25
Dibromochloromethane	3.75	4.27	4.33	114	115	70.0-130			1.40	25
1,2-Dibromoethane	3.75	4.21	4.25	112	113	70.0-130			0.946	25
Chlorobenzene	3.75	4.28	4.29	114	114	70.0-130			0.233	25
Ethylbenzene	3.75	4.14	4.10	110	109	70.0-130			0.971	25
m&p-Xylene	7.50	8.27	8.26	110	110	70.0-130			0.121	25
o-Xylene	3.75	4.16	4.13	111	110	70.0-130			0.724	25
Styrene	3.75	4.20	4.19	112	112	70.0-130			0.238	25

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3628811-1 03/07/21 08:10 • (LCSD) R3628811-2 03/07/21 08:50

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	3.75	4.42	4.45	118	119	70.0-130			0.676	25
1,1,2,2-Tetrachloroethane	3.75	4.05	4.07	108	109	70.0-130			0.493	25
4-Ethyltoluene	3.75	4.54	4.42	121	118	70.0-130			2.68	25
1,3,5-Trimethylbenzene	3.75	4.39	4.35	117	116	70.0-130			0.915	25
1,2,4-Trimethylbenzene	3.75	4.46	4.40	119	117	70.0-130			1.35	25
1,3-Dichlorobenzene	3.75	4.83	4.77	129	127	70.0-130			1.25	25
1,4-Dichlorobenzene	3.75	4.90	4.86	131	130	70.0-130	J4		0.820	25
Benzyl Chloride	3.75	5.68	5.55	151	148	70.0-152			2.32	25
1,2-Dichlorobenzene	3.75	4.75	4.71	127	126	70.0-130			0.846	25
1,2,4-Trichlorobenzene	3.75	5.80	5.69	155	152	70.0-160			1.91	25
Hexachloro-1,3-butadiene	3.75	4.98	4.80	133	128	70.0-151			3.68	25
Naphthalene	3.75	4.27	4.20	114	112	70.0-159			1.65	25
TPH (GC/MS) Low Fraction	203	251	247	124	122	70.0-130			1.61	25
Allyl Chloride	3.75	3.67	3.70	97.9	98.7	70.0-130			0.814	25
2-Chlorotoluene	3.75	4.27	4.14	114	110	70.0-130			3.09	25
Methyl Methacrylate	3.75	3.75	3.65	100	97.3	70.0-130			2.70	25
Tetrahydrofuran	3.75	3.24	3.27	86.4	87.2	70.0-137			0.922	25
2,2,4-Trimethylpentane	3.75	3.57	3.49	95.2	93.1	70.0-130			2.27	25
Vinyl Bromide	3.75	4.01	3.92	107	105	70.0-130			2.27	25
Isopropylbenzene	3.75	4.26	4.20	114	112	70.0-130			1.42	25
(S) 1,4-Bromofluorobenzene				98.5	99.2	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

Volatile Organic Compounds (MS) by Method TO-15 [L1323982-01](#)

Method Blank (MB)

(MB) R3628843-2 03/09/21 09:51

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	94.2			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3628843-1 03/09/21 09:14 • (LCSD) R3628843-3 03/09/21 10:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
n-Hexane	3.75	4.27	4.40	114	117	70.0-130			3.00	25
Cyclohexane	3.75	4.11	4.12	110	110	70.0-130			0.243	25
(S) 1,4-Bromofluorobenzene				100	101	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Tr

6Sr

7Qc

8Gl

9Al

10Sc

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

J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	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 ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	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 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ 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.

¹ Cp² Tc³ Ss⁴ Cn⁵ Tr⁶ Sr⁷ Qc⁸ Gl⁹ Al¹⁰ Sc

Released to Imaging: 3/21/2024 4:39:37 PM

Certificate of Analysis Summary 683637



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 683637-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.06.2021 13:20					
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.07.2021 11:57 Analyzed: 01.07.2021 12:55 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1340 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1340 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-38	Extracted: Analyzed: 01.07.2021 16:43 Units/RL: % RL					
Cation-Anion Balance	8.10					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-38	Extracted: 01.07.2021 11:03 Analyzed: 01.07.2021 12:02 Units/RL: mg/L RL					
Bromide	0.784 0.500					
Chloride	504 0.500					
Fluoride	<0.500 0.500					
Nitrate as N	0.155 0.100					
Nitrite as N	2.61 D 1.00					
Sulfate	23.0 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683637



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683637-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	01.06.2021 13:20					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-38	Extracted:	01.07.2021 07:20					
	Analyzed:	01.07.2021 14:13					
	Units/RL:	mg/L RL					
	Calcium	400 D 10.0					
	Magnesium	79.8 0.200					
	Potassium	6.14 0.500					
	Silica	63.1 1.07					
	Sodium	135 0.500					
TDS by SM2540C SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.07.2021 10:51					
	Units/RL:	mg/L RL					
Total Dissolved Solids		2210 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683637



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 683637-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.06.2021 13:20					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.07.2021 12:00 Analyzed: 01.07.2021 13:55 Units/RL: mg/L RL					
Benzene	0.00661 0.00100					
Bromobenzene	<0.00100 0.00100					
Bromochloromethane	<0.00100 0.00100					
Bromodichloromethane	<0.00100 0.00100					
Bromoform	<0.00500 0.00500					
Methyl bromide	<0.00500 0.00500					
2-Butanone	<0.0500 0.0500					
n-Butylbenzene	<0.00100 0.00100					
Sec-Butylbenzene	0.00233 0.00100					
tert-Butylbenzene	<0.00100 0.00100					
Carbon Tetrachloride	<0.00500 0.00500					
Chlorobenzene	<0.00100 0.00100					
Chloroethane	<0.0100 0.0100					
Chloroform	<0.00100 0.00100					
Methyl Chloride	<0.0100 0.0100					
2-Chlorotoluene	<0.00100 0.00100					
4-Chlorotoluene	<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)	0.00140 0.00100					
Dibromochloromethane	<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane	<0.00100 0.00100					
1,2-Dibromoethane	<0.00500 0.00500					
Methylene Bromide	<0.00100 0.00100					
1,2-Dichlorobenzene	<0.00100 0.00100					
1,3-Dichlorobenzene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683637



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 683637-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.06.2021 13:20					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.07.2021 12:00 Analyzed: 01.07.2021 13:55 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0239 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.0122 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.00710 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683637



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 683637-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.06.2021 13:20					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.07.2021 12:00 Analyzed: 01.07.2021 13:55 Units/RL: mg/L RL					
Toluene	0.0494 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0334 0.00100					
1,3,5-Trimethylbenzene	0.0113 0.00100					
o-Xylene	0.0141 0.00100					
m,p-Xylenes	0.0930 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.107 0.00100					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.07.2021 14:38 Units/RL: Deg C RL					
Temperature	12.0 K					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.07.2021 14:38 Units/RL: SU RL					
pH	6.27 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 683637

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

01.07.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.07.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **683637**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683637. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 683637 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 683637

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	01.06.2021 13:20		683637-001



CASE NARRATIVE

Client Name: *Ensolum*

Project Name: *Levey Well*

Project ID: 03B1417001
Work Order Number(s): 683637

Report Date: 01.07.2021
Date Received: 01.06.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 683637

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.06.2021 15:39

Lab Sample Id: 683637-001

Date Collected: 01.06.2021 13:20

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.07.2021 11:57

% Moisture:

Seq Number: 3147034

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO₃)	1640192	1340	4.00	mg/L	01.07.2021 12:55		1
Alkalinity, Bicarbonate (as CaCO₃)	471-34-1	1340	4.00	mg/L	01.07.2021 12:55		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	01.07.2021 12:55	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	01.07.2021 12:55	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

Seq Number: 3147060

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	8.10		%	01.07.2021 16:43		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.07.2021 11:03

% Moisture:

Seq Number: 3147056

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.784	0.500	mg/L	01.07.2021 12:02		1
Chloride	16887-00-6	504	0.500	mg/L	01.07.2021 12:02		1
Fluoride	16984-48-8	<0.500	0.500	mg/L	01.07.2021 12:02	U	1
Nitrate as N	14797-55-8	0.155	0.100	mg/L	01.07.2021 12:02		1
Nitrite as N	14797-65-0	2.61	1.00	mg/L	01.07.2021 12:14	D	10
Sulfate	14808-79-8	23.0	0.500	mg/L	01.07.2021 12:02		1

Analytical Method: TDS by SM2540C

Tech: YAV

Analyst: YAV

Seq Number: 3146961

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	2210	5.00	mg/L	01.07.2021 10:51		1



Certificate of Analytical Results 683637

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.06.2021 15:39

Lab Sample Id: 683637-001

Date Collected: 01.06.2021 13:20

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3147021

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.27		SU	01.07.2021 14:38	K	1
Temperature	TEMP	12.0		Deg C	01.07.2021 14:38	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: VID

Analyst: DEP

Date Prep: 01.07.2021 07:20

% Moisture:

SUB: T104704215-20-38

Seq Number: 3147046

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	400	10.0	mg/L	01.07.2021 14:18	D	50
Magnesium	7439-95-4	79.8	0.200	mg/L	01.07.2021 14:13		1
Potassium	7440-09-7	6.14	0.500	mg/L	01.07.2021 14:13		1
Silica	7631-86-9	63.1	1.07	mg/L	01.07.2021 14:13		1
Sodium	7440-23-5	135	0.500	mg/L	01.07.2021 14:13		1



Certificate of Analytical Results 683637

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.06.2021 15:39

Lab Sample Id: 683637-001

Date Collected: 01.06.2021 13:20

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.07.2021 12:00

% Moisture:

Seq Number: 3147038

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00661	0.00100	mg/L	01.07.2021 13:55		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.07.2021 13:55	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Sec-Butylbenzene	135-98-8	0.00233	0.00100	mg/L	01.07.2021 13:55		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.07.2021 13:55	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.07.2021 13:55	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00140	0.00100	mg/L	01.07.2021 13:55		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Ethylbenzene	100-41-4	0.0239	0.00100	mg/L	01.07.2021 13:55		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Isopropylbenzene	98-82-8	0.0122	0.00100	mg/L	01.07.2021 13:55		1



Certificate of Analytical Results 683637

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.06.2021 15:39

Lab Sample Id: 683637-001

Date Collected: 01.06.2021 13:20

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.07.2021 12:00

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.07.2021 13:55	U	1
n-Propylbenzene	103-65-1	0.00710	0.00100	mg/L	01.07.2021 13:55		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Toluene	108-88-3	0.0494	0.00100	mg/L	01.07.2021 13:55		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.07.2021 13:55	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.07.2021 13:55	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0334	0.00100	mg/L	01.07.2021 13:55		1
1,3,5-Trimethylbenzene	108-67-8	0.0113	0.00100	mg/L	01.07.2021 13:55		1
o-Xylene	95-47-6	0.0141	0.00100	mg/L	01.07.2021 13:55		1
m,p-Xylenes	179601-23-1	0.0930	0.0100	mg/L	01.07.2021 13:55		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.07.2021 13:55	U	1
Total Xylenes	1330-20-7	0.107	0.00100	mg/L	01.07.2021 13:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	01.07.2021 13:55	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	01.07.2021 13:55	
Toluene-D8	2037-26-5	99	%	80-117	01.07.2021 13:55	
4-Bromofluorobenzene	460-00-4	102	%	74-124	01.07.2021 13:55	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

MB Sample Id: 7718637-1-BLK

Matrix: Water

LCS Sample Id: 7718637-1-BKS

Prep Method: SM2320P

Date Prep: 01.07.2021

LCSD Sample Id: 7718637-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	261	104	265	106	85-115	2	20	mg/L	01.07.2021 12:21	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

Matrix: Water

MB Sample Id: 7718637-1-BLK

Prep Method: SM2320P

Date Prep: 01.07.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	01.07.2021 12:13	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	01.07.2021 12:13	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	01.07.2021 12:13	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

Matrix: Ground Water

Parent Sample Id: 682270-001

MD Sample Id: 682270-001 D

Prep Method: SM2320P

Date Prep: 01.07.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	200	199	1	20	mg/L	01.07.2021 12:40	
Alkalinity, Bicarbonate (as CaCO ₃)	200	199	1	20	mg/L	01.07.2021 12:40	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.07.2021 12:40	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.07.2021 12:40	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

Matrix: Water

Parent Sample Id: 682844-001

MD Sample Id: 682844-001 D

Prep Method: SM2320P

Date Prep: 01.07.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	129	125	3	20	mg/L	01.07.2021 14:22	
Alkalinity, Bicarbonate (as CaCO ₃)	129	125	3	20	mg/L	01.07.2021 14:22	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.07.2021 14:22	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.07.2021 14:22	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3147056

Matrix: Water

Prep Method: E300P

Date Prep: 01.07.2021

MB Sample Id: 7718617-1-BLK

LCS Sample Id: 7718617-1-BKS

LCSD Sample Id: 7718617-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.93	99	9.88	99	90-110	1	20	mg/L	01.07.2021 11:37	
Chloride	<0.500	10.0	10.1	101	10.1	101	90-110	0	20	mg/L	01.07.2021 11:37	
Fluoride	<0.500	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	01.07.2021 11:37	
Nitrate as N	<0.100	10.0	10.0	100	9.98	100	90-110	0	20	mg/L	01.07.2021 11:37	
Nitrite as N	<0.100	10.0	9.95	100	9.92	99	90-110	0	20	mg/L	01.07.2021 11:37	
Sulfate	<0.500	10.0	9.84	98	9.83	98	90-110	0	20	mg/L	01.07.2021 11:37	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3147056

Matrix: Water

Prep Method: E300P

Date Prep: 01.07.2021

Parent Sample Id: 683832-001

MS Sample Id: 683832-001 S

MSD Sample Id: 683832-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.3	103	10.3	103	90-110	0	20	mg/L	01.07.2021 13:52	
Chloride	111	10.0	119	80	119	80	90-110	0	20	mg/L	01.07.2021 13:52	X
Fluoride	<0.500	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	01.07.2021 13:52	
Nitrate as N	0.339	10.0	10.5	102	10.5	102	90-110	0	20	mg/L	01.07.2021 13:52	
Nitrite as N	0.178	10.0	9.99	98	9.99	98	90-110	0	20	mg/L	01.07.2021 13:52	
Sulfate	239	10.0	243	40	243	40	90-110	0	20	mg/L	01.07.2021 13:52	X

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3147056

Matrix: Water

Prep Method: E300P

Date Prep: 01.07.2021

Parent Sample Id: 683832-002

MS Sample Id: 683832-002 S

MSD Sample Id: 683832-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.2	102	10.2	102	90-110	0	20	mg/L	01.07.2021 14:29	
Chloride	111	10.0	119	80	119	80	90-110	0	20	mg/L	01.07.2021 14:29	X
Fluoride	<0.500	10.0	10.3	103	10.3	103	90-110	0	20	mg/L	01.07.2021 14:29	
Nitrate as N	0.319	10.0	10.4	101	10.4	101	90-110	0	20	mg/L	01.07.2021 14:29	
Nitrite as N	0.182	10.0	9.90	97	9.91	97	90-110	0	20	mg/L	01.07.2021 14:29	
Sulfate	239	10.0	243	40	243	40	90-110	0	20	mg/L	01.07.2021 14:29	X

Analytical Method: TDS by SM2540C

Seq Number: 3146961

Matrix: Water

MB Sample Id: 3146961-1-BLK

LCS Sample Id: 3146961-1-BKS

LCSD Sample Id: 3146961-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	1000	100	1010	101	80-120	1	10	mg/L	01.07.2021 10:51	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: TDS by SM2540C

Seq Number: 3146961

Matrix: Water

Parent Sample Id: 683637-001

MD Sample Id: 683637-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	2210	2290	4	10	mg/L	01.07.2021 10:51	

Analytical Method: pH by SM4500-H

Seq Number: 3147021

Matrix: Water

Parent Sample Id: 683359-001

MD Sample Id: 683359-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.47	7.55	1	20	SU	01.07.2021 14:38	
Temperature	14.4	13.9	4	20	Deg C	01.07.2021 14:38	

Analytical Method: pH by SM4500-H

Seq Number: 3147021

Matrix: Water

Parent Sample Id: 683571-002

MD Sample Id: 683571-002 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Temperature	13.6	13.0	5	20	Deg C	01.07.2021 14:38	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3147046

Matrix: Water

MB Sample Id: 7718611-1-BLK

LCS Sample Id: 7718611-1-BKS

Prep Method: E200.7P

Date Prep: 01.07.2021

LCSD Sample Id: 7718611-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.5	98	24.4	98	85-115	0	20	mg/L	01.07.2021 13:01	
Magnesium	<0.200	25.0	24.4	98	24.3	97	85-115	0	20	mg/L	01.07.2021 13:01	
Potassium	<0.500	10.0	9.85	99	9.79	98	85-115	1	20	mg/L	01.07.2021 13:01	
Silica	<1.07	21.4	21.3	100	21.4	100	85-115	0	20	mg/L	01.07.2021 13:01	
Sodium	<0.500	25.0	24.1	96	24.0	96	85-115	0	20	mg/L	01.07.2021 13:01	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3147046

Matrix: Water

Parent Sample Id: 682878-001

MS Sample Id: 682878-001 S

Prep Method: E200.7P

Date Prep: 01.07.2021

MSD Sample Id: 682878-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	76.6	25.0	99.9	93	99.3	91	70-130	1	20	mg/L	01.07.2021 13:13	
Magnesium	24.7	25.0	48.9	97	48.8	96	70-130	0	20	mg/L	01.07.2021 13:13	
Potassium	27.3	10.0	37.5	102	37.5	102	70-130	0	20	mg/L	01.07.2021 13:13	
Silica	14.1	21.4	35.5	100	35.5	100	70-130	0	20	mg/L	01.07.2021 13:13	
Sodium	669	25.0	686	68	682	52	70-130	1	20	mg/L	01.07.2021 13:13	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

MB Sample Id: 7718639-1-BLK

Matrix: Water

LCS Sample Id: 7718639-1-BKS

Prep Method: SW5030B

Date Prep: 01.07.2021

LCSD Sample Id: 7718639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0486	97	0.0465	93	66-142	4	25	mg/L	01.07.2021 10:21	
Bromobenzene	<0.00100	0.0500	0.0498	100	0.0501	100	75-125	1	25	mg/L	01.07.2021 10:21	
Bromochloromethane	<0.00100	0.0500	0.0489	98	0.0472	94	60-140	4	25	mg/L	01.07.2021 10:21	
Bromodichloromethane	<0.00100	0.0500	0.0483	97	0.0475	95	75-125	2	25	mg/L	01.07.2021 10:21	
Bromoform	<0.00500	0.0500	0.0469	94	0.0483	97	75-125	3	25	mg/L	01.07.2021 10:21	
Methyl bromide	<0.00500	0.0500	0.0408	82	0.0396	79	60-140	3	25	mg/L	01.07.2021 10:21	
2-Butanone	<0.0500	0.250	0.210	84	0.216	86	60-140	3	25	mg/L	01.07.2021 10:21	
n-Butylbenzene	<0.00100	0.0500	0.0541	108	0.0543	109	75-125	0	25	mg/L	01.07.2021 10:21	
Sec-Butylbenzene	<0.00100	0.0500	0.0536	107	0.0538	108	75-125	0	25	mg/L	01.07.2021 10:21	
tert-Butylbenzene	<0.00100	0.0500	0.0524	105	0.0523	105	75-125	0	25	mg/L	01.07.2021 10:21	
Carbon Tetrachloride	<0.00500	0.0500	0.0529	106	0.0493	99	62-125	7	25	mg/L	01.07.2021 10:21	
Chlorobenzene	<0.00100	0.0500	0.0481	96	0.0477	95	60-133	1	25	mg/L	01.07.2021 10:21	
Chloroethane	<0.0100	0.0500	0.0484	97	0.0457	91	60-140	6	25	mg/L	01.07.2021 10:21	
Chloroform	<0.00100	0.0500	0.0483	97	0.0464	93	70-130	4	25	mg/L	01.07.2021 10:21	
Methyl Chloride	<0.0100	0.0500	0.0446	89	0.0423	85	60-140	5	25	mg/L	01.07.2021 10:21	
2-Chlorotoluene	<0.00100	0.0500	0.0517	103	0.0522	104	73-125	1	25	mg/L	01.07.2021 10:21	
4-Chlorotoluene	<0.00100	0.0500	0.0509	102	0.0514	103	74-125	1	25	mg/L	01.07.2021 10:21	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0532	106	0.0532	106	75-125	0	25	mg/L	01.07.2021 10:21	
Dibromochloromethane	<0.00500	0.0500	0.0479	96	0.0481	96	73-125	0	25	mg/L	01.07.2021 10:21	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0448	90	0.0480	96	59-125	7	25	mg/L	01.07.2021 10:21	
1,2-Dibromoethane	<0.00500	0.0500	0.0475	95	0.0484	97	73-125	2	25	mg/L	01.07.2021 10:21	
Methylene Bromide	<0.00100	0.0500	0.0472	94	0.0469	94	69-127	1	25	mg/L	01.07.2021 10:21	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0501	100	0.0511	102	75-125	2	25	mg/L	01.07.2021 10:21	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0504	101	0.0509	102	75-125	1	25	mg/L	01.07.2021 10:21	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0497	99	0.0505	101	75-125	2	25	mg/L	01.07.2021 10:21	
Dichlorodifluoromethane	<0.00100	0.0500	0.0472	94	0.0435	87	60-140	8	25	mg/L	01.07.2021 10:21	
1,1-Dichloroethane	<0.00100	0.0500	0.0489	98	0.0460	92	72-125	6	25	mg/L	01.07.2021 10:21	
1,2-Dichloroethane	<0.00100	0.0500	0.0491	98	0.0486	97	68-127	1	25	mg/L	01.07.2021 10:21	
1,1-Dichloroethene	<0.00100	0.0500	0.0500	100	0.0471	94	59-172	6	25	mg/L	01.07.2021 10:21	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0469	94	0.0458	92	75-125	2	25	mg/L	01.07.2021 10:21	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0491	98	0.0464	93	75-125	6	25	mg/L	01.07.2021 10:21	
1,2-Dichloropropane	<0.00500	0.0500	0.0487	97	0.0472	94	74-125	3	25	mg/L	01.07.2021 10:21	
1,3-Dichloropropane	<0.00500	0.0500	0.0466	93	0.0476	95	75-125	2	25	mg/L	01.07.2021 10:21	
2,2-Dichloropropane	<0.00500	0.0500	0.0508	102	0.0470	94	75-125	8	25	mg/L	01.07.2021 10:21	
1,1-Dichloropropene	<0.00500	0.0500	0.0512	102	0.0489	98	75-125	5	25	mg/L	01.07.2021 10:21	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0490	98	0.0472	94	74-125	4	25	mg/L	01.07.2021 10:21	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0481	96	0.0470	94	66-125	2	25	mg/L	01.07.2021 10:21	
Ethylbenzene	<0.00100	0.0500	0.0496	99	0.0489	98	75-125	1	25	mg/L	01.07.2021 10:21	
Hexachlorobutadiene	<0.00500	0.0500	0.0531	106	0.0556	111	75-125	5	25	mg/L	01.07.2021 10:21	
Isopropylbenzene	<0.00100	0.0500	0.0505	101	0.0497	99	75-125	2	25	mg/L	01.07.2021 10:21	
Methylene Chloride	<0.00500	0.0500	0.0448	90	0.0430	86	75-125	4	25	mg/L	01.07.2021 10:21	
MTBE	<0.00500	0.0500	0.0492	98	0.0481	96	65-135	2	25	mg/L	01.07.2021 10:21	
Naphthalene	<0.0100	0.0500	0.0451	90	0.0512	102	70-130	13	25	mg/L	01.07.2021 10:21	
n-Propylbenzene	<0.00100	0.0500	0.0535	107	0.0534	107	75-125	0	25	mg/L	01.07.2021 10:21	
Styrene	<0.00100	0.0500	0.0479	96	0.0474	95	75-125	1	25	mg/L	01.07.2021 10:21	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0479	96	0.0474	95	72-125	1	25	mg/L	01.07.2021 10:21	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0490	98	0.0520	104	74-125	6	25	mg/L	01.07.2021 10:21	
Tetrachloroethylene	<0.00100	0.0500	0.0498	100	0.0498	100	71-125	0	25	mg/L	01.07.2021 10:21	
Toluene	<0.00100	0.0500	0.0475	95	0.0472	94	59-139	1	25	mg/L	01.07.2021 10:21	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0463	93	0.0520	104	75-137	12	25	mg/L	01.07.2021 10:21	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum
Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

MB Sample Id: 7718639-1-BLK

Matrix: Water

LCS Sample Id: 7718639-1-BKS

Prep Method: SW5030B

Date Prep: 01.07.2021

LCSD Sample Id: 7718639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0476	95	0.0516	103	75-135	8	25	mg/L	01.07.2021 10:21	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0503	101	0.0475	95	75-125	6	25	mg/L	01.07.2021 10:21	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0463	93	0.0471	94	75-127	2	25	mg/L	01.07.2021 10:21	
Trichloroethylene	<0.00500	0.0500	0.0487	97	0.0464	93	62-137	5	25	mg/L	01.07.2021 10:21	
Trichlorofluoromethane	<0.00100	0.0500	0.0557	111	0.0517	103	60-140	7	25	mg/L	01.07.2021 10:21	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0486	97	0.0504	101	75-125	4	25	mg/L	01.07.2021 10:21	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0512	102	0.0521	104	75-125	2	25	mg/L	01.07.2021 10:21	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0522	104	0.0522	104	70-125	0	25	mg/L	01.07.2021 10:21	
o-Xylene	<0.00100	0.0500	0.0485	97	0.0477	95	75-125	2	25	mg/L	01.07.2021 10:21	
m,p-Xylenes	<0.0100	0.100	0.0990	99	0.0979	98	75-125	1	25	mg/L	01.07.2021 10:21	
Vinyl Chloride	<0.00200	0.0500	0.0497	99	0.0464	93	60-140	7	25	mg/L	01.07.2021 10:21	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		101		101		75-131			%	01.07.2021 10:21	
1,2-Dichloroethane-D4	101		101		101		63-144			%	01.07.2021 10:21	
Toluene-D8	99		99		102		80-117			%	01.07.2021 10:21	
4-Bromofluorobenzene	102		104		104		74-124			%	01.07.2021 10:21	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

Parent Sample Id: 683082-001

Matrix: Waste Water

MS Sample Id: 683082-001 S

Prep Method: SW5030B

Date Prep: 01.07.2021

MSD Sample Id: 683082-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0480	96	0.0460	92	66-142	4	25	mg/L	01.07.2021 10:59	
Bromobenzene	<0.00100	0.0500	0.0481	96	0.0466	93	75-125	3	25	mg/L	01.07.2021 10:59	
Bromochloromethane	<0.00100	0.0500	0.0483	97	0.0466	93	60-140	4	25	mg/L	01.07.2021 10:59	
Bromodichloromethane	<0.00100	0.0500	0.0479	96	0.0466	93	75-125	3	25	mg/L	01.07.2021 10:59	
Bromoform	<0.00500	0.0500	0.0465	93	0.0458	92	75-125	2	25	mg/L	01.07.2021 10:59	
Methyl bromide	<0.00500	0.0500	0.0422	84	0.0405	81	60-140	4	25	mg/L	01.07.2021 10:59	
2-Butanone	<0.0500	0.250	0.218	87	0.222	89	60-140	2	25	mg/L	01.07.2021 10:59	
n-Butylbenzene	<0.00100	0.0500	0.0526	105	0.0500	100	75-125	5	25	mg/L	01.07.2021 10:59	
Sec-Butylbenzene	<0.00100	0.0500	0.0514	103	0.0490	98	75-125	5	25	mg/L	01.07.2021 10:59	
tert-Butylbenzene	<0.00100	0.0500	0.0503	101	0.0476	95	75-125	6	25	mg/L	01.07.2021 10:59	
Carbon Tetrachloride	<0.00500	0.0500	0.0517	103	0.0494	99	62-125	5	25	mg/L	01.07.2021 10:59	
Chlorobenzene	<0.00100	0.0500	0.0479	96	0.0464	93	60-133	3	25	mg/L	01.07.2021 10:59	
Chloroethane	<0.0100	0.0500	0.0490	98	0.0466	93	60-140	5	25	mg/L	01.07.2021 10:59	
Chloroform	<0.00100	0.0500	0.0478	96	0.0469	94	70-130	2	25	mg/L	01.07.2021 10:59	
Methyl Chloride	<0.0100	0.0500	0.0427	85	0.0417	83	60-140	2	25	mg/L	01.07.2021 10:59	
2-Chlorotoluene	<0.00100	0.0500	0.0498	100	0.0474	95	73-125	5	25	mg/L	01.07.2021 10:59	
4-Chlorotoluene	<0.00100	0.0500	0.0493	99	0.0473	95	74-125	4	25	mg/L	01.07.2021 10:59	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0512	102	0.0489	98	75-125	5	25	mg/L	01.07.2021 10:59	
Dibromochloromethane	<0.00500	0.0500	0.0477	95	0.0466	93	73-125	2	25	mg/L	01.07.2021 10:59	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0455	91	0.0464	93	59-125	2	25	mg/L	01.07.2021 10:59	
1,2-Dibromoethane	<0.00500	0.0500	0.0488	98	0.0471	94	73-125	4	25	mg/L	01.07.2021 10:59	
Methylene Bromide	<0.00100	0.0500	0.0469	94	0.0463	93	69-127	1	25	mg/L	01.07.2021 10:59	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0487	97	0.0470	94	75-125	4	25	mg/L	01.07.2021 10:59	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0481	96	0.0466	93	75-125	3	25	mg/L	01.07.2021 10:59	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0483	97	0.0465	93	75-125	4	25	mg/L	01.07.2021 10:59	
Dichlorodifluoromethane	<0.00100	0.0500	0.0444	89	0.0421	84	60-140	5	25	mg/L	01.07.2021 10:59	
1,1-Dichloroethane	<0.00100	0.0500	0.0481	96	0.0460	92	72-125	4	25	mg/L	01.07.2021 10:59	
1,2-Dichloroethane	<0.00100	0.0500	0.0493	99	0.0480	96	68-127	3	25	mg/L	01.07.2021 10:59	
1,1-Dichloroethene	<0.00100	0.0500	0.0494	99	0.0469	94	59-172	5	25	mg/L	01.07.2021 10:59	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0466	93	0.0457	91	75-125	2	25	mg/L	01.07.2021 10:59	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0485	97	0.0464	93	75-125	4	25	mg/L	01.07.2021 10:59	
1,2-Dichloropropane	<0.00500	0.0500	0.0486	97	0.0472	94	74-125	3	25	mg/L	01.07.2021 10:59	
1,3-Dichloropropane	<0.00500	0.0500	0.0469	94	0.0460	92	75-125	2	25	mg/L	01.07.2021 10:59	
2,2-Dichloropropane	<0.00500	0.0500	0.0503	101	0.0474	95	75-125	6	25	mg/L	01.07.2021 10:59	
1,1-Dichloropropene	<0.00500	0.0500	0.0496	99	0.0490	98	75-125	1	25	mg/L	01.07.2021 10:59	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0491	98	0.0470	94	74-125	4	25	mg/L	01.07.2021 10:59	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0480	96	0.0466	93	66-125	3	25	mg/L	01.07.2021 10:59	
Ethylbenzene	<0.00100	0.0500	0.0497	99	0.0470	94	75-125	6	25	mg/L	01.07.2021 10:59	
Hexachlorobutadiene	<0.00500	0.0500	0.0525	105	0.0503	101	75-125	4	25	mg/L	01.07.2021 10:59	
Isopropylbenzene	<0.00100	0.0500	0.0496	99	0.0477	95	75-125	4	25	mg/L	01.07.2021 10:59	
Methylene Chloride	<0.00500	0.0500	0.0452	90	0.0430	86	75-125	5	25	mg/L	01.07.2021 10:59	
MTBE	<0.00500	0.0500	0.0490	98	0.0488	98	65-135	0	25	mg/L	01.07.2021 10:59	
Naphthalene	<0.0100	0.0500	0.0488	98	0.0486	97	70-130	0	25	mg/L	01.07.2021 10:59	
n-Propylbenzene	<0.00100	0.0500	0.0512	102	0.0489	98	75-125	5	25	mg/L	01.07.2021 10:59	
Styrene	<0.00100	0.0500	0.0476	95	0.0464	93	75-125	3	25	mg/L	01.07.2021 10:59	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0471	94	0.0457	91	72-125	3	25	mg/L	01.07.2021 10:59	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0484	97	0.0477	95	74-125	1	25	mg/L	01.07.2021 10:59	
Tetrachloroethylene	<0.00100	0.0500	0.0498	100	0.0473	95	71-125	5	25	mg/L	01.07.2021 10:59	
Toluene	<0.00100	0.0500	0.0478	96	0.0456	91	59-139	5	25	mg/L	01.07.2021 10:59	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0491	98	0.0496	99	75-137	1	25	mg/L	01.07.2021 10:59	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

Parent Sample Id: 683082-001

Matrix: Waste Water

MS Sample Id: 683082-001 S

Prep Method: SW5030B

Date Prep: 01.07.2021

MSD Sample Id: 683082-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0487	97	0.0474	95	75-135	3	25	mg/L	01.07.2021 10:59	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0500	100	0.0480	96	75-125	4	25	mg/L	01.07.2021 10:59	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0466	93	0.0465	93	75-127	0	25	mg/L	01.07.2021 10:59	
Trichloroethylene	<0.00500	0.0500	0.0482	96	0.0460	92	62-137	5	25	mg/L	01.07.2021 10:59	
Trichlorofluoromethane	<0.00100	0.0500	0.0546	109	0.0517	103	60-140	5	25	mg/L	01.07.2021 10:59	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0479	96	0.0472	94	75-125	1	25	mg/L	01.07.2021 10:59	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0502	100	0.0477	95	75-125	5	25	mg/L	01.07.2021 10:59	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0506	101	0.0482	96	70-125	5	25	mg/L	01.07.2021 10:59	
o-Xylene	<0.00100	0.0500	0.0479	96	0.0463	93	75-125	3	25	mg/L	01.07.2021 10:59	
m,p-Xylenes	<0.0100	0.100	0.0983	98	0.0934	93	75-125	5	25	mg/L	01.07.2021 10:59	
Vinyl Chloride	<0.00200	0.0500	0.0487	97	0.0462	92	60-140	5	25	mg/L	01.07.2021 10:59	

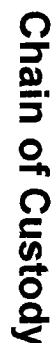
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		103		75-131	%	01.07.2021 10:59
1,2-Dichloroethane-D4	101		98		63-144	%	01.07.2021 10:59
Toluene-D8	100		99		80-117	%	01.07.2021 10:59
4-Bromofluorobenzene	103		101		74-124	%	01.07.2021 10:59

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296

www.xenco.com Page 1 of 1

Work Order No: 1083637

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

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	7.2	7.7			Thermometer ID		
Received Intact:	Yes	No			1128		
Cooler Custody Seals:	Yes	No	N/A		Correction Factor:		3
Sample Custody Seals:	Yes	No	N/A		Total Containers:		

Number of Containers

F, Cl, SO₄, B

: Ca, K, Mg, Na, Si

ty

TAT starts the day received by the lab. if received by 4:30pm

[illegible]

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
<i>Circle Method(s) and Metal(s) to be analyzed</i>			TCLP/SLP 6010		8RCRA	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	TLL												
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.																																		
1634 / 245-1 / 7470-17474-Hg																																		

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11-27-1539			

Inter-Office Shipment

IOS Number : **75980**

Date/Time: 01.06.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 7725561803336

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
683637-001	W	Levey Well	01.06.2021 13:20	SW8260C	VOCs by SW-846 8260C	01.07.2021	01.20.2021	JKR	BDCME BRBZ BRCLME	
683637-001	W	Levey Well	01.06.2021 13:20	E200.7	Recoverable Metals per ICP by EPA 200	01.07.2021	07.05.2021	JKR	CA K MG NA SI	
683637-001	W	Levey Well	01.06.2021 13:20	E300	Inorganic Anions by EPA 300/300.1	01.07.2021	01.08.2021 13:20	JKR	BR CL F NO2N NO3N SC	
683637-001	W	Levey Well	01.06.2021 13:20	SM4500-H	pH by SM4500-H	01.07.2021	01.06.2021 13:20	JKR		
683637-001	W	Levey Well	01.06.2021 13:20	SM2540C	TDS by SM2540C	01.07.2021	01.13.2021	JKR	TDS	
683637-001	W	Levey Well	01.06.2021 13:20	SM2320B	Alkalinity by SM2320B	01.07.2021	01.20.2021	JKR	ALK ALKB ALKC	
683637-001	W	Levey Well	01.06.2021 13:20	SM1030E	Cation-Anion Balance Calculation	01.07.2021	02.05.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.06.2021

Received By:



Jhyrom Edralin

Date Received: 01.07.2021

Cooler Temperature: 2.6



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 75980

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.06.2021 03.46 PM

Received By: Jhyrom Edralin

Date Received: 01.07.2021 10.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.07.2021

Certificate of Analysis Summary 684398



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 07:54
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 684398-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.12.2021 13:25					
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.13.2021 11:25 Analyzed: 01.13.2021 13:00 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1160 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1160 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-38	Extracted: Analyzed: 01.13.2021 17:14 Units/RL: % RL					
Cation-Anion Balance	7.00					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-38	Extracted: 01.13.2021 10:05 Analyzed: 01.13.2021 12:00 Units/RL: mg/L RL					
Bromide	0.605 0.500					
Chloride	326 0.500					
Fluoride	<0.500 0.500					
Nitrate as N	0.137 0.100					
Nitrite as N	1.05 D 0.500					
Sulfate	<0.500 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 684398

Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
 Contact: Beaux Jennings
 Project Location: Hobbs NM

Date Received in Lab: Tue 01.12.2021 15:35
 Report Date: 01.14.2021 07:54
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684398-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	01.12.2021 13:25					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-38	Extracted:	01.13.2021 11:00					
	Analyzed:	01.13.2021 14:59					
	Units/RL:	mg/L RL					
	Calcium	324 D 10.0					
	Magnesium	64.3 0.200					
	Potassium	5.68 0.500					
	Silica	59.2 1.07					
	Sodium	97.8 0.500					
TDS by SM2540C SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.13.2021 11:30					
	Units/RL:	mg/L RL					
Total Dissolved Solids		1680 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 684398

Ensolum, Dallas, TX

Project Name: Levey Well

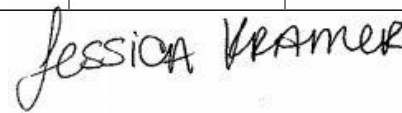
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 07:54
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684398-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	01.12.2021 13:25					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.13.2021 10:50					
	Analyzed:	01.13.2021 17:15					
	Units/RL:	mg/L RL					
Benzene		0.00362 0.00100					
Bromobenzene		<0.00100 0.00100					
Bromochloromethane		<0.00100 0.00100					
Bromodichloromethane		<0.00100 0.00100					
Bromoform		<0.00500 0.00500					
Methyl bromide		<0.00500 0.00500					
2-Butanone		<0.0500 0.0500					
n-Butylbenzene		0.00159 0.00100					
Sec-Butylbenzene		0.00278 0.00100					
tert-Butylbenzene		<0.00100 0.00100					
Carbon Tetrachloride		<0.00500 0.00500					
Chlorobenzene		<0.00100 0.00100					
Chloroethane		<0.0100 0.0100					
Chloroform		<0.00100 0.00100					
Methyl Chloride		<0.0100 0.0100					
2-Chlorotoluene		<0.00100 0.00100					
4-Chlorotoluene		<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)		0.00157 0.00100					
Dibromochloromethane		<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane		<0.00100 0.00100					
1,2-Dibromoethane		<0.00500 0.00500					
Methylene Bromide		<0.00100 0.00100					
1,2-Dichlorobenzene		<0.00100 0.00100					
1,3-Dichlorobenzene		<0.00100 0.00100					

BRL - Below Reporting Limit

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Certificate of Analysis Summary 684398



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 07:54
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684398-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	01.12.2021 13:25					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.13.2021 10:50					
	Analyzed:	01.13.2021 17:15					
	Units/RL:	mg/L RL					
1,4-Dichlorobenzene		<0.00100 0.00100					
Dichlorodifluoromethane		<0.00100 0.00100					
1,1-Dichloroethane		<0.00100 0.00100					
1,2-Dichloroethane		<0.00100 0.00100					
1,1-Dichloroethene		<0.00100 0.00100					
cis-1,2-Dichloroethylene		<0.00100 0.00100					
trans-1,2-dichloroethylene		<0.00100 0.00100					
1,2-Dichloropropane		<0.00500 0.00500					
1,3-Dichloropropane		<0.00500 0.00500					
2,2-Dichloropropane		<0.00500 0.00500					
1,1-Dichloropropene		<0.00500 0.00500					
cis-1,3-Dichloropropene		<0.00500 0.00500					
trans-1,3-dichloropropene		<0.00500 0.00500					
Ethylbenzene		0.0168 0.00100					
Hexachlorobutadiene		<0.00500 0.00500					
Isopropylbenzene		0.0105 0.00100					
Methylene Chloride		<0.00500 0.00500					
MTBE		<0.00500 0.00500					
Naphthalene		<0.0100 0.0100					
n-Propylbenzene		0.00959 0.00100					
Styrene		<0.00100 0.00100					
1,1,1,2-Tetrachloroethane		<0.00100 0.00100					
1,1,2,2-Tetrachloroethane		<0.00100 0.00100					
Tetrachloroethylene		<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 684398



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 07:54
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 684398-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.12.2021 13:25					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.13.2021 10:50 Analyzed: 01.13.2021 17:15 Units/RL: mg/L RL					
Toluene	0.0206 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0540 0.00100					
1,3,5-Trimethylbenzene	0.0174 0.00100					
o-Xylene	0.00849 0.00100					
m,p-Xylenes	0.0547 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.0632 0.00100					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.13.2021 14:04 Units/RL: Deg C RL					
Temperature	13.4 K					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.13.2021 14:04 Units/RL: SU RL					
pH	6.57 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 684398

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

01.14.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.14.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **684398**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 684398. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 684398 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 684398

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	01.12.2021 13:25		684398-001



CASE NARRATIVE

Client Name: *Ensolum*

Project Name: *Levey Well*

Project ID: 03B1417001
Work Order Number(s): 684398

Report Date: 01.14.2021
Date Received: 01.12.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 684398

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.12.2021 15:35

Lab Sample Id: 684398-001

Date Collected: 01.12.2021 13:25

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.13.2021 11:25

% Moisture:

SUB: T104704215-20-38

Seq Number: 3147675

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO₃)	1640192	1160	4.00	mg/L	01.13.2021 13:00		1
Alkalinity, Bicarbonate (as CaCO₃)	471-34-1	1160	4.00	mg/L	01.13.2021 13:00		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	01.13.2021 13:00	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	01.13.2021 13:00	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-38

Seq Number: 3147710

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	7.00		%	01.13.2021 17:14		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.13.2021 10:05

% Moisture:

SUB: T104704215-20-38

Seq Number: 3147703

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.605	0.500	mg/L	01.13.2021 12:00		1
Chloride	16887-00-6	326	0.500	mg/L	01.13.2021 12:00		1
Fluoride	16984-48-8	<0.500	0.500	mg/L	01.13.2021 12:00	U	1
Nitrate as N	14797-55-8	0.137	0.100	mg/L	01.13.2021 12:00		1
Nitrite as N	14797-65-0	1.05	0.500	mg/L	01.13.2021 12:12	D	5
Sulfate	14808-79-8	<0.500	0.500	mg/L	01.13.2021 12:00	U	1

Analytical Method: TDS by SM2540C

Tech: YAV

Analyst: YAV

% Moisture:

SUB: T104704215-20-38

Seq Number: 3147640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	1680	5.00	mg/L	01.13.2021 11:30		1



Certificate of Analytical Results 684398

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.12.2021 15:35

Lab Sample Id: 684398-001

Date Collected: 01.12.2021 13:25

Analytical Method: pH by SM4500-H

Tech: DTN

Analyst: DTN

Seq Number: 3147660

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.57		SU	01.13.2021 14:04	K	1
Temperature	TEMP	13.4		Deg C	01.13.2021 14:04	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 01.13.2021 11:00

% Moisture:

SUB: T104704215-20-38

Seq Number: 3147690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	324	10.0	mg/L	01.13.2021 15:03	D	50
Magnesium	7439-95-4	64.3	0.200	mg/L	01.13.2021 14:59		1
Potassium	7440-09-7	5.68	0.500	mg/L	01.13.2021 14:59		1
Silica	7631-86-9	59.2	1.07	mg/L	01.13.2021 14:59		1
Sodium	7440-23-5	97.8	0.500	mg/L	01.13.2021 14:59		1



Certificate of Analytical Results 684398

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.12.2021 15:35

Lab Sample Id: 684398-001

Date Collected: 01.12.2021 13:25

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.13.2021 10:50

% Moisture:

Seq Number: 3147726

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00362	0.00100	mg/L	01.13.2021 17:15		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.13.2021 17:15	U	1
n-Butylbenzene	104-51-8	0.00159	0.00100	mg/L	01.13.2021 17:15		1
Sec-Butylbenzene	135-98-8	0.00278	0.00100	mg/L	01.13.2021 17:15		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.13.2021 17:15	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.13.2021 17:15	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00157	0.00100	mg/L	01.13.2021 17:15		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Ethylbenzene	100-41-4	0.0168	0.00100	mg/L	01.13.2021 17:15		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Isopropylbenzene	98-82-8	0.0105	0.00100	mg/L	01.13.2021 17:15		1



Certificate of Analytical Results 684398

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.12.2021 15:35

Lab Sample Id: 684398-001

Date Collected: 01.12.2021 13:25

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.13.2021 10:50

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.13.2021 17:15	U	1
n-Propylbenzene	103-65-1	0.00959	0.00100	mg/L	01.13.2021 17:15		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Toluene	108-88-3	0.0206	0.00100	mg/L	01.13.2021 17:15		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.13.2021 17:15	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.13.2021 17:15	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0540	0.00100	mg/L	01.13.2021 17:15		1
1,3,5-Trimethylbenzene	108-67-8	0.0174	0.00100	mg/L	01.13.2021 17:15		1
o-Xylene	95-47-6	0.00849	0.00100	mg/L	01.13.2021 17:15		1
m,p-Xylenes	179601-23-1	0.0547	0.0100	mg/L	01.13.2021 17:15		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.13.2021 17:15	U	1
Total Xylenes	1330-20-7	0.0632	0.00100	mg/L	01.13.2021 17:15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	97	%	75-131	01.13.2021 17:15	
1,2-Dichloroethane-D4	17060-07-0	99	%	63-144	01.13.2021 17:15	
Toluene-D8	2037-26-5	101	%	80-117	01.13.2021 17:15	
4-Bromofluorobenzene	460-00-4	102	%	74-124	01.13.2021 17:15	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

MB Sample Id: 7719076-1-BLK

Matrix: Water

LCS Sample Id: 7719076-1-BKS

Prep Method: SM2320P

Date Prep: 01.13.2021

LCSD Sample Id: 7719076-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	258	103	261	104	85-115	1	20	mg/L	01.13.2021 11:49	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

Matrix: Water

MB Sample Id: 7719076-1-BLK

Prep Method: SM2320P

Date Prep: 01.13.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	01.13.2021 11:41	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	01.13.2021 11:41	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	01.13.2021 11:41	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

Matrix: Water

Parent Sample Id: 684027-005

MD Sample Id: 684027-005 D

Prep Method: SM2320P

Date Prep: 01.13.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	104	103	1	20	mg/L	01.13.2021 14:04	
Alkalinity, Bicarbonate (as CaCO ₃)	104	103	1	20	mg/L	01.13.2021 14:04	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.13.2021 14:04	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.13.2021 14:04	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

Matrix: Water

Parent Sample Id: 684085-007

MD Sample Id: 684085-007 D

Prep Method: SM2320P

Date Prep: 01.13.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	927	925	0	20	mg/L	01.13.2021 12:18	
Alkalinity, Bicarbonate (as CaCO ₃)	927	925	0	20	mg/L	01.13.2021 12:18	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.13.2021 12:18	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.13.2021 12:18	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3147703

Matrix: Water

Prep Method: E300P

Date Prep: 01.13.2021

MB Sample Id: 7719046-1-BLK

LCS Sample Id: 7719046-1-BKS

LCSD Sample Id: 7719046-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.2	102	10.3	103	90-110	1	20	mg/L	01.13.2021 09:50	
Chloride	<0.500	10.0	10.2	102	10.2	102	90-110	0	20	mg/L	01.13.2021 09:50	
Fluoride	<0.500	10.0	10.7	107	10.7	107	90-110	0	20	mg/L	01.13.2021 09:50	
Nitrate as N	<0.100	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	01.13.2021 09:50	
Nitrite as N	<0.100	10.0	9.89	99	9.89	99	90-110	0	20	mg/L	01.13.2021 09:50	
Sulfate	<0.500	10.0	10.2	102	10.2	102	90-110	0	20	mg/L	01.13.2021 09:50	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3147703

Matrix: Water

Prep Method: E300P

Date Prep: 01.13.2021

Parent Sample Id: 684431-005

MS Sample Id: 684431-005 S

MSD Sample Id: 684431-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<10.0	200	214	107	214	107	90-110	0	20	mg/L	01.13.2021 12:48	
Chloride	2310	200	2550	120	2550	120	90-110	0	20	mg/L	01.13.2021 12:48	X
Fluoride	<10.0	200	215	108	215	108	90-110	0	20	mg/L	01.13.2021 12:48	
Nitrate as N	<2.00	200	209	105	209	105	90-110	0	20	mg/L	01.13.2021 12:48	
Nitrite as N	<2.00	200	203	102	203	102	90-110	0	20	mg/L	01.13.2021 12:48	
Sulfate	<10.0	200	210	105	209	105	90-110	0	20	mg/L	01.13.2021 12:48	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3147703

Matrix: Water

Prep Method: E300P

Date Prep: 01.13.2021

Parent Sample Id: 684431-006

MS Sample Id: 684431-006 S

MSD Sample Id: 684431-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<10.0	200	215	108	215	108	90-110	0	20	mg/L	01.13.2021 13:23	
Chloride	2310	200	2530	110	2530	110	90-110	0	20	mg/L	01.13.2021 13:23	
Fluoride	<10.0	200	216	108	216	108	90-110	0	20	mg/L	01.13.2021 13:23	
Nitrate as N	<2.00	200	210	105	210	105	90-110	0	20	mg/L	01.13.2021 13:23	
Nitrite as N	<2.00	200	203	102	203	102	90-110	0	20	mg/L	01.13.2021 13:23	
Sulfate	<10.0	200	208	104	208	104	90-110	0	20	mg/L	01.13.2021 13:23	

Analytical Method: TDS by SM2540C

Seq Number: 3147640

Matrix: Water

MB Sample Id: 3147640-1-BLK

LCS Sample Id: 3147640-1-BKS

LCSD Sample Id: 3147640-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	1010	101	1010	101	80-120	0	10	mg/L	01.13.2021 11:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: TDS by SM2540C

Seq Number: 3147640

Matrix: Water

Parent Sample Id: 684398-001

MD Sample Id: 684398-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	1680	1630	3	10	mg/L	01.13.2021 11:30	

Analytical Method: pH by SM4500-H

Seq Number: 3147660

Matrix: Ground Water

Parent Sample Id: 684397-001

MD Sample Id: 684397-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.42	6.44	0	20	SU	01.13.2021 14:04	
Temperature	14.6	14.0	4	20	Deg C	01.13.2021 14:04	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3147690

Matrix: Water

MB Sample Id: 7719067-1-BLK

LCS Sample Id: 7719067-1-BKS

Prep Method: E200.7P

Date Prep: 01.13.2021

LCSD Sample Id: 7719067-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.4	98	24.4	98	85-115	0	20	mg/L	01.13.2021 14:34	
Magnesium	<0.200	25.0	24.3	97	24.3	97	85-115	0	20	mg/L	01.13.2021 14:34	
Potassium	<0.500	10.0	9.69	97	9.72	97	85-115	0	20	mg/L	01.13.2021 14:34	
Silica	<1.07	21.4	21.7	101	21.7	101	85-115	0	20	mg/L	01.13.2021 14:34	
Sodium	<0.500	25.0	24.0	96	24.0	96	85-115	0	20	mg/L	01.13.2021 14:34	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3147690

Matrix: Water

Parent Sample Id: 683690-001

MS Sample Id: 683690-001 S

Prep Method: E200.7P

Date Prep: 01.13.2021

MSD Sample Id: 683690-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	47.9	25.0	71.0	92	71.3	94	70-130	0	20	mg/L	01.13.2021 14:46	
Magnesium	27.0	25.0	51.2	97	51.5	98	70-130	1	20	mg/L	01.13.2021 14:46	
Potassium	8.62	10.0	19.3	107	19.4	108	70-130	1	20	mg/L	01.13.2021 14:46	
Silica	7.02	21.4	30.3	109	30.4	109	70-130	0	20	mg/L	01.13.2021 14:46	
Sodium	1380	25.0	1360	0	1370	0	70-130	1	20	mg/L	01.13.2021 14:46	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

MB Sample Id: 7719107-1-BLK

Matrix: Water

LCS Sample Id: 7719107-1-BKS

Prep Method: SW5030B

Date Prep: 01.13.2021

LCSD Sample Id: 7719107-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0506	101	0.0495	99	66-142	2	25	mg/L	01.13.2021 12:00	
Bromobenzene	<0.00100	0.0500	0.0509	102	0.0502	100	75-125	1	25	mg/L	01.13.2021 12:00	
Bromochloromethane	<0.00100	0.0500	0.0508	102	0.0504	101	60-140	1	25	mg/L	01.13.2021 12:00	
Bromodichloromethane	<0.00100	0.0500	0.0512	102	0.0500	100	75-125	2	25	mg/L	01.13.2021 12:00	
Bromoform	<0.00500	0.0500	0.0523	105	0.0518	104	75-125	1	25	mg/L	01.13.2021 12:00	
Methyl bromide	<0.00500	0.0500	0.0491	98	0.0485	97	60-140	1	25	mg/L	01.13.2021 12:00	
2-Butanone	<0.0500	0.250	0.209	84	0.224	90	60-140	7	25	mg/L	01.13.2021 12:00	
n-Butylbenzene	<0.00100	0.0500	0.0544	109	0.0519	104	75-125	5	25	mg/L	01.13.2021 12:00	
Sec-Butylbenzene	<0.00100	0.0500	0.0536	107	0.0518	104	75-125	3	25	mg/L	01.13.2021 12:00	
tert-Butylbenzene	<0.00100	0.0500	0.0533	107	0.0508	102	75-125	5	25	mg/L	01.13.2021 12:00	
Carbon Tetrachloride	<0.00500	0.0500	0.0533	107	0.0510	102	62-125	4	25	mg/L	01.13.2021 12:00	
Chlorobenzene	<0.00100	0.0500	0.0513	103	0.0493	99	60-133	4	25	mg/L	01.13.2021 12:00	
Chloroethane	<0.0100	0.0500	0.0464	93	0.0441	88	60-140	5	25	mg/L	01.13.2021 12:00	
Chloroform	<0.00100	0.0500	0.0497	99	0.0486	97	70-130	2	25	mg/L	01.13.2021 12:00	
Methyl Chloride	<0.0100	0.0500	0.0489	98	0.0485	97	60-140	1	25	mg/L	01.13.2021 12:00	
2-Chlorotoluene	<0.00100	0.0500	0.0517	103	0.0495	99	73-125	4	25	mg/L	01.13.2021 12:00	
4-Chlorotoluene	<0.00100	0.0500	0.0520	104	0.0502	100	74-125	4	25	mg/L	01.13.2021 12:00	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0545	109	0.0525	105	75-125	4	25	mg/L	01.13.2021 12:00	
Dibromochloromethane	<0.00500	0.0500	0.0533	107	0.0521	104	73-125	2	25	mg/L	01.13.2021 12:00	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0492	98	0.0506	101	59-125	3	25	mg/L	01.13.2021 12:00	
1,2-Dibromoethane	<0.00500	0.0500	0.0514	103	0.0514	103	73-125	0	25	mg/L	01.13.2021 12:00	
Methylene Bromide	<0.00100	0.0500	0.0496	99	0.0499	100	69-127	1	25	mg/L	01.13.2021 12:00	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0518	104	0.0496	99	75-125	4	25	mg/L	01.13.2021 12:00	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0522	104	0.0503	101	75-125	4	25	mg/L	01.13.2021 12:00	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0518	104	0.0501	100	75-125	3	25	mg/L	01.13.2021 12:00	
Dichlorodifluoromethane	<0.00100	0.0500	0.0496	99	0.0523	105	60-140	5	25	mg/L	01.13.2021 12:00	
1,1-Dichloroethane	<0.00100	0.0500	0.0507	101	0.0494	99	72-125	3	25	mg/L	01.13.2021 12:00	
1,2-Dichloroethane	<0.00100	0.0500	0.0506	101	0.0506	101	68-127	0	25	mg/L	01.13.2021 12:00	
1,1-Dichloroethene	<0.00100	0.0500	0.0541	108	0.0517	103	59-172	5	25	mg/L	01.13.2021 12:00	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0511	102	0.0505	101	75-125	1	25	mg/L	01.13.2021 12:00	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0516	103	0.0500	100	75-125	3	25	mg/L	01.13.2021 12:00	
1,2-Dichloropropane	<0.00500	0.0500	0.0507	101	0.0504	101	74-125	1	25	mg/L	01.13.2021 12:00	
1,3-Dichloropropane	<0.00500	0.0500	0.0510	102	0.0497	99	75-125	3	25	mg/L	01.13.2021 12:00	
2,2-Dichloropropane	<0.00500	0.0500	0.0540	108	0.0526	105	75-125	3	25	mg/L	01.13.2021 12:00	
1,1-Dichloropropene	<0.00500	0.0500	0.0525	105	0.0501	100	75-125	5	25	mg/L	01.13.2021 12:00	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0533	107	0.0524	105	74-125	2	25	mg/L	01.13.2021 12:00	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0532	106	0.0519	104	66-125	2	25	mg/L	01.13.2021 12:00	
Ethylbenzene	<0.00100	0.0500	0.0524	105	0.0497	99	75-125	5	25	mg/L	01.13.2021 12:00	
Hexachlorobutadiene	<0.00500	0.0500	0.0564	113	0.0540	108	75-125	4	25	mg/L	01.13.2021 12:00	
Isopropylbenzene	<0.00100	0.0500	0.0535	107	0.0509	102	75-125	5	25	mg/L	01.13.2021 12:00	
Methylene Chloride	<0.00500	0.0500	0.0455	91	0.0457	91	75-125	0	25	mg/L	01.13.2021 12:00	
MTBE	<0.00500	0.0500	0.0499	100	0.0505	101	65-135	1	25	mg/L	01.13.2021 12:00	
Naphthalene	<0.0100	0.0500	0.0520	104	0.0534	107	70-130	3	25	mg/L	01.13.2021 12:00	
n-Propylbenzene	<0.00100	0.0500	0.0523	105	0.0500	100	75-125	4	25	mg/L	01.13.2021 12:00	
Styrene	<0.00100	0.0500	0.0535	107	0.0511	102	75-125	5	25	mg/L	01.13.2021 12:00	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0526	105	0.0511	102	72-125	3	25	mg/L	01.13.2021 12:00	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0483	97	0.0488	98	74-125	1	25	mg/L	01.13.2021 12:00	
Tetrachloroethylene	<0.00100	0.0500	0.0523	105	0.0495	99	71-125	6	25	mg/L	01.13.2021 12:00	
Toluene	<0.00100	0.0500	0.0551	110	0.0518	104	59-139	6	25	mg/L	01.13.2021 12:00	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0527	105	0.0535	107	75-137	2	25	mg/L	01.13.2021 12:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

MB Sample Id: 7719107-1-BLK

Matrix: Water

LCS Sample Id: 7719107-1-BKS

Prep Method: SW5030B

Date Prep: 01.13.2021

LCSD Sample Id: 7719107-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0534	107	0.0522	104	75-135	2	25	mg/L	01.13.2021 12:00	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0528	106	0.0509	102	75-125	4	25	mg/L	01.13.2021 12:00	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0492	98	0.0483	97	75-127	2	25	mg/L	01.13.2021 12:00	
Trichloroethylene	<0.00500	0.0500	0.0518	104	0.0500	100	62-137	4	25	mg/L	01.13.2021 12:00	
Trichlorofluoromethane	<0.00100	0.0500	0.0538	108	0.0505	101	60-140	6	25	mg/L	01.13.2021 12:00	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0479	96	0.0492	98	75-125	3	25	mg/L	01.13.2021 12:00	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0531	106	0.0513	103	75-125	3	25	mg/L	01.13.2021 12:00	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0531	106	0.0515	103	70-125	3	25	mg/L	01.13.2021 12:00	
o-Xylene	<0.00100	0.0500	0.0529	106	0.0502	100	75-125	5	25	mg/L	01.13.2021 12:00	
m,p-Xylenes	<0.0100	0.100	0.107	107	0.102	102	75-125	5	25	mg/L	01.13.2021 12:00	
Vinyl Chloride	<0.00200	0.0500	0.0516	103	0.0509	102	60-140	1	25	mg/L	01.13.2021 12:00	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	97		99		99		75-131			%	01.13.2021 12:00	
1,2-Dichloroethane-D4	102		98		98		63-144			%	01.13.2021 12:00	
Toluene-D8	102		99		98		80-117			%	01.13.2021 12:00	
4-Bromofluorobenzene	103		99		101		74-124			%	01.13.2021 12:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 684397-001

MS Sample Id: 684397-001 S

Date Prep: 01.13.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.00211	0.0500	0.0481	92	66-142	mg/L	01.13.2021 13:24	
Bromobenzene	<0.00100	0.0500	0.0467	93	75-125	mg/L	01.13.2021 13:24	
Bromochloromethane	<0.00100	0.0500	0.0456	91	60-140	mg/L	01.13.2021 13:24	
Bromodichloromethane	<0.00100	0.0500	0.0464	93	75-125	mg/L	01.13.2021 13:24	
Bromoform	<0.00500	0.0500	0.0485	97	75-125	mg/L	01.13.2021 13:24	
Methyl bromide	<0.00500	0.0500	0.0431	86	60-140	mg/L	01.13.2021 13:24	
2-Butanone	<0.0500	0.250	0.192	77	60-140	mg/L	01.13.2021 13:24	
n-Butylbenzene	<0.00100	0.0500	0.0484	97	75-125	mg/L	01.13.2021 13:24	
Sec-Butylbenzene	0.000220	0.0500	0.0485	97	75-125	mg/L	01.13.2021 13:24	
tert-Butylbenzene	<0.00100	0.0500	0.0477	95	75-125	mg/L	01.13.2021 13:24	
Carbon Tetrachloride	<0.00500	0.0500	0.0467	93	62-125	mg/L	01.13.2021 13:24	
Chlorobenzene	<0.00100	0.0500	0.0473	95	60-133	mg/L	01.13.2021 13:24	
Chloroethane	<0.0100	0.0500	0.0424	85	60-140	mg/L	01.13.2021 13:24	
Chloroform	<0.00100	0.0500	0.0449	90	70-130	mg/L	01.13.2021 13:24	
Methyl Chloride	<0.0100	0.0500	0.0414	83	60-140	mg/L	01.13.2021 13:24	
2-Chlorotoluene	<0.00100	0.0500	0.0472	94	73-125	mg/L	01.13.2021 13:24	
4-Chlorotoluene	<0.00100	0.0500	0.0481	96	74-125	mg/L	01.13.2021 13:24	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0493	99	75-125	mg/L	01.13.2021 13:24	
Dibromochloromethane	<0.00500	0.0500	0.0484	97	73-125	mg/L	01.13.2021 13:24	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0489	98	59-125	mg/L	01.13.2021 13:24	
1,2-Dibromoethane	<0.00500	0.0500	0.0471	94	73-125	mg/L	01.13.2021 13:24	
Methylene Bromide	<0.00100	0.0500	0.0454	91	69-127	mg/L	01.13.2021 13:24	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0470	94	75-125	mg/L	01.13.2021 13:24	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0482	96	75-125	mg/L	01.13.2021 13:24	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0478	96	75-125	mg/L	01.13.2021 13:24	
Dichlorodifluoromethane	<0.00100	0.0500	0.0427	85	60-140	mg/L	01.13.2021 13:24	
1,1-Dichloroethane	<0.00100	0.0500	0.0459	92	72-125	mg/L	01.13.2021 13:24	
1,2-Dichloroethane	<0.00100	0.0500	0.0459	92	68-127	mg/L	01.13.2021 13:24	
1,1-Dichloroethene	<0.00100	0.0500	0.0474	95	59-172	mg/L	01.13.2021 13:24	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0461	92	75-125	mg/L	01.13.2021 13:24	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0468	94	75-125	mg/L	01.13.2021 13:24	
1,2-Dichloropropane	<0.00500	0.0500	0.0466	93	74-125	mg/L	01.13.2021 13:24	
1,3-Dichloropropane	<0.00500	0.0500	0.0467	93	75-125	mg/L	01.13.2021 13:24	
2,2-Dichloropropane	<0.00500	0.0500	0.0481	96	75-125	mg/L	01.13.2021 13:24	
1,1-Dichloropropene	<0.00500	0.0500	0.0462	92	75-125	mg/L	01.13.2021 13:24	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0484	97	74-125	mg/L	01.13.2021 13:24	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0485	97	66-125	mg/L	01.13.2021 13:24	
Ethylbenzene	0.000540	0.0500	0.0473	94	75-125	mg/L	01.13.2021 13:24	
Hexachlorobutadiene	<0.00500	0.0500	0.0504	101	75-125	mg/L	01.13.2021 13:24	
Isopropylbenzene	0.000200	0.0500	0.0482	96	75-125	mg/L	01.13.2021 13:24	
Methylene Chloride	<0.00500	0.0500	0.0401	80	75-125	mg/L	01.13.2021 13:24	
MTBE	<0.00500	0.0500	0.0462	92	65-135	mg/L	01.13.2021 13:24	
Naphthalene	<0.0100	0.0500	0.0520	104	70-130	mg/L	01.13.2021 13:24	
n-Propylbenzene	<0.00100	0.0500	0.0474	95	75-125	mg/L	01.13.2021 13:24	
Styrene	<0.00100	0.0500	0.0485	97	75-125	mg/L	01.13.2021 13:24	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0478	96	72-125	mg/L	01.13.2021 13:24	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0470	94	74-125	mg/L	01.13.2021 13:24	
Tetrachloroethylene	<0.00100	0.0500	0.0465	93	71-125	mg/L	01.13.2021 13:24	
Toluene	0.000690	0.0500	0.0484	95	59-139	mg/L	01.13.2021 13:24	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0527	105	75-137	mg/L	01.13.2021 13:24	

 MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

 $[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

 LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

 MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 684397-001

MS Sample Id: 684397-001 S

Date Prep: 01.13.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0502	100	75-135	mg/L	01.13.2021 13:24	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0464	93	75-125	mg/L	01.13.2021 13:24	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0456	91	75-127	mg/L	01.13.2021 13:24	
Trichloroethylene	<0.00500	0.0500	0.0463	93	62-137	mg/L	01.13.2021 13:24	
Trichlorofluoromethane	<0.00100	0.0500	0.0453	91	60-140	mg/L	01.13.2021 13:24	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0509	102	75-125	mg/L	01.13.2021 13:24	
1,2,4-Trimethylbenzene	0.00143	0.0500	0.0499	97	75-125	mg/L	01.13.2021 13:24	
1,3,5-Trimethylbenzene	0.000670	0.0500	0.0493	97	70-125	mg/L	01.13.2021 13:24	
o-Xylene	<0.00100	0.0500	0.0473	95	75-125	mg/L	01.13.2021 13:24	
m,p-Xylenes	0.00163	0.100	0.0981	96	75-125	mg/L	01.13.2021 13:24	
Vinyl Chloride	<0.00200	0.0500	0.0455	91	60-140	mg/L	01.13.2021 13:24	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	97		75-131	%	01.13.2021 13:24
1,2-Dichloroethane-D4	97		63-144	%	01.13.2021 13:24
Toluene-D8	99		80-117	%	01.13.2021 13:24
4-Bromofluorobenzene	101		74-124	%	01.13.2021 13:24

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



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
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 281-1111
Hobbs, NM (575) 392-7550

www.xenco.com Page 1 of 1

Chain of Custody

Work Order No: 084398

Project Manager:		Beaux Jennings	Bill to: (if different)	
Company Name:		Ensolum LLC	Company Name:	
Address:		705 W Wadley #210	Address:	
City, State ZIP:		Midland TX	City, State ZIP:	
Phone:		432-230-3344	Email:	bjennings@ensolum.com

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

[illegible]

CUSTODY SEAL
ENVIRONMENTAL SAMPLING SUPPLY
www.essl.com 800-233-6425

Date: 1-12-21
Signature: [Handwritten Signature]

Inter-Office Shipment

IOS Number : **76272**

Date/Time: 01.12.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772608611558

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
684398-001	W	Levey Well	01.12.2021 13:25	SW8260C	VOCs by SW-846 8260C	01.13.2021	01.26.2021	JKR	BDCME BRBZ BRCLME	
684398-001	W	Levey Well	01.12.2021 13:25	E200.7	Recoverable Metals per ICP by EPA 200	01.13.2021	07.11.2021	JKR	CA K MG NA SI	
684398-001	W	Levey Well	01.12.2021 13:25	E300	Inorganic Anions by EPA 300/300.1	01.13.2021	01.14.2021 13:25	JKR	BR CL F NO2N NO3N SC	
684398-001	W	Levey Well	01.12.2021 13:25	SM4500-H	pH by SM4500-H	01.13.2021	01.12.2021 13:40	JKR		
684398-001	W	Levey Well	01.12.2021 13:25	SM2540C	TDS by SM2540C	01.13.2021	01.19.2021	JKR	TDS	
684398-001	W	Levey Well	01.12.2021 13:25	SM2320B	Alkalinity by SM2320B	01.13.2021	01.26.2021	JKR	ALK ALKB ALKC	
684398-001	W	Levey Well	01.12.2021 13:25	SM1030E	Cation-Anion Balance Calculation	01.13.2021	02.11.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.12.2021

Received By:



Jhyrom Edralin

Date Received: 01.13.2021

Cooler Temperature: 3.6



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 76272

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.12.2021 03.59 PM

Received By: Jhyrom Edralin

Date Received: 01.13.2021 11.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.13.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.12.2021 03.35.00 PM

Work Order #: 684398

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 01.12.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.13.2021

Certificate of Analysis Summary 685457

Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
 Contact: Beaux Jennings
 Project Location: Hobbs NM

Date Received in Lab: Wed 01.20.2021 16:52
 Report Date: 01.22.2021 18:00
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 685457-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.20.2021 14:45					
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.22.2021 12:14 Analyzed: 01.22.2021 13:46 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1200 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1200 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-38	Extracted: Analyzed: 01.22.2021 17:19 Units/RL: % RL					
Cation-Anion Balance	5.70					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-38	Extracted: 01.22.2021 08:20 Analyzed: 01.22.2021 11:41 Units/RL: mg/L RL					
Bromide	0.796 0.500					
Chloride	486 0.500					
Fluoride	<0.500 0.500					
Nitrate as N	0.138 0.100					
Nitrite as N	<0.100 0.100					
Sulfate	7.68 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 685457



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685457-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	01.20.2021 14:45					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-38	Extracted:	01.22.2021 11:10					
	Analyzed:	01.22.2021 15:57					
	Units/RL:	mg/L RL					
	Calcium	397 D 10.0					
	Magnesium	73.0 0.200					
	Potassium	6.00 0.500					
	Silica	64.9 1.07					
	Sodium	127 0.500					
TDS by SM2540C SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.22.2021 11:32					
	Units/RL:	mg/L RL					
Total Dissolved Solids		2170 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685457

Ensolum, Dallas, TX

Project Name: Levey Well

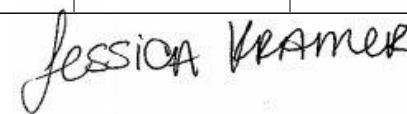
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 685457-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.20.2021 14:45					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.22.2021 16:13 Analyzed: *** ** * Units/RL: mg/L RL					
Benzene	0.00621 0.00100					
Bromobenzene	<0.00100 0.00100					
Bromochloromethane	<0.00100 0.00100					
Bromodichloromethane	<0.00100 0.00100					
Bromoform	<0.00500 0.00500					
Methyl bromide	<0.00500 0.00500					
2-Butanone	<0.0500 0.0500					
n-Butylbenzene	<0.00100 0.00100					
Sec-Butylbenzene	<0.00100 0.00100					
tert-Butylbenzene	<0.00100 0.00100					
Carbon Tetrachloride	<0.00500 0.00500					
Chlorobenzene	<0.00100 0.00100					
Chloroethane	<0.0100 0.0100					
Chloroform	<0.00100 0.00100					
Methyl Chloride	<0.0100 0.0100					
2-Chlorotoluene	<0.00100 0.00100					
4-Chlorotoluene	<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)	0.00159 0.00100					
Dibromochloromethane	<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane	<0.00100 0.00100					
1,2-Dibromoethane	<0.00500 0.00500					
Methylene Bromide	<0.00100 0.00100					
1,2-Dichlorobenzene	<0.00100 0.00100					
1,3-Dichlorobenzene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 685457



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 685457-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.20.2021 14:45					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.22.2021 16:13 Analyzed: *** ** Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0245 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.0135 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.00920 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685457



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 685457-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.20.2021 14:45					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.22.2021 16:13 Analyzed: *** ** * Units/RL: mg/L RL					
Toluene	0.0383 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0470 0.00100					
1,3,5-Trimethylbenzene	0.0152 0.00100					
o-Xylene	0.0137 0.00100					
m,p-Xylenes	0.0884 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.102 0.00100					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.22.2021 15:33 Units/RL: Deg C RL					
Temperature	17.7 K					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.22.2021 15:33 Units/RL: SU RL					
pH	6.24 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 685457

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

01.22.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.22.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **685457**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 685457. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 685457 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 685457

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	01.20.2021 14:45		685457-001



CASE NARRATIVE

Client Name: *Ensolum*

Project Name: *Levey Well*

Project ID: 03B1417001
Work Order Number(s): 685457

Report Date: 01.22.2021
Date Received: 01.20.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 685457

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.20.2021 16:52

Lab Sample Id: 685457-001

Date Collected: 01.20.2021 14:45

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.22.2021 12:14

% Moisture:

SUB: T104704215-20-38

Seq Number: 3148653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO₃)	1640192	1200	4.00	mg/L	01.22.2021 13:46		1
Alkalinity, Bicarbonate (as CaCO₃)	471-34-1	1200	4.00	mg/L	01.22.2021 13:46		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	01.22.2021 13:46	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	01.22.2021 13:46	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-38

Seq Number: 3148686

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	5.70		%	01.22.2021 17:19		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.22.2021 08:20

% Moisture:

SUB: T104704215-20-38

Seq Number: 3148638

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.796	0.500	mg/L	01.22.2021 11:41		1
Chloride	16887-00-6	486	0.500	mg/L	01.22.2021 11:41		1
Fluoride	16984-48-8	<0.500	0.500	mg/L	01.22.2021 11:41	U	1
Nitrate as N	14797-55-8	0.138	0.100	mg/L	01.22.2021 11:41		1
Nitrite as N	14797-65-0	<0.100	0.100	mg/L	01.22.2021 11:41	U	1
Sulfate	14808-79-8	7.68	0.500	mg/L	01.22.2021 11:41		1

Analytical Method: TDS by SM2540C

Tech: DTN

Analyst: DTN

% Moisture:

SUB: T104704215-20-38

Seq Number: 3148592

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	2170	5.00	mg/L	01.22.2021 11:32		1



Certificate of Analytical Results 685457

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.20.2021 16:52

Lab Sample Id: 685457-001

Date Collected: 01.20.2021 14:45

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3148654

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.24		SU	01.22.2021 15:33	K	1
Temperature	TEMP	17.7		Deg C	01.22.2021 15:33	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 01.22.2021 11:10

% Moisture:

SUB: T104704215-20-38

Seq Number: 3148674

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	397	10.0	mg/L	01.22.2021 16:01	D	50
Magnesium	7439-95-4	73.0	0.200	mg/L	01.22.2021 15:57		1
Potassium	7440-09-7	6.00	0.500	mg/L	01.22.2021 15:57		1
Silica	7631-86-9	64.9	1.07	mg/L	01.22.2021 15:57		1
Sodium	7440-23-5	127	0.500	mg/L	01.22.2021 15:57		1



Certificate of Analytical Results 685457

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.20.2021 16:52

Lab Sample Id: 685457-001

Date Collected: 01.20.2021 14:45

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.22.2021 16:13

% Moisture:

Seq Number: 3148667

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00621	0.00100	mg/L	01.22.2021 14:22		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.22.2021 14:22	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Sec-Butylbenzene	135-98-8	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.22.2021 14:22	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.22.2021 14:22	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00159	0.00100	mg/L	01.22.2021 14:22		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Ethylbenzene	100-41-4	0.0245	0.00100	mg/L	01.22.2021 14:22		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Isopropylbenzene	98-82-8	0.0135	0.00100	mg/L	01.22.2021 14:22		1



Certificate of Analytical Results 685457

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.20.2021 16:52

Lab Sample Id: 685457-001

Date Collected: 01.20.2021 14:45

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.22.2021 16:13

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.22.2021 14:22	U	1
n-Propylbenzene	103-65-1	0.00920	0.00100	mg/L	01.22.2021 14:22		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Toluene	108-88-3	0.0383	0.00100	mg/L	01.22.2021 14:22		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.22.2021 14:22	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.22.2021 14:22	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0470	0.00100	mg/L	01.22.2021 14:22		1
1,3,5-Trimethylbenzene	108-67-8	0.0152	0.00100	mg/L	01.22.2021 14:22		1
o-Xylene	95-47-6	0.0137	0.00100	mg/L	01.22.2021 14:22		1
m,p-Xylenes	179601-23-1	0.0884	0.0100	mg/L	01.22.2021 14:22		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.22.2021 14:22	U	1
Total Xylenes	1330-20-7	0.102	0.00100	mg/L	01.22.2021 14:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	75-131	01.22.2021 14:22	
1,2-Dichloroethane-D4	17060-07-0	98	%	63-144	01.22.2021 14:22	
Toluene-D8	2037-26-5	103	%	80-117	01.22.2021 14:22	
4-Bromofluorobenzene	460-00-4	102	%	74-124	01.22.2021 14:22	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

MB Sample Id: 7719773-1-BLK

Matrix: Water

LCS Sample Id: 7719773-1-BKS

Prep Method: SM2320P

Date Prep: 01.22.2021

LCSD Sample Id: 7719773-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	263	105	266	106	85-115	1	20	mg/L	01.22.2021 12:37	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

Matrix: Water

MB Sample Id: 7719773-1-BLK

Prep Method: SM2320P

Date Prep: 01.22.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	01.22.2021 12:29	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	01.22.2021 12:29	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	01.22.2021 12:29	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

Matrix: Water

Parent Sample Id: 685367-001

MD Sample Id: 685367-001 D

Prep Method: SM2320P

Date Prep: 01.22.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	375	374	0	20	mg/L	01.22.2021 12:59	
Alkalinity, Bicarbonate (as CaCO ₃)	375	374	0	20	mg/L	01.22.2021 12:59	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.22.2021 12:59	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.22.2021 12:59	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

Matrix: Water

Parent Sample Id: 685390-001

MD Sample Id: 685390-001 D

Prep Method: SM2320P

Date Prep: 01.22.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	284	284	0	20	mg/L	01.22.2021 14:49	
Alkalinity, Bicarbonate (as CaCO ₃)	284	284	0	20	mg/L	01.22.2021 14:49	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.22.2021 14:49	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.22.2021 14:49	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3148638

Matrix: Water

Prep Method: E300P

Date Prep: 01.22.2021

MB Sample Id: 7719736-1-BLK

LCS Sample Id: 7719736-1-BKS

LCSD Sample Id: 7719736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.3	103	10.3	103	90-110	0	20	mg/L	01.22.2021 05:57	
Chloride	<0.500	10.0	10.3	103	10.3	103	90-110	0	20	mg/L	01.22.2021 05:57	
Fluoride	<0.500	10.0	10.7	107	10.6	106	90-110	1	20	mg/L	01.22.2021 05:57	
Nitrate as N	<0.100	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	01.22.2021 05:57	
Nitrite as N	<0.100	10.0	9.71	97	9.69	97	90-110	0	20	mg/L	01.22.2021 05:57	
Sulfate	<0.500	10.0	10.1	101	10.1	101	90-110	0	20	mg/L	01.22.2021 05:57	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3148638

Matrix: Water

Prep Method: E300P

Date Prep: 01.22.2021

Parent Sample Id: 685610-003

MS Sample Id: 685610-003 S

MSD Sample Id: 685610-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	11.6	200	225	107	225	107	90-110	0	20	mg/L	01.22.2021 09:07	
Chloride	2370	200	2600	115	2600	115	90-110	0	20	mg/L	01.22.2021 09:07	X
Fluoride	<10.0	200	217	109	218	109	90-110	0	20	mg/L	01.22.2021 09:07	
Nitrate as N	3.45	200	218	107	218	107	90-110	0	20	mg/L	01.22.2021 09:07	
Nitrite as N	1.24	200	202	100	202	100	90-110	0	20	mg/L	01.22.2021 09:07	
Sulfate	1470	200	1690	110	1690	110	90-110	0	20	mg/L	01.22.2021 09:07	

Analytical Method: TDS by SM2540C

Seq Number: 3148592

Matrix: Water

MB Sample Id: 3148592-1-BLK

LCS Sample Id: 3148592-1-BKS

LCSD Sample Id: 3148592-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	993	99	1020	102	80-120	3	10	mg/L	01.22.2021 11:32	

Analytical Method: TDS by SM2540C

Seq Number: 3148592

Matrix: Water

Parent Sample Id: 685457-001

MD Sample Id: 685457-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	2170	2240	3	10	mg/L	01.22.2021 11:32	

Analytical Method: pH by SM4500-H

Seq Number: 3148654

Matrix: Water

Parent Sample Id: 685457-001

MD Sample Id: 685457-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.24	6.28	1	20	SU	01.22.2021 15:33	
Temperature	17.7	17.0	4	20	Deg C	01.22.2021 15:33	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3148674

Matrix: Water

Prep Method: E200.7P

Date Prep: 01.22.2021

MB Sample Id: 7719776-1-BLK

LCS Sample Id: 7719776-1-BKS

LCSD Sample Id: 7719776-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.3	97	24.2	97	85-115	0	20	mg/L	01.22.2021 15:19	
Magnesium	<0.200	25.0	24.3	97	24.2	97	85-115	0	20	mg/L	01.22.2021 15:19	
Potassium	<0.500	10.0	9.69	97	9.67	97	85-115	0	20	mg/L	01.22.2021 15:19	
Silica	<1.07	21.4	21.6	101	21.7	101	85-115	0	20	mg/L	01.22.2021 15:19	
Sodium	<0.500	25.0	24.0	96	24.0	96	85-115	0	20	mg/L	01.22.2021 15:19	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3148674

Matrix: Water

Prep Method: E200.7P

Date Prep: 01.22.2021

Parent Sample Id: 685164-001

MS Sample Id: 685164-001 S

MSD Sample Id: 685164-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	77.4	25.0	103	102	101	94	70-130	2	20	mg/L	01.22.2021 15:32	
Magnesium	23.7	25.0	49.4	103	48.4	99	70-130	2	20	mg/L	01.22.2021 15:32	
Potassium	35.6	10.0	46.7	111	45.9	103	70-130	2	20	mg/L	01.22.2021 15:32	
Silica	13.5	21.4	38.5	117	38.1	115	70-130	1	20	mg/L	01.22.2021 15:32	
Sodium	753	25.0	775	88	764	44	70-130	1	20	mg/L	01.22.2021 15:32	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

MB Sample Id: 7719804-1-BLK

Matrix: Water

LCS Sample Id: 7719804-1-BKS

Prep Method: SW5030B

Date Prep: 01.22.2021

LCSD Sample Id: 7719804-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0475	95	0.0445	89	66-142	7	25	mg/L	01.22.2021 10:33	
Bromobenzene	<0.00100	0.0500	0.0478	96	0.0460	92	75-125	4	25	mg/L	01.22.2021 10:33	
Bromochloromethane	<0.00100	0.0500	0.0499	100	0.0471	94	60-140	6	25	mg/L	01.22.2021 10:33	
Bromodichloromethane	<0.00100	0.0500	0.0505	101	0.0479	96	75-125	5	25	mg/L	01.22.2021 10:33	
Bromoform	<0.00500	0.0500	0.0511	102	0.0508	102	75-125	1	25	mg/L	01.22.2021 10:33	
Methyl bromide	<0.00500	0.0500	0.0444	89	0.0413	83	60-140	7	25	mg/L	01.22.2021 10:33	
2-Butanone	<0.0500	0.250	0.215	86	0.223	89	60-140	4	25	mg/L	01.22.2021 10:33	
n-Butylbenzene	<0.00100	0.0500	0.0496	99	0.0466	93	75-125	6	25	mg/L	01.22.2021 10:33	
Sec-Butylbenzene	<0.00100	0.0500	0.0491	98	0.0460	92	75-125	7	25	mg/L	01.22.2021 10:33	
tert-Butylbenzene	<0.00100	0.0500	0.0493	99	0.0462	92	75-125	6	25	mg/L	01.22.2021 10:33	
Carbon Tetrachloride	<0.00500	0.0500	0.0488	98	0.0450	90	62-125	8	25	mg/L	01.22.2021 10:33	
Chlorobenzene	<0.00100	0.0500	0.0474	95	0.0449	90	60-133	5	25	mg/L	01.22.2021 10:33	
Chloroethane	<0.0100	0.0500	0.0468	94	0.0425	85	60-140	10	25	mg/L	01.22.2021 10:33	
Chloroform	<0.00100	0.0500	0.0478	96	0.0450	90	70-130	6	25	mg/L	01.22.2021 10:33	
Methyl Chloride	<0.0100	0.0500	0.0463	93	0.0429	86	60-140	8	25	mg/L	01.22.2021 10:33	
2-Chlorotoluene	<0.00100	0.0500	0.0478	96	0.0451	90	73-125	6	25	mg/L	01.22.2021 10:33	
4-Chlorotoluene	<0.00100	0.0500	0.0478	96	0.0455	91	74-125	5	25	mg/L	01.22.2021 10:33	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0494	99	0.0467	93	75-125	6	25	mg/L	01.22.2021 10:33	
Dibromochloromethane	<0.00500	0.0500	0.0514	103	0.0498	100	73-125	3	25	mg/L	01.22.2021 10:33	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0546	109	0.0564	113	59-125	3	25	mg/L	01.22.2021 10:33	
1,2-Dibromoethane	<0.00500	0.0500	0.0479	96	0.0473	95	73-125	1	25	mg/L	01.22.2021 10:33	
Methylene Bromide	<0.00100	0.0500	0.0488	98	0.0475	95	69-127	3	25	mg/L	01.22.2021 10:33	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0482	96	0.0464	93	75-125	4	25	mg/L	01.22.2021 10:33	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0475	95	0.0451	90	75-125	5	25	mg/L	01.22.2021 10:33	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0470	94	0.0451	90	75-125	4	25	mg/L	01.22.2021 10:33	
Dichlorodifluoromethane	<0.00100	0.0500	0.0518	104	0.0468	94	60-140	10	25	mg/L	01.22.2021 10:33	
1,1-Dichloroethane	<0.00100	0.0500	0.0484	97	0.0449	90	72-125	8	25	mg/L	01.22.2021 10:33	
1,2-Dichloroethane	<0.00100	0.0500	0.0484	97	0.0467	93	68-127	4	25	mg/L	01.22.2021 10:33	
1,1-Dichloroethene	<0.00100	0.0500	0.0484	97	0.0438	88	59-172	10	25	mg/L	01.22.2021 10:33	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0481	96	0.0453	91	75-125	6	25	mg/L	01.22.2021 10:33	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0473	95	0.0438	88	75-125	8	25	mg/L	01.22.2021 10:33	
1,2-Dichloropropane	<0.00500	0.0500	0.0492	98	0.0469	94	74-125	5	25	mg/L	01.22.2021 10:33	
1,3-Dichloropropane	<0.00500	0.0500	0.0489	98	0.0482	96	75-125	1	25	mg/L	01.22.2021 10:33	
2,2-Dichloropropane	<0.00500	0.0500	0.0495	99	0.0451	90	75-125	9	25	mg/L	01.22.2021 10:33	
1,1-Dichloropropene	<0.00500	0.0500	0.0482	96	0.0438	88	75-125	10	25	mg/L	01.22.2021 10:33	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0506	101	0.0484	97	74-125	4	25	mg/L	01.22.2021 10:33	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0502	100	0.0495	99	66-125	1	25	mg/L	01.22.2021 10:33	
Ethylbenzene	<0.00100	0.0500	0.0471	94	0.0446	89	75-125	5	25	mg/L	01.22.2021 10:33	
Hexachlorobutadiene	<0.00500	0.0500	0.0484	97	0.0480	96	75-125	1	25	mg/L	01.22.2021 10:33	
Isopropylbenzene	<0.00100	0.0500	0.0485	97	0.0459	92	75-125	6	25	mg/L	01.22.2021 10:33	
Methylene Chloride	<0.00500	0.0500	0.0473	95	0.0444	89	75-125	6	25	mg/L	01.22.2021 10:33	
MTBE	<0.00500	0.0500	0.0503	101	0.0490	98	65-135	3	25	mg/L	01.22.2021 10:33	
Naphthalene	<0.0100	0.0500	0.0630	126	0.0648	130	70-130	3	25	mg/L	01.22.2021 10:33	
n-Propylbenzene	<0.00100	0.0500	0.0480	96	0.0452	90	75-125	6	25	mg/L	01.22.2021 10:33	
Styrene	<0.00100	0.0500	0.0489	98	0.0464	93	75-125	5	25	mg/L	01.22.2021 10:33	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0502	100	0.0478	96	72-125	5	25	mg/L	01.22.2021 10:33	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0491	98	0.0496	99	74-125	1	25	mg/L	01.22.2021 10:33	
Tetrachloroethylene	<0.00100	0.0500	0.0461	92	0.0441	88	71-125	4	25	mg/L	01.22.2021 10:33	
Toluene	<0.00100	0.0500	0.0466	93	0.0439	88	59-139	6	25	mg/L	01.22.2021 10:33	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0628	126	0.0622	124	75-137	1	25	mg/L	01.22.2021 10:33	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

MB Sample Id: 7719804-1-BLK

Matrix: Water

LCS Sample Id: 7719804-1-BKS

Prep Method: SW5030B

Date Prep: 01.22.2021

LCSD Sample Id: 7719804-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0538	108	0.0530	106	75-135	1	25	mg/L	01.22.2021 10:33	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0479	96	0.0446	89	75-125	7	25	mg/L	01.22.2021 10:33	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0495	99	0.0474	95	75-127	4	25	mg/L	01.22.2021 10:33	
Trichloroethylene	<0.00500	0.0500	0.0469	94	0.0438	88	62-137	7	25	mg/L	01.22.2021 10:33	
Trichlorofluoromethane	<0.00100	0.0500	0.0488	98	0.0439	88	60-140	11	25	mg/L	01.22.2021 10:33	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0489	98	0.0492	98	75-125	1	25	mg/L	01.22.2021 10:33	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0488	98	0.0458	92	75-125	6	25	mg/L	01.22.2021 10:33	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0485	97	0.0458	92	70-125	6	25	mg/L	01.22.2021 10:33	
o-Xylene	<0.00100	0.0500	0.0484	97	0.0456	91	75-125	6	25	mg/L	01.22.2021 10:33	
m,p-Xylenes	<0.0100	0.100	0.0954	95	0.0899	90	75-125	6	25	mg/L	01.22.2021 10:33	
Vinyl Chloride	<0.00200	0.0500	0.0477	95	0.0434	87	60-140	9	25	mg/L	01.22.2021 10:33	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		101		99		75-131			%	01.22.2021 10:33	
1,2-Dichloroethane-D4	100		100		100		63-144			%	01.22.2021 10:33	
Toluene-D8	102		100		100		80-117			%	01.22.2021 10:33	
4-Bromofluorobenzene	99		100		101		74-124			%	01.22.2021 10:33	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.22.2021

Parent Sample Id: 685152-001

MS Sample Id: 685152-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0489	98	66-142	mg/L	01.22.2021 11:34	
Bromobenzene	<0.00100	0.0500	0.0503	101	75-125	mg/L	01.22.2021 11:34	
Bromochloromethane	<0.00100	0.0500	0.0498	100	60-140	mg/L	01.22.2021 11:34	
Bromodichloromethane	<0.00100	0.0500	0.0521	104	75-125	mg/L	01.22.2021 11:34	
Bromoform	<0.00500	0.0500	0.0566	113	75-125	mg/L	01.22.2021 11:34	
Methyl bromide	<0.00500	0.0500	0.0415	83	60-140	mg/L	01.22.2021 11:34	
2-Butanone	<0.0500	0.250	0.198	79	60-140	mg/L	01.22.2021 11:34	
n-Butylbenzene	<0.00100	0.0500	0.0544	109	75-125	mg/L	01.22.2021 11:34	
Sec-Butylbenzene	<0.00100	0.0500	0.0508	102	75-125	mg/L	01.22.2021 11:34	
tert-Butylbenzene	<0.00100	0.0500	0.0531	106	75-125	mg/L	01.22.2021 11:34	
Carbon Tetrachloride	<0.00500	0.0500	0.0517	103	62-125	mg/L	01.22.2021 11:34	
Chlorobenzene	<0.00100	0.0500	0.0497	99	60-133	mg/L	01.22.2021 11:34	
Chloroethane	<0.0100	0.0500	0.0539	108	60-140	mg/L	01.22.2021 11:34	
Chloroform	<0.00100	0.0500	0.0510	102	70-130	mg/L	01.22.2021 11:34	
Methyl Chloride	<0.0100	0.0500	0.0552	110	60-140	mg/L	01.22.2021 11:34	
2-Chlorotoluene	<0.00100	0.0500	0.0504	101	73-125	mg/L	01.22.2021 11:34	
4-Chlorotoluene	<0.00100	0.0500	0.0507	101	74-125	mg/L	01.22.2021 11:34	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0466	93	75-125	mg/L	01.22.2021 11:34	
Dibromochloromethane	<0.00500	0.0500	0.0556	111	73-125	mg/L	01.22.2021 11:34	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0540	108	59-125	mg/L	01.22.2021 11:34	
1,2-Dibromoethane	<0.00500	0.0500	0.0490	98	73-125	mg/L	01.22.2021 11:34	
Methylene Bromide	<0.00100	0.0500	0.0498	100	69-127	mg/L	01.22.2021 11:34	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0510	102	75-125	mg/L	01.22.2021 11:34	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0500	100	75-125	mg/L	01.22.2021 11:34	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0481	96	75-125	mg/L	01.22.2021 11:34	
Dichlorodifluoromethane	<0.00100	0.0500	0.0962	192	60-140	mg/L	01.22.2021 11:34	X
1,1-Dichloroethane	<0.00100	0.0500	0.0550	110	72-125	mg/L	01.22.2021 11:34	
1,2-Dichloroethane	<0.00100	0.0500	0.0502	100	68-127	mg/L	01.22.2021 11:34	
1,1-Dichloroethene	<0.00100	0.0500	0.0520	104	59-172	mg/L	01.22.2021 11:34	
cis-1,2-Dichloroethylene	0.0263	0.0500	0.0806	109	75-125	mg/L	01.22.2021 11:34	
trans-1,2-dichloroethylene	0.000450	0.0500	0.0491	97	75-125	mg/L	01.22.2021 11:34	
1,2-Dichloropropane	<0.00500	0.0500	0.0523	105	74-125	mg/L	01.22.2021 11:34	
1,3-Dichloropropane	<0.00500	0.0500	0.0525	105	75-125	mg/L	01.22.2021 11:34	
2,2-Dichloropropane	<0.00500	0.0500	0.0542	108	75-125	mg/L	01.22.2021 11:34	
1,1-Dichloropropene	<0.00500	0.0500	0.0440	88	75-125	mg/L	01.22.2021 11:34	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0538	108	74-125	mg/L	01.22.2021 11:34	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0536	107	66-125	mg/L	01.22.2021 11:34	
Ethylbenzene	<0.00100	0.0500	0.0487	97	75-125	mg/L	01.22.2021 11:34	
Hexachlorobutadiene	<0.00500	0.0500	0.0534	107	75-125	mg/L	01.22.2021 11:34	
Isopropylbenzene	<0.00100	0.0500	0.0489	98	75-125	mg/L	01.22.2021 11:34	
Methylene Chloride	<0.00500	0.0500	0.0479	96	75-125	mg/L	01.22.2021 11:34	
MTBE	0.0125	0.0500	0.0603	96	65-135	mg/L	01.22.2021 11:34	
Naphthalene	<0.0100	0.0500	0.0656	131	70-130	mg/L	01.22.2021 11:34	X
n-Propylbenzene	<0.00100	0.0500	0.0515	103	75-125	mg/L	01.22.2021 11:34	
Styrene	<0.00100	0.0500	0.0425	85	75-125	mg/L	01.22.2021 11:34	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0523	105	72-125	mg/L	01.22.2021 11:34	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0490	98	74-125	mg/L	01.22.2021 11:34	
Tetrachloroethylene	<0.00100	0.0500	0.0487	97	71-125	mg/L	01.22.2021 11:34	
Toluene	<0.00100	0.0500	0.0491	98	59-139	mg/L	01.22.2021 11:34	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0634	127	75-137	mg/L	01.22.2021 11:34	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

Matrix: Water

Prep Method: SW5030B

Parent Sample Id: 685152-001

MS Sample Id: 685152-001 S

Date Prep: 01.22.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0566	113	75-135	mg/L	01.22.2021 11:34	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0522	104	75-125	mg/L	01.22.2021 11:34	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0509	102	75-127	mg/L	01.22.2021 11:34	
Trichloroethylene	0.00629	0.0500	0.0581	104	62-137	mg/L	01.22.2021 11:34	
Trichlorofluoromethane	<0.00100	0.0500	0.0564	113	60-140	mg/L	01.22.2021 11:34	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0503	101	75-125	mg/L	01.22.2021 11:34	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0509	102	75-125	mg/L	01.22.2021 11:34	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0510	102	70-125	mg/L	01.22.2021 11:34	
o-Xylene	<0.00100	0.0500	0.0505	101	75-125	mg/L	01.22.2021 11:34	
m,p-Xylenes	<0.0100	0.100	0.101	101	75-125	mg/L	01.22.2021 11:34	
Vinyl Chloride	0.00122	0.0500	0.0643	126	60-140	mg/L	01.22.2021 11:34	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		75-131	%	01.22.2021 11:34
1,2-Dichloroethane-D4	99		63-144	%	01.22.2021 11:34
Toluene-D8	98		80-117	%	01.22.2021 11:34
4-Bromofluorobenzene	100		74-124	%	01.22.2021 11:34

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Work Order No: 00292

Page 1 of 1

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

[illegible][illegible][illegible]

1631 / 245.1 / 7470 / 7471 : Hg

Date/Time

1025

Inter-Office Shipment

IOS Number : **76809**

Date/Time: 01.21.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772696408941

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
685457-001	W	Levey Well	01.20.2021 14:45	SW8260C	VOCs by SW-846 8260C	01.22.2021	02.03.2021	JKR	BDCME BRBZ BRCLME	
685457-001	W	Levey Well	01.20.2021 14:45	E200.7	Recoverable Metals per ICP by EPA 200	01.22.2021	07.19.2021	JKR	CA K MG NA SI	
685457-001	W	Levey Well	01.20.2021 14:45	E300	Inorganic Anions by EPA 300/300.1	01.22.2021	01.22.2021 14:45	JKR	BR CL F NO2N NO3N SC	
685457-001	W	Levey Well	01.20.2021 14:45	SM4500-H	pH by SM4500-H	01.22.2021	01.20.2021 15:00	JKR		
685457-001	W	Levey Well	01.20.2021 14:45	SM2540C	TDS by SM2540C	01.22.2021	01.27.2021 14:45	JKR	TDS	
685457-001	W	Levey Well	01.20.2021 14:45	SM2320B	Alkalinity by SM2320B	01.22.2021	02.03.2021	JKR	ALK ALKB ALKC	
685457-001	W	Levey Well	01.20.2021 14:45	SM1030E	Cation-Anion Balance Calculation	01.22.2021	02.19.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.21.2021

Received By:



Jhyrom Edralin

Date Received: 01.22.2021

Cooler Temperature: 4.7



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 76809

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.21.2021 07.47 AM

Received By: Jhyrom Edralin

Date Received: 01.22.2021 10.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	4.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.22.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.20.2021 04.52.00 PM

Work Order #: 685457

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 01.21.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.21.2021

Certificate of Analysis Summary 685967

Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

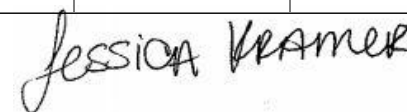
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Tue 01.26.2021 09:05
Report Date: 01.29.2021 18:09
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685967-001	685967-002	685967-003			
	Field Id:	Levey Well	Levey Well	Levey Well			
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER			
	Sampled:	01.25.2021 08:40	01.25.2021 13:30	01.25.2021 15:30			
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.28.2021 09:00	01.28.2021 09:00	01.28.2021 09:00			
	Analyzed:	01.28.2021 19:48	01.28.2021 19:06	01.28.2021 19:27			
	Units/RL:	mg/L RL	mg/L RL	mg/L RL			
Benzene		0.0102 0.00100	0.00689 0.00100	0.00693 0.00100			
Bromobenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Bromochloromethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Bromodichloromethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Bromoform		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Methyl bromide		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
2-Butanone		<0.0500 0.0500	<0.0500 0.0500	<0.0500 0.0500			
n-Butylbenzene		0.00167 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Sec-Butylbenzene		0.00287 0.00100	<0.00100 0.00100	<0.00100 0.00100			
tert-Butylbenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Carbon Tetrachloride		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Chlorobenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Chloroethane		<0.0100 0.0100	<0.0100 0.0100	<0.0100 0.0100			
Chloroform		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Methyl Chloride		<0.0100 0.0100	<0.0100 0.0100	<0.0100 0.0100			
2-Chlorotoluene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
4-Chlorotoluene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
p-Cymene (p-Isopropyltoluene)		0.00162 0.00100	0.00145 0.00100	0.00146 0.00100			
Dibromochloromethane		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
1,2-Dibromo-3-Chloropropane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,2-Dibromoethane		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Methylene Bromide		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,2-Dichlorobenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,3-Dichlorobenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico





Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Tue 01.26.2021 09:05
Report Date: 01.29.2021 18:09
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	685967-001	685967-002	685967-003			
	<i>Field Id:</i>	Levey Well	Levey Well	Levey Well			
	<i>Depth:</i>						
	<i>Matrix:</i>	GROUND WATER	GROUND WATER	GROUND WATER			
	<i>Sampled:</i>	01.25.2021 08:40	01.25.2021 13:30	01.25.2021 15:30			
VOCs by SW-846 8260C SUB: T104704215-20-38	<i>Extracted:</i>	01.28.2021 09:00	01.28.2021 09:00	01.28.2021 09:00			
	<i>Analyzed:</i>	01.28.2021 19:48	01.28.2021 19:06	01.28.2021 19:27			
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL			
1,4-Dichlorobenzene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Dichlorodifluoromethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,1-Dichloroethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,2-Dichloroethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,1-Dichloroethene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
cis-1,2-Dichloroethylene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
trans-1,2-dichloroethylene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,2-Dichloropropane		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
1,3-Dichloropropane		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
2,2-Dichloropropane		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
1,1-Dichloropropene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
cis-1,3-Dichloropropene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
trans-1,3-dichloropropene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Ethylbenzene		0.0337 0.00100	0.0243 0.00100	0.0251 0.00100			
Hexachlorobutadiene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Isopropylbenzene		0.0162 0.00100	0.0127 0.00100	0.0133 0.00100			
Methylene Chloride		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
MTBE		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Naphthalene		<0.0100 0.0100	<0.0100 0.0100	<0.0100 0.0100			
n-Propylbenzene		0.00914 0.00100	0.0115 0.00100	0.0124 0.00100			
Styrene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,1,1,2-Tetrachloroethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,1,2,2-Tetrachloroethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Tetrachloroethylene		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685967



Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Tue 01.26.2021 09:05
Report Date: 01.29.2021 18:09
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	685967-001	685967-002	685967-003			
	<i>Field Id:</i>	Levey Well	Levey Well	Levey Well			
	<i>Depth:</i>						
	<i>Matrix:</i>	GROUND WATER	GROUND WATER	GROUND WATER			
	<i>Sampled:</i>	01.25.2021 08:40	01.25.2021 13:30	01.25.2021 15:30			
VOCs by SW-846 8260C SUB: T104704215-20-38	<i>Extracted:</i>	01.28.2021 09:00	01.28.2021 09:00	01.28.2021 09:00			
	<i>Analyzed:</i>	01.28.2021 19:48	01.28.2021 19:06	01.28.2021 19:27			
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL			
Toluene		0.0717 0.00100	0.0353 0.00100	0.0342 0.00100			
1,2,3-Trichlorobenzene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
1,2,4-Trichlorobenzene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
1,1,1-Trichloroethane		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
1,1,2-Trichloroethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
Trichloroethylene		<0.00500 0.00500	<0.00500 0.00500	<0.00500 0.00500			
Trichlorofluoromethane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,2,3-Trichloropropane		<0.00100 0.00100	<0.00100 0.00100	<0.00100 0.00100			
1,2,4-Trimethylbenzene		0.0455 0.00100	0.0687 0.00100	0.0738 0.00100			
1,3,5-Trimethylbenzene		0.0149 0.00100	0.0205 0.00100	0.0218 0.00100			
o-Xylene		0.0195 0.00100	0.0113 0.00100	0.0113 0.00100			
m,p-Xylenes		0.130 0.0100	0.0733 0.0100	0.0737 0.0100			
Vinyl Chloride		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Total Xylenes		0.150 0.00100	0.0846 0.00100	0.0850 0.00100			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 685967

for

Ensolum

Project Manager: Beaux Jennings

Levey Well Hobbs NM

03B1417001

01.29.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.29.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **685967**

Levey Well Hobbs NM

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 685967. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 685967 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	01.25.2021 08:40		685967-001
Levey Well	W	01.25.2021 13:30		685967-002
Levey Well	W	01.25.2021 15:30		685967-003



CASE NARRATIVE

Client Name: *Ensolum*

Project Name: *Levey Well Hobbs NM*

Project ID: 03B1417001
Work Order Number(s): 685967

Report Date: 01.29.2021
Date Received: 01.26.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Ground Water

Date Received: 01.26.2021 09:05

Lab Sample Id: 685967-001

Date Collected: 01.25.2021 08:40

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.28.2021 09:00

% Moisture:

Seq Number: 3149363

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0102	0.00100	mg/L	01.28.2021 19:48		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.28.2021 19:48	U	1
n-Butylbenzene	104-51-8	0.00167	0.00100	mg/L	01.28.2021 19:48		1
Sec-Butylbenzene	135-98-8	0.00287	0.00100	mg/L	01.28.2021 19:48		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.28.2021 19:48	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.28.2021 19:48	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00162	0.00100	mg/L	01.28.2021 19:48		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Ethylbenzene	100-41-4	0.0337	0.00100	mg/L	01.28.2021 19:48		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Isopropylbenzene	98-82-8	0.0162	0.00100	mg/L	01.28.2021 19:48		1



Certificate of Analytical Results 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Ground Water

Date Received: 01.26.2021 09:05

Lab Sample Id: 685967-001

Date Collected: 01.25.2021 08:40

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.28.2021 09:00

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.28.2021 19:48	U	1
n-Propylbenzene	103-65-1	0.00914	0.00100	mg/L	01.28.2021 19:48		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Toluene	108-88-3	0.0717	0.00100	mg/L	01.28.2021 19:48		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.28.2021 19:48	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.28.2021 19:48	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0455	0.00100	mg/L	01.28.2021 19:48		1
1,3,5-Trimethylbenzene	108-67-8	0.0149	0.00100	mg/L	01.28.2021 19:48		1
o-Xylene	95-47-6	0.0195	0.00100	mg/L	01.28.2021 19:48		1
m,p-Xylenes	179601-23-1	0.130	0.0100	mg/L	01.28.2021 19:48		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.28.2021 19:48	U	1
Total Xylenes	1330-20-7	0.150	0.00100	mg/L	01.28.2021 19:48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	75-131	01.28.2021 19:48	
1,2-Dichloroethane-D4	17060-07-0	105	%	63-144	01.28.2021 19:48	
Toluene-D8	2037-26-5	97	%	80-117	01.28.2021 19:48	
4-Bromofluorobenzene	460-00-4	100	%	74-124	01.28.2021 19:48	



Certificate of Analytical Results 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Ground Water

Date Received: 01.26.2021 09:05

Lab Sample Id: 685967-002

Date Collected: 01.25.2021 13:30

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.28.2021 09:00

% Moisture:

Seq Number: 3149363

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00689	0.00100	mg/L	01.28.2021 19:06		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.28.2021 19:06	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Sec-Butylbenzene	135-98-8	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.28.2021 19:06	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.28.2021 19:06	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00145	0.00100	mg/L	01.28.2021 19:06		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Ethylbenzene	100-41-4	0.0243	0.00100	mg/L	01.28.2021 19:06		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Isopropylbenzene	98-82-8	0.0127	0.00100	mg/L	01.28.2021 19:06		1



Certificate of Analytical Results 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Ground Water

Date Received: 01.26.2021 09:05

Lab Sample Id: 685967-002

Date Collected: 01.25.2021 13:30

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.28.2021 09:00

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.28.2021 19:06	U	1
n-Propylbenzene	103-65-1	0.0115	0.00100	mg/L	01.28.2021 19:06		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Toluene	108-88-3	0.0353	0.00100	mg/L	01.28.2021 19:06		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.28.2021 19:06	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.28.2021 19:06	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0687	0.00100	mg/L	01.28.2021 19:06		1
1,3,5-Trimethylbenzene	108-67-8	0.0205	0.00100	mg/L	01.28.2021 19:06		1
o-Xylene	95-47-6	0.0113	0.00100	mg/L	01.28.2021 19:06		1
m,p-Xylenes	179601-23-1	0.0733	0.0100	mg/L	01.28.2021 19:06		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.28.2021 19:06	U	1
Total Xylenes	1330-20-7	0.0846	0.00100	mg/L	01.28.2021 19:06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	01.28.2021 19:06	
1,2-Dichloroethane-D4	17060-07-0	98	%	63-144	01.28.2021 19:06	
Toluene-D8	2037-26-5	100	%	80-117	01.28.2021 19:06	
4-Bromofluorobenzene	460-00-4	104	%	74-124	01.28.2021 19:06	



Certificate of Analytical Results 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Ground Water

Date Received: 01.26.2021 09:05

Lab Sample Id: 685967-003

Date Collected: 01.25.2021 15:30

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.28.2021 09:00

% Moisture:

Seq Number: 3149363

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00693	0.00100	mg/L	01.28.2021 19:27		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.28.2021 19:27	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Sec-Butylbenzene	135-98-8	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.28.2021 19:27	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.28.2021 19:27	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00146	0.00100	mg/L	01.28.2021 19:27		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Ethylbenzene	100-41-4	0.0251	0.00100	mg/L	01.28.2021 19:27		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Isopropylbenzene	98-82-8	0.0133	0.00100	mg/L	01.28.2021 19:27		1



Certificate of Analytical Results 685967

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Ground Water

Date Received: 01.26.2021 09:05

Lab Sample Id: 685967-003

Date Collected: 01.25.2021 15:30

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.28.2021 09:00

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.28.2021 19:27	U	1
n-Propylbenzene	103-65-1	0.0124	0.00100	mg/L	01.28.2021 19:27		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Toluene	108-88-3	0.0342	0.00100	mg/L	01.28.2021 19:27		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.28.2021 19:27	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.28.2021 19:27	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0738	0.00100	mg/L	01.28.2021 19:27		1
1,3,5-Trimethylbenzene	108-67-8	0.0218	0.00100	mg/L	01.28.2021 19:27		1
o-Xylene	95-47-6	0.0113	0.00100	mg/L	01.28.2021 19:27		1
m,p-Xylenes	179601-23-1	0.0737	0.0100	mg/L	01.28.2021 19:27		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.28.2021 19:27	U	1
Total Xylenes	1330-20-7	0.0850	0.00100	mg/L	01.28.2021 19:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	75-131	01.28.2021 19:27	
1,2-Dichloroethane-D4	17060-07-0	97	%	63-144	01.28.2021 19:27	
Toluene-D8	2037-26-5	99	%	80-117	01.28.2021 19:27	
4-Bromofluorobenzene	460-00-4	99	%	74-124	01.28.2021 19:27	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum

Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149363

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.28.2021

MB Sample Id: 7720328-1-BLK

LCS Sample Id: 7720328-1-BKS

LCSD Sample Id: 7720328-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0498	100	0.0483	97	66-142	3	25	mg/L	01.28.2021 10:40	
Bromobenzene	<0.00100	0.0500	0.0501	100	0.0502	100	75-125	0	25	mg/L	01.28.2021 10:40	
Bromochloromethane	<0.00100	0.0500	0.0544	109	0.0501	100	60-140	8	25	mg/L	01.28.2021 10:40	
Bromodichloromethane	<0.00100	0.0500	0.0510	102	0.0493	99	75-125	3	25	mg/L	01.28.2021 10:40	
Bromoform	<0.00500	0.0500	0.0522	104	0.0504	101	75-125	4	25	mg/L	01.28.2021 10:40	
Methyl bromide	<0.00500	0.0500	0.0522	104	0.0492	98	60-140	6	25	mg/L	01.28.2021 10:40	
2-Butanone	<0.0500	0.250	0.212	85	0.212	85	60-140	0	25	mg/L	01.28.2021 10:40	
n-Butylbenzene	<0.00100	0.0500	0.0525	105	0.0518	104	75-125	1	25	mg/L	01.28.2021 10:40	
Sec-Butylbenzene	<0.00100	0.0500	0.0523	105	0.0514	103	75-125	2	25	mg/L	01.28.2021 10:40	
tert-Butylbenzene	<0.00100	0.0500	0.0522	104	0.0518	104	75-125	1	25	mg/L	01.28.2021 10:40	
Carbon Tetrachloride	<0.00500	0.0500	0.0518	104	0.0474	95	62-125	9	25	mg/L	01.28.2021 10:40	
Chlorobenzene	<0.00100	0.0500	0.0497	99	0.0481	96	60-133	3	25	mg/L	01.28.2021 10:40	
Chloroethane	<0.0100	0.0500	0.0530	106	0.0477	95	60-140	11	25	mg/L	01.28.2021 10:40	
Chloroform	<0.00100	0.0500	0.0504	101	0.0470	94	70-130	7	25	mg/L	01.28.2021 10:40	
Methyl Chloride	<0.0100	0.0500	0.0518	104	0.0502	100	60-140	3	25	mg/L	01.28.2021 10:40	
2-Chlorotoluene	<0.00100	0.0500	0.0510	102	0.0508	102	73-125	0	25	mg/L	01.28.2021 10:40	
4-Chlorotoluene	<0.00100	0.0500	0.0512	102	0.0508	102	74-125	1	25	mg/L	01.28.2021 10:40	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0529	106	0.0522	104	75-125	1	25	mg/L	01.28.2021 10:40	
Dibromochloromethane	<0.00500	0.0500	0.0533	107	0.0504	101	73-125	6	25	mg/L	01.28.2021 10:40	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0500	100	0.0513	103	59-125	3	25	mg/L	01.28.2021 10:40	
1,2-Dibromoethane	<0.00500	0.0500	0.0510	102	0.0489	98	73-125	4	25	mg/L	01.28.2021 10:40	
Methylene Bromide	<0.00100	0.0500	0.0516	103	0.0501	100	69-127	3	25	mg/L	01.28.2021 10:40	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0507	101	0.0508	102	75-125	0	25	mg/L	01.28.2021 10:40	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0506	101	0.0507	101	75-125	0	25	mg/L	01.28.2021 10:40	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0510	102	0.0506	101	75-125	1	25	mg/L	01.28.2021 10:40	
Dichlorodifluoromethane	<0.00100	0.0500	0.0565	113	0.0527	105	60-140	7	25	mg/L	01.28.2021 10:40	
1,1-Dichloroethane	<0.00100	0.0500	0.0507	101	0.0477	95	72-125	6	25	mg/L	01.28.2021 10:40	
1,2-Dichloroethane	<0.00100	0.0500	0.0516	103	0.0496	99	68-127	4	25	mg/L	01.28.2021 10:40	
1,1-Dichloroethene	<0.00100	0.0500	0.0506	101	0.0478	96	59-172	6	25	mg/L	01.28.2021 10:40	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0515	103	0.0480	96	75-125	7	25	mg/L	01.28.2021 10:40	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0502	100	0.0469	94	75-125	7	25	mg/L	01.28.2021 10:40	
1,2-Dichloropropane	<0.00500	0.0500	0.0509	102	0.0490	98	74-125	4	25	mg/L	01.28.2021 10:40	
1,3-Dichloropropane	<0.00500	0.0500	0.0498	100	0.0488	98	75-125	2	25	mg/L	01.28.2021 10:40	
2,2-Dichloropropane	<0.00500	0.0500	0.0510	102	0.0477	95	75-125	7	25	mg/L	01.28.2021 10:40	
1,1-Dichloropropene	<0.00500	0.0500	0.0509	102	0.0472	94	75-125	8	25	mg/L	01.28.2021 10:40	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0523	105	0.0505	101	74-125	4	25	mg/L	01.28.2021 10:40	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0525	105	0.0516	103	66-125	2	25	mg/L	01.28.2021 10:40	
Ethylbenzene	<0.00100	0.0500	0.0494	99	0.0479	96	75-125	3	25	mg/L	01.28.2021 10:40	
Hexachlorobutadiene	<0.00500	0.0500	0.0497	99	0.0515	103	75-125	4	25	mg/L	01.28.2021 10:40	
Isopropylbenzene	<0.00100	0.0500	0.0506	101	0.0485	97	75-125	4	25	mg/L	01.28.2021 10:40	
Methylene Chloride	<0.00500	0.0500	0.0507	101	0.0468	94	75-125	8	25	mg/L	01.28.2021 10:40	
MTBE	<0.00500	0.0500	0.0529	106	0.0497	99	65-135	6	25	mg/L	01.28.2021 10:40	
Naphthalene	<0.0100	0.0500	0.0509	102	0.0525	105	70-130	3	25	mg/L	01.28.2021 10:40	
n-Propylbenzene	<0.00100	0.0500	0.0514	103	0.0511	102	75-125	1	25	mg/L	01.28.2021 10:40	
Styrene	<0.00100	0.0500	0.0497	99	0.0480	96	75-125	3	25	mg/L	01.28.2021 10:40	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0516	103	0.0497	99	72-125	4	25	mg/L	01.28.2021 10:40	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0504	101	0.0510	102	74-125	1	25	mg/L	01.28.2021 10:40	
Tetrachloroethylene	<0.00100	0.0500	0.0486	97	0.0459	92	71-125	6	25	mg/L	01.28.2021 10:40	
Toluene	<0.00100	0.0500	0.0488	98	0.0472	94	59-139	3	25	mg/L	01.28.2021 10:40	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0490	98	0.0500	100	75-137	2	25	mg/L	01.28.2021 10:40	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum
Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149363

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.28.2021

MB Sample Id: 7720328-1-BLK

LCS Sample Id: 7720328-1-BKS

LCSD Sample Id: 7720328-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0510	102	0.0511	102	75-135	0	25	mg/L	01.28.2021 10:40	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0507	101	0.0475	95	75-125	7	25	mg/L	01.28.2021 10:40	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0499	100	0.0485	97	75-127	3	25	mg/L	01.28.2021 10:40	
Trichloroethylene	<0.00500	0.0500	0.0495	99	0.0484	97	62-137	2	25	mg/L	01.28.2021 10:40	
Trichlorofluoromethane	<0.00100	0.0500	0.0519	104	0.0490	98	60-140	6	25	mg/L	01.28.2021 10:40	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0507	101	0.0519	104	75-125	2	25	mg/L	01.28.2021 10:40	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0527	105	0.0518	104	75-125	2	25	mg/L	01.28.2021 10:40	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0515	103	0.0518	104	70-125	1	25	mg/L	01.28.2021 10:40	
o-Xylene	<0.00100	0.0500	0.0504	101	0.0488	98	75-125	3	25	mg/L	01.28.2021 10:40	
m,p-Xylenes	<0.0100	0.100	0.101	101	0.0964	96	75-125	5	25	mg/L	01.28.2021 10:40	
Vinyl Chloride	<0.00200	0.0500	0.0498	100	0.0489	98	60-140	2	25	mg/L	01.28.2021 10:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	104		102		102		75-131	%	01.28.2021 10:40
1,2-Dichloroethane-D4	102		99		98		63-144	%	01.28.2021 10:40
Toluene-D8	99		98		100		80-117	%	01.28.2021 10:40
4-Bromofluorobenzene	105		102		103		74-124	%	01.28.2021 10:40

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149363

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.28.2021

Parent Sample Id: 686000-001

MS Sample Id: 686000-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0511	102	66-142	mg/L	01.28.2021 11:24	
Bromobenzene	<0.00100	0.0500	0.0503	101	75-125	mg/L	01.28.2021 11:24	
Bromochloromethane	<0.00100	0.0500	0.0543	109	60-140	mg/L	01.28.2021 11:24	
Bromodichloromethane	<0.00100	0.0500	0.0510	102	75-125	mg/L	01.28.2021 11:24	
Bromoform	<0.00500	0.0500	0.0545	109	75-125	mg/L	01.28.2021 11:24	
Methyl bromide	<0.00500	0.0500	0.0488	98	60-140	mg/L	01.28.2021 11:24	
2-Butanone	<0.0500	0.250	0.199	80	60-140	mg/L	01.28.2021 11:24	
n-Butylbenzene	<0.00100	0.0500	0.0544	109	75-125	mg/L	01.28.2021 11:24	
Sec-Butylbenzene	<0.00100	0.0500	0.0511	102	75-125	mg/L	01.28.2021 11:24	
tert-Butylbenzene	<0.00100	0.0500	0.0532	106	75-125	mg/L	01.28.2021 11:24	
Carbon Tetrachloride	<0.00500	0.0500	0.0532	106	62-125	mg/L	01.28.2021 11:24	
Chlorobenzene	<0.00100	0.0500	0.0507	101	60-133	mg/L	01.28.2021 11:24	
Chloroethane	<0.0100	0.0500	0.0501	100	60-140	mg/L	01.28.2021 11:24	
Chloroform	<0.00100	0.0500	0.0516	103	70-130	mg/L	01.28.2021 11:24	
Methyl Chloride	<0.0100	0.0500	0.0534	107	60-140	mg/L	01.28.2021 11:24	
2-Chlorotoluene	<0.00100	0.0500	0.0513	103	73-125	mg/L	01.28.2021 11:24	
4-Chlorotoluene	<0.00100	0.0500	0.0511	102	74-125	mg/L	01.28.2021 11:24	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0476	95	75-125	mg/L	01.28.2021 11:24	
Dibromochloromethane	<0.00500	0.0500	0.0545	109	73-125	mg/L	01.28.2021 11:24	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0471	94	59-125	mg/L	01.28.2021 11:24	
1,2-Dibromoethane	<0.00500	0.0500	0.0509	102	73-125	mg/L	01.28.2021 11:24	
Methylene Bromide	<0.00100	0.0500	0.0523	105	69-127	mg/L	01.28.2021 11:24	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0511	102	75-125	mg/L	01.28.2021 11:24	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0508	102	75-125	mg/L	01.28.2021 11:24	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0492	98	75-125	mg/L	01.28.2021 11:24	
Dichlorodifluoromethane	<0.00100	0.0500	0.0691	138	60-140	mg/L	01.28.2021 11:24	
1,1-Dichloroethane	<0.00100	0.0500	0.0560	112	72-125	mg/L	01.28.2021 11:24	
1,2-Dichloroethane	<0.00100	0.0500	0.0515	103	68-127	mg/L	01.28.2021 11:24	
1,1-Dichloroethene	<0.00100	0.0500	0.0552	110	59-172	mg/L	01.28.2021 11:24	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0516	103	75-125	mg/L	01.28.2021 11:24	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0520	104	75-125	mg/L	01.28.2021 11:24	
1,2-Dichloropropane	<0.00500	0.0500	0.0527	105	74-125	mg/L	01.28.2021 11:24	
1,3-Dichloropropane	<0.00500	0.0500	0.0522	104	75-125	mg/L	01.28.2021 11:24	
2,2-Dichloropropane	<0.00500	0.0500	0.0543	109	75-125	mg/L	01.28.2021 11:24	
1,1-Dichloropropene	<0.00500	0.0500	0.0466	93	75-125	mg/L	01.28.2021 11:24	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0543	109	74-125	mg/L	01.28.2021 11:24	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0550	110	66-125	mg/L	01.28.2021 11:24	
Ethylbenzene	<0.00100	0.0500	0.0502	100	75-125	mg/L	01.28.2021 11:24	
Hexachlorobutadiene	<0.00500	0.0500	0.0511	102	75-125	mg/L	01.28.2021 11:24	
Isopropylbenzene	<0.00100	0.0500	0.0499	100	75-125	mg/L	01.28.2021 11:24	
Methylene Chloride	<0.00500	0.0500	0.0513	103	75-125	mg/L	01.28.2021 11:24	
MTBE	<0.00500	0.0500	0.0503	101	65-135	mg/L	01.28.2021 11:24	
Naphthalene	<0.0100	0.0500	0.0491	98	70-130	mg/L	01.28.2021 11:24	
n-Propylbenzene	<0.00100	0.0500	0.0520	104	75-125	mg/L	01.28.2021 11:24	
Styrene	<0.00100	0.0500	0.0517	103	75-125	mg/L	01.28.2021 11:24	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0527	105	72-125	mg/L	01.28.2021 11:24	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0481	96	74-125	mg/L	01.28.2021 11:24	
Tetrachloroethylene	<0.00100	0.0500	0.0502	100	71-125	mg/L	01.28.2021 11:24	
Toluene	<0.00100	0.0500	0.0513	103	59-139	mg/L	01.28.2021 11:24	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0442	88	75-137	mg/L	01.28.2021 11:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum
Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149363

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.28.2021

Parent Sample Id: 686000-001

MS Sample Id: 686000-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0497	99	75-135	mg/L	01.28.2021 11:24	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0529	106	75-125	mg/L	01.28.2021 11:24	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0509	102	75-127	mg/L	01.28.2021 11:24	
Trichloroethylene	<0.00500	0.0500	0.0523	105	62-137	mg/L	01.28.2021 11:24	
Trichlorofluoromethane	<0.00100	0.0500	0.0528	106	60-140	mg/L	01.28.2021 11:24	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0500	100	75-125	mg/L	01.28.2021 11:24	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0526	105	75-125	mg/L	01.28.2021 11:24	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0527	105	70-125	mg/L	01.28.2021 11:24	
o-Xylene	<0.00100	0.0500	0.0525	105	75-125	mg/L	01.28.2021 11:24	
m,p-Xylenes	<0.0100	0.100	0.105	105	75-125	mg/L	01.28.2021 11:24	
Vinyl Chloride	<0.00200	0.0500	0.0560	112	60-140	mg/L	01.28.2021 11:24	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		75-131	%	01.28.2021 11:24
1,2-Dichloroethane-D4	99		63-144	%	01.28.2021 11:24
Toluene-D8	99		80-117	%	01.28.2021 11:24
4-Bromofluorobenzene	100		74-124	%	01.28.2021 11:24

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 16859107

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)

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Project Manager:	Beau Jennings	Bill to: (if different)	
Company Name:	Environ LLC	Company Name:	
Address:	705 W. Wadley	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@envelum.com

Work Order Comments	
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:	Levey Well 11	Turn Around	☐
Project Number:	0381417001	Routine	☐
P.O. Number:	0381417001	Rush:	
Sampler's Name:	Steve D. Lee	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	1					
Received Intact:	Yes	No		Thermometer ID	188	
Cooler Custody Seals:	Yes	No	NA	Correction Factor:	5	
Sample Custody Seals:	Yes	No	NA	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

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
1 <i>[Signature]</i>	<i>[Signature]</i>	1/20/21 9:05			
3 <i>[Signature]</i>					
5					

CUSTODY SEAL

Date 6-26-21

Signature [Signature]

Thermo
S C I E N T I F I C

90009

Inter-Office Shipment

IOS Number : **76999**

Date/Time: 01.26.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772737303745

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
685967-001	W	Levey Well	01.25.2021 08:40	SW8260C	VOCs by SW-846 8260C	02.01.2021	02.08.2021	JKR	BDCME BRBZ BRCLME	
685967-002	W	Levey Well	01.25.2021 13:30	SW8260C	VOCs by SW-846 8260C	02.01.2021	02.08.2021	JKR	BDCME BRBZ BRCLME	
685967-003	W	Levey Well	01.25.2021 15:30	SW8260C	VOCs by SW-846 8260C	02.01.2021	02.08.2021	JKR	BDCME BRBZ BRCLME	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.26.2021

Received By:



Jhyrom Edralin

Date Received: 01.27.2021

Cooler Temperature: 4.6



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 76999

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.26.2021 09.14 AM

Received By: Jhyrom Edralin

Date Received: 01.27.2021 12.04 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	4.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.27.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.26.2021 09.05.00 AM

Work Order #: 685967

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 01.26.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.27.2021

Certificate of Analysis Summary 686339



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 01.29.2021 18:08
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 686339-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.27.2021 14:00					
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.29.2021 12:06 Analyzed: 01.29.2021 13:57 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	875 4.00					
Alkalinity, Bicarbonate (as CaCO3)	875 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 16:47 Units/RL: % RL					
Cation-Anion Balance	1.70					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-38	Extracted: 01.29.2021 08:20 Analyzed: 01.29.2021 12:34 Units/RL: mg/L RL					
Bromide	0.510 0.500					
Chloride	264 0.500					
Fluoride	0.905 0.500					
Nitrate as N	0.137 0.100					
Nitrite as N	1.16 D 1.00					
Sulfate	23.1 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686339



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 01.29.2021 18:08
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686339-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	01.27.2021 14:00					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-38	Extracted:	01.29.2021 10:00					
	Analyzed:	01.29.2021 15:15					
	Units/RL:	mg/L RL					
	Calcium	296 D 10.0					
	Magnesium	55.1 0.200					
	Potassium	4.75 0.500					
	Silica	59.7 1.07					
	Sodium	83.1 0.500					
TDS by SM2540C SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.29.2021 12:00					
	Units/RL:	mg/L RL					
Total Dissolved Solids		1350 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686339



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 01.29.2021 18:08
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 686339-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.27.2021 14:00					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.29.2021 08:50 Analyzed: 01.29.2021 15:17 Units/RL: mg/L RL					
Benzene	0.00186 0.00100					
Bromobenzene	<0.00100 0.00100					
Bromochloromethane	<0.00100 0.00100					
Bromodichloromethane	<0.00100 0.00100					
Bromoform	<0.00500 0.00500					
Methyl bromide	<0.00500 0.00500					
2-Butanone	<0.0500 0.0500					
n-Butylbenzene	0.00110 0.00100					
Sec-Butylbenzene	0.00169 0.00100					
tert-Butylbenzene	<0.00100 0.00100					
Carbon Tetrachloride	<0.00500 0.00500					
Chlorobenzene	<0.00100 0.00100					
Chloroethane	<0.0100 0.0100					
Chloroform	<0.00100 0.00100					
Methyl Chloride	<0.0100 0.0100					
2-Chlorotoluene	<0.00100 0.00100					
4-Chlorotoluene	<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)	<0.00100 0.00100					
Dibromochloromethane	<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane	<0.00100 0.00100					
1,2-Dibromoethane	<0.00500 0.00500					
Methylene Bromide	<0.00100 0.00100					
1,2-Dichlorobenzene	<0.00100 0.00100					
1,3-Dichlorobenzene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686339



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 01.29.2021 18:08
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 686339-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.27.2021 14:00					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.29.2021 08:50 Analyzed: 01.29.2021 15:17 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0101 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.00618 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.0125 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686339



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 01.29.2021 18:08
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 686339-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 01.27.2021 14:00					
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted: 01.29.2021 08:50 Analyzed: 01.29.2021 15:17 Units/RL: mg/L RL					
Toluene	0.00398 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0743 0.00100					
1,3,5-Trimethylbenzene	0.0224 0.00100					
o-Xylene	0.00322 0.00100					
m,p-Xylenes	0.0219 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.0251 0.00100					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 12:25 Units/RL: Deg C RL					
Temperature	11.4 K					
pH by SM4500-H SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 12:25 Units/RL: SU RL					
pH	6.38 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 686339

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

01.29.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.29.2021

Project Manager: **Beaux Jennings****Ensolum**

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **686339****Levey Well**

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 686339. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 686339 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 686339

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	01.27.2021 14:00		686339-001



CASE NARRATIVE

Client Name: *Ensolum*

Project Name: *Levey Well*

Project ID: 03B1417001
Work Order Number(s): 686339

Report Date: 01.29.2021
Date Received: 01.27.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 686339

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.27.2021 16:58

Lab Sample Id: 686339-001

Date Collected: 01.27.2021 14:00

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.29.2021 12:06

% Moisture:

SUB: T104704215-20-38

Seq Number: 3149389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	875	4.00	mg/L	01.29.2021 13:57		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	875	4.00	mg/L	01.29.2021 13:57		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	01.29.2021 13:57	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	01.29.2021 13:57	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-38

Seq Number: 3149407

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	1.70		%	01.29.2021 16:47		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.29.2021 08:20

% Moisture:

SUB: T104704215-20-38

Seq Number: 3149384

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.510	0.500	mg/L	01.29.2021 12:34		1
Chloride	16887-00-6	264	0.500	mg/L	01.29.2021 12:34		1
Fluoride	16984-48-8	0.905	0.500	mg/L	01.29.2021 12:34		1
Nitrate as N	14797-55-8	0.137	0.100	mg/L	01.29.2021 12:34		1
Nitrite as N	14797-65-0	1.16	1.00	mg/L	01.29.2021 12:45	D	10
Sulfate	14808-79-8	23.1	0.500	mg/L	01.29.2021 12:34		1

Analytical Method: TDS by SM2540C

Tech: DTN

Analyst: DTN

% Moisture:

SUB: T104704215-20-38

Seq Number: 3149332

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	1350	5.00	mg/L	01.29.2021 12:00		1



Certificate of Analytical Results 686339

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.27.2021 16:58

Lab Sample Id: 686339-001

Date Collected: 01.27.2021 14:00

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3149339

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.38		SU	01.29.2021 12:25	K	1
Temperature	TEMP	11.4		Deg C	01.29.2021 12:25	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 01.29.2021 10:00

% Moisture:

SUB: T104704215-20-38

Seq Number: 3149398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	296	10.0	mg/L	01.29.2021 15:32	D	50
Magnesium	7439-95-4	55.1	0.200	mg/L	01.29.2021 15:15		1
Potassium	7440-09-7	4.75	0.500	mg/L	01.29.2021 15:15		1
Silica	7631-86-9	59.7	1.07	mg/L	01.29.2021 15:15		1
Sodium	7440-23-5	83.1	0.500	mg/L	01.29.2021 15:15		1



Certificate of Analytical Results 686339

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.27.2021 16:58

Lab Sample Id: 686339-001

Date Collected: 01.27.2021 14:00

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.29.2021 08:50

% Moisture:

Seq Number: 3149421

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00186	0.00100	mg/L	01.29.2021 15:17		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	01.29.2021 15:17	U	1
n-Butylbenzene	104-51-8	0.00110	0.00100	mg/L	01.29.2021 15:17		1
Sec-Butylbenzene	135-98-8	0.00169	0.00100	mg/L	01.29.2021 15:17		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	01.29.2021 15:17	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	01.29.2021 15:17	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Ethylbenzene	100-41-4	0.0101	0.00100	mg/L	01.29.2021 15:17		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Isopropylbenzene	98-82-8	0.00618	0.00100	mg/L	01.29.2021 15:17		1



Certificate of Analytical Results 686339

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 01.27.2021 16:58

Lab Sample Id: 686339-001

Date Collected: 01.27.2021 14:00

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.29.2021 08:50

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	01.29.2021 15:17	U	1
n-Propylbenzene	103-65-1	0.0125	0.00100	mg/L	01.29.2021 15:17		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Toluene	108-88-3	0.00398	0.00100	mg/L	01.29.2021 15:17		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	01.29.2021 15:17	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	01.29.2021 15:17	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0743	0.00100	mg/L	01.29.2021 15:17		1
1,3,5-Trimethylbenzene	108-67-8	0.0224	0.00100	mg/L	01.29.2021 15:17		1
o-Xylene	95-47-6	0.00322	0.00100	mg/L	01.29.2021 15:17		1
m,p-Xylenes	179601-23-1	0.0219	0.0100	mg/L	01.29.2021 15:17		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	01.29.2021 15:17	U	1
Total Xylenes	1330-20-7	0.0251	0.00100	mg/L	01.29.2021 15:17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	75-131	01.29.2021 15:17	
1,2-Dichloroethane-D4	17060-07-0	99	%	63-144	01.29.2021 15:17	
Toluene-D8	2037-26-5	102	%	80-117	01.29.2021 15:17	
4-Bromofluorobenzene	460-00-4	101	%	74-124	01.29.2021 15:17	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

MB Sample Id: 7720339-1-BLK

Matrix: Water

LCS Sample Id: 7720339-1-BKS

Prep Method: SM2320P

Date Prep: 01.29.2021

LCSD Sample Id: 7720339-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	258	103	261	104	85-115	1	20	mg/L	01.29.2021 12:28	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

MB Sample Id: 7720339-1-BLK

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	
Alkalinity, hydroxide (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

Parent Sample Id: 685548-001

MD Sample Id: 685548-001 D

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	211	209	1	20	mg/L	01.29.2021 12:48	
Alkalinity, Bicarbonate (as CaCO3)	211	209	1	20	mg/L	01.29.2021 12:48	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 12:48	
Alkalinity, hydroxide (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 12:48	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

Parent Sample Id: 686047-003

MD Sample Id: 686047-003 D

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	136	136	0	20	mg/L	01.29.2021 14:30	
Alkalinity, Bicarbonate (as CaCO3)	136	136	0	20	mg/L	01.29.2021 14:30	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 14:30	
Alkalinity, hydroxide (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 14:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3149384

Matrix: Water

Prep Method: E300P

Date Prep: 01.29.2021

MB Sample Id: 7720271-1-BLK

LCS Sample Id: 7720271-1-BKS

LCSD Sample Id: 7720271-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.95	100	9.95	100	90-110	0	20	mg/L	01.29.2021 07:12	
Chloride	<0.500	10.0	9.91	99	9.92	99	90-110	0	20	mg/L	01.29.2021 07:12	
Fluoride	<0.500	10.0	10.4	104	10.5	105	90-110	1	20	mg/L	01.29.2021 07:12	
Nitrate as N	<0.100	10.0	10.1	101	10.1	101	90-110	0	20	mg/L	01.29.2021 07:12	
Nitrite as N	<0.100	10.0	9.79	98	9.81	98	90-110	0	20	mg/L	01.29.2021 07:12	
Sulfate	<0.500	10.0	10.0	100	10.0	100	90-110	0	20	mg/L	01.29.2021 07:12	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3149384

Matrix: Water

Prep Method: E300P

Date Prep: 01.29.2021

Parent Sample Id: 686554-003

MS Sample Id: 686554-003 S

MSD Sample Id: 686554-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	0.215	10.0	10.6	104	10.6	104	90-110	0	20	mg/L	01.29.2021 09:12	
Chloride	11.0	10.0	21.5	105	21.4	104	90-110	0	20	mg/L	01.29.2021 09:12	
Fluoride	0.160	10.0	10.9	107	10.9	107	90-110	0	20	mg/L	01.29.2021 09:12	
Nitrate as N	0.177	10.0	10.6	104	10.6	104	90-110	0	20	mg/L	01.29.2021 09:12	
Nitrite as N	0.162	10.0	10.1	99	10.1	99	90-110	0	20	mg/L	01.29.2021 09:12	
Sulfate	8.80	10.0	19.2	104	19.2	104	90-110	0	20	mg/L	01.29.2021 09:12	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3149384

Matrix: Water

Prep Method: E300P

Date Prep: 01.29.2021

Parent Sample Id: 686554-005

MS Sample Id: 686554-005 S

MSD Sample Id: 686554-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	2.64	10.0	13.1	105	13.1	105	90-110	0	20	mg/L	01.29.2021 11:11	
Chloride	124	10.0	131	70	131	70	90-110	0	20	mg/L	01.29.2021 11:11	X
Fluoride	0.361	10.0	11.1	107	11.1	107	90-110	0	20	mg/L	01.29.2021 11:11	
Nitrate as N	0.146	10.0	10.5	104	10.5	104	90-110	0	20	mg/L	01.29.2021 11:11	
Nitrite as N	0.121	10.0	9.99	99	9.99	99	90-110	0	20	mg/L	01.29.2021 11:11	
Sulfate	65.3	10.0	74.3	90	74.4	91	90-110	0	20	mg/L	01.29.2021 11:11	

Analytical Method: TDS by SM2540C

Seq Number: 3149332

Matrix: Water

MB Sample Id: 3149332-1-BLK

LCS Sample Id: 3149332-1-BKS

LCSD Sample Id: 3149332-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	987	99	1010	101	80-120	2	10	mg/L	01.29.2021 12:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: TDS by SM2540C

Seq Number: 3149332

Matrix: Water

Parent Sample Id: 686339-001

MD Sample Id: 686339-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	1350	1360	1	10	mg/L	01.29.2021 12:00	

Analytical Method: pH by SM4500-H

Seq Number: 3149339

Matrix: Water

Parent Sample Id: 686339-001

MD Sample Id: 686339-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.38	6.44	1	20	SU	01.29.2021 12:25	
Temperature	11.4	11.8	3	20	Deg C	01.29.2021 12:25	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3149398

Matrix: Water

MB Sample Id: 7720314-1-BLK

LCS Sample Id: 7720314-1-BKS

Prep Method: E200.7P

Date Prep: 01.29.2021

LCSD Sample Id: 7720314-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.5	98	24.6	98	85-115	0	20	mg/L	01.29.2021 14:10	
Magnesium	<0.200	25.0	24.1	96	24.3	97	85-115	1	20	mg/L	01.29.2021 14:10	
Potassium	<0.500	10.0	9.85	99	9.88	99	85-115	0	20	mg/L	01.29.2021 14:10	
Silica	<1.07	21.4	21.0	98	21.2	99	85-115	1	20	mg/L	01.29.2021 14:10	
Sodium	<0.500	25.0	23.9	96	23.9	96	85-115	0	20	mg/L	01.29.2021 14:10	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3149398

Matrix: Water

Parent Sample Id: 686068-001

MS Sample Id: 686068-001 S

Prep Method: E200.7P

Date Prep: 01.29.2021

MSD Sample Id: 686068-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	4.89	25.0	30.7	103	29.9	100	70-130	3	20	mg/L	01.29.2021 14:26	
Magnesium	2.31	25.0	28.0	103	27.2	100	70-130	3	20	mg/L	01.29.2021 14:26	
Potassium	2.20	10.0	12.7	105	12.5	103	70-130	2	20	mg/L	01.29.2021 14:26	
Silica	41.5	21.4	65.5	112	63.7	104	70-130	3	20	mg/L	01.29.2021 14:26	
Sodium	139	25.0	164	100	159	80	70-130	3	20	mg/L	01.29.2021 14:26	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

MB Sample Id: 7720358-1-BLK

Matrix: Water

LCS Sample Id: 7720358-1-BKS

Prep Method: SW5030B

Date Prep: 01.29.2021

LCSD Sample Id: 7720358-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0476	95	0.0460	92	66-142	3	25	mg/L	01.29.2021 10:23	
Bromobenzene	<0.00100	0.0500	0.0509	102	0.0500	100	75-125	2	25	mg/L	01.29.2021 10:23	
Bromochloromethane	<0.00100	0.0500	0.0489	98	0.0487	97	60-140	0	25	mg/L	01.29.2021 10:23	
Bromodichloromethane	<0.00100	0.0500	0.0486	97	0.0477	95	75-125	2	25	mg/L	01.29.2021 10:23	
Bromoform	<0.00500	0.0500	0.0530	106	0.0516	103	75-125	3	25	mg/L	01.29.2021 10:23	
Methyl bromide	<0.00500	0.0500	0.0455	91	0.0426	85	60-140	7	25	mg/L	01.29.2021 10:23	
2-Butanone	<0.0500	0.250	0.210	84	0.220	88	60-140	5	25	mg/L	01.29.2021 10:23	
n-Butylbenzene	<0.00100	0.0500	0.0523	105	0.0506	101	75-125	3	25	mg/L	01.29.2021 10:23	
Sec-Butylbenzene	<0.00100	0.0500	0.0523	105	0.0506	101	75-125	3	25	mg/L	01.29.2021 10:23	
tert-Butylbenzene	<0.00100	0.0500	0.0520	104	0.0503	101	75-125	3	25	mg/L	01.29.2021 10:23	
Carbon Tetrachloride	<0.00500	0.0500	0.0474	95	0.0454	91	62-125	4	25	mg/L	01.29.2021 10:23	
Chlorobenzene	<0.00100	0.0500	0.0497	99	0.0474	95	60-133	5	25	mg/L	01.29.2021 10:23	
Chloroethane	<0.0100	0.0500	0.0486	97	0.0458	92	60-140	6	25	mg/L	01.29.2021 10:23	
Chloroform	<0.00100	0.0500	0.0468	94	0.0456	91	70-130	3	25	mg/L	01.29.2021 10:23	
Methyl Chloride	<0.0100	0.0500	0.0440	88	0.0436	87	60-140	1	25	mg/L	01.29.2021 10:23	
2-Chlorotoluene	<0.00100	0.0500	0.0507	101	0.0494	99	73-125	3	25	mg/L	01.29.2021 10:23	
4-Chlorotoluene	<0.00100	0.0500	0.0515	103	0.0496	99	74-125	4	25	mg/L	01.29.2021 10:23	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0528	106	0.0509	102	75-125	4	25	mg/L	01.29.2021 10:23	
Dibromochloromethane	<0.00500	0.0500	0.0528	106	0.0511	102	73-125	3	25	mg/L	01.29.2021 10:23	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0539	108	0.0542	108	59-125	1	25	mg/L	01.29.2021 10:23	
1,2-Dibromoethane	<0.00500	0.0500	0.0513	103	0.0502	100	73-125	2	25	mg/L	01.29.2021 10:23	
Methylene Bromide	<0.00100	0.0500	0.0493	99	0.0483	97	69-127	2	25	mg/L	01.29.2021 10:23	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0513	103	0.0499	100	75-125	3	25	mg/L	01.29.2021 10:23	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0511	102	0.0494	99	75-125	3	25	mg/L	01.29.2021 10:23	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0513	103	0.0495	99	75-125	4	25	mg/L	01.29.2021 10:23	
Dichlorodifluoromethane	<0.00100	0.0500	0.0483	97	0.0461	92	60-140	5	25	mg/L	01.29.2021 10:23	
1,1-Dichloroethane	<0.00100	0.0500	0.0466	93	0.0458	92	72-125	2	25	mg/L	01.29.2021 10:23	
1,2-Dichloroethane	<0.00100	0.0500	0.0483	97	0.0475	95	68-127	2	25	mg/L	01.29.2021 10:23	
1,1-Dichloroethene	<0.00100	0.0500	0.0472	94	0.0448	90	59-172	5	25	mg/L	01.29.2021 10:23	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0466	93	0.0462	92	75-125	1	25	mg/L	01.29.2021 10:23	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0458	92	0.0442	88	75-125	4	25	mg/L	01.29.2021 10:23	
1,2-Dichloropropane	<0.00500	0.0500	0.0485	97	0.0473	95	74-125	3	25	mg/L	01.29.2021 10:23	
1,3-Dichloropropane	<0.00500	0.0500	0.0506	101	0.0494	99	75-125	2	25	mg/L	01.29.2021 10:23	
2,2-Dichloropropane	<0.00500	0.0500	0.0477	95	0.0452	90	75-125	5	25	mg/L	01.29.2021 10:23	
1,1-Dichloropropene	<0.00500	0.0500	0.0464	93	0.0445	89	75-125	4	25	mg/L	01.29.2021 10:23	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0503	101	0.0490	98	74-125	3	25	mg/L	01.29.2021 10:23	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0532	106	0.0514	103	66-125	3	25	mg/L	01.29.2021 10:23	
Ethylbenzene	<0.00100	0.0500	0.0495	99	0.0471	94	75-125	5	25	mg/L	01.29.2021 10:23	
Hexachlorobutadiene	<0.00500	0.0500	0.0501	100	0.0482	96	75-125	4	25	mg/L	01.29.2021 10:23	
Isopropylbenzene	<0.00100	0.0500	0.0504	101	0.0477	95	75-125	6	25	mg/L	01.29.2021 10:23	
Methylene Chloride	<0.00500	0.0500	0.0470	94	0.0461	92	75-125	2	25	mg/L	01.29.2021 10:23	
MTBE	<0.00500	0.0500	0.0490	98	0.0488	98	65-135	0	25	mg/L	01.29.2021 10:23	
Naphthalene	<0.0100	0.0500	0.0514	103	0.0514	103	70-130	0	25	mg/L	01.29.2021 10:23	
n-Propylbenzene	<0.00100	0.0500	0.0513	103	0.0496	99	75-125	3	25	mg/L	01.29.2021 10:23	
Styrene	<0.00100	0.0500	0.0496	99	0.0476	95	75-125	4	25	mg/L	01.29.2021 10:23	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0513	103	0.0498	100	72-125	3	25	mg/L	01.29.2021 10:23	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0524	105	0.0535	107	74-125	2	25	mg/L	01.29.2021 10:23	
Tetrachloroethylene	<0.00100	0.0500	0.0474	95	0.0454	91	71-125	4	25	mg/L	01.29.2021 10:23	
Toluene	<0.00100	0.0500	0.0487	97	0.0466	93	59-139	4	25	mg/L	01.29.2021 10:23	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0489	98	0.0467	93	75-137	5	25	mg/L	01.29.2021 10:23	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

MB Sample Id: 7720358-1-BLK

Matrix: Water

LCS Sample Id: 7720358-1-BKS

Prep Method: SW5030B

Date Prep: 01.29.2021

LCSD Sample Id: 7720358-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0515	103	0.0490	98	75-135	5	25	mg/L	01.29.2021 10:23	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0466	93	0.0449	90	75-125	4	25	mg/L	01.29.2021 10:23	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0505	101	0.0495	99	75-127	2	25	mg/L	01.29.2021 10:23	
Trichloroethylene	<0.00500	0.0500	0.0474	95	0.0452	90	62-137	5	25	mg/L	01.29.2021 10:23	
Trichlorofluoromethane	<0.00100	0.0500	0.0457	91	0.0440	88	60-140	4	25	mg/L	01.29.2021 10:23	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0537	107	0.0535	107	75-125	0	25	mg/L	01.29.2021 10:23	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0522	104	0.0512	102	75-125	2	25	mg/L	01.29.2021 10:23	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0521	104	0.0507	101	70-125	3	25	mg/L	01.29.2021 10:23	
o-Xylene	<0.00100	0.0500	0.0502	100	0.0483	97	75-125	4	25	mg/L	01.29.2021 10:23	
m,p-Xylenes	<0.0100	0.100	0.0995	100	0.0952	95	75-125	4	25	mg/L	01.29.2021 10:23	
Vinyl Chloride	<0.00200	0.0500	0.0432	86	0.0421	84	60-140	3	25	mg/L	01.29.2021 10:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		99		100		75-131	%	01.29.2021 10:23
1,2-Dichloroethane-D4	101		101		100		63-144	%	01.29.2021 10:23
Toluene-D8	104		103		101		80-117	%	01.29.2021 10:23
4-Bromofluorobenzene	105		101		103		74-124	%	01.29.2021 10:23

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Parent Sample Id: 686308-005

Matrix: Water

MS Sample Id: 686308-005 S

Prep Method: SW5030B

Date Prep: 01.29.2021

MSD Sample Id: 686308-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0486	97	0.0467	93	66-142	4	25	mg/L	01.29.2021 11:47	
Bromobenzene	<0.00100	0.0500	0.0541	108	0.0487	97	75-125	11	25	mg/L	01.29.2021 11:47	
Bromochloromethane	<0.00100	0.0500	0.0509	102	0.0502	100	60-140	1	25	mg/L	01.29.2021 11:47	
Bromodichloromethane	<0.00100	0.0500	0.0518	104	0.0500	100	75-125	4	25	mg/L	01.29.2021 11:47	
Bromoform	<0.00500	0.0500	0.0624	125	0.0588	118	75-125	6	25	mg/L	01.29.2021 11:47	
Methyl bromide	<0.00500	0.0500	0.0393	79	0.0419	84	60-140	6	25	mg/L	01.29.2021 11:47	
2-Butanone	<0.0500	0.250	0.229	92	0.230	92	60-140	0	25	mg/L	01.29.2021 11:47	
n-Butylbenzene	<0.00100	0.0500	0.0575	115	0.0515	103	75-125	11	25	mg/L	01.29.2021 11:47	
Sec-Butylbenzene	<0.00100	0.0500	0.0546	109	0.0486	97	75-125	12	25	mg/L	01.29.2021 11:47	
tert-Butylbenzene	<0.00100	0.0500	0.0571	114	0.0513	103	75-125	11	25	mg/L	01.29.2021 11:47	
Carbon Tetrachloride	<0.00500	0.0500	0.0491	98	0.0478	96	62-125	3	25	mg/L	01.29.2021 11:47	
Chlorobenzene	<0.00100	0.0500	0.0518	104	0.0498	100	60-133	4	25	mg/L	01.29.2021 11:47	
Chloroethane	<0.0100	0.0500	0.0542	108	0.0509	102	60-140	6	25	mg/L	01.29.2021 11:47	
Chloroform	<0.00100	0.0500	0.0501	100	0.0489	98	70-130	2	25	mg/L	01.29.2021 11:47	
Methyl Chloride	<0.0100	0.0500	0.0504	101	0.0523	105	60-140	4	25	mg/L	01.29.2021 11:47	
2-Chlorotoluene	<0.00100	0.0500	0.0549	110	0.0496	99	73-125	10	25	mg/L	01.29.2021 11:47	
4-Chlorotoluene	<0.00100	0.0500	0.0550	110	0.0496	99	74-125	10	25	mg/L	01.29.2021 11:47	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0508	102	0.0448	90	75-125	13	25	mg/L	01.29.2021 11:47	
Dibromochloromethane	<0.00500	0.0500	0.0582	116	0.0558	112	73-125	4	25	mg/L	01.29.2021 11:47	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0616	123	0.0554	111	59-125	11	25	mg/L	01.29.2021 11:47	
1,2-Dibromoethane	<0.00500	0.0500	0.0545	109	0.0530	106	73-125	3	25	mg/L	01.29.2021 11:47	
Methylene Bromide	<0.00100	0.0500	0.0520	104	0.0503	101	69-127	3	25	mg/L	01.29.2021 11:47	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0566	113	0.0507	101	75-125	11	25	mg/L	01.29.2021 11:47	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0552	110	0.0487	97	75-125	13	25	mg/L	01.29.2021 11:47	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0529	106	0.0477	95	75-125	10	25	mg/L	01.29.2021 11:47	
Dichlorodifluoromethane	<0.00100	0.0500	0.0684	137	0.0706	141	60-140	3	25	mg/L	01.29.2021 11:47	X
1,1-Dichloroethane	<0.00100	0.0500	0.0535	107	0.0525	105	72-125	2	25	mg/L	01.29.2021 11:47	
1,2-Dichloroethane	<0.00100	0.0500	0.0517	103	0.0499	100	68-127	4	25	mg/L	01.29.2021 11:47	
1,1-Dichloroethene	<0.00100	0.0500	0.0474	95	0.0459	92	59-172	3	25	mg/L	01.29.2021 11:47	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0490	98	0.0475	95	75-125	3	25	mg/L	01.29.2021 11:47	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0462	92	0.0461	92	75-125	0	25	mg/L	01.29.2021 11:47	
1,2-Dichloropropane	<0.00500	0.0500	0.0524	105	0.0500	100	74-125	5	25	mg/L	01.29.2021 11:47	
1,3-Dichloropropane	<0.00500	0.0500	0.0561	112	0.0541	108	75-125	4	25	mg/L	01.29.2021 11:47	
2,2-Dichloropropane	<0.00500	0.0500	0.0507	101	0.0496	99	75-125	2	25	mg/L	01.29.2021 11:47	
1,1-Dichloropropene	<0.00500	0.0500	0.0416	83	0.0408	82	75-125	2	25	mg/L	01.29.2021 11:47	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0534	107	0.0517	103	74-125	3	25	mg/L	01.29.2021 11:47	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0576	115	0.0553	111	66-125	4	25	mg/L	01.29.2021 11:47	
Ethylbenzene	<0.00100	0.0500	0.0508	102	0.0479	96	75-125	6	25	mg/L	01.29.2021 11:47	
Hexachlorobutadiene	<0.00500	0.0500	0.0553	111	0.0494	99	75-125	11	25	mg/L	01.29.2021 11:47	
Isopropylbenzene	<0.00100	0.0500	0.0504	101	0.0478	96	75-125	5	25	mg/L	01.29.2021 11:47	
Methylene Chloride	<0.00500	0.0500	0.0478	96	0.0470	94	75-125	2	25	mg/L	01.29.2021 11:47	
MTBE	<0.00500	0.0500	0.0513	103	0.0509	102	65-135	1	25	mg/L	01.29.2021 11:47	
Naphthalene	<0.0100	0.0500	0.0634	127	0.0544	109	70-130	15	25	mg/L	01.29.2021 11:47	
n-Propylbenzene	<0.00100	0.0500	0.0557	111	0.0498	100	75-125	11	25	mg/L	01.29.2021 11:47	
Styrene	<0.00100	0.0500	0.0106	21	0.0111	22	75-125	5	25	mg/L	01.29.2021 11:47	X
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0547	109	0.0526	105	72-125	4	25	mg/L	01.29.2021 11:47	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0585	117	0.0541	108	74-125	8	25	mg/L	01.29.2021 11:47	
Tetrachloroethylene	<0.00100	0.0500	0.0489	98	0.0456	91	71-125	7	25	mg/L	01.29.2021 11:47	
Toluene	<0.00100	0.0500	0.0511	102	0.0488	98	59-139	5	25	mg/L	01.29.2021 11:47	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0567	113	0.0481	96	75-137	16	25	mg/L	01.29.2021 11:47	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Parent Sample Id: 686308-005

Matrix: Water

MS Sample Id: 686308-005 S

Prep Method: SW5030B

Date Prep: 01.29.2021

MSD Sample Id: 686308-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0571	114	0.0501	100	75-135	13	25	mg/L	01.29.2021 11:47	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0505	101	0.0491	98	75-125	3	25	mg/L	01.29.2021 11:47	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0555	111	0.0527	105	75-127	5	25	mg/L	01.29.2021 11:47	
Trichloroethylene	<0.00500	0.0500	0.0496	99	0.0484	97	62-137	2	25	mg/L	01.29.2021 11:47	
Trichlorofluoromethane	<0.00100	0.0500	0.0491	98	0.0506	101	60-140	3	25	mg/L	01.29.2021 11:47	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0611	122	0.0549	110	75-125	11	25	mg/L	01.29.2021 11:47	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0563	113	0.0507	101	75-125	10	25	mg/L	01.29.2021 11:47	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0560	112	0.0497	99	70-125	12	25	mg/L	01.29.2021 11:47	
o-Xylene	<0.00100	0.0500	0.0526	105	0.0501	100	75-125	5	25	mg/L	01.29.2021 11:47	
m,p-Xylenes	<0.0100	0.100	0.104	104	0.0990	99	75-125	5	25	mg/L	01.29.2021 11:47	
Vinyl Chloride	<0.00200	0.0500	0.0525	105	0.0548	110	60-140	4	25	mg/L	01.29.2021 11:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		99		75-131	%	01.29.2021 11:47
1,2-Dichloroethane-D4	101		99		63-144	%	01.29.2021 11:47
Toluene-D8	103		101		80-117	%	01.29.2021 11:47
4-Bromofluorobenzene	102		100		74-124	%	01.29.2021 11:47

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 184339

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
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 281-7550
Hobbs, NM (575-392-7550)

Page 1 of 1

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@ensolum.com

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

Project Name:	Levey Well	Hobbs NM	Turn Around	ANALYSIS REQUEST	Work Order Notes
Project Number:	03B1417001		Routine ☐		
P.O. Number:	03B1417001		Rush: 24 hr		
Sampler's Name:	Shane Diller		Due Date:		
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice: Yes No		
Temperature (°C):	5 /	Thermometer ID			
Received intact:	Yes No				
Cooler Custody Seals:	Yes No N/A	Correction Factor: .5			
Sample Custody Seals:	Yes No N/A	Total Containers:			
Number of Containers				ANALYSIS REQUEST	Work Order Notes
: F, Cl, SO ₄ , B					
s: Ca, K, Mg, Na, Si					
TAT starts the day received by the lab, if received by 4:30pm					

[illegible]

<i>Circle Method(s) and Metal(s) to be analyzed</i>	<i>TCLP / SPLP</i>	<i>6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U</i>	<i>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</i>
Total	200.7 / 6010	200.8 / 6020:	

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		12/27/2011			
		4			
		6			

Inter-Office Shipment

IOS Number : **77215**

Date/Time: 01.28.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772761771126

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
686339-001	W	Levey Well	01.27.2021 14:00	SW8260C	VOCs by SW-846 8260C	01.28.2021	02.10.2021	JKR	BDCME BRBZ BRCLME	
686339-001	W	Levey Well	01.27.2021 14:00	E200.7	Recoverable Metals per ICP by EPA 200	01.28.2021	07.26.2021	JKR	CA K MG NA SI	
686339-001	W	Levey Well	01.27.2021 14:00	E300	Inorganic Anions by EPA 300/300.1	01.28.2021	01.29.2021 14:00	JKR	BR CL F NO2N NO3N SC	
686339-001	W	Levey Well	01.27.2021 14:00	SM4500-H	pH by SM4500-H	01.28.2021	01.27.2021 14:00	JKR		
686339-001	W	Levey Well	01.27.2021 14:00	SM2540C	TDS by SM2540C	01.28.2021	02.03.2021 14:00	JKR	TDS	
686339-001	W	Levey Well	01.27.2021 14:00	SM2320B	Alkalinity by SM2320B	01.28.2021	02.10.2021	JKR	ALK ALKB ALKC	
686339-001	W	Levey Well	01.27.2021 14:00	SM1030E	Cation-Anion Balance Calculation	01.28.2021	02.26.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.28.2021

Received By:



Jhyrom Edralin

Date Received: 01.29.2021

Cooler Temperature: 1.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 77215

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.28.2021 08.26 AM

Received By: Jhyrom Edralin

Date Received: 01.29.2021 10.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.29.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.27.2021 04.58.00 PM

Work Order #: 686339

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 01.28.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.28.2021

Certificate of Analysis Summary 687228



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.05.2021 14:22
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 687228-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.03.2021 10:45					
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 02.04.2021 14:43 Analyzed: * * * * * Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	940 4.00					
Alkalinity, Bicarbonate (as CaCO3)	940 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-39	Extracted: Analyzed: 02.04.2021 18:29 Units/RL: % RL					
Cation-Anion Balance	0					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-39	Extracted: 02.04.2021 09:05 Analyzed: 02.04.2021 12:24 Units/RL: mg/L RL					
Bromide	0.501 0.500					
Chloride	275 0.500					
Fluoride	0.842 0.500					
Nitrate as N	0.122 0.100					
Nitrite as N	1.02 D 1.00					
Sulfate	20.5 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 687228



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.05.2021 14:22
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 687228-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.03.2021 10:45					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-39	Extracted: 02.04.2021 10:30 Analyzed: 02.04.2021 17:12 Units/RL: mg/L RL					
Calcium	329 D 10.0					
Magnesium	59.0 0.200					
Potassium	4.76 0.500					
Silica	62.2 1.07					
Sodium	89.4 0.500					
TDS by SM2540C SUB: T104704215-20-39	Extracted: Analyzed: 02.04.2021 11:47 Units/RL: mg/L RL					
Total Dissolved Solids	1370 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 687228

Ensolum, Dallas, TX

Project Name: Levey Well

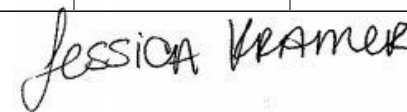
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.05.2021 14:22
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 687228-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.03.2021 10:45					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.04.2021 12:59 Analyzed: 02.04.2021 14:22 Units/RL: mg/L RL					
Benzene	0.00208 0.00100					
Bromobenzene	<0.00100 0.00100					
Bromochloromethane	<0.00100 0.00100					
Bromodichloromethane	<0.00100 0.00100					
Bromoform	<0.00500 0.00500					
Methyl bromide	<0.00500 0.00500					
2-Butanone	<0.0500 0.0500					
n-Butylbenzene	<0.00100 0.00100					
Sec-Butylbenzene	0.00195 0.00100					
tert-Butylbenzene	<0.00100 0.00100					
Carbon Tetrachloride	<0.00500 0.00500					
Chlorobenzene	<0.00100 0.00100					
Chloroethane	<0.0100 0.0100					
Chloroform	<0.00100 0.00100					
Methyl Chloride	<0.0100 0.0100					
2-Chlorotoluene	<0.00100 0.00100					
4-Chlorotoluene	<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)	0.00101 0.00100					
Dibromochloromethane	<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane	<0.00100 0.00100					
1,2-Dibromoethane	<0.00500 0.00500					
Methylene Bromide	<0.00100 0.00100					
1,2-Dichlorobenzene	<0.00100 0.00100					
1,3-Dichlorobenzene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 687228



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.05.2021 14:22
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 687228-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.03.2021 10:45					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.04.2021 12:59 Analyzed: 02.04.2021 14:22 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0120 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.00756 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.0156 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 687228



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.05.2021 14:22
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 687228-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.03.2021 10:45					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.04.2021 12:59 Analyzed: 02.04.2021 14:22 Units/RL: mg/L RL					
Toluene	0.00551 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0945 0.00100					
1,3,5-Trimethylbenzene	0.0282 0.00100					
o-Xylene	0.00438 0.00100					
m,p-Xylenes	0.0262 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.0306 0.00100					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.04.2021 15:29 Units/RL: Deg C RL					
Temperature	21.4 K					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.04.2021 15:29 Units/RL: SU RL					
pH	6.37 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 687228

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

02.05.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.05.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **687228**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 687228. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 687228 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 687228

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	02.03.2021 10:45		687228-001



CASE NARRATIVE

Client Name: Ensolum

Project Name: Levey Well

Project ID: 03B1417001
Work Order Number(s): 687228

Report Date: 02.05.2021
Date Received: 02.03.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3150031 VOCs by SW-846 8260C

1,2-Dibromo-3-Chloropropane, Naphthalene recovered above QC limits in the Blank Spike Duplicate.
Samples in the analytical batch are: 687228-001.



Certificate of Analytical Results 687228

Ensolum, Dallas, TX Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.03.2021 16:11

Lab Sample Id: 687228-001

Date Collected: 02.03.2021 10:45

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.04.2021 14:43

% Moisture:

SUB: T104704215-20-39

Seq Number: 3150019

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	940	4.00	mg/L	02.04.2021 13:56		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	940	4.00	mg/L	02.04.2021 13:56		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	02.04.2021 13:56	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	02.04.2021 13:56	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-39

Seq Number: 3150074

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	0		%	02.04.2021 18:29	U	1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.04.2021 09:05

% Moisture:

SUB: T104704215-20-39

Seq Number: 3150028

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.501	0.500	mg/L	02.04.2021 12:24		1
Chloride	16887-00-6	275	0.500	mg/L	02.04.2021 12:24		1
Fluoride	16984-48-8	0.842	0.500	mg/L	02.04.2021 12:24		1
Nitrate as N	14797-55-8	0.122	0.100	mg/L	02.04.2021 12:24		1
Nitrite as N	14797-65-0	1.02	1.00	mg/L	02.04.2021 12:35	D	10
Sulfate	14808-79-8	20.5	0.500	mg/L	02.04.2021 12:24		1

Analytical Method: TDS by SM2540C

Tech: DTN

Analyst: DTN

% Moisture:

SUB: T104704215-20-39

Seq Number: 3149982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	1370	5.00	mg/L	02.04.2021 11:47		1



Certificate of Analytical Results 687228

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.03.2021 16:11

Lab Sample Id: 687228-001

Date Collected: 02.03.2021 10:45

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3150023

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.37		SU	02.04.2021 15:29	K	1
Temperature	TEMP	21.4		Deg C	02.04.2021 15:29	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 02.04.2021 10:30

% Moisture:

SUB: T104704215-20-39

Seq Number: 3150066

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	329	10.0	mg/L	02.04.2021 17:16	D	50
Magnesium	7439-95-4	59.0	0.200	mg/L	02.04.2021 17:12		1
Potassium	7440-09-7	4.76	0.500	mg/L	02.04.2021 17:12		1
Silica	7631-86-9	62.2	1.07	mg/L	02.04.2021 17:12		1
Sodium	7440-23-5	89.4	0.500	mg/L	02.04.2021 17:12		1



Certificate of Analytical Results 687228

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.03.2021 16:11

Lab Sample Id: 687228-001

Date Collected: 02.03.2021 10:45

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.04.2021 12:59

% Moisture:

SUB: T104704215-20-39

Seq Number: 3150031

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00208	0.00100	mg/L	02.04.2021 14:22		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	02.04.2021 14:22	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Sec-Butylbenzene	135-98-8	0.00195	0.00100	mg/L	02.04.2021 14:22		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	02.04.2021 14:22	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	02.04.2021 14:22	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00101	0.00100	mg/L	02.04.2021 14:22		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	02.04.2021 14:22	UH	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Ethylbenzene	100-41-4	0.0120	0.00100	mg/L	02.04.2021 14:22		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Isopropylbenzene	98-82-8	0.00756	0.00100	mg/L	02.04.2021 14:22		1



Certificate of Analytical Results 687228

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.03.2021 16:11

Lab Sample Id: 687228-001

Date Collected: 02.03.2021 10:45

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

% Moisture:

Analyst: EZA

Date Prep: 02.04.2021 12:59

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	02.04.2021 14:22	UH	1
n-Propylbenzene	103-65-1	0.0156	0.00100	mg/L	02.04.2021 14:22		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Toluene	108-88-3	0.00551	0.00100	mg/L	02.04.2021 14:22		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	02.04.2021 14:22	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	02.04.2021 14:22	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0945	0.00100	mg/L	02.04.2021 14:22		1
1,3,5-Trimethylbenzene	108-67-8	0.0282	0.00100	mg/L	02.04.2021 14:22		1
o-Xylene	95-47-6	0.00438	0.00100	mg/L	02.04.2021 14:22		1
m,p-Xylenes	179601-23-1	0.0262	0.0100	mg/L	02.04.2021 14:22		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	02.04.2021 14:22	U	1
Total Xylenes	1330-20-7	0.0306	0.00100	mg/L	02.04.2021 14:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	02.04.2021 14:22	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	02.04.2021 14:22	
Toluene-D8	2037-26-5	103	%	80-117	02.04.2021 14:22	
4-Bromofluorobenzene	460-00-4	99	%	74-124	02.04.2021 14:22	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3150019

MB Sample Id: 7720797-1-BLK

Matrix: Water

LCS Sample Id: 7720797-1-BKS

Prep Method: SM2320P

Date Prep: 02.04.2021

LCSD Sample Id: 7720797-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	259	104	263	105	85-115	2	20	mg/L	02.04.2021 12:56	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3150019

Matrix: Water

MB Sample Id: 7720797-1-BLK

Prep Method: SM2320P

Date Prep: 02.04.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	02.04.2021 12:49	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	02.04.2021 12:49	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	02.04.2021 12:49	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3150019

Matrix: Ground Water

Parent Sample Id: 687229-001

MD Sample Id: 687229-001 D

Prep Method: SM2320P

Date Prep: 02.04.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	1130	1130	0	20	mg/L	02.04.2021 13:30	
Alkalinity, Bicarbonate (as CaCO ₃)	1130	1130	0	20	mg/L	02.04.2021 13:30	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.04.2021 13:30	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.04.2021 13:30	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3150028

Matrix: Water

MB Sample Id: 7720745-1-BLK

LCS Sample Id: 7720745-1-BKS

Prep Method: E300P

Date Prep: 02.04.2021

LCSD Sample Id: 7720745-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.74	97	9.77	98	90-110	0	20	mg/L	02.04.2021 09:00	
Chloride	<0.500	10.0	9.96	100	10.0	100	90-110	0	20	mg/L	02.04.2021 09:00	
Fluoride	<0.500	10.0	10.1	101	10.1	101	90-110	0	20	mg/L	02.04.2021 09:00	
Nitrate as N	<0.100	10.0	9.75	98	9.79	98	90-110	0	20	mg/L	02.04.2021 09:00	
Nitrite as N	<0.100	10.0	9.58	96	9.62	96	90-110	0	20	mg/L	02.04.2021 09:00	
Sulfate	<0.500	10.0	9.81	98	9.83	98	90-110	0	20	mg/L	02.04.2021 09:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3150028

Matrix: Water

Prep Method: E300P

Date Prep: 02.04.2021

Parent Sample Id: 687174-001

MS Sample Id: 687174-001 S

MSD Sample Id: 687174-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	02.04.2021 09:48	
Chloride	27.2	10.0	36.5	93	36.5	93	90-110	0	20	mg/L	02.04.2021 09:48	
Fluoride	<0.500	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	02.04.2021 09:48	
Nitrate as N	0.644	10.0	10.6	100	10.6	100	90-110	0	20	mg/L	02.04.2021 09:48	
Nitrite as N	<0.100	10.0	9.94	99	9.93	99	90-110	0	20	mg/L	02.04.2021 09:48	
Sulfate	7.87	10.0	17.8	99	17.8	99	90-110	0	20	mg/L	02.04.2021 09:48	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3150028

Matrix: Liquid

Prep Method: E300P

Date Prep: 02.04.2021

Parent Sample Id: 687335-001

MS Sample Id: 687335-001 S

MSD Sample Id: 687335-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.2	102	10.2	102	90-110	0	20	mg/L	02.04.2021 11:46	
Chloride	34.8	10.0	44.0	92	43.9	91	90-110	0	20	mg/L	02.04.2021 11:46	
Fluoride	<0.500	10.0	10.5	105	10.5	105	90-110	0	20	mg/L	02.04.2021 11:46	
Nitrate as N	0.243	10.0	10.1	99	10.1	99	90-110	0	20	mg/L	02.04.2021 11:46	
Nitrite as N	<0.100	10.0	9.77	98	9.76	98	90-110	0	20	mg/L	02.04.2021 11:46	
Sulfate	30.7	10.0	40.1	94	40.1	94	90-110	0	20	mg/L	02.04.2021 11:46	

Analytical Method: TDS by SM2540C

Seq Number: 3149982

Matrix: Water

MB Sample Id: 3149982-1-BLK

LCS Sample Id: 3149982-1-BKS

LCSD Sample Id: 3149982-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	985	99	1020	102	80-120	3	10	mg/L	02.04.2021 11:47	

Analytical Method: TDS by SM2540C

Seq Number: 3149982

Matrix: Water

Parent Sample Id: 686757-001

MD Sample Id: 686757-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	11100	10800	3	10	mg/L	02.04.2021 11:47	

Analytical Method: pH by SM4500-H

Seq Number: 3150023

Matrix: Water

Parent Sample Id: 687228-001

MD Sample Id: 687228-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.37	6.45	1	20	SU	02.04.2021 15:29	
Temperature	21.4	21.7	1	20	Deg C	02.04.2021 15:29	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3150066

Matrix: Water

Prep Method: E200.7P

Date Prep: 02.04.2021

MB Sample Id: 7720777-1-BLK

LCS Sample Id: 7720777-1-BKS

LCSD Sample Id: 7720777-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.4	98	24.5	98	85-115	0	20	mg/L	02.04.2021 16:30	
Magnesium	<0.200	25.0	24.7	99	24.7	99	85-115	0	20	mg/L	02.04.2021 16:30	
Potassium	<0.500	10.0	9.64	96	9.65	97	85-115	0	20	mg/L	02.04.2021 16:30	
Silica	<1.07	21.4	21.0	98	21.1	99	85-115	0	20	mg/L	02.04.2021 16:30	
Sodium	<0.500	25.0	23.6	94	23.6	94	85-115	0	20	mg/L	02.04.2021 16:30	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3150066

Matrix: Water

Prep Method: E200.7P

Date Prep: 02.04.2021

Parent Sample Id: 686777-001

MS Sample Id: 686777-001 S

MSD Sample Id: 686777-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	54.2	25.0	78.4	97	78.3	96	70-130	0	20	mg/L	02.04.2021 16:43	
Magnesium	10.3	25.0	35.8	102	35.8	102	70-130	0	20	mg/L	02.04.2021 16:43	
Potassium	2.25	10.0	12.3	101	12.3	101	70-130	0	20	mg/L	02.04.2021 16:43	
Silica	14.8	21.4	37.6	107	37.6	107	70-130	0	20	mg/L	02.04.2021 16:43	
Sodium	69.2	25.0	92.0	91	91.9	91	70-130	0	20	mg/L	02.04.2021 16:43	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

MB Sample Id: 7720808-1-BLK

Matrix: Water

LCS Sample Id: 7720808-1-BKS

Prep Method: SW5030B

Date Prep: 02.04.2021

LCSD Sample Id: 7720808-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0534	107	0.0515	103	66-142	4	25	mg/L	02.04.2021 09:29	
Bromobenzene	<0.00100	0.0500	0.0549	110	0.0526	105	75-125	4	25	mg/L	02.04.2021 09:29	
Bromochloromethane	<0.00100	0.0500	0.0551	110	0.0552	110	60-140	0	25	mg/L	02.04.2021 09:29	
Bromodichloromethane	<0.00100	0.0500	0.0544	109	0.0542	108	75-125	0	25	mg/L	02.04.2021 09:29	
Bromoform	<0.00500	0.0500	0.0583	117	0.0596	119	75-125	2	25	mg/L	02.04.2021 09:29	
Methyl bromide	<0.00500	0.0500	0.0569	114	0.0566	113	60-140	1	25	mg/L	02.04.2021 09:29	
2-Butanone	<0.0500	0.250	0.297	119	0.323	129	60-140	8	25	mg/L	02.04.2021 09:29	
n-Butylbenzene	<0.00100	0.0500	0.0582	116	0.0553	111	75-125	5	25	mg/L	02.04.2021 09:29	
Sec-Butylbenzene	<0.00100	0.0500	0.0579	116	0.0554	111	75-125	4	25	mg/L	02.04.2021 09:29	
tert-Butylbenzene	<0.00100	0.0500	0.0565	113	0.0535	107	75-125	5	25	mg/L	02.04.2021 09:29	
Carbon Tetrachloride	<0.00500	0.0500	0.0574	115	0.0558	112	62-125	3	25	mg/L	02.04.2021 09:29	
Chlorobenzene	<0.00100	0.0500	0.0542	108	0.0535	107	60-133	1	25	mg/L	02.04.2021 09:29	
Chloroethane	<0.0100	0.0500	0.0540	108	0.0508	102	60-140	6	25	mg/L	02.04.2021 09:29	
Chloroform	<0.00100	0.0500	0.0528	106	0.0518	104	70-130	2	25	mg/L	02.04.2021 09:29	
Methyl Chloride	<0.0100	0.0500	0.0525	105	0.0502	100	60-140	4	25	mg/L	02.04.2021 09:29	
2-Chlorotoluene	<0.00100	0.0500	0.0573	115	0.0547	109	73-125	5	25	mg/L	02.04.2021 09:29	
4-Chlorotoluene	<0.00100	0.0500	0.0588	118	0.0555	111	74-125	6	25	mg/L	02.04.2021 09:29	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0588	118	0.0558	112	75-125	5	25	mg/L	02.04.2021 09:29	
Dibromochloromethane	<0.00500	0.0500	0.0566	113	0.0560	112	73-125	1	25	mg/L	02.04.2021 09:29	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0624	125	0.0628	126	59-125	1	25	mg/L	02.04.2021 09:29	H
1,2-Dibromoethane	<0.00500	0.0500	0.0558	112	0.0558	112	73-125	0	25	mg/L	02.04.2021 09:29	
Methylene Bromide	<0.00100	0.0500	0.0554	111	0.0558	112	69-127	1	25	mg/L	02.04.2021 09:29	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0560	112	0.0529	106	75-125	6	25	mg/L	02.04.2021 09:29	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0563	113	0.0530	106	75-125	6	25	mg/L	02.04.2021 09:29	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0543	109	0.0520	104	75-125	4	25	mg/L	02.04.2021 09:29	
Dichlorodifluoromethane	<0.00100	0.0500	0.0527	105	0.0503	101	60-140	5	25	mg/L	02.04.2021 09:29	
1,1-Dichloroethane	<0.00100	0.0500	0.0535	107	0.0528	106	72-125	1	25	mg/L	02.04.2021 09:29	
1,2-Dichloroethane	<0.00100	0.0500	0.0537	107	0.0526	105	68-127	2	25	mg/L	02.04.2021 09:29	
1,1-Dichloroethene	<0.00100	0.0500	0.0563	113	0.0556	111	59-172	1	25	mg/L	02.04.2021 09:29	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0521	104	0.0510	102	75-125	2	25	mg/L	02.04.2021 09:29	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0556	111	0.0534	107	75-125	4	25	mg/L	02.04.2021 09:29	
1,2-Dichloropropane	<0.00500	0.0500	0.0544	109	0.0532	106	74-125	2	25	mg/L	02.04.2021 09:29	
1,3-Dichloropropane	<0.00500	0.0500	0.0542	108	0.0528	106	75-125	3	25	mg/L	02.04.2021 09:29	
2,2-Dichloropropane	<0.00500	0.0500	0.0550	110	0.0538	108	75-125	2	25	mg/L	02.04.2021 09:29	
1,1-Dichloropropene	<0.00500	0.0500	0.0555	111	0.0542	108	75-125	2	25	mg/L	02.04.2021 09:29	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0538	108	0.0536	107	74-125	0	25	mg/L	02.04.2021 09:29	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0554	111	0.0545	109	66-125	2	25	mg/L	02.04.2021 09:29	
Ethylbenzene	<0.00100	0.0500	0.0553	111	0.0541	108	75-125	2	25	mg/L	02.04.2021 09:29	
Hexachlorobutadiene	<0.00500	0.0500	0.0553	111	0.0523	105	75-125	6	25	mg/L	02.04.2021 09:29	
Isopropylbenzene	<0.00100	0.0500	0.0592	118	0.0572	114	75-125	3	25	mg/L	02.04.2021 09:29	
Methylene Chloride	<0.00500	0.0500	0.0505	101	0.0504	101	75-125	0	25	mg/L	02.04.2021 09:29	
MTBE	<0.00500	0.0500	0.0565	113	0.0575	115	65-135	2	25	mg/L	02.04.2021 09:29	
Naphthalene	<0.0100	0.0500	0.0627	125	0.0672	134	70-130	7	25	mg/L	02.04.2021 09:29	H
n-Propylbenzene	<0.00100	0.0500	0.0574	115	0.0543	109	75-125	6	25	mg/L	02.04.2021 09:29	
Styrene	<0.00100	0.0500	0.0596	119	0.0577	115	75-125	3	25	mg/L	02.04.2021 09:29	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0554	111	0.0531	106	72-125	4	25	mg/L	02.04.2021 09:29	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0565	113	0.0575	115	74-125	2	25	mg/L	02.04.2021 09:29	
Tetrachloroethylene	<0.00100	0.0500	0.0546	109	0.0527	105	71-125	4	25	mg/L	02.04.2021 09:29	
Toluene	<0.00100	0.0500	0.0536	107	0.0519	104	59-139	3	25	mg/L	02.04.2021 09:29	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0593	119	0.0622	124	75-137	5	25	mg/L	02.04.2021 09:29	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

MB Sample Id: 7720808-1-BLK

Matrix: Water

LCS Sample Id: 7720808-1-BKS

Prep Method: SW5030B

Date Prep: 02.04.2021

LCSD Sample Id: 7720808-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0566	113	0.0566	113	75-135	0	25	mg/L	02.04.2021 09:29	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0534	107	0.0529	106	75-125	1	25	mg/L	02.04.2021 09:29	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0538	108	0.0535	107	75-127	1	25	mg/L	02.04.2021 09:29	
Trichloroethylene	<0.00500	0.0500	0.0537	107	0.0524	105	62-137	2	25	mg/L	02.04.2021 09:29	
Trichlorofluoromethane	<0.00100	0.0500	0.0597	119	0.0591	118	60-140	1	25	mg/L	02.04.2021 09:29	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0561	112	0.0574	115	75-125	2	25	mg/L	02.04.2021 09:29	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0579	116	0.0556	111	75-125	4	25	mg/L	02.04.2021 09:29	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0589	118	0.0556	111	70-125	6	25	mg/L	02.04.2021 09:29	
o-Xylene	<0.00100	0.0500	0.0581	116	0.0567	113	75-125	2	25	mg/L	02.04.2021 09:29	
m,p-Xylenes	<0.0100	0.100	0.118	118	0.113	113	75-125	4	25	mg/L	02.04.2021 09:29	
Vinyl Chloride	<0.00200	0.0500	0.0540	108	0.0538	108	60-140	0	25	mg/L	02.04.2021 09:29	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		99		101		75-131			%	02.04.2021 09:29	
1,2-Dichloroethane-D4	103		98		97		63-144			%	02.04.2021 09:29	
Toluene-D8	98		98		98		80-117			%	02.04.2021 09:29	
4-Bromofluorobenzene	97		98		97		74-124			%	02.04.2021 09:29	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 686610-017

MS Sample Id: 686610-017 S

Date Prep: 02.04.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0570	114	66-142	mg/L	02.04.2021 10:19	
Bromobenzene	<0.00100	0.0500	0.0611	122	75-125	mg/L	02.04.2021 10:19	
Bromochloromethane	<0.00100	0.0500	0.0581	116	60-140	mg/L	02.04.2021 10:19	
Bromodichloromethane	<0.00100	0.0500	0.0586	117	75-125	mg/L	02.04.2021 10:19	
Bromoform	<0.00500	0.0500	0.0640	128	75-125	mg/L	02.04.2021 10:19	X
Methyl bromide	<0.00500	0.0500	0.0610	122	60-140	mg/L	02.04.2021 10:19	
2-Butanone	<0.0500	0.250	0.292	117	60-140	mg/L	02.04.2021 10:19	
n-Butylbenzene	<0.00100	0.0500	0.0647	129	75-125	mg/L	02.04.2021 10:19	X
Sec-Butylbenzene	<0.00100	0.0500	0.0644	129	75-125	mg/L	02.04.2021 10:19	X
tert-Butylbenzene	<0.00100	0.0500	0.0623	125	75-125	mg/L	02.04.2021 10:19	
Carbon Tetrachloride	<0.00500	0.0500	0.0595	119	62-125	mg/L	02.04.2021 10:19	
Chlorobenzene	<0.00100	0.0500	0.0593	119	60-133	mg/L	02.04.2021 10:19	
Chloroethane	<0.0100	0.0500	0.0551	110	60-140	mg/L	02.04.2021 10:19	
Chloroform	<0.00100	0.0500	0.0567	113	70-130	mg/L	02.04.2021 10:19	
Methyl Chloride	<0.0100	0.0500	0.0530	106	60-140	mg/L	02.04.2021 10:19	
2-Chlorotoluene	<0.00100	0.0500	0.0631	126	73-125	mg/L	02.04.2021 10:19	X
4-Chlorotoluene	<0.00100	0.0500	0.0650	130	74-125	mg/L	02.04.2021 10:19	X
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0649	130	75-125	mg/L	02.04.2021 10:19	X
Dibromochloromethane	<0.00500	0.0500	0.0616	123	73-125	mg/L	02.04.2021 10:19	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0665	133	59-125	mg/L	02.04.2021 10:19	X
1,2-Dibromoethane	<0.00500	0.0500	0.0585	117	73-125	mg/L	02.04.2021 10:19	
Methylene Bromide	<0.00100	0.0500	0.0599	120	69-127	mg/L	02.04.2021 10:19	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0618	124	75-125	mg/L	02.04.2021 10:19	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0620	124	75-125	mg/L	02.04.2021 10:19	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0600	120	75-125	mg/L	02.04.2021 10:19	
Dichlorodifluoromethane	<0.00100	0.0500	0.0528	106	60-140	mg/L	02.04.2021 10:19	
1,1-Dichloroethane	<0.00100	0.0500	0.0569	114	72-125	mg/L	02.04.2021 10:19	
1,2-Dichloroethane	<0.00100	0.0500	0.0578	116	68-127	mg/L	02.04.2021 10:19	
1,1-Dichloroethene	<0.00100	0.0500	0.0592	118	59-172	mg/L	02.04.2021 10:19	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0545	109	75-125	mg/L	02.04.2021 10:19	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0580	116	75-125	mg/L	02.04.2021 10:19	
1,2-Dichloropropane	<0.00500	0.0500	0.0578	116	74-125	mg/L	02.04.2021 10:19	
1,3-Dichloropropane	<0.00500	0.0500	0.0572	114	75-125	mg/L	02.04.2021 10:19	
2,2-Dichloropropane	<0.00500	0.0500	0.0582	116	75-125	mg/L	02.04.2021 10:19	
1,1-Dichloropropene	<0.00500	0.0500	0.0586	117	75-125	mg/L	02.04.2021 10:19	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0584	117	74-125	mg/L	02.04.2021 10:19	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0593	119	66-125	mg/L	02.04.2021 10:19	
Ethylbenzene	<0.00100	0.0500	0.0602	120	75-125	mg/L	02.04.2021 10:19	
Hexachlorobutadiene	<0.00500	0.0500	0.0615	123	75-125	mg/L	02.04.2021 10:19	
Isopropylbenzene	<0.00100	0.0500	0.0645	129	75-125	mg/L	02.04.2021 10:19	X
Methylene Chloride	<0.00500	0.0500	0.0535	107	75-125	mg/L	02.04.2021 10:19	
MTBE	<0.00500	0.0500	0.0601	120	65-135	mg/L	02.04.2021 10:19	
Naphthalene	<0.0100	0.0500	0.0697	139	70-130	mg/L	02.04.2021 10:19	X
n-Propylbenzene	<0.00100	0.0500	0.0641	128	75-125	mg/L	02.04.2021 10:19	X
Styrene	<0.00100	0.0500	0.0641	128	75-125	mg/L	02.04.2021 10:19	X
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0591	118	72-125	mg/L	02.04.2021 10:19	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0641	128	74-125	mg/L	02.04.2021 10:19	X
Tetrachloroethylene	<0.00100	0.0500	0.0580	116	71-125	mg/L	02.04.2021 10:19	
Toluene	<0.00100	0.0500	0.0577	115	59-139	mg/L	02.04.2021 10:19	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0670	134	75-137	mg/L	02.04.2021 10:19	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 686610-017

MS Sample Id: 686610-017 S

Date Prep: 02.04.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0637	127	75-135	mg/L	02.04.2021 10:19	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0571	114	75-125	mg/L	02.04.2021 10:19	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0583	117	75-127	mg/L	02.04.2021 10:19	
Trichloroethylene	<0.00500	0.0500	0.0564	113	62-137	mg/L	02.04.2021 10:19	
Trichlorofluoromethane	<0.00100	0.0500	0.0622	124	60-140	mg/L	02.04.2021 10:19	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0638	128	75-125	mg/L	02.04.2021 10:19	X
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0646	129	75-125	mg/L	02.04.2021 10:19	X
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0648	130	70-125	mg/L	02.04.2021 10:19	X
o-Xylene	<0.00100	0.0500	0.0624	125	75-125	mg/L	02.04.2021 10:19	
m,p-Xylenes	<0.0100	0.100	0.126	126	75-125	mg/L	02.04.2021 10:19	X
Vinyl Chloride	<0.00200	0.0500	0.0580	116	60-140	mg/L	02.04.2021 10:19	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		75-131	%	02.04.2021 10:19
1,2-Dichloroethane-D4	98		63-144	%	02.04.2021 10:19
Toluene-D8	100		80-117	%	02.04.2021 10:19
4-Bromofluorobenzene	101		74-124	%	02.04.2021 10:19

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3333
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 889-7550
Hobbs, NM (575) 392-7550

Chain of Custody

Work Order No: 1087228

Project Manager:		Beaux Jennings		Bill to: (if different)		
Company Name:		Ensolum LLC		Company Name:		
Address:		705 W Wadley #210		Address:		
City, State ZIP:		Midland TX		City, State ZIP:		
Phone:		432-230-3344		Email:		bjennings@ensolum.com

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

[illegible]

Inter-Office Shipment

IOS Number : **77648**

Date/Time: 02.03.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772814844258

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
687228-001	W	Levey Well	02.03.2021 10:45	SW8260C	VOCs by SW-846 8260C	02.04.2021	02.17.2021	JKR	BDCME BRBZ BRCLME	
687228-001	W	Levey Well	02.03.2021 10:45	E200.7	Recoverable Metals per ICP by EPA 200	02.04.2021	08.02.2021	JKR	CA K MG NA SI	
687228-001	W	Levey Well	02.03.2021 10:45	E300	Inorganic Anions by EPA 300/300.1	02.04.2021	02.05.2021 10:45	JKR	BR CL F NO2N NO3N SC	
687228-001	W	Levey Well	02.03.2021 10:45	SM4500-H	pH by SM4500-H	02.04.2021	02.03.2021 11:00	JKR		
687228-001	W	Levey Well	02.03.2021 10:45	SM2540C	TDS by SM2540C	02.04.2021	02.10.2021	JKR	TDS	
687228-001	W	Levey Well	02.03.2021 10:45	SM2320B	Alkalinity by SM2320B	02.04.2021	02.17.2021	JKR	ALK ALKB ALKC	
687228-001	W	Levey Well	02.03.2021 10:45	SM1030E	Cation-Anion Balance Calculation	02.04.2021	03.05.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

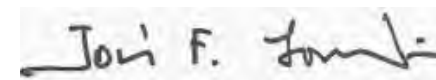
Relinquished By:



Brianna Teel

Date Relinquished: 02.03.2021

Received By:



Jose Londono

Date Received: 02.04.2021

Cooler Temperature: 2.2



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 77648

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 02.03.2021 04.18 PM

Received By: Jose Londono

Date Received: 02.04.2021 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 02.04.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.03.2021 04.11.00 PM

Work Order #: 687228

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	11.9	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	Cooling in progress
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	N/A	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.03.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.05.2021



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.10.2021 16:10
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 688059-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.10.2021 12:25					
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 02.19.2021 11:43 Analyzed: 02.19.2021 12:50 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1170 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1170 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-39	Extracted: Analyzed: 02.22.2021 08:22 Units/RL: % RL					
Cation-Anion Balance	4.50					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-39	Extracted: 02.14.2021 11:00 Analyzed: 02.14.2021 13:04 Units/RL: mg/L RL					
Bromide	0.615 K 0.500					
Chloride	561 D 2.50					
Fluoride	<0.500 0.500					
Nitrate as N	0.147 K 0.100					
Nitrite as N	0.308 K 0.100					
Sulfate	24.9 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 688059



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.10.2021 16:10
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 688059-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.10.2021 12:25					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-39	Extracted: 02.18.2021 09:10 Analyzed: 02.18.2021 16:20 Units/RL: mg/L RL					
Calcium	416 D 10.0					
Magnesium	77.9 D 10.0					
Potassium	7.03 0.500					
Silica	70.4 1.07					
Sodium	156 0.500					
TDS by SM2540C SUB: T104704215-20-39	Extracted: Analyzed: 02.18.2021 02:00 Units/RL: mg/L RL					
Total Dissolved Solids	1980 K 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 688059

Ensolum, Dallas, TX

Project Name: Levey Well

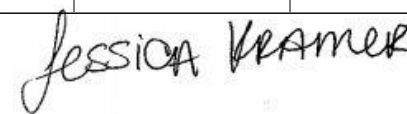
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.10.2021 16:10
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	688059-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	02.10.2021 12:25					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.18.2021 21:33					
	Analyzed:	02.19.2021 07:45					
	Units/RL:	mg/L RL					
Benzene		0.00743 0.00100					
Bromobenzene		<0.00100 0.00100					
Bromochloromethane		<0.00100 0.00100					
Bromodichloromethane		<0.00100 0.00100					
Bromoform		<0.00500 0.00500					
Methyl bromide		<0.00500 0.00500					
2-Butanone		<0.0500 0.0500					
n-Butylbenzene		0.00140 0.00100					
Sec-Butylbenzene		<0.00100 0.00100					
tert-Butylbenzene		<0.00100 0.00100					
Carbon Tetrachloride		<0.00500 0.00500					
Chlorobenzene		<0.00100 0.00100					
Chloroethane		<0.0100 0.0100					
Chloroform		<0.00100 0.00100					
Methyl Chloride		<0.0100 0.0100					
2-Chlorotoluene		<0.00100 0.00100					
4-Chlorotoluene		<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)		0.00145 0.00100					
Dibromochloromethane		<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane		<0.00100 0.00100					
1,2-Dibromoethane		<0.00500 0.00500					
Methylene Bromide		<0.00100 0.00100					
1,2-Dichlorobenzene		<0.00100 0.00100					
1,3-Dichlorobenzene		<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 688059

Ensolum, Dallas, TX

Project Name: Levey Well

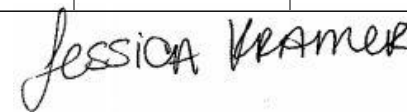
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.10.2021 16:10
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 688059-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.10.2021 12:25					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.18.2021 21:33 Analyzed: 02.19.2021 07:45 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0280 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.0142 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.00876 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico





Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.10.2021 16:10
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 688059-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.10.2021 12:25					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.18.2021 21:33 Analyzed: 02.19.2021 07:45 Units/RL: mg/L RL					
Toluene	0.0531 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0448 0.00100					
1,3,5-Trimethylbenzene	0.0143 0.00100					
o-Xylene	0.0157 0.00100					
m,p-Xylenes	0.104 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.120 0.00100					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.19.2021 15:26 Units/RL: Deg C RL					
Temperature	17.1 K					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.19.2021 15:26 Units/RL: SU RL					
pH	6.31 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 688059

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

02.22.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.22.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **688059**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 688059. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 688059 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 688059

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	02.10.2021 12:25		688059-001



CASE NARRATIVE

Client Name: Ensolum

Project Name: Levey Well

Project ID: 03B1417001
Work Order Number(s): 688059

Report Date: 02.22.2021
Date Received: 02.10.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 688059

Ensolum, Dallas, TX Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.10.2021 16:10

Lab Sample Id: 688059-001

Date Collected: 02.10.2021 12:25

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.19.2021 11:43

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151198

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO₃)	1640192	1170	4.00	mg/L	02.19.2021 12:50		1
Alkalinity, Bicarbonate (as CaCO₃)	471-34-1	1170	4.00	mg/L	02.19.2021 12:50		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	02.19.2021 12:50	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	02.19.2021 12:50	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151335

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	4.50		%	02.22.2021 08:22		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.14.2021 11:00

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151019

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.615	0.500	mg/L	02.14.2021 13:04	K	1
Chloride	16887-00-6	561	2.50	mg/L	02.14.2021 13:15	D	5
Fluoride	16984-48-8	<0.500	0.500	mg/L	02.14.2021 13:04	U	1
Nitrate as N	14797-55-8	0.147	0.100	mg/L	02.14.2021 13:04	K	1
Nitrite as N	14797-65-0	0.308	0.100	mg/L	02.14.2021 13:04	K	1
Sulfate	14808-79-8	24.9	0.500	mg/L	02.14.2021 13:04		1

Analytical Method: TDS by SM2540C

Tech: ANP

Analyst: ANP

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151016

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	1980	5.00	mg/L	02.18.2021 02:00	K	1



Certificate of Analytical Results 688059

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.10.2021 16:10

Lab Sample Id: 688059-001

Date Collected: 02.10.2021 12:25

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3151202

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.31		SU	02.19.2021 15:26	K	1
Temperature	TEMP	17.1		Deg C	02.19.2021 15:26	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 02.18.2021 09:10

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151177

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	416	10.0	mg/L	02.18.2021 16:41	D	50
Magnesium	7439-95-4	77.9	10.0	mg/L	02.18.2021 16:41	D	50
Potassium	7440-09-7	7.03	0.500	mg/L	02.18.2021 16:20		1
Silica	7631-86-9	70.4	1.07	mg/L	02.18.2021 16:20		1
Sodium	7440-23-5	156	0.500	mg/L	02.18.2021 16:20		1



Certificate of Analytical Results 688059

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.10.2021 16:10

Lab Sample Id: 688059-001

Date Collected: 02.10.2021 12:25

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 02.18.2021 21:33

% Moisture:

Seq Number: 3151396

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00743	0.00100	mg/L	02.19.2021 07:45		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	02.19.2021 07:45	U	1
n-Butylbenzene	104-51-8	0.00140	0.00100	mg/L	02.19.2021 07:45		1
Sec-Butylbenzene	135-98-8	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	02.19.2021 07:45	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	02.19.2021 07:45	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00145	0.00100	mg/L	02.19.2021 07:45		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Ethylbenzene	100-41-4	0.0280	0.00100	mg/L	02.19.2021 07:45		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Isopropylbenzene	98-82-8	0.0142	0.00100	mg/L	02.19.2021 07:45		1



Certificate of Analytical Results 688059

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.10.2021 16:10

Lab Sample Id: 688059-001

Date Collected: 02.10.2021 12:25

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 02.18.2021 21:33

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	02.19.2021 07:45	U	1
n-Propylbenzene	103-65-1	0.00876	0.00100	mg/L	02.19.2021 07:45		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Toluene	108-88-3	0.0531	0.00100	mg/L	02.19.2021 07:45		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	02.19.2021 07:45	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	02.19.2021 07:45	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0448	0.00100	mg/L	02.19.2021 07:45		1
1,3,5-Trimethylbenzene	108-67-8	0.0143	0.00100	mg/L	02.19.2021 07:45		1
o-Xylene	95-47-6	0.0157	0.00100	mg/L	02.19.2021 07:45		1
m,p-Xylenes	179601-23-1	0.104	0.0100	mg/L	02.19.2021 07:45		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	02.19.2021 07:45	U	1
Total Xylenes	1330-20-7	0.120	0.00100	mg/L	02.19.2021 07:45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	75-131	02.19.2021 07:45	
1,2-Dichloroethane-D4	17060-07-0	97	%	63-144	02.19.2021 07:45	
Toluene-D8	2037-26-5	103	%	80-117	02.19.2021 07:45	
4-Bromofluorobenzene	460-00-4	101	%	74-124	02.19.2021 07:45	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151198

MB Sample Id: 7721598-1-BLK

Matrix: Water

LCS Sample Id: 7721598-1-BKS

Prep Method: SM2320P

Date Prep: 02.19.2021

LCSD Sample Id: 7721598-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	261	104	265	106	85-115	2	20	mg/L	02.19.2021 12:06	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151198

Matrix: Water

MB Sample Id: 7721598-1-BLK

Prep Method: SM2320P

Date Prep: 02.19.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	02.19.2021 11:58	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	02.19.2021 11:58	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	02.19.2021 11:58	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151198

Matrix: Water

Parent Sample Id: 688097-001

MD Sample Id: 688097-001 D

Prep Method: SM2320P

Date Prep: 02.19.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	156	155	1	20	mg/L	02.19.2021 12:24	
Alkalinity, Bicarbonate (as CaCO ₃)	156	155	1	20	mg/L	02.19.2021 12:24	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.19.2021 12:24	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.19.2021 12:24	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151198

Matrix: Water

Parent Sample Id: 688432-002

MD Sample Id: 688432-002 D

Prep Method: SM2320P

Date Prep: 02.19.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	414	415	0	20	mg/L	02.19.2021 14:08	
Alkalinity, Bicarbonate (as CaCO ₃)	414	415	0	20	mg/L	02.19.2021 14:08	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.19.2021 14:08	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.19.2021 14:08	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3151019

Matrix: Water

Prep Method: E300P

Date Prep: 02.14.2021

MB Sample Id: 7721470-1-BLK

LCS Sample Id: 7721470-1-BKS

LCSD Sample Id: 7721470-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.43	94	9.36	94	90-110	1	20	mg/L	02.14.2021 10:37	
Chloride	<0.500	10.0	9.73	97	9.68	97	90-110	1	20	mg/L	02.14.2021 10:37	
Fluoride	<0.500	10.0	9.92	99	9.88	99	90-110	0	20	mg/L	02.14.2021 10:37	
Nitrate as N	<0.100	10.0	9.53	95	9.48	95	90-110	1	20	mg/L	02.14.2021 10:37	
Nitrite as N	<0.100	10.0	9.60	96	9.57	96	90-110	0	20	mg/L	02.14.2021 10:37	
Sulfate	<0.500	10.0	9.52	95	9.46	95	90-110	1	20	mg/L	02.14.2021 10:37	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3151019

Matrix: Water

Prep Method: E300P

Date Prep: 02.14.2021

Parent Sample Id: 688055-002

MS Sample Id: 688055-002 S

MSD Sample Id: 688055-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.95	100	9.93	99	90-110	0	20	mg/L	02.14.2021 11:36	
Chloride	54.9	10.0	63.2	83	63.4	85	90-110	0	20	mg/L	02.14.2021 11:36	X
Fluoride	0.869	10.0	10.7	98	10.8	99	90-110	1	20	mg/L	02.14.2021 11:36	
Nitrate as N	3.31	10.0	12.9	96	12.9	96	90-110	0	20	mg/L	02.14.2021 11:36	
Nitrite as N	0.300	10.0	9.85	96	9.87	96	90-110	0	20	mg/L	02.14.2021 11:36	
Sulfate	61.2	10.0	69.6	84	69.6	84	90-110	0	20	mg/L	02.14.2021 11:36	X

Analytical Method: TDS by SM2540C

Seq Number: 3151016

Matrix: Water

MB Sample Id: 3151016-1-BLK

LCS Sample Id: 3151016-1-BKS

LCSD Sample Id: 3151016-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	981	98	973	97	80-120	1	10	mg/L	02.18.2021 02:00	

Analytical Method: TDS by SM2540C

Seq Number: 3151016

Matrix: Water

Parent Sample Id: 687947-001

MD Sample Id: 687947-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	226	242	7	10	mg/L	02.18.2021 02:00	

Analytical Method: TDS by SM2540C

Seq Number: 3151016

Matrix: Water

Parent Sample Id: 688038-003

MD Sample Id: 688038-003 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	3300	3320	1	10	mg/L	02.18.2021 02:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: pH by SM4500-H

Seq Number: 3151202

Matrix: Water

Parent Sample Id: 688422-001

MD Sample Id: 688422-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.61	7.67	1	20	SU	02.19.2021 15:26	
Temperature	15.5	15.3	1	20	Deg C	02.19.2021 15:26	

Analytical Method: pH by SM4500-H

Seq Number: 3151202

Matrix: Water

Parent Sample Id: 688427-001

MD Sample Id: 688427-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.66	7.69	0	20	SU	02.19.2021 15:26	
Temperature	18.2	19.2	5	20	Deg C	02.19.2021 15:26	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3151177

Matrix: Water

MB Sample Id: 7721526-1-BLK

LCS Sample Id: 7721526-1-BKS

Prep Method: E200.7P

Date Prep: 02.18.2021

LCSD Sample Id: 7721526-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.1	96	24.2	97	85-115	0	20	mg/L	02.18.2021 16:12	
Magnesium	<0.200	25.0	24.7	99	24.7	99	85-115	0	20	mg/L	02.18.2021 16:12	
Potassium	<0.500	10.0	9.81	98	9.83	98	85-115	0	20	mg/L	02.18.2021 16:12	
Silica	<1.07	21.4	21.8	102	22.0	103	85-115	1	20	mg/L	02.18.2021 16:12	
Sodium	<0.500	25.0	24.3	97	24.3	97	85-115	0	20	mg/L	02.18.2021 16:12	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3151177

Matrix: Water

Parent Sample Id: 688059-001

MS Sample Id: 688059-001 S

Prep Method: E200.7P

Date Prep: 02.18.2021

MSD Sample Id: 688059-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	434	25.0	452	72	457	92	70-130	1	20	mg/L	02.18.2021 16:24	
Magnesium	84.2	25.0	109	99	110	103	70-130	1	20	mg/L	02.18.2021 16:24	
Potassium	7.03	10.0	17.6	106	17.8	108	70-130	1	20	mg/L	02.18.2021 16:24	
Silica	70.4	21.4	93.3	107	94.4	112	70-130	1	20	mg/L	02.18.2021 16:24	
Sodium	156	25.0	179	92	181	100	70-130	1	20	mg/L	02.18.2021 16:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum
Levey Well

Analytical Method: Recoverable Metals per ICP by EPA 200.7
Seq Number: 3151177 Matrix: Water
Parent Sample Id: 688002-001 MS Sample Id: 688002-001 S

Prep Method: E200.7P
Date Prep: 02.18.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Calcium	194	25.0	209	60	70-130	mg/L	02.18.2021 18:51	X
Magnesium	21.9	25.0	46.3	98	70-130	mg/L	02.18.2021 18:51	
Potassium	35.7	10.0	44.5	88	70-130	mg/L	02.18.2021 18:51	
Silica	38.8	21.4	60.2	100	70-130	mg/L	02.18.2021 18:51	
Sodium	190	25.0	206	64	70-130	mg/L	02.18.2021 18:51	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $Log\ Diff. = Log(Sample\ Duplicate) - Log(Original\ Sample)$

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

MB Sample Id: 7721653-1-BLK

Matrix: Water

LCS Sample Id: 7721653-1-BKS

Prep Method: SW5030B

Date Prep: 02.18.2021

LCSD Sample Id: 7721653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0460	92	0.0450	90	66-142	2	25	mg/L	02.19.2021 00:35	
Bromobenzene	<0.00100	0.0500	0.0499	100	0.0480	96	75-125	4	25	mg/L	02.19.2021 00:35	
Bromochloromethane	<0.00100	0.0500	0.0493	99	0.0481	96	60-140	2	25	mg/L	02.19.2021 00:35	
Bromodichloromethane	<0.00100	0.0500	0.0480	96	0.0468	94	75-125	3	25	mg/L	02.19.2021 00:35	
Bromoform	<0.00500	0.0500	0.0480	96	0.0466	93	75-125	3	25	mg/L	02.19.2021 00:35	
Methyl bromide	<0.00500	0.0500	0.0393	79	0.0386	77	60-140	2	25	mg/L	02.19.2021 00:35	
2-Butanone	<0.0500	0.250	0.192	77	0.184	74	60-140	4	25	mg/L	02.19.2021 00:35	
n-Butylbenzene	<0.00100	0.0500	0.0461	92	0.0447	89	75-125	3	25	mg/L	02.19.2021 00:35	
Sec-Butylbenzene	<0.00100	0.0500	0.0478	96	0.0466	93	75-125	3	25	mg/L	02.19.2021 00:35	
tert-Butylbenzene	<0.00100	0.0500	0.0490	98	0.0472	94	75-125	4	25	mg/L	02.19.2021 00:35	
Carbon Tetrachloride	<0.00500	0.0500	0.0454	91	0.0443	89	62-125	2	25	mg/L	02.19.2021 00:35	
Chlorobenzene	<0.00100	0.0500	0.0465	93	0.0462	92	60-133	1	25	mg/L	02.19.2021 00:35	
Chloroethane	<0.0100	0.0500	0.0407	81	0.0406	81	60-140	0	25	mg/L	02.19.2021 00:35	
Chloroform	<0.00100	0.0500	0.0450	90	0.0450	90	70-130	0	25	mg/L	02.19.2021 00:35	
Methyl Chloride	<0.0100	0.0500	0.0407	81	0.0394	79	60-140	3	25	mg/L	02.19.2021 00:35	
2-Chlorotoluene	<0.00100	0.0500	0.0477	95	0.0461	92	73-125	3	25	mg/L	02.19.2021 00:35	
4-Chlorotoluene	<0.00100	0.0500	0.0470	94	0.0453	91	74-125	4	25	mg/L	02.19.2021 00:35	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0492	98	0.0476	95	75-125	3	25	mg/L	02.19.2021 00:35	
Dibromochloromethane	<0.00500	0.0500	0.0496	99	0.0489	98	73-125	1	25	mg/L	02.19.2021 00:35	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0409	82	0.0399	80	59-125	2	25	mg/L	02.19.2021 00:35	
1,2-Dibromoethane	<0.00500	0.0500	0.0485	97	0.0473	95	73-125	3	25	mg/L	02.19.2021 00:35	
Methylene Bromide	<0.00100	0.0500	0.0485	97	0.0465	93	69-127	4	25	mg/L	02.19.2021 00:35	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0489	98	0.0471	94	75-125	4	25	mg/L	02.19.2021 00:35	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0480	96	0.0465	93	75-125	3	25	mg/L	02.19.2021 00:35	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0475	95	0.0462	92	75-125	3	25	mg/L	02.19.2021 00:35	
Dichlorodifluoromethane	<0.00100	0.0500	0.0362	72	0.0360	72	60-140	1	25	mg/L	02.19.2021 00:35	
1,1-Dichloroethane	<0.00100	0.0500	0.0459	92	0.0449	90	72-125	2	25	mg/L	02.19.2021 00:35	
1,2-Dichloroethane	<0.00100	0.0500	0.0485	97	0.0474	95	68-127	2	25	mg/L	02.19.2021 00:35	
1,1-Dichloroethene	<0.00100	0.0500	0.0401	80	0.0408	82	59-172	2	25	mg/L	02.19.2021 00:35	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0468	94	0.0457	91	75-125	2	25	mg/L	02.19.2021 00:35	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0455	91	0.0453	91	75-125	0	25	mg/L	02.19.2021 00:35	
1,2-Dichloropropane	<0.00500	0.0500	0.0476	95	0.0456	91	74-125	4	25	mg/L	02.19.2021 00:35	
1,3-Dichloropropane	<0.00500	0.0500	0.0485	97	0.0469	94	75-125	3	25	mg/L	02.19.2021 00:35	
2,2-Dichloropropane	<0.00500	0.0500	0.0406	81	0.0409	82	75-125	1	25	mg/L	02.19.2021 00:35	
1,1-Dichloropropene	<0.00500	0.0500	0.0447	89	0.0444	89	75-125	1	25	mg/L	02.19.2021 00:35	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0486	97	0.0471	94	74-125	3	25	mg/L	02.19.2021 00:35	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0487	97	0.0474	95	66-125	3	25	mg/L	02.19.2021 00:35	
Ethylbenzene	<0.00100	0.0500	0.0469	94	0.0460	92	75-125	2	25	mg/L	02.19.2021 00:35	
Hexachlorobutadiene	<0.00500	0.0500	0.0486	97	0.0471	94	75-125	3	25	mg/L	02.19.2021 00:35	
Isopropylbenzene	<0.00100	0.0500	0.0485	97	0.0478	96	75-125	1	25	mg/L	02.19.2021 00:35	
Methylene Chloride	<0.00500	0.0500	0.0431	86	0.0437	87	75-125	1	25	mg/L	02.19.2021 00:35	
MTBE	<0.00500	0.0500	0.0474	95	0.0464	93	65-135	2	25	mg/L	02.19.2021 00:35	
Naphthalene	<0.0100	0.0500	0.0449	90	0.0430	86	70-130	4	25	mg/L	02.19.2021 00:35	
n-Propylbenzene	<0.00100	0.0500	0.0473	95	0.0463	93	75-125	2	25	mg/L	02.19.2021 00:35	
Styrene	<0.00100	0.0500	0.0480	96	0.0471	94	75-125	2	25	mg/L	02.19.2021 00:35	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0499	100	0.0490	98	72-125	2	25	mg/L	02.19.2021 00:35	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0433	87	0.0410	82	74-125	5	25	mg/L	02.19.2021 00:35	
Tetrachloroethylene	<0.00100	0.0500	0.0468	94	0.0474	95	71-125	1	25	mg/L	02.19.2021 00:35	
Toluene	<0.00100	0.0500	0.0464	93	0.0459	92	59-139	1	25	mg/L	02.19.2021 00:35	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0440	88	0.0422	84	75-137	4	25	mg/L	02.19.2021 00:35	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

MB Sample Id: 7721653-1-BLK

Matrix: Water

LCS Sample Id: 7721653-1-BKS

Prep Method: SW5030B

Date Prep: 02.18.2021

LCSD Sample Id: 7721653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0470	94	0.0458	92	75-135	3	25	mg/L	02.19.2021 00:35	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0454	91	0.0452	90	75-125	0	25	mg/L	02.19.2021 00:35	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0487	97	0.0473	95	75-127	3	25	mg/L	02.19.2021 00:35	
Trichloroethylene	<0.00500	0.0500	0.0487	97	0.0476	95	62-137	2	25	mg/L	02.19.2021 00:35	
Trichlorofluoromethane	<0.00100	0.0500	0.0390	78	0.0386	77	60-140	1	25	mg/L	02.19.2021 00:35	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0455	91	0.0429	86	75-125	6	25	mg/L	02.19.2021 00:35	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0490	98	0.0472	94	75-125	4	25	mg/L	02.19.2021 00:35	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0490	98	0.0470	94	70-125	4	25	mg/L	02.19.2021 00:35	
o-Xylene	<0.00100	0.0500	0.0479	96	0.0470	94	75-125	2	25	mg/L	02.19.2021 00:35	
m,p-Xylenes	<0.0100	0.100	0.0958	96	0.0949	95	75-125	1	25	mg/L	02.19.2021 00:35	
Vinyl Chloride	<0.00200	0.0500	0.0379	76	0.0381	76	60-140	1	25	mg/L	02.19.2021 00:35	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	105		99		98		75-131			%	02.19.2021 00:35	
1,2-Dichloroethane-D4	99		99		97		63-144			%	02.19.2021 00:35	
Toluene-D8	102		100		99		80-117			%	02.19.2021 00:35	
4-Bromofluorobenzene	102		100		98		74-124			%	02.19.2021 00:35	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

Matrix: Water

Prep Method: SW5030B

Date Prep: 02.18.2021

Parent Sample Id: 688197-001

MS Sample Id: 688197-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0489	98	66-142	mg/L	02.19.2021 02:38	
Bromobenzene	<0.00100	0.0500	0.0522	104	75-125	mg/L	02.19.2021 02:38	
Bromochloromethane	<0.00100	0.0500	0.0492	98	60-140	mg/L	02.19.2021 02:38	
Bromodichloromethane	0.00178	0.0500	0.0512	99	75-125	mg/L	02.19.2021 02:38	
Bromoform	<0.00500	0.0500	0.0484	97	75-125	mg/L	02.19.2021 02:38	
Methyl bromide	<0.00500	0.0500	0.0409	82	60-140	mg/L	02.19.2021 02:38	
2-Butanone	<0.0500	0.250	0.168	67	60-140	mg/L	02.19.2021 02:38	
n-Butylbenzene	<0.00100	0.0500	0.0493	99	75-125	mg/L	02.19.2021 02:38	
Sec-Butylbenzene	<0.00100	0.0500	0.0515	103	75-125	mg/L	02.19.2021 02:38	
tert-Butylbenzene	<0.00100	0.0500	0.0523	105	75-125	mg/L	02.19.2021 02:38	
Carbon Tetrachloride	<0.00500	0.0500	0.0479	96	62-125	mg/L	02.19.2021 02:38	
Chlorobenzene	<0.00100	0.0500	0.0499	100	60-133	mg/L	02.19.2021 02:38	
Chloroethane	<0.0100	0.0500	0.0419	84	60-140	mg/L	02.19.2021 02:38	
Chloroform	0.0292	0.0500	0.0709	83	70-130	mg/L	02.19.2021 02:38	
Methyl Chloride	<0.0100	0.0500	0.0415	83	60-140	mg/L	02.19.2021 02:38	
2-Chlorotoluene	<0.00100	0.0500	0.0508	102	73-125	mg/L	02.19.2021 02:38	
4-Chlorotoluene	<0.00100	0.0500	0.0497	99	74-125	mg/L	02.19.2021 02:38	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0526	105	75-125	mg/L	02.19.2021 02:38	
Dibromochloromethane	<0.00500	0.0500	0.0519	104	73-125	mg/L	02.19.2021 02:38	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0399	80	59-125	mg/L	02.19.2021 02:38	
1,2-Dibromoethane	<0.00500	0.0500	0.0483	97	73-125	mg/L	02.19.2021 02:38	
Methylene Bromide	<0.00100	0.0500	0.0483	97	69-127	mg/L	02.19.2021 02:38	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0519	104	75-125	mg/L	02.19.2021 02:38	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0512	102	75-125	mg/L	02.19.2021 02:38	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0508	102	75-125	mg/L	02.19.2021 02:38	
Dichlorodifluoromethane	<0.00100	0.0500	0.0386	77	60-140	mg/L	02.19.2021 02:38	
1,1-Dichloroethane	<0.00100	0.0500	0.0470	94	72-125	mg/L	02.19.2021 02:38	
1,2-Dichloroethane	<0.00100	0.0500	0.0489	98	68-127	mg/L	02.19.2021 02:38	
1,1-Dichloroethene	<0.00100	0.0500	0.0448	90	59-172	mg/L	02.19.2021 02:38	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0480	96	75-125	mg/L	02.19.2021 02:38	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0481	96	75-125	mg/L	02.19.2021 02:38	
1,2-Dichloropropane	<0.00500	0.0500	0.0488	98	74-125	mg/L	02.19.2021 02:38	
1,3-Dichloropropane	<0.00500	0.0500	0.0487	97	75-125	mg/L	02.19.2021 02:38	
2,2-Dichloropropane	<0.00500	0.0500	0.0422	84	75-125	mg/L	02.19.2021 02:38	
1,1-Dichloropropene	<0.00500	0.0500	0.0480	96	75-125	mg/L	02.19.2021 02:38	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0498	100	74-125	mg/L	02.19.2021 02:38	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0493	99	66-125	mg/L	02.19.2021 02:38	
Ethylbenzene	<0.00100	0.0500	0.0501	100	75-125	mg/L	02.19.2021 02:38	
Hexachlorobutadiene	<0.00500	0.0500	0.0508	102	75-125	mg/L	02.19.2021 02:38	
Isopropylbenzene	<0.00100	0.0500	0.0520	104	75-125	mg/L	02.19.2021 02:38	
Methylene Chloride	<0.00500	0.0500	0.0444	89	75-125	mg/L	02.19.2021 02:38	
MTBE	<0.00500	0.0500	0.0461	92	65-135	mg/L	02.19.2021 02:38	
Naphthalene	<0.0100	0.0500	0.0430	86	70-130	mg/L	02.19.2021 02:38	
n-Propylbenzene	<0.00100	0.0500	0.0510	102	75-125	mg/L	02.19.2021 02:38	
Styrene	<0.00100	0.0500	0.0488	98	75-125	mg/L	02.19.2021 02:38	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0524	105	72-125	mg/L	02.19.2021 02:38	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0449	90	74-125	mg/L	02.19.2021 02:38	
Tetrachloroethylene	<0.00100	0.0500	0.0506	101	71-125	mg/L	02.19.2021 02:38	
Toluene	<0.00100	0.0500	0.0502	100	59-139	mg/L	02.19.2021 02:38	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0434	87	75-137	mg/L	02.19.2021 02:38	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

Matrix: Water

Prep Method: SW5030B

Parent Sample Id: 688197-001

MS Sample Id: 688197-001 S

Date Prep: 02.18.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0491	98	75-135	mg/L	02.19.2021 02:38	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0483	97	75-125	mg/L	02.19.2021 02:38	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0488	98	75-127	mg/L	02.19.2021 02:38	
Trichloroethylene	<0.00500	0.0500	0.0487	97	62-137	mg/L	02.19.2021 02:38	
Trichlorofluoromethane	<0.00100	0.0500	0.0401	80	60-140	mg/L	02.19.2021 02:38	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0436	87	75-125	mg/L	02.19.2021 02:38	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0520	104	75-125	mg/L	02.19.2021 02:38	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0521	104	70-125	mg/L	02.19.2021 02:38	
o-Xylene	<0.00100	0.0500	0.0513	103	75-125	mg/L	02.19.2021 02:38	
m,p-Xylenes	<0.0100	0.100	0.103	103	75-125	mg/L	02.19.2021 02:38	
Vinyl Chloride	<0.00200	0.0500	0.0415	83	60-140	mg/L	02.19.2021 02:38	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	95		75-131	%	02.19.2021 02:38
1,2-Dichloroethane-D4	98		63-144	%	02.19.2021 02:38
Toluene-D8	100		80-117	%	02.19.2021 02:38
4-Bromofluorobenzene	99		74-124	%	02.19.2021 02:38

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

XENCO

Chain of Custody

Work Order No: 488059

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

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	

Program: ☐ UST/PRP ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund	
State of Project:	
Reporting Level: ☐ Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV	
Deliverables: ☐ EDD ☐ ADAPT ☐ Other:	

Project Name:	Levey Well	Hobbs NM	Turn Around	ANALYSIS REQUEST										Work Order Notes
Project Number:	03B1417001		Route: ☐											
P.O. Number:	03B1417001		Rush: 24 Hr											
Sampler's Name:	Shane Diller		Due Date:											

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No										
Temperature (°C):	41	Thermometer ID														
Received intact:	Yes	No	Correction Factor:													
Cooler Custody Seals:	Yes	No	Total Containers:													
Sample Custody Seals:	Yes	No														

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers										Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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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
		2/10/21 1200P			
3		4			
5		6			

Inter-Office Shipment

IOS Number : **78021**

Date/Time: 02.10.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772880042313

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
688059-001	W	Levey Well	02.10.2021 12:25	SW8260C	VOCs by SW-846 8260C	02.17.2021	02.24.2021	JKR	BDCME BRBZ BRCLME	
688059-001	W	Levey Well	02.10.2021 12:25	E200.7	Recoverable Metals per ICP by EPA 200	02.17.2021	08.09.2021	JKR	CA K MG NA SI	
688059-001	W	Levey Well	02.10.2021 12:25	E300	Inorganic Anions by EPA 300/300.1	02.17.2021	02.12.2021 12:25	JKR	BR CL F NO2N NO3N SC	
688059-001	W	Levey Well	02.10.2021 12:25	SM4500-H	pH by SM4500-H	02.17.2021	02.10.2021 12:40	JKR		
688059-001	W	Levey Well	02.10.2021 12:25	SM2540C	TDS by SM2540C	02.17.2021	02.17.2021 12:25	JKR	TDS	
688059-001	W	Levey Well	02.10.2021 12:25	SM2320B	Alkalinity by SM2320B	02.17.2021	02.24.2021	JKR	ALK ALKB ALKC	
688059-001	W	Levey Well	02.10.2021 12:25	SM1030E	Cation-Anion Balance Calculation	02.17.2021	03.12.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 02.10.2021

Received By:



Sandra Torres

Date Received: 02.13.2021

Cooler Temperature: 1.5



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 78021

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 02.10.2021 04.13 PM

Received By: Sandra Torres

Date Received: 02.13.2021 11.08 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received with appropriate temperature?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 *Custody Seals Signed and dated for Containers/coolers	Yes	
#6 *IOS present?	Yes	
#7 Any missing/extra samples?	No	
#8 IOS agrees with sample label(s)/matrix?	Yes	
#9 Sample matrix/ properties agree with IOS?	Yes	
#10 Samples in proper container/ bottle?	Yes	
#11 Samples properly preserved?	Yes	
#12 Sample container(s) intact?	Yes	
#13 Sufficient sample amount for indicated test(s)?	Yes	
#14 All samples received within hold time?	No	Due to the weather, Fedex did not deliver on time.

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Sandra Torres

Date: 02.13.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.10.2021 04.10.04 PM

Work Order #: 688059

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	11.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.10.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.12.2021

Certificate of Analysis Summary 689186



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 02.26.2021 18:15
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689186-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.24.2021 10:35					
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 02.26.2021 13:17 Analyzed: 02.26.2021 14:58 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1190 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1190 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 17:40 Units/RL: % RL					
Cation-Anion Balance	2.50					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-39	Extracted: 02.26.2021 13:48 Analyzed: 02.26.2021 14:15 Units/RL: mg/L RL					
Bromide	0.695 0.500					
Chloride	576 D 5.00					
Fluoride	<0.500 0.500					
Nitrate as N	0.163 K 0.100					
Nitrite as N	2.60 KD 1.00					
Sulfate	31.4 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689186



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 02.26.2021 18:15
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689186-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.24.2021 10:35					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-39	Extracted: 02.26.2021 10:45 Analyzed: 02.26.2021 14:41 Units/RL: mg/L RL					
Calcium	450 DX 10.0					
Magnesium	81.3 D 10.0					
Potassium	7.94 0.500					
Silica	76.9 1.07					
Sodium	164 0.500					
TDS by SM2540C SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 13:30 Units/RL: mg/L RL					
Total Dissolved Solids	2260 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689186



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 02.26.2021 18:15
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689186-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.24.2021 10:35					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.26.2021 11:33 Analyzed: 02.26.2021 13:08 Units/RL: mg/L RL					
Benzene	0.00800 0.00100					
Bromobenzene	<0.00100 0.00100					
Bromochloromethane	<0.00100 0.00100					
Bromodichloromethane	<0.00100 0.00100					
Bromoform	<0.00500 0.00500					
Methyl bromide	<0.00500 0.00500					
2-Butanone	<0.0500 0.0500					
n-Butylbenzene	<0.00100 0.00100					
Sec-Butylbenzene	0.00240 0.00100					
tert-Butylbenzene	<0.00100 0.00100					
Carbon Tetrachloride	<0.00500 0.00500					
Chlorobenzene	<0.00100 0.00100					
Chloroethane	<0.0100 0.0100					
Chloroform	<0.00100 0.00100					
Methyl Chloride	<0.0100 0.0100					
2-Chlorotoluene	<0.00100 0.00100					
4-Chlorotoluene	<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)	0.00142 0.00100					
Dibromochloromethane	<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane	<0.00100 0.00100					
1,2-Dibromoethane	<0.00500 0.00500					
Methylene Bromide	<0.00100 0.00100					
1,2-Dichlorobenzene	<0.00100 0.00100					
1,3-Dichlorobenzene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689186

Ensolum, Dallas, TX

Project Name: Levey Well

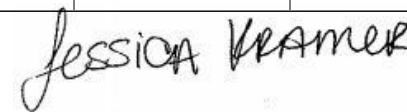
Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 02.26.2021 18:15
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689186-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.24.2021 10:35					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.26.2021 11:33 Analyzed: 02.26.2021 13:08 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0287 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.0140 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.00808 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 689186

Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
 Contact: Beaux Jennings
 Project Location: Hobbs NM

Date Received in Lab: Wed 02.24.2021 16:00
 Report Date: 02.26.2021 18:15
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689186-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 02.24.2021 10:35					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.26.2021 11:33 Analyzed: 02.26.2021 13:08 Units/RL: mg/L RL					
Toluene	0.0593 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0408 0.00100					
1,3,5-Trimethylbenzene	0.0132 0.00100					
o-Xylene	0.0177 0.00100					
m,p-Xylenes	0.109 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.127 0.00100					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 16:43 Units/RL: Deg C RL					
Temperature	19.0 K					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 16:43 Units/RL: SU RL					
pH	6.22 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 689186

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

02.26.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.26.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **689186**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 689186. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 689186 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 689186

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	02.24.2021 10:35		689186-001

**CASE NARRATIVE****Client Name: Ensolum****Project Name: Levey Well**Project ID: 03B1417001
Work Order Number(s): 689186Report Date: 02.26.2021
Date Received: 02.24.2021**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3151928 VOCs by SW-846 8260C

2-Butanone recovered above QC limits in the Blank Spike Duplicate. Analyte was not detected in any of the associated samples and therefore the data was accepted. Samples in the analytical batch are: 689186-001.

1,1-Dichloroethene, 2-Butanone RPD was outside laboratory control limits.
Samples in the analytical batch are: 689186-001

Batch: LBA-3151933 Recoverable Metals per ICP by EPA 200.7

Lab Sample ID 689186-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Calcium recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 689186-001.

The Laboratory Control Sample for Calcium is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 689186

Ensolum, Dallas, TX Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.24.2021 16:00

Lab Sample Id: 689186-001

Date Collected: 02.24.2021 10:35

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.26.2021 13:17

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151936

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1190	4.00	mg/L	02.26.2021 14:58		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1190	4.00	mg/L	02.26.2021 14:58		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	02.26.2021 14:58	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	02.26.2021 14:58	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: DEP

Analyst: DEP

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	2.50		%	02.26.2021 17:40		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.26.2021 13:48

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.695	0.500	mg/L	02.26.2021 14:15		1
Chloride	16887-00-6	576	5.00	mg/L	02.26.2021 14:26	D	10
Fluoride	16984-48-8	<0.500	0.500	mg/L	02.26.2021 14:15	U	1
Nitrate as N	14797-55-8	0.163	0.100	mg/L	02.26.2021 14:15	K	1
Nitrite as N	14797-65-0	2.60	1.00	mg/L	02.26.2021 14:26	KD	10
Sulfate	14808-79-8	31.4	0.500	mg/L	02.26.2021 14:15		1

Analytical Method: TDS by SM2540C

Tech: DTN

Analyst: DTN

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151888

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	2260	5.00	mg/L	02.26.2021 13:30		1



Certificate of Analytical Results 689186

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.24.2021 16:00

Lab Sample Id: 689186-001

Date Collected: 02.24.2021 10:35

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3151932

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.22		SU	02.26.2021 16:43	K	1
Temperature	TEMP	19.0		Deg C	02.26.2021 16:43	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 02.26.2021 10:45

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151933

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	450	10.0	mg/L	02.26.2021 15:02	DX	50
Magnesium	7439-95-4	81.3	10.0	mg/L	02.26.2021 15:02	D	50
Potassium	7440-09-7	7.94	0.500	mg/L	02.26.2021 14:41		1
Silica	7631-86-9	76.9	1.07	mg/L	02.26.2021 14:41		1
Sodium	7440-23-5	164	0.500	mg/L	02.26.2021 14:41		1



Certificate of Analytical Results 689186

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.24.2021 16:00

Lab Sample Id: 689186-001

Date Collected: 02.24.2021 10:35

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

% Moisture:

SUB: T104704215-20-39

Seq Number: 3151928

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00800	0.00100	mg/L	02.26.2021 13:08		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	02.26.2021 13:08	UHF	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Sec-Butylbenzene	135-98-8	0.00240	0.00100	mg/L	02.26.2021 13:08		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	02.26.2021 13:08	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	02.26.2021 13:08	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00142	0.00100	mg/L	02.26.2021 13:08		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	02.26.2021 13:08	UF	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Ethylbenzene	100-41-4	0.0287	0.00100	mg/L	02.26.2021 13:08		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Isopropylbenzene	98-82-8	0.0140	0.00100	mg/L	02.26.2021 13:08		1



Certificate of Analytical Results 689186

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 02.24.2021 16:00

Lab Sample Id: 689186-001

Date Collected: 02.24.2021 10:35

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

% Moisture:

Analyst: EZA

Date Prep: 02.26.2021 11:33

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	02.26.2021 13:08	U	1
n-Propylbenzene	103-65-1	0.00808	0.00100	mg/L	02.26.2021 13:08		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Toluene	108-88-3	0.0593	0.00100	mg/L	02.26.2021 13:08		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	02.26.2021 13:08	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	02.26.2021 13:08	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0408	0.00100	mg/L	02.26.2021 13:08		1
1,3,5-Trimethylbenzene	108-67-8	0.0132	0.00100	mg/L	02.26.2021 13:08		1
o-Xylene	95-47-6	0.0177	0.00100	mg/L	02.26.2021 13:08		1
m,p-Xylenes	179601-23-1	0.109	0.0100	mg/L	02.26.2021 13:08		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	02.26.2021 13:08	U	1
Total Xylenes	1330-20-7	0.127	0.00100	mg/L	02.26.2021 13:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	75-131	02.26.2021 13:08	
1,2-Dichloroethane-D4	17060-07-0	101	%	63-144	02.26.2021 13:08	
Toluene-D8	2037-26-5	101	%	80-117	02.26.2021 13:08	
4-Bromofluorobenzene	460-00-4	101	%	74-124	02.26.2021 13:08	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

MB Sample Id: 7722069-1-BLK

Matrix: Water

LCS Sample Id: 7722069-1-BKS

Prep Method: SM2320P

Date Prep: 02.26.2021

LCSD Sample Id: 7722069-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	265	106	266	106	85-115	0	20	mg/L	02.26.2021 13:58	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Water

MB Sample Id: 7722069-1-BLK

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	02.26.2021 13:50	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	02.26.2021 13:50	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	02.26.2021 13:50	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Water

Parent Sample Id: 688931-011

MD Sample Id: 688931-011 D

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	356	357	0	20	mg/L	02.26.2021 16:16	
Alkalinity, Bicarbonate (as CaCO ₃)	356	357	0	20	mg/L	02.26.2021 16:16	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.26.2021 16:16	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.26.2021 16:16	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Ground Water

Parent Sample Id: 689185-001

MD Sample Id: 689185-001 D

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	1070	1070	0	20	mg/L	02.26.2021 14:30	
Alkalinity, Bicarbonate (as CaCO ₃)	1070	1070	0	20	mg/L	02.26.2021 14:30	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.26.2021 14:30	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.26.2021 14:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3151923

Matrix: Water

Prep Method: E300P

Date Prep: 02.26.2021

MB Sample Id: 7722071-1-BLK

LCS Sample Id: 7722071-1-BKS

LCSD Sample Id: 7722071-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	10.7	107	10.6	106	90-110	1	20	mg/L	02.26.2021 13:31	
Chloride	<0.500	10.0	10.7	107	10.7	107	90-110	0	20	mg/L	02.26.2021 13:31	
Fluoride	<0.500	10.0	10.6	106	10.6	106	90-110	0	20	mg/L	02.26.2021 13:31	
Nitrate as N	<0.100	10.0	10.4	104	10.4	104	90-110	0	20	mg/L	02.26.2021 13:31	
Nitrite as N	<0.100	10.0	10.5	105	10.5	105	90-110	0	20	mg/L	02.26.2021 13:31	
Sulfate	<0.500	10.0	10.6	106	10.6	106	90-110	0	20	mg/L	02.26.2021 13:31	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3151923

Matrix: Water

Prep Method: E300P

Date Prep: 02.26.2021

Parent Sample Id: 688896-003

MS Sample Id: 688896-003 S

MSD Sample Id: 688896-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	0.341	10.0	10.9	106	10.9	106	90-110	0	20	mg/L	02.26.2021 14:59	
Chloride	60.0	10.0	69.4	94	69.7	97	90-110	0	20	mg/L	02.26.2021 14:59	
Fluoride	1.51	10.0	11.6	101	11.7	102	90-110	1	20	mg/L	02.26.2021 14:59	
Nitrate as N	2.21	10.0	12.2	100	12.3	101	90-110	1	20	mg/L	02.26.2021 14:59	
Nitrite as N	0.163	10.0	10.3	101	10.4	102	90-110	1	20	mg/L	02.26.2021 14:59	
Sulfate	53.3	10.0	63.0	97	63.2	99	90-110	0	20	mg/L	02.26.2021 14:59	

Analytical Method: TDS by SM2540C

Seq Number: 3151888

Matrix: Water

MB Sample Id: 3151888-1-BLK

LCS Sample Id: 3151888-1-BKS

LCSD Sample Id: 3151888-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	1030	103	988	99	80-120	4	10	mg/L	02.26.2021 13:30	

Analytical Method: TDS by SM2540C

Seq Number: 3151888

Matrix: Water

Parent Sample Id: 689186-001

MD Sample Id: 689186-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	2260	2330	3	10	mg/L	02.26.2021 13:30	

Analytical Method: pH by SM4500-H

Seq Number: 3151932

Matrix: Water

Parent Sample Id: 688758-001

MD Sample Id: 688758-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.80	6.89	1	20	SU	02.26.2021 16:43	
Temperature	19.5	19.7	1	20	Deg C	02.26.2021 16:43	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: pH by SM4500-H

Seq Number: 3151932

Matrix: Waste Water

Parent Sample Id: 689113-004

MD Sample Id: 689113-004 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.18	7.25	1	20	SU	02.26.2021 16:43	
Temperature	19.4	19.0	2	20	Deg C	02.26.2021 16:43	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3151933

Matrix: Water

MB Sample Id: 7722061-1-BLK

LCS Sample Id: 7722061-1-BKS

Prep Method: E200.7P

Date Prep: 02.26.2021

LCSD Sample Id: 7722061-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	25.0	100	25.0	100	85-115	0	20	mg/L	02.26.2021 14:32	
Magnesium	<0.200	25.0	25.1	100	25.0	100	85-115	0	20	mg/L	02.26.2021 14:32	
Potassium	<0.500	10.0	10.2	102	10.2	102	85-115	0	20	mg/L	02.26.2021 14:32	
Silica	<1.07	21.4	22.0	103	22.0	103	85-115	0	20	mg/L	02.26.2021 14:32	
Sodium	<0.500	25.0	24.6	98	24.6	98	85-115	0	20	mg/L	02.26.2021 14:32	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3151933

Matrix: Water

Parent Sample Id: 689186-001

MS Sample Id: 689186-001 S

Prep Method: E200.7P

Date Prep: 02.26.2021

MSD Sample Id: 689186-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	488	25.0	506	72	502	56	70-130	1	20	mg/L	02.26.2021 14:45	X
Magnesium	92.4	25.0	119	106	118	102	70-130	1	20	mg/L	02.26.2021 14:45	
Potassium	7.94	10.0	19.8	119	19.8	119	70-130	0	20	mg/L	02.26.2021 14:45	
Silica	76.9	21.4	101	113	100	108	70-130	1	20	mg/L	02.26.2021 14:45	
Sodium	164	25.0	190	104	188	96	70-130	1	20	mg/L	02.26.2021 14:45	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

MB Sample Id: 7722090-1-BLK

Matrix: Water

LCS Sample Id: 7722090-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.2021

LCSD Sample Id: 7722090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0485	97	0.0511	102	66-142	5	25	mg/L	02.26.2021 15:24	
Bromobenzene	<0.00100	0.0500	0.0491	98	0.0528	106	75-125	7	25	mg/L	02.26.2021 15:24	
Bromochloromethane	<0.00100	0.0500	0.0513	103	0.0521	104	60-140	2	25	mg/L	02.26.2021 15:24	
Bromodichloromethane	<0.00100	0.0500	0.0517	103	0.0520	104	75-125	1	25	mg/L	02.26.2021 15:24	
Bromoform	<0.00500	0.0500	0.0571	114	0.0581	116	75-125	2	25	mg/L	02.26.2021 15:24	
Methyl bromide	<0.00500	0.0500	0.0540	108	0.0546	109	60-140	1	25	mg/L	02.26.2021 15:24	
2-Butanone	<0.0500	0.250	0.268	107	0.366	146	60-140	31	25	mg/L	02.26.2021 15:24	HF
n-Butylbenzene	<0.00100	0.0500	0.0533	107	0.0567	113	75-125	6	25	mg/L	02.26.2021 15:24	
Sec-Butylbenzene	<0.00100	0.0500	0.0489	98	0.0523	105	75-125	7	25	mg/L	02.26.2021 15:24	
tert-Butylbenzene	<0.00100	0.0500	0.0519	104	0.0545	109	75-125	5	25	mg/L	02.26.2021 15:24	
Carbon Tetrachloride	<0.00500	0.0500	0.0498	100	0.0521	104	62-125	5	25	mg/L	02.26.2021 15:24	
Chlorobenzene	<0.00100	0.0500	0.0506	101	0.0513	103	60-133	1	25	mg/L	02.26.2021 15:24	
Chloroethane	<0.0100	0.0500	0.0521	104	0.0507	101	60-140	3	25	mg/L	02.26.2021 15:24	
Chloroform	<0.00100	0.0500	0.0521	104	0.0518	104	70-130	1	25	mg/L	02.26.2021 15:24	
Methyl Chloride	<0.0100	0.0500	0.0456	91	0.0465	93	60-140	2	25	mg/L	02.26.2021 15:24	
2-Chlorotoluene	<0.00100	0.0500	0.0513	103	0.0543	109	73-125	6	25	mg/L	02.26.2021 15:24	
4-Chlorotoluene	<0.00100	0.0500	0.0513	103	0.0541	108	74-125	5	25	mg/L	02.26.2021 15:24	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0471	94	0.0500	100	75-125	6	25	mg/L	02.26.2021 15:24	
Dibromochloromethane	<0.00500	0.0500	0.0539	108	0.0555	111	73-125	3	25	mg/L	02.26.2021 15:24	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0486	97	0.0518	104	59-125	6	25	mg/L	02.26.2021 15:24	
1,2-Dibromoethane	<0.00500	0.0500	0.0522	104	0.0528	106	73-125	1	25	mg/L	02.26.2021 15:24	
Methylene Bromide	<0.00100	0.0500	0.0524	105	0.0521	104	69-127	1	25	mg/L	02.26.2021 15:24	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0499	100	0.0520	104	75-125	4	25	mg/L	02.26.2021 15:24	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0491	98	0.0519	104	75-125	6	25	mg/L	02.26.2021 15:24	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0487	97	0.0509	102	75-125	4	25	mg/L	02.26.2021 15:24	
Dichlorodifluoromethane	<0.00100	0.0500	0.0521	104	0.0516	103	60-140	1	25	mg/L	02.26.2021 15:24	
1,1-Dichloroethane	<0.00100	0.0500	0.0533	107	0.0559	112	72-125	5	25	mg/L	02.26.2021 15:24	
1,2-Dichloroethane	<0.00100	0.0500	0.0516	103	0.0516	103	68-127	0	25	mg/L	02.26.2021 15:24	
1,1-Dichloroethene	<0.00100	0.0500	0.0383	77	0.0526	105	59-172	31	25	mg/L	02.26.2021 15:24	F
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0483	97	0.0503	101	75-125	4	25	mg/L	02.26.2021 15:24	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0460	92	0.0503	101	75-125	9	25	mg/L	02.26.2021 15:24	
1,2-Dichloropropane	<0.00500	0.0500	0.0519	104	0.0526	105	74-125	1	25	mg/L	02.26.2021 15:24	
1,3-Dichloropropane	<0.00500	0.0500	0.0540	108	0.0540	108	75-125	0	25	mg/L	02.26.2021 15:24	
2,2-Dichloropropane	<0.00500	0.0500	0.0505	101	0.0527	105	75-125	4	25	mg/L	02.26.2021 15:24	
1,1-Dichloropropene	<0.00500	0.0500	0.0463	93	0.0480	96	75-125	4	25	mg/L	02.26.2021 15:24	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0543	109	0.0540	108	74-125	1	25	mg/L	02.26.2021 15:24	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0534	107	0.0535	107	66-125	0	25	mg/L	02.26.2021 15:24	
Ethylbenzene	<0.00100	0.0500	0.0507	101	0.0510	102	75-125	1	25	mg/L	02.26.2021 15:24	
Hexachlorobutadiene	<0.00500	0.0500	0.0470	94	0.0516	103	75-125	9	25	mg/L	02.26.2021 15:24	
Isopropylbenzene	<0.00100	0.0500	0.0497	99	0.0504	101	75-125	1	25	mg/L	02.26.2021 15:24	
Methylene Chloride	<0.00500	0.0500	0.0475	95	0.0501	100	75-125	5	25	mg/L	02.26.2021 15:24	
MTBE	<0.00500	0.0500	0.0514	103	0.0529	106	65-135	3	25	mg/L	02.26.2021 15:24	
Naphthalene	<0.0100	0.0500	0.0500	100	0.0550	110	70-130	10	25	mg/L	02.26.2021 15:24	
n-Propylbenzene	<0.00100	0.0500	0.0519	104	0.0551	110	75-125	6	25	mg/L	02.26.2021 15:24	
Styrene	<0.00100	0.0500	0.0528	106	0.0533	107	75-125	1	25	mg/L	02.26.2021 15:24	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0516	103	0.0517	103	72-125	0	25	mg/L	02.26.2021 15:24	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0532	106	0.0554	111	74-125	4	25	mg/L	02.26.2021 15:24	
Tetrachloroethylene	<0.00100	0.0500	0.0483	97	0.0507	101	71-125	5	25	mg/L	02.26.2021 15:24	
Toluene	<0.00100	0.0500	0.0503	101	0.0523	105	59-139	4	25	mg/L	02.26.2021 15:24	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0450	90	0.0512	102	75-137	13	25	mg/L	02.26.2021 15:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

MB Sample Id: 7722090-1-BLK

Matrix: Water

LCS Sample Id: 7722090-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.2021

LCSD Sample Id: 7722090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0482	96	0.0528	106	75-135	9	25	mg/L	02.26.2021 15:24	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0519	104	0.0527	105	75-125	2	25	mg/L	02.26.2021 15:24	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0537	107	0.0533	107	75-127	1	25	mg/L	02.26.2021 15:24	
Trichloroethylene	<0.00500	0.0500	0.0488	98	0.0511	102	62-137	5	25	mg/L	02.26.2021 15:24	
Trichlorofluoromethane	<0.00100	0.0500	0.0517	103	0.0503	101	60-140	3	25	mg/L	02.26.2021 15:24	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0537	107	0.0567	113	75-125	5	25	mg/L	02.26.2021 15:24	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0522	104	0.0555	111	75-125	6	25	mg/L	02.26.2021 15:24	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0521	104	0.0553	111	70-125	6	25	mg/L	02.26.2021 15:24	
o-Xylene	<0.00100	0.0500	0.0524	105	0.0536	107	75-125	2	25	mg/L	02.26.2021 15:24	
m,p-Xylenes	<0.0100	0.100	0.104	104	0.105	105	75-125	1	25	mg/L	02.26.2021 15:24	
Vinyl Chloride	<0.00200	0.0500	0.0536	107	0.0531	106	60-140	1	25	mg/L	02.26.2021 15:24	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		103		99		75-131			%	02.26.2021 15:24	
1,2-Dichloroethane-D4	101		100		100		63-144			%	02.26.2021 15:24	
Toluene-D8	100		99		102		80-117			%	02.26.2021 15:24	
4-Bromofluorobenzene	101		100		104		74-124			%	02.26.2021 15:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

Matrix: Waste Water

Prep Method: SW5030B

Date Prep: 02.26.2021

Parent Sample Id: 689420-001

MS Sample Id: 689420-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0493	99	66-142	mg/L	02.26.2021 10:09	
Bromobenzene	<0.00100	0.0500	0.0506	101	75-125	mg/L	02.26.2021 10:09	
Bromochloromethane	<0.00100	0.0500	0.0522	104	60-140	mg/L	02.26.2021 10:09	
Bromodichloromethane	0.00901	0.0500	0.0592	100	75-125	mg/L	02.26.2021 10:09	
Bromoform	0.0141	0.0500	0.0668	105	75-125	mg/L	02.26.2021 10:09	
Methyl bromide	<0.00500	0.0500	0.0529	106	60-140	mg/L	02.26.2021 10:09	
2-Butanone	<0.0500	0.250	0.326	130	60-140	mg/L	02.26.2021 10:09	
n-Butylbenzene	<0.00100	0.0500	0.0550	110	75-125	mg/L	02.26.2021 10:09	
Sec-Butylbenzene	<0.00100	0.0500	0.0506	101	75-125	mg/L	02.26.2021 10:09	
tert-Butylbenzene	<0.00100	0.0500	0.0533	107	75-125	mg/L	02.26.2021 10:09	
Carbon Tetrachloride	<0.00500	0.0500	0.0516	103	62-125	mg/L	02.26.2021 10:09	
Chlorobenzene	<0.00100	0.0500	0.0492	98	60-133	mg/L	02.26.2021 10:09	
Chloroethane	<0.0100	0.0500	0.0521	104	60-140	mg/L	02.26.2021 10:09	
Chloroform	0.00500	0.0500	0.0572	104	70-130	mg/L	02.26.2021 10:09	
Methyl Chloride	<0.0100	0.0500	0.0504	101	60-140	mg/L	02.26.2021 10:09	
2-Chlorotoluene	<0.00100	0.0500	0.0532	106	73-125	mg/L	02.26.2021 10:09	
4-Chlorotoluene	<0.00100	0.0500	0.0527	105	74-125	mg/L	02.26.2021 10:09	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0489	98	75-125	mg/L	02.26.2021 10:09	
Dibromochloromethane	0.0181	0.0500	0.0701	104	73-125	mg/L	02.26.2021 10:09	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0448	90	59-125	mg/L	02.26.2021 10:09	
1,2-Dibromoethane	<0.00500	0.0500	0.0484	97	73-125	mg/L	02.26.2021 10:09	
Methylene Bromide	0.000160	0.0500	0.0499	99	69-127	mg/L	02.26.2021 10:09	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0500	100	75-125	mg/L	02.26.2021 10:09	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0503	101	75-125	mg/L	02.26.2021 10:09	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0498	100	75-125	mg/L	02.26.2021 10:09	
Dichlorodifluoromethane	<0.00100	0.0500	0.0527	105	60-140	mg/L	02.26.2021 10:09	
1,1-Dichloroethane	<0.00100	0.0500	0.0555	111	72-125	mg/L	02.26.2021 10:09	
1,2-Dichloroethane	<0.00100	0.0500	0.0496	99	68-127	mg/L	02.26.2021 10:09	
1,1-Dichloroethene	<0.00100	0.0500	0.0537	107	59-172	mg/L	02.26.2021 10:09	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0499	100	75-125	mg/L	02.26.2021 10:09	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0517	103	75-125	mg/L	02.26.2021 10:09	
1,2-Dichloropropane	<0.00500	0.0500	0.0518	104	74-125	mg/L	02.26.2021 10:09	
1,3-Dichloropropane	<0.00500	0.0500	0.0507	101	75-125	mg/L	02.26.2021 10:09	
2,2-Dichloropropane	<0.00500	0.0500	0.0529	106	75-125	mg/L	02.26.2021 10:09	
1,1-Dichloropropene	<0.00500	0.0500	0.0476	95	75-125	mg/L	02.26.2021 10:09	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0523	105	74-125	mg/L	02.26.2021 10:09	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0512	102	66-125	mg/L	02.26.2021 10:09	
Ethylbenzene	<0.00100	0.0500	0.0490	98	75-125	mg/L	02.26.2021 10:09	
Hexachlorobutadiene	<0.00500	0.0500	0.0515	103	75-125	mg/L	02.26.2021 10:09	
Isopropylbenzene	<0.00100	0.0500	0.0484	97	75-125	mg/L	02.26.2021 10:09	
Methylene Chloride	<0.00500	0.0500	0.0503	101	75-125	mg/L	02.26.2021 10:09	
MTBE	<0.00500	0.0500	0.0508	102	65-135	mg/L	02.26.2021 10:09	
Naphthalene	<0.0100	0.0500	0.0537	107	70-130	mg/L	02.26.2021 10:09	
n-Propylbenzene	<0.00100	0.0500	0.0534	107	75-125	mg/L	02.26.2021 10:09	
Styrene	<0.00100	0.0500	0.0511	102	75-125	mg/L	02.26.2021 10:09	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0500	100	72-125	mg/L	02.26.2021 10:09	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0512	102	74-125	mg/L	02.26.2021 10:09	
Tetrachloroethylene	<0.00100	0.0500	0.0494	99	71-125	mg/L	02.26.2021 10:09	
Toluene	<0.00100	0.0500	0.0500	100	59-139	mg/L	02.26.2021 10:09	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0510	102	75-137	mg/L	02.26.2021 10:09	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

Matrix: Waste Water

Prep Method: SW5030B

Parent Sample Id: 689420-001

MS Sample Id: 689420-001 S

Date Prep: 02.26.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0501	100	75-135	mg/L	02.26.2021 10:09	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0529	106	75-125	mg/L	02.26.2021 10:09	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0502	100	75-127	mg/L	02.26.2021 10:09	
Trichloroethylene	<0.00500	0.0500	0.0498	100	62-137	mg/L	02.26.2021 10:09	
Trichlorofluoromethane	<0.00100	0.0500	0.0515	103	60-140	mg/L	02.26.2021 10:09	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0521	104	75-125	mg/L	02.26.2021 10:09	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0536	107	75-125	mg/L	02.26.2021 10:09	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0542	108	70-125	mg/L	02.26.2021 10:09	
o-Xylene	<0.00100	0.0500	0.0508	102	75-125	mg/L	02.26.2021 10:09	
m,p-Xylenes	<0.0100	0.100	0.101	101	75-125	mg/L	02.26.2021 10:09	
Vinyl Chloride	<0.00200	0.0500	0.0545	109	60-140	mg/L	02.26.2021 10:09	

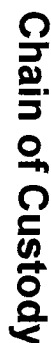
Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		75-131	%	02.26.2021 10:09
1,2-Dichloroethane-D4	95		63-144	%	02.26.2021 10:09
Toluene-D8	99		80-117	%	02.26.2021 10:09
4-Bromofluorobenzene	105		74-124	%	02.26.2021 10:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



089184

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)

Page 1 of 1
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Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADaPT ☐ Other:	

[illegible]

Number of Containers	
Elements: F, Cl, SO₄, B	
Elements: Ca, K, Mg, Na, Si	
Quantity	
TAT starts the day received by the lab, if received by 4:30pm	

[illegible]

	Total	200.7 / 6010	200.8 / 6020:	
Circle Method(s) and Metal(s) to be analyzed	8RCRA TCLP / SPLP 6010:	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	13PPM Texas 11	1631 / 245.1 / 7470 / 7471 : Hg

Notices: 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 \$73.00 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
1 			2		
3 		02/21/21	4		
5		16:00	6		

Inter-Office Shipment

IOS Number : **78453**

Date/Time: 02.25.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: SW Cargo

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
689186-001	W	Levey Well	02.24.2021 10:35	SW8260C	VOCs by SW-846 8260C	02.26.2021	03.10.2021	JKR	BDCME BRBZ BRCLME	
689186-001	W	Levey Well	02.24.2021 10:35	E200.7	Recoverable Metals per ICP by EPA 200	02.26.2021	08.23.2021	JKR	CA K MG NA SI	
689186-001	W	Levey Well	02.24.2021 10:35	E300	Inorganic Anions by EPA 300/300.1	02.26.2021	02.26.2021 10:35	JKR	BR CL F NO2N NO3N SC	
689186-001	W	Levey Well	02.24.2021 10:35	SM4500-H	pH by SM4500-H	02.26.2021	02.24.2021 10:35	JKR		
689186-001	W	Levey Well	02.24.2021 10:35	SM2540C	TDS by SM2540C	02.26.2021	03.03.2021 10:35	JKR	TDS	
689186-001	W	Levey Well	02.24.2021 10:35	SM2320B	Alkalinity by SM2320B	02.26.2021	03.10.2021	JKR	ALK ALKB ALKC	
689186-001	W	Levey Well	02.24.2021 10:35	SM1030E	Cation-Anion Balance Calculation	02.26.2021	03.26.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

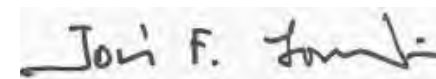
Relinquished By:



Jessica Kramer

Date Relinquished: 02.25.2021

Received By:



Jose Londono

Date Received: 02.26.2021

Cooler Temperature: 2.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 78453

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 02.25.2021 08.00 AM

Received By: Jose Londono

Date Received: 02.26.2021 09.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 02.26.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.24.2021 04.00.00 PM

Work Order #: 689186

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.24.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.25.2021

Certificate of Analysis Summary 690484



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:40
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 690484-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.04.2021 13:37					
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 03.08.2021 11:36 Analyzed: 03.08.2021 12:16 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1050 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1050 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-39	Extracted: Analyzed: 03.08.2021 17:00 Units/RL: % RL					
Cation-Anion Balance	3.00					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-39	Extracted: 03.06.2021 12:56 Analyzed: 03.06.2021 13:03 Units/RL: mg/L RL					
Bromide	0.789 0.500					
Chloride	585 D 2.50					
Fluoride	<0.500 0.500					
Nitrate as N	0.121 0.100					
Nitrite as N	0.215 0.100					
Sulfate	54.1 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 690484



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:40
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	690484-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	03.04.2021 13:37					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-39	Extracted:	03.08.2021 09:00					
	Analyzed:	03.08.2021 12:58					
	Units/RL:	mg/L RL					
	Calcium	425 D 10.0					
	Magnesium	77.8 0.200					
	Potassium	6.41 0.500					
	Silica	62.4 1.07					
	Sodium	151 0.500					
TDS by SM2540C SUB: T104704215-20-39	Extracted:						
	Analyzed:	03.06.2021 16:00					
	Units/RL:	mg/L RL					
Total Dissolved Solids		2090 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 690484



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:40
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	690484-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	03.04.2021 13:37					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	03.06.2021 15:00					
	Analyzed:	03.06.2021 17:08					
	Units/RL:	mg/L RL					
Benzene		0.00566 0.00100					
Bromobenzene		<0.00100 0.00100					
Bromochloromethane		<0.00100 0.00100					
Bromodichloromethane		<0.00100 0.00100					
Bromoform		<0.00500 0.00500					
Methyl bromide		<0.00500 0.00500					
2-Butanone		<0.0500 0.0500					
n-Butylbenzene		<0.00100 0.00100					
Sec-Butylbenzene		0.00187 0.00100					
tert-Butylbenzene		<0.00100 0.00100					
Carbon Tetrachloride		<0.00500 0.00500					
Chlorobenzene		<0.00100 0.00100					
Chloroethane		<0.0100 0.0100					
Chloroform		<0.00100 0.00100					
Methyl Chloride		<0.0100 0.0100					
2-Chlorotoluene		<0.00100 0.00100					
4-Chlorotoluene		<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)		0.00110 0.00100					
Dibromochloromethane		<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane		<0.00100 0.00100					
1,2-Dibromoethane		<0.00500 0.00500					
Methylene Bromide		<0.00100 0.00100					
1,2-Dichlorobenzene		<0.00100 0.00100					
1,3-Dichlorobenzene		<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 690484



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:40
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 690484-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.04.2021 13:37					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 03.06.2021 15:00 Analyzed: 03.06.2021 17:08 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0222 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.0105 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.00694 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 690484



Ensolum, Dallas, TX

Project Name: Levey Well

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:40
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 690484-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.04.2021 13:37					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 03.06.2021 15:00 Analyzed: 03.06.2021 17:08 Units/RL: mg/L RL					
Toluene	0.0446 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0390 0.00100					
1,3,5-Trimethylbenzene	0.0119 0.00100					
o-Xylene	0.0133 0.00100					
m,p-Xylenes	0.0869 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.100 0.00100					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 03.08.2021 08:53 Units/RL: Deg C RL					
Temperature	18.1 K					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 03.08.2021 08:53 Units/RL: SU RL					
pH	6.34 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 690484

for

Ensolum

Project Manager: Beaux Jennings

Levey Well

03B1417001

03.08.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.08.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **690484**

Levey Well

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 690484. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 690484 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 690484

Ensolum, Dallas, TX

Levey Well

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	03.04.2021 13:37		690484-001



CASE NARRATIVE

Client Name: Ensolum

Project Name: Levey Well

Project ID: 03B1417001
Work Order Number(s): 690484

Report Date: 03.08.2021
Date Received: 03.04.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 690484

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.04.2021 16:54

Lab Sample Id: 690484-001

Date Collected: 03.04.2021 13:37

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 03.08.2021 11:36

% Moisture:

SUB: T104704215-20-39

Seq Number: 3152834

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO₃)	1640192	1050	4.00	mg/L	03.08.2021 12:16		1
Alkalinity, Bicarbonate (as CaCO₃)	471-34-1	1050	4.00	mg/L	03.08.2021 12:16		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	03.08.2021 12:16	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	03.08.2021 12:16	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-39

Seq Number: 3152886

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	3.00		%	03.08.2021 17:00		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 03.06.2021 12:56

% Moisture:

SUB: T104704215-20-39

Seq Number: 3152754

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.789	0.500	mg/L	03.06.2021 13:03		1
Chloride	16887-00-6	585	2.50	mg/L	03.06.2021 13:15	D	5
Fluoride	16984-48-8	<0.500	0.500	mg/L	03.06.2021 13:03	U	1
Nitrate as N	14797-55-8	0.121	0.100	mg/L	03.06.2021 13:03		1
Nitrite as N	14797-65-0	0.215	0.100	mg/L	03.06.2021 13:03		1
Sulfate	14808-79-8	54.1	0.500	mg/L	03.06.2021 13:03		1

Analytical Method: TDS by SM2540C

Tech: DTN

Analyst: DTN

% Moisture:

SUB: T104704215-20-39

Seq Number: 3152750

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	2090	5.00	mg/L	03.06.2021 16:00		1



Certificate of Analytical Results 690484

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.04.2021 16:54

Lab Sample Id: 690484-001

Date Collected: 03.04.2021 13:37

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3152780

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.34		SU	03.08.2021 08:53	K	1
Temperature	TEMP	18.1		Deg C	03.08.2021 08:53	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 03.08.2021 09:00

% Moisture:

SUB: T104704215-20-39

Seq Number: 3152878

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	425	10.0	mg/L	03.08.2021 13:19	D	50
Magnesium	7439-95-4	77.8	0.200	mg/L	03.08.2021 12:58		1
Potassium	7440-09-7	6.41	0.500	mg/L	03.08.2021 12:58		1
Silica	7631-86-9	62.4	1.07	mg/L	03.08.2021 12:58		1
Sodium	7440-23-5	151	0.500	mg/L	03.08.2021 12:58		1



Certificate of Analytical Results 690484

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.04.2021 16:54

Lab Sample Id: 690484-001

Date Collected: 03.04.2021 13:37

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: NGA

Analyst: NGA

Date Prep: 03.06.2021 15:00

% Moisture:

SUB: T104704215-20-39

Seq Number: 3152820

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00566	0.00100	mg/L	03.06.2021 17:08		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	03.06.2021 17:08	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Sec-Butylbenzene	135-98-8	0.00187	0.00100	mg/L	03.06.2021 17:08		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	03.06.2021 17:08	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	03.06.2021 17:08	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00110	0.00100	mg/L	03.06.2021 17:08		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Ethylbenzene	100-41-4	0.0222	0.00100	mg/L	03.06.2021 17:08		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Isopropylbenzene	98-82-8	0.0105	0.00100	mg/L	03.06.2021 17:08		1



Certificate of Analytical Results 690484

Ensolum, Dallas, TX

Levey Well

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.04.2021 16:54

Lab Sample Id: 690484-001

Date Collected: 03.04.2021 13:37

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: NGA

% Moisture:

Analyst: NGA

Date Prep: 03.06.2021 15:00

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	03.06.2021 17:08	U	1
n-Propylbenzene	103-65-1	0.00694	0.00100	mg/L	03.06.2021 17:08		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Toluene	108-88-3	0.0446	0.00100	mg/L	03.06.2021 17:08		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	03.06.2021 17:08	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	03.06.2021 17:08	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0390	0.00100	mg/L	03.06.2021 17:08		1
1,3,5-Trimethylbenzene	108-67-8	0.0119	0.00100	mg/L	03.06.2021 17:08		1
o-Xylene	95-47-6	0.0133	0.00100	mg/L	03.06.2021 17:08		1
m,p-Xylenes	179601-23-1	0.0869	0.0100	mg/L	03.06.2021 17:08		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	03.06.2021 17:08	U	1
Total Xylenes	1330-20-7	0.100	0.00100	mg/L	03.06.2021 17:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	03.06.2021 17:08	
1,2-Dichloroethane-D4	17060-07-0	101	%	63-144	03.06.2021 17:08	
Toluene-D8	2037-26-5	108	%	80-117	03.06.2021 17:08	
4-Bromofluorobenzene	460-00-4	105	%	74-124	03.06.2021 17:08	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum Levey Well

Analytical Method: Alkalinity by SM2320B

Seq Number: 3152834

MB Sample Id: 7722725-1-BLK

Matrix: Water

LCS Sample Id: 7722725-1-BKS

Prep Method: SM2320P

Date Prep: 03.08.2021

LCSD Sample Id: 7722725-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	252	101	256	102	85-115	2	20	mg/L	03.08.2021 11:57	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3152834

Matrix: Water

MB Sample Id: 7722725-1-BLK

Prep Method: SM2320P

Date Prep: 03.08.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	03.08.2021 11:50	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	03.08.2021 11:50	
Alkalinity, hydroxide (as CaCO3)	<4.00	mg/L	03.08.2021 11:50	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3152834

Matrix: Water

Parent Sample Id: 690484-001

MD Sample Id: 690484-001 D

Prep Method: SM2320P

Date Prep: 03.08.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	1050	1040	1	20	mg/L	03.08.2021 12:29	
Alkalinity, Bicarbonate (as CaCO3)	1050	1040	1	20	mg/L	03.08.2021 12:29	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	03.08.2021 12:29	
Alkalinity, hydroxide (as CaCO3)	<4.00	<4.00	0	20	mg/L	03.08.2021 12:29	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3152754

Matrix: Water

MB Sample Id: 7722670-1-BLK

LCS Sample Id: 7722670-1-BKS

Prep Method: E300P

Date Prep: 03.06.2021

LCSD Sample Id: 7722670-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.62	96	9.62	96	90-110	0	20	mg/L	03.06.2021 12:27	
Chloride	<0.500	10.0	9.91	99	9.90	99	90-110	0	20	mg/L	03.06.2021 12:27	
Fluoride	<0.500	10.0	9.94	99	9.93	99	90-110	0	20	mg/L	03.06.2021 12:27	
Nitrate as N	<0.100	10.0	9.49	95	9.49	95	90-110	0	20	mg/L	03.06.2021 12:27	
Nitrite as N	<0.100	10.0	9.47	95	9.46	95	90-110	0	20	mg/L	03.06.2021 12:27	
Sulfate	<0.500	10.0	9.66	97	9.64	96	90-110	0	20	mg/L	03.06.2021 12:27	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3152754

Matrix: Water

Prep Method: E300P

Date Prep: 03.06.2021

Parent Sample Id: 690603-001

MS Sample Id: 690603-001 S

MSD Sample Id: 690603-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.94	99	9.92	99	90-110	0	20	mg/L	03.06.2021 14:53	
Chloride	55.4	10.0	64.6	92	64.6	92	90-110	0	20	mg/L	03.06.2021 14:53	
Fluoride	3.01	10.0	12.5	95	12.5	95	90-110	0	20	mg/L	03.06.2021 14:53	
Nitrate as N	1.60	10.0	11.5	99	11.5	99	90-110	0	20	mg/L	03.06.2021 14:53	
Nitrite as N	0.175	10.0	9.42	92	9.42	92	90-110	0	20	mg/L	03.06.2021 14:53	
Sulfate	81.8	10.0	89.7	79	89.8	80	90-110	0	20	mg/L	03.06.2021 14:53	X

Analytical Method: TDS by SM2540C

Seq Number: 3152750

Matrix: Water

MB Sample Id: 3152750-1-BLK

LCS Sample Id: 3152750-1-BKS

LCSD Sample Id: 3152750-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	1040	104	1020	102	80-120	2	10	mg/L	03.06.2021 16:00	

Analytical Method: TDS by SM2540C

Seq Number: 3152750

Matrix: Water

Parent Sample Id: 690699-001

MD Sample Id: 690699-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	365	338	8	10	mg/L	03.06.2021 16:00	

Analytical Method: pH by SM4500-H

Seq Number: 3152780

Matrix: Ground Water

Parent Sample Id: 690485-001

MD Sample Id: 690485-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.38	6.38	0	20	SU	03.08.2021 08:53	
Temperature	18.8	18.0	4	20	Deg C	03.08.2021 08:53	

Analytical Method: pH by SM4500-H

Seq Number: 3152780

Matrix: Water

Parent Sample Id: 690762-001

MD Sample Id: 690762-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.03	7.00	0	20	SU	03.08.2021 08:53	
Temperature	18.6	18.7	1	20	Deg C	03.08.2021 08:53	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3152878

Matrix: Water

Prep Method: E200.7P

Date Prep: 03.08.2021

MB Sample Id: 7722720-1-BLK

LCS Sample Id: 7722720-1-BKS

LCSD Sample Id: 7722720-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	23.8	95	23.8	95	85-115	0	20	mg/L	03.08.2021 12:49	
Magnesium	<0.200	25.0	23.8	95	23.9	96	85-115	0	20	mg/L	03.08.2021 12:49	
Potassium	<0.500	10.0	9.46	95	9.49	95	85-115	0	20	mg/L	03.08.2021 12:49	
Silica	<1.07	21.4	20.8	97	21.0	98	85-115	1	20	mg/L	03.08.2021 12:49	
Sodium	<0.500	25.0	23.3	93	23.3	93	85-115	0	20	mg/L	03.08.2021 12:49	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3152878

Matrix: Water

Prep Method: E200.7P

Date Prep: 03.08.2021

Parent Sample Id: 690484-001

MS Sample Id: 690484-001 S

MSD Sample Id: 690484-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	419	25.0	439	80	441	88	70-130	0	20	mg/L	03.08.2021 13:02	
Magnesium	77.8	25.0	102	97	102	97	70-130	0	20	mg/L	03.08.2021 13:02	
Potassium	6.41	10.0	16.8	104	16.8	104	70-130	0	20	mg/L	03.08.2021 13:02	
Silica	62.4	21.4	84.0	101	84.1	101	70-130	0	20	mg/L	03.08.2021 13:02	
Sodium	151	25.0	174	92	175	96	70-130	1	20	mg/L	03.08.2021 13:02	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

MB Sample Id: 7722736-1-BLK

Matrix: Water

LCS Sample Id: 7722736-1-BKS

Prep Method: E624P

Date Prep: 03.06.2021

LCSD Sample Id: 7722736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0500	100	0.0492	98	66-142	2	25	mg/L	03.06.2021 12:19	
Bromobenzene	<0.00100	0.0500	0.0544	109	0.0534	107	75-125	2	25	mg/L	03.06.2021 12:19	
Bromochloromethane	<0.00100	0.0500	0.0491	98	0.0479	96	60-140	2	25	mg/L	03.06.2021 12:19	
Bromodichloromethane	<0.00100	0.0500	0.0542	108	0.0526	105	75-125	3	25	mg/L	03.06.2021 12:19	
Bromoform	<0.00500	0.0500	0.0540	108	0.0533	107	75-125	1	25	mg/L	03.06.2021 12:19	
Methyl bromide	<0.00500	0.0500	0.0541	108	0.0530	106	60-140	2	25	mg/L	03.06.2021 12:19	
2-Butanone	<0.0500	0.250	0.233	93	0.238	95	60-140	2	25	mg/L	03.06.2021 12:19	
n-Butylbenzene	<0.00100	0.0500	0.0585	117	0.0574	115	75-125	2	25	mg/L	03.06.2021 12:19	
Sec-Butylbenzene	<0.00100	0.0500	0.0585	117	0.0567	113	75-125	3	25	mg/L	03.06.2021 12:19	
tert-Butylbenzene	<0.00100	0.0500	0.0578	116	0.0555	111	75-125	4	25	mg/L	03.06.2021 12:19	
Carbon Tetrachloride	<0.00500	0.0500	0.0516	103	0.0491	98	62-125	5	25	mg/L	03.06.2021 12:19	
Chlorobenzene	<0.00100	0.0500	0.0521	104	0.0508	102	60-133	3	25	mg/L	03.06.2021 12:19	
Chloroethane	<0.0100	0.0500	0.0458	92	0.0460	92	60-140	0	25	mg/L	03.06.2021 12:19	
Chloroform	<0.00100	0.0500	0.0501	100	0.0488	98	70-130	3	25	mg/L	03.06.2021 12:19	
Methyl Chloride	<0.0100	0.0500	0.0435	87	0.0428	86	60-140	2	25	mg/L	03.06.2021 12:19	
2-Chlorotoluene	<0.00100	0.0500	0.0567	113	0.0556	111	73-125	2	25	mg/L	03.06.2021 12:19	
4-Chlorotoluene	<0.00100	0.0500	0.0570	114	0.0551	110	74-125	3	25	mg/L	03.06.2021 12:19	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0582	116	0.0564	113	75-125	3	25	mg/L	03.06.2021 12:19	
Dibromochloromethane	<0.00500	0.0500	0.0566	113	0.0545	109	73-125	4	25	mg/L	03.06.2021 12:19	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0557	111	0.0584	117	59-125	5	25	mg/L	03.06.2021 12:19	
1,2-Dibromoethane	<0.00500	0.0500	0.0528	106	0.0514	103	73-125	3	25	mg/L	03.06.2021 12:19	
Methylene Bromide	<0.00100	0.0500	0.0506	101	0.0498	100	69-127	2	25	mg/L	03.06.2021 12:19	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0550	110	0.0554	111	75-125	1	25	mg/L	03.06.2021 12:19	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0540	108	0.0525	105	75-125	3	25	mg/L	03.06.2021 12:19	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0543	109	0.0534	107	75-125	2	25	mg/L	03.06.2021 12:19	
Dichlorodifluoromethane	<0.00100	0.0500	0.0456	91	0.0434	87	60-140	5	25	mg/L	03.06.2021 12:19	
1,1-Dichloroethane	<0.00100	0.0500	0.0510	102	0.0487	97	72-125	5	25	mg/L	03.06.2021 12:19	
1,2-Dichloroethane	<0.00100	0.0500	0.0523	105	0.0515	103	68-127	2	25	mg/L	03.06.2021 12:19	
1,1-Dichloroethene	<0.00100	0.0500	0.0496	99	0.0465	93	59-172	6	25	mg/L	03.06.2021 12:19	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0507	101	0.0490	98	75-125	3	25	mg/L	03.06.2021 12:19	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0481	96	0.0453	91	75-125	6	25	mg/L	03.06.2021 12:19	
1,2-Dichloropropane	<0.00500	0.0500	0.0523	105	0.0511	102	74-125	2	25	mg/L	03.06.2021 12:19	
1,3-Dichloropropane	<0.00500	0.0500	0.0542	108	0.0530	106	75-125	2	25	mg/L	03.06.2021 12:19	
2,2-Dichloropropane	<0.00500	0.0500	0.0551	110	0.0519	104	75-125	6	25	mg/L	03.06.2021 12:19	
1,1-Dichloropropene	<0.00500	0.0500	0.0513	103	0.0491	98	75-125	4	25	mg/L	03.06.2021 12:19	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0529	106	0.0526	105	74-125	1	25	mg/L	03.06.2021 12:19	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0558	112	0.0537	107	66-125	4	25	mg/L	03.06.2021 12:19	
Ethylbenzene	<0.00100	0.0500	0.0528	106	0.0511	102	75-125	3	25	mg/L	03.06.2021 12:19	
Hexachlorobutadiene	<0.00500	0.0500	0.0473	95	0.0481	96	75-125	2	25	mg/L	03.06.2021 12:19	
Isopropylbenzene	<0.00100	0.0500	0.0552	110	0.0525	105	75-125	5	25	mg/L	03.06.2021 12:19	
Methylene Chloride	<0.00500	0.0500	0.0473	95	0.0451	90	75-125	5	25	mg/L	03.06.2021 12:19	
MTBE	<0.00500	0.0500	0.0513	103	0.0504	101	65-135	2	25	mg/L	03.06.2021 12:19	
Naphthalene	<0.0100	0.0500	0.0533	107	0.0577	115	70-130	8	25	mg/L	03.06.2021 12:19	
n-Propylbenzene	<0.00100	0.0500	0.0579	116	0.0563	113	75-125	3	25	mg/L	03.06.2021 12:19	
Styrene	<0.00100	0.0500	0.0555	111	0.0538	108	75-125	3	25	mg/L	03.06.2021 12:19	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0545	109	0.0532	106	72-125	2	25	mg/L	03.06.2021 12:19	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0563	113	0.0572	114	74-125	2	25	mg/L	03.06.2021 12:19	
Tetrachloroethylene	<0.00100	0.0500	0.0494	99	0.0469	94	71-125	5	25	mg/L	03.06.2021 12:19	
Toluene	<0.00100	0.0500	0.0513	103	0.0490	98	59-139	5	25	mg/L	03.06.2021 12:19	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0523	105	0.0574	115	75-137	9	25	mg/L	03.06.2021 12:19	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

MB Sample Id: 7722736-1-BLK

Matrix: Water

LCS Sample Id: 7722736-1-BKS

Prep Method: E624P

Date Prep: 03.06.2021

LCSD Sample Id: 7722736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0498	100	0.0501	100	75-135	1	25	mg/L	03.06.2021 12:19	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0515	103	0.0494	99	75-125	4	25	mg/L	03.06.2021 12:19	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0541	108	0.0537	107	75-127	1	25	mg/L	03.06.2021 12:19	
Trichloroethylene	<0.00500	0.0500	0.0499	100	0.0488	98	62-137	2	25	mg/L	03.06.2021 12:19	
Trichlorofluoromethane	<0.00100	0.0500	0.0487	97	0.0466	93	60-140	4	25	mg/L	03.06.2021 12:19	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0559	112	0.0572	114	75-125	2	25	mg/L	03.06.2021 12:19	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0584	117	0.0568	114	75-125	3	25	mg/L	03.06.2021 12:19	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0578	116	0.0558	112	70-125	4	25	mg/L	03.06.2021 12:19	
o-Xylene	<0.00100	0.0500	0.0545	109	0.0525	105	75-125	4	25	mg/L	03.06.2021 12:19	
m,p-Xylenes	<0.0100	0.100	0.107	107	0.103	103	75-125	4	25	mg/L	03.06.2021 12:19	
Vinyl Chloride	<0.00200	0.0500	0.0463	93	0.0443	89	60-140	4	25	mg/L	03.06.2021 12:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		101		98		75-131	%	03.06.2021 12:19
1,2-Dichloroethane-D4	102		102		100		63-144	%	03.06.2021 12:19
Toluene-D8	104		105		102		80-117	%	03.06.2021 12:19
4-Bromofluorobenzene	105		103		102		74-124	%	03.06.2021 12:19

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

Matrix: Water

Prep Method: E624P

Date Prep: 03.06.2021

Parent Sample Id: 690708-001

MS Sample Id: 690708-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0487	97	66-142	mg/L	03.06.2021 13:00	
Bromobenzene	<0.00100	0.0500	0.0517	103	75-125	mg/L	03.06.2021 13:00	
Bromochloromethane	<0.00100	0.0500	0.0483	97	60-140	mg/L	03.06.2021 13:00	
Bromodichloromethane	0.00342	0.0500	0.0555	104	75-125	mg/L	03.06.2021 13:00	
Bromoform	<0.000630	0.0500	0.0534	107	75-125	mg/L	03.06.2021 13:00	
Methyl bromide	<0.00500	0.0500	0.0588	118	60-140	mg/L	03.06.2021 13:00	
2-Butanone	0.00957	0.250	0.231	89	60-140	mg/L	03.06.2021 13:00	
n-Butylbenzene	<0.00100	0.0500	0.0521	104	75-125	mg/L	03.06.2021 13:00	
Sec-Butylbenzene	<0.00100	0.0500	0.0525	105	75-125	mg/L	03.06.2021 13:00	
tert-Butylbenzene	<0.00100	0.0500	0.0521	104	75-125	mg/L	03.06.2021 13:00	
Carbon Tetrachloride	<0.00500	0.0500	0.0482	96	62-125	mg/L	03.06.2021 13:00	
Chlorobenzene	<0.00100	0.0500	0.0503	101	60-133	mg/L	03.06.2021 13:00	
Chloroethane	<0.0100	0.0500	0.0485	97	60-140	mg/L	03.06.2021 13:00	
Chloroform	0.00304	0.0500	0.0510	96	70-130	mg/L	03.06.2021 13:00	
Methyl Chloride	<0.0100	0.0500	0.0441	88	60-140	mg/L	03.06.2021 13:00	
2-Chlorotoluene	<0.00100	0.0500	0.0529	106	73-125	mg/L	03.06.2021 13:00	
4-Chlorotoluene	<0.00100	0.0500	0.0528	106	74-125	mg/L	03.06.2021 13:00	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0525	105	75-125	mg/L	03.06.2021 13:00	
Dibromochloromethane	0.00248	0.0500	0.0565	108	73-125	mg/L	03.06.2021 13:00	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0560	112	59-125	mg/L	03.06.2021 13:00	
1,2-Dibromoethane	<0.00500	0.0500	0.0515	103	73-125	mg/L	03.06.2021 13:00	
Methylene Bromide	<0.00100	0.0500	0.0481	96	69-127	mg/L	03.06.2021 13:00	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0534	107	75-125	mg/L	03.06.2021 13:00	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0503	101	75-125	mg/L	03.06.2021 13:00	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0516	103	75-125	mg/L	03.06.2021 13:00	
Dichlorodifluoromethane	<0.00100	0.0500	0.0433	87	60-140	mg/L	03.06.2021 13:00	
1,1-Dichloroethane	<0.00100	0.0500	0.0489	98	72-125	mg/L	03.06.2021 13:00	
1,2-Dichloroethane	<0.00100	0.0500	0.0504	101	68-127	mg/L	03.06.2021 13:00	
1,1-Dichloroethene	<0.00100	0.0500	0.0469	94	59-172	mg/L	03.06.2021 13:00	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0493	99	75-125	mg/L	03.06.2021 13:00	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0456	91	75-125	mg/L	03.06.2021 13:00	
1,2-Dichloropropane	<0.00500	0.0500	0.0506	101	74-125	mg/L	03.06.2021 13:00	
1,3-Dichloropropane	<0.00500	0.0500	0.0535	107	75-125	mg/L	03.06.2021 13:00	
2,2-Dichloropropane	<0.00500	0.0500	0.0509	102	75-125	mg/L	03.06.2021 13:00	
1,1-Dichloropropene	<0.00500	0.0500	0.0483	97	75-125	mg/L	03.06.2021 13:00	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0516	103	74-125	mg/L	03.06.2021 13:00	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0543	109	66-125	mg/L	03.06.2021 13:00	
Ethylbenzene	<0.00100	0.0500	0.0510	102	75-125	mg/L	03.06.2021 13:00	
Hexachlorobutadiene	<0.00500	0.0500	0.0437	87	75-125	mg/L	03.06.2021 13:00	
Isopropylbenzene	<0.00100	0.0500	0.0522	104	75-125	mg/L	03.06.2021 13:00	
Methylene Chloride	<0.00500	0.0500	0.0453	91	75-125	mg/L	03.06.2021 13:00	
MTBE	<0.00500	0.0500	0.0500	100	65-135	mg/L	03.06.2021 13:00	
Naphthalene	<0.0100	0.0500	0.0631	126	70-130	mg/L	03.06.2021 13:00	
n-Propylbenzene	<0.00100	0.0500	0.0530	106	75-125	mg/L	03.06.2021 13:00	
Styrene	<0.00100	0.0500	0.0541	108	75-125	mg/L	03.06.2021 13:00	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0530	106	72-125	mg/L	03.06.2021 13:00	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0568	114	74-125	mg/L	03.06.2021 13:00	
Tetrachloroethylene	<0.00100	0.0500	0.0476	95	71-125	mg/L	03.06.2021 13:00	
Toluene	<0.00100	0.0500	0.0495	99	59-139	mg/L	03.06.2021 13:00	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0589	118	75-137	mg/L	03.06.2021 13:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum Levey Well

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

Matrix: Water

Prep Method: E624P

Parent Sample Id: 690708-001

MS Sample Id: 690708-001 S

Date Prep: 03.06.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0489	98	75-135	mg/L	03.06.2021 13:00	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0488	98	75-125	mg/L	03.06.2021 13:00	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0527	105	75-127	mg/L	03.06.2021 13:00	
Trichloroethylene	<0.00500	0.0500	0.0473	95	62-137	mg/L	03.06.2021 13:00	
Trichlorofluoromethane	<0.00100	0.0500	0.0462	92	60-140	mg/L	03.06.2021 13:00	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0553	111	75-125	mg/L	03.06.2021 13:00	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0537	107	75-125	mg/L	03.06.2021 13:00	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0532	106	70-125	mg/L	03.06.2021 13:00	
o-Xylene	<0.00100	0.0500	0.0526	105	75-125	mg/L	03.06.2021 13:00	
m,p-Xylenes	<0.0100	0.100	0.103	103	75-125	mg/L	03.06.2021 13:00	
Vinyl Chloride	<0.00200	0.0500	0.0453	91	60-140	mg/L	03.06.2021 13:00	

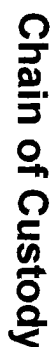
Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		75-131	%	03.06.2021 13:00
1,2-Dichloroethane-D4	101		63-144	%	03.06.2021 13:00
Toluene-D8	104		80-117	%	03.06.2021 13:00
4-Bromofluorobenzene	100		74-124	%	03.06.2021 13:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Work Order No:

686484

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)

www.xenco.com Page 1 of 1

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

[illegible]

Inter-Office Shipment

IOS Number : **79013**

Date/Time: 03.05.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 773084224033

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
690484-001	W	Levey Well	03.04.2021 13:37	SW8260C	VOCs by SW-846 8260C	03.08.2021	03.18.2021	JKR	BDCME BRBZ BRCLME	
690484-001	W	Levey Well	03.04.2021 13:37	E200.7	Recoverable Metals per ICP by EPA 200	03.08.2021	08.31.2021	JKR	CA K MG NA SI	
690484-001	W	Levey Well	03.04.2021 13:37	E300	Inorganic Anions by EPA 300/300.1	03.08.2021	03.06.2021 13:37	JKR	BR CL F NO2N NO3N SC	
690484-001	W	Levey Well	03.04.2021 13:37	SM4500-H	pH by SM4500-H	03.08.2021	03.04.2021 13:52	JKR		
690484-001	W	Levey Well	03.04.2021 13:37	SM2540C	TDS by SM2540C	03.08.2021	03.11.2021 13:37	JKR	TDS	
690484-001	W	Levey Well	03.04.2021 13:37	SM2320B	Alkalinity by SM2320B	03.08.2021	03.18.2021	JKR	ALK ALKB ALKC	
690484-001	W	Levey Well	03.04.2021 13:37	SM1030E	Cation-Anion Balance Calculation	03.08.2021	04.03.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

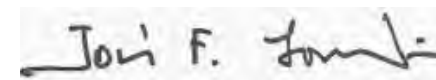
Relinquished By:



Brianna Teel

Date Relinquished: 03.05.2021

Received By:



Jose Londono

Date Received: 03.06.2021

Cooler Temperature: 2.3



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 79013

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 03.05.2021 08.33 AM

Received By: Jose Londono

Date Received: 03.06.2021 11.59 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 03.06.2021

Certificate of Analysis Summary 691273



Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 03.10.2021 15:27
Report Date: 03.11.2021 20:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 691273-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.10.2021 10:10					
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 03.11.2021 13:05 Analyzed: 03.11.2021 14:25 Units/RL: mg/L RL					
Alkalinity, Total (as CaCO3)	1160 4.00					
Alkalinity, Bicarbonate (as CaCO3)	1160 4.00					
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00					
Alkalinity, hydroxide (as CaCO3)	<4.00 4.00					
Cation-Anion Balance Calculation SUB: T104704215-20-39	Extracted: Analyzed: 03.11.2021 17:59 Units/RL: % RL					
Cation-Anion Balance	5.10					
Inorganic Anions by EPA 300/300.1 SUB: T104704215-20-39	Extracted: 03.11.2021 08:40 Analyzed: 03.11.2021 13:36 Units/RL: mg/L RL					
Bromide	0.756 0.500					
Chloride	540 0.500					
Fluoride	<0.500 0.500					
Nitrate as N	0.147 0.100					
Nitrite as N	<0.100 0.100					
Sulfate	45.5 0.500					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 691273



Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 03.10.2021 15:27
Report Date: 03.11.2021 20:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	691273-001					
	Field Id:	Levey Well					
	Depth:						
	Matrix:	WATER					
	Sampled:	03.10.2021 10:10					
Recoverable Metals per ICP by EPA 200.7 SUB: T104704215-20-39	Extracted:	03.11.2021 12:35					
	Analyzed:	03.11.2021 16:06					
	Units/RL:	mg/L RL					
	Calcium	417 D 10.0					
	Magnesium	76.3 0.200					
	Potassium	5.54 0.500					
	Silica	63.6 1.07					
	Sodium	139 0.500					
TDS by SM2540C SUB: T104704215-20-39	Extracted:						
	Analyzed:	03.11.2021 14:09					
	Units/RL:	mg/L RL					
Total Dissolved Solids		1940 5.00					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 691273



Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 03.10.2021 15:27
Report Date: 03.11.2021 20:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 691273-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.10.2021 10:10					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 03.11.2021 13:10 Analyzed: 03.11.2021 14:14 Units/RL: mg/L RL					
Benzene	0.00850 0.00100					
Bromobenzene	<0.00100 0.00100					
Bromochloromethane	<0.00100 0.00100					
Bromodichloromethane	<0.00100 0.00100					
Bromoform	<0.00500 0.00500					
Methyl bromide	<0.00500 0.00500					
2-Butanone	<0.0500 0.0500					
n-Butylbenzene	<0.00100 0.00100					
Sec-Butylbenzene	0.00270 0.00100					
tert-Butylbenzene	<0.00100 0.00100					
Carbon Tetrachloride	<0.00500 0.00500					
Chlorobenzene	<0.00100 0.00100					
Chloroethane	<0.0100 0.0100					
Chloroform	<0.00100 0.00100					
Methyl Chloride	<0.0100 0.0100					
2-Chlorotoluene	<0.00100 0.00100					
4-Chlorotoluene	<0.00100 0.00100					
p-Cymene (p-Isopropyltoluene)	0.00176 0.00100					
Dibromochloromethane	<0.00500 0.00500					
1,2-Dibromo-3-Chloropropane	<0.00100 0.00100					
1,2-Dibromoethane	<0.00500 0.00500					
Methylene Bromide	<0.00100 0.00100					
1,2-Dichlorobenzene	<0.00100 0.00100					
1,3-Dichlorobenzene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 691273



Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 03.10.2021 15:27
Report Date: 03.11.2021 20:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 691273-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.10.2021 10:10					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 03.11.2021 13:10 Analyzed: 03.11.2021 14:14 Units/RL: mg/L RL					
1,4-Dichlorobenzene	<0.00100 0.00100					
Dichlorodifluoromethane	<0.00100 0.00100					
1,1-Dichloroethane	<0.00100 0.00100					
1,2-Dichloroethane	<0.00100 0.00100					
1,1-Dichloroethene	<0.00100 0.00100					
cis-1,2-Dichloroethylene	<0.00100 0.00100					
trans-1,2-dichloroethylene	<0.00100 0.00100					
1,2-Dichloropropane	<0.00500 0.00500					
1,3-Dichloropropane	<0.00500 0.00500					
2,2-Dichloropropane	<0.00500 0.00500					
1,1-Dichloropropene	<0.00500 0.00500					
cis-1,3-Dichloropropene	<0.00500 0.00500					
trans-1,3-dichloropropene	<0.00500 0.00500					
Ethylbenzene	0.0314 0.00100					
Hexachlorobutadiene	<0.00500 0.00500					
Isopropylbenzene	0.0156 0.00100					
Methylene Chloride	<0.00500 0.00500					
MTBE	<0.00500 0.00500					
Naphthalene	<0.0100 0.0100					
n-Propylbenzene	0.00898 0.00100					
Styrene	<0.00100 0.00100					
1,1,1,2-Tetrachloroethane	<0.00100 0.00100					
1,1,2,2-Tetrachloroethane	<0.00100 0.00100					
Tetrachloroethylene	<0.00100 0.00100					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 691273



Ensolum, Dallas, TX

Project Name: Levey Well Hobbs NM

Project Id: 03B1417001
Contact: Beaux Jennings
Project Location: Hobbs NM

Date Received in Lab: Wed 03.10.2021 15:27
Report Date: 03.11.2021 20:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 691273-001 Field Id: Levey Well Depth: Matrix: WATER Sampled: 03.10.2021 10:10					
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 03.11.2021 13:10 Analyzed: 03.11.2021 14:14 Units/RL: mg/L RL					
Toluene	0.0668 0.00100					
1,2,3-Trichlorobenzene	<0.00500 0.00500					
1,2,4-Trichlorobenzene	<0.00500 0.00500					
1,1,1-Trichloroethane	<0.00500 0.00500					
1,1,2-Trichloroethane	<0.00100 0.00100					
Trichloroethylene	<0.00500 0.00500					
Trichlorofluoromethane	<0.00100 0.00100					
1,2,3-Trichloropropane	<0.00100 0.00100					
1,2,4-Trimethylbenzene	0.0466 0.00100					
1,3,5-Trimethylbenzene	0.0150 0.00100					
o-Xylene	0.0194 0.00100					
m,p-Xylenes	0.126 0.0100					
Vinyl Chloride	<0.00200 0.00200					
Total Xylenes	0.145 0.00100					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 03.11.2021 16:23 Units/RL: Deg C RL					
Temperature	18.6 K					
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 03.11.2021 16:23 Units/RL: SU RL					
pH	6.29 K					

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 691273

for

Ensolum

Project Manager: Beaux Jennings

Levey Well Hobbs NM

03B1417001

03.11.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.11.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **691273**

Levey Well Hobbs NM

Project Address: Hobbs NM

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 691273. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 691273 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Chad A. Bechtold".

Chad Bechtold

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 691273

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Levey Well	W	03.10.2021 10:10		691273-001



CASE NARRATIVE

Client Name: Ensolum

Project Name: Levey Well Hobbs NM

Project ID: 03B1417001
Work Order Number(s): 691273

Report Date: 03.11.2021
Date Received: 03.10.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3153371 VOCs by SW-846 8260C

Naphthalene recovered above QC limits in the Blank Spike Duplicate. Analyte was not detected in any of the associated samples and therefore the data was accepted. Samples in the analytical batch are: 691273-001.



Certificate of Analytical Results 691273

Ensolum, Dallas, TX Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.10.2021 15:27

Lab Sample Id: 691273-001

Date Collected: 03.10.2021 10:10

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 03.11.2021 13:05

% Moisture:

SUB: T104704215-20-39

Seq Number: 3153366

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO₃)	1640192	1160	4.00	mg/L	03.11.2021 14:25		1
Alkalinity, Bicarbonate (as CaCO₃)	471-34-1	1160	4.00	mg/L	03.11.2021 14:25		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	mg/L	03.11.2021 14:25	U	1
Alkalinity, hydroxide (as CaCO ₃)	14280-30-9	<4.00	4.00	mg/L	03.11.2021 14:25	U	1

Analytical Method: Cation-Anion Balance Calculation

Tech: ALA

Analyst: ALA

% Moisture:

SUB: T104704215-20-39

Seq Number: 3153368

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Cation-Anion Balance	CATANBAL	5.10		%	03.11.2021 17:59		1

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 03.11.2021 08:40

% Moisture:

SUB: T104704215-20-39

Seq Number: 3153337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Bromide	24959-67-9	0.756	0.500	mg/L	03.11.2021 13:36		1
Chloride	16887-00-6	540	0.500	mg/L	03.11.2021 13:36		1
Fluoride	16984-48-8	<0.500	0.500	mg/L	03.11.2021 13:36	U	1
Nitrate as N	14797-55-8	0.147	0.100	mg/L	03.11.2021 13:36		1
Nitrite as N	14797-65-0	<0.100	0.100	mg/L	03.11.2021 13:36	U	1
Sulfate	14808-79-8	45.5	0.500	mg/L	03.11.2021 13:36		1

Analytical Method: TDS by SM2540C

Tech: DTN

Analyst: DTN

% Moisture:

SUB: T104704215-20-39

Seq Number: 3153299

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	1940	5.00	mg/L	03.11.2021 14:09		1



Certificate of Analytical Results 691273

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.10.2021 15:27

Lab Sample Id: 691273-001

Date Collected: 03.10.2021 10:10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

Seq Number: 3153333

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.29		SU	03.11.2021 16:23	K	1
Temperature	TEMP	18.6		Deg C	03.11.2021 16:23	K	1

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Prep Method: E200.7P

Tech: MLI

Analyst: DEP

Date Prep: 03.11.2021 12:35

% Moisture:

SUB: T104704215-20-39

Seq Number: 3153335

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium	7440-70-2	417	10.0	mg/L	03.11.2021 16:15	D	50
Magnesium	7439-95-4	76.3	0.200	mg/L	03.11.2021 16:06		1
Potassium	7440-09-7	5.54	0.500	mg/L	03.11.2021 16:06		1
Silica	7631-86-9	63.6	1.07	mg/L	03.11.2021 16:06		1
Sodium	7440-23-5	139	0.500	mg/L	03.11.2021 16:06		1



Certificate of Analytical Results 691273

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.10.2021 15:27

Lab Sample Id: 691273-001

Date Collected: 03.10.2021 10:10

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 03.11.2021 13:10

% Moisture:

SUB: T104704215-20-39

Seq Number: 3153371

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00850	0.00100	mg/L	03.11.2021 14:14		1
Bromobenzene	108-86-1	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Bromochloromethane	74-97-5	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Bromodichloromethane	75-27-4	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Bromoform	75-25-2	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Methyl bromide	74-83-9	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
2-Butanone	78-93-3	<0.0500	0.0500	mg/L	03.11.2021 14:14	U	1
n-Butylbenzene	104-51-8	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Sec-Butylbenzene	135-98-8	0.00270	0.00100	mg/L	03.11.2021 14:14		1
tert-Butylbenzene	98-06-6	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Carbon Tetrachloride	56-23-5	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Chlorobenzene	108-90-7	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Chloroethane	75-00-3	<0.0100	0.0100	mg/L	03.11.2021 14:14	U	1
Chloroform	67-66-3	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Methyl Chloride	74-87-3	<0.0100	0.0100	mg/L	03.11.2021 14:14	U	1
2-Chlorotoluene	95-49-8	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
4-Chlorotoluene	106-43-4	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00176	0.00100	mg/L	03.11.2021 14:14		1
Dibromochloromethane	124-48-1	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,2-Dibromoethane	106-93-4	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Methylene Bromide	74-95-3	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,2-Dichlorobenzene	95-50-1	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,3-Dichlorobenzene	541-73-1	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,4-Dichlorobenzene	106-46-7	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Dichlorodifluoromethane	75-71-8	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,1-Dichloroethane	75-34-3	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,2-Dichloroethane	107-06-2	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,1-Dichloroethene	75-35-4	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
trans-1,2-dichloroethylene	156-60-5	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,2-Dichloropropane	78-87-5	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
1,3-Dichloropropane	142-28-9	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
2,2-Dichloropropane	594-20-7	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
1,1-Dichloropropene	563-58-6	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
trans-1,3-dichloropropene	10061-02-6	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Ethylbenzene	100-41-4	0.0314	0.00100	mg/L	03.11.2021 14:14		1
Hexachlorobutadiene	87-68-3	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Isopropylbenzene	98-82-8	0.0156	0.00100	mg/L	03.11.2021 14:14		1



Certificate of Analytical Results 691273

Ensolum, Dallas, TX

Levey Well Hobbs NM

Sample Id: **Levey Well**

Matrix: Water

Date Received: 03.10.2021 15:27

Lab Sample Id: 691273-001

Date Collected: 03.10.2021 10:10

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

% Moisture:

Analyst: EZA

Date Prep: 03.11.2021 13:10

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number: 3153371							
Methylene Chloride	75-09-2	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
MTBE	1634-04-4	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Naphthalene	91-20-3	<0.0100	0.0100	mg/L	03.11.2021 14:14	UH	1
n-Propylbenzene	103-65-1	0.00898	0.00100	mg/L	03.11.2021 14:14		1
Styrene	100-42-5	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Tetrachloroethylene	127-18-4	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Toluene	108-88-3	0.0668	0.00100	mg/L	03.11.2021 14:14		1
1,2,3-Trichlorobenzene	87-61-6	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
1,1,1-Trichloroethane	71-55-6	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
1,1,2-Trichloroethane	79-00-5	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
Trichloroethylene	79-01-6	<0.00500	0.00500	mg/L	03.11.2021 14:14	U	1
Trichlorofluoromethane	75-69-4	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,2,3-Trichloropropane	96-18-4	<0.00100	0.00100	mg/L	03.11.2021 14:14	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0466	0.00100	mg/L	03.11.2021 14:14		1
1,3,5-Trimethylbenzene	108-67-8	0.0150	0.00100	mg/L	03.11.2021 14:14		1
o-Xylene	95-47-6	0.0194	0.00100	mg/L	03.11.2021 14:14		1
m,p-Xylenes	179601-23-1	0.126	0.0100	mg/L	03.11.2021 14:14		1
Vinyl Chloride	75-01-4	<0.00200	0.00200	mg/L	03.11.2021 14:14	U	1
Total Xylenes	1330-20-7	0.145	0.00100	mg/L	03.11.2021 14:14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	75-131	03.11.2021 14:14	
1,2-Dichloroethane-D4	17060-07-0	103	%	63-144	03.11.2021 14:14	
Toluene-D8	2037-26-5	103	%	80-117	03.11.2021 14:14	
4-Bromofluorobenzene	460-00-4	103	%	74-124	03.11.2021 14:14	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum

Levey Well Hobbs NM

Analytical Method: Alkalinity by SM2320B

Seq Number: 3153366

MB Sample Id: 7723075-1-BLK

Matrix: Water

LCS Sample Id: 7723075-1-BKS

Prep Method: SM2320P

Date Prep: 03.11.2021

LCSD Sample Id: 7723075-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	253	101	257	103	85-115	2	20	mg/L	03.11.2021 13:25	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3153366

Matrix: Water

MB Sample Id: 7723075-1-BLK

Prep Method: SM2320P

Date Prep: 03.11.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	03.11.2021 13:18	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	03.11.2021 13:18	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	mg/L	03.11.2021 13:18	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3153366

Matrix: Ground Water

Parent Sample Id: 690632-002

MD Sample Id: 690632-002 D

Prep Method: SM2320P

Date Prep: 03.11.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	344	345	0	20	mg/L	03.11.2021 15:36	
Alkalinity, Bicarbonate (as CaCO ₃)	344	345	0	20	mg/L	03.11.2021 15:36	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	03.11.2021 15:36	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	03.11.2021 15:36	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3153366

Matrix: Ground Water

Parent Sample Id: 691272-001

MD Sample Id: 691272-001 D

Prep Method: SM2320P

Date Prep: 03.11.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	1020	1010	1	20	mg/L	03.11.2021 13:57	
Alkalinity, Bicarbonate (as CaCO ₃)	1020	1010	1	20	mg/L	03.11.2021 13:57	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	03.11.2021 13:57	
Alkalinity, hydroxide (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	03.11.2021 13:57	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum
Levey Well Hobbs NM

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3153337

Matrix: Water

Prep Method: E300P

Date Prep: 03.11.2021

MB Sample Id: 7723031-1-BLK

LCS Sample Id: 7723031-1-BKS

LCSD Sample Id: 7723031-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.72	97	9.69	97	90-110	0	20	mg/L	03.11.2021 08:11	
Chloride	<0.500	10.0	10.0	100	10.0	100	90-110	0	20	mg/L	03.11.2021 08:11	
Fluoride	<0.500	10.0	10.0	100	10.0	100	90-110	0	20	mg/L	03.11.2021 08:11	
Nitrate as N	<0.100	10.0	9.59	96	9.57	96	90-110	0	20	mg/L	03.11.2021 08:11	
Nitrite as N	0.0587	10.0	9.62	96	9.66	97	90-110	0	20	mg/L	03.11.2021 08:11	
Sulfate	<0.500	10.0	9.70	97	9.72	97	90-110	0	20	mg/L	03.11.2021 08:11	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3153337

Matrix: Water

Prep Method: E300P

Date Prep: 03.11.2021

Parent Sample Id: 691136-001

MS Sample Id: 691136-001 S

MSD Sample Id: 691136-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	<0.500	10.0	9.85	99	9.95	100	90-110	1	20	mg/L	03.11.2021 11:34	
Chloride	21.6	10.0	31.0	94	31.4	98	90-110	1	20	mg/L	03.11.2021 11:34	
Fluoride	<0.500	10.0	10.4	104	10.5	105	90-110	1	20	mg/L	03.11.2021 11:34	
Nitrate as N	0.575	10.0	10.1	95	10.3	97	90-110	2	20	mg/L	03.11.2021 11:34	
Nitrite as N	0.141	10.0	9.55	94	9.68	95	90-110	1	20	mg/L	03.11.2021 11:34	
Sulfate	15.1	10.0	24.8	97	25.0	99	90-110	1	20	mg/L	03.11.2021 11:34	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3153337

Matrix: Water

Prep Method: E300P

Date Prep: 03.11.2021

Parent Sample Id: 691263-001

MS Sample Id: 691263-001 S

MSD Sample Id: 691263-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Bromide	0.177	10.0	9.79	96	9.80	96	90-110	0	20	mg/L	03.11.2021 14:49	
Chloride	93.7	10.0	112	183	112	183	90-110	0	20	mg/L	03.11.2021 14:49	X
Fluoride	0.877	10.0	10.8	99	10.8	99	90-110	0	20	mg/L	03.11.2021 14:49	
Nitrate as N	4.59	10.0	19.5	149	19.6	150	90-110	1	20	mg/L	03.11.2021 14:49	X
Nitrite as N	<0.100	10.0	3.88	39	3.89	39	90-110	0	20	mg/L	03.11.2021 14:49	X
Sulfate	84.0	10.0	92.4	84	92.2	82	90-110	0	20	mg/L	03.11.2021 14:49	X

Analytical Method: TDS by SM2540C

Seq Number: 3153299

Matrix: Water

MB Sample Id: 3153299-1-BLK

LCS Sample Id: 3153299-1-BKS

LCSD Sample Id: 3153299-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	970	97	1030	103	80-120	6	10	mg/L	03.11.2021 14:09	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

Levey Well Hobbs NM

Analytical Method: TDS by SM2540C

Seq Number: 3153299

Matrix: Water

Parent Sample Id: 691273-001

MD Sample Id: 691273-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	1940	1990	3	10	mg/L	03.11.2021 14:09	

Analytical Method: pH by SM4500-H

Seq Number: 3153333

Matrix: Water

Parent Sample Id: 691378-003

MD Sample Id: 691378-003 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.47	7.48	0	20	SU	03.11.2021 16:23	
Temperature	21.6	19.2	12	20	Deg C	03.11.2021 16:23	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3153335

Matrix: Water

MB Sample Id: 7723053-1-BLK

LCS Sample Id: 7723053-1-BKS

Prep Method: E200.7P

Date Prep: 03.11.2021

LCSD Sample Id: 7723053-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	<0.200	25.0	24.5	98	24.4	98	85-115	0	20	mg/L	03.11.2021 12:11	
Magnesium	<0.200	25.0	24.5	98	24.4	98	85-115	0	20	mg/L	03.11.2021 12:11	
Potassium	<0.500	10.0	9.53	95	9.49	95	85-115	0	20	mg/L	03.11.2021 12:11	
Silica	<1.07	21.4	21.7	101	21.8	102	85-115	0	20	mg/L	03.11.2021 12:11	
Sodium	<0.500	25.0	24.4	98	24.3	97	85-115	0	20	mg/L	03.11.2021 12:11	

Analytical Method: Recoverable Metals per ICP by EPA 200.7

Seq Number: 3153335

Matrix: Water

Parent Sample Id: 691078-001

MS Sample Id: 691078-001 S

Prep Method: E200.7P

Date Prep: 03.11.2021

MSD Sample Id: 691078-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	109	25.0	136	108	135	104	70-130	1	20	mg/L	03.11.2021 12:27	
Magnesium	48.5	25.0	74.1	102	73.5	100	70-130	1	20	mg/L	03.11.2021 12:27	
Potassium	11.8	10.0	22.3	105	22.2	104	70-130	0	20	mg/L	03.11.2021 12:27	
Silica	5.36	21.4	28.2	107	28.2	107	70-130	0	20	mg/L	03.11.2021 12:27	
Sodium	323	25.0	356	132	352	116	70-130	1	20	mg/L	03.11.2021 12:27	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3153371

Matrix: Water

Prep Method: SW5030B

Date Prep: 03.11.2021

MB Sample Id: 7723124-1-BLK

LCS Sample Id: 7723124-1-BKS

LCSD Sample Id: 7723124-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0455	91	0.0452	90	66-142	1	25	mg/L	03.11.2021 16:05	
Bromobenzene	<0.00100	0.0500	0.0448	90	0.0464	93	75-125	4	25	mg/L	03.11.2021 16:05	
Bromochloromethane	<0.00100	0.0500	0.0464	93	0.0461	92	60-140	1	25	mg/L	03.11.2021 16:05	
Bromodichloromethane	<0.00100	0.0500	0.0478	96	0.0477	95	75-125	0	25	mg/L	03.11.2021 16:05	
Bromoform	<0.00500	0.0500	0.0518	104	0.0521	104	75-125	1	25	mg/L	03.11.2021 16:05	
Methyl bromide	<0.00500	0.0500	0.0412	82	0.0424	85	60-140	3	25	mg/L	03.11.2021 16:05	
2-Butanone	<0.0500	0.250	0.287	115	0.292	117	60-140	2	25	mg/L	03.11.2021 16:05	
n-Butylbenzene	<0.00100	0.0500	0.0465	93	0.0482	96	75-125	4	25	mg/L	03.11.2021 16:05	
Sec-Butylbenzene	<0.00100	0.0500	0.0475	95	0.0479	96	75-125	1	25	mg/L	03.11.2021 16:05	
tert-Butylbenzene	<0.00100	0.0500	0.0468	94	0.0471	94	75-125	1	25	mg/L	03.11.2021 16:05	
Carbon Tetrachloride	<0.00500	0.0500	0.0468	94	0.0454	91	62-125	3	25	mg/L	03.11.2021 16:05	
Chlorobenzene	<0.00100	0.0500	0.0456	91	0.0455	91	60-133	0	25	mg/L	03.11.2021 16:05	
Chloroethane	<0.0100	0.0500	0.0451	90	0.0452	90	60-140	0	25	mg/L	03.11.2021 16:05	
Chloroform	<0.00100	0.0500	0.0476	95	0.0471	94	70-130	1	25	mg/L	03.11.2021 16:05	
Methyl Chloride	<0.0100	0.0500	0.0417	83	0.0409	82	60-140	2	25	mg/L	03.11.2021 16:05	
2-Chlorotoluene	<0.00100	0.0500	0.0464	93	0.0468	94	73-125	1	25	mg/L	03.11.2021 16:05	
4-Chlorotoluene	<0.00100	0.0500	0.0462	92	0.0462	92	74-125	0	25	mg/L	03.11.2021 16:05	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0473	95	0.0481	96	75-125	2	25	mg/L	03.11.2021 16:05	
Dibromochloromethane	<0.00500	0.0500	0.0473	95	0.0482	96	73-125	2	25	mg/L	03.11.2021 16:05	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0573	115	0.0616	123	59-125	7	25	mg/L	03.11.2021 16:05	
1,2-Dibromoethane	<0.00500	0.0500	0.0471	94	0.0490	98	73-125	4	25	mg/L	03.11.2021 16:05	
Methylene Bromide	<0.00100	0.0500	0.0486	97	0.0494	99	69-127	2	25	mg/L	03.11.2021 16:05	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0477	95	0.0484	97	75-125	1	25	mg/L	03.11.2021 16:05	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0466	93	0.0471	94	75-125	1	25	mg/L	03.11.2021 16:05	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0454	91	0.0467	93	75-125	3	25	mg/L	03.11.2021 16:05	
Dichlorodifluoromethane	<0.00100	0.0500	0.0480	96	0.0467	93	60-140	3	25	mg/L	03.11.2021 16:05	
1,1-Dichloroethane	<0.00100	0.0500	0.0474	95	0.0465	93	72-125	2	25	mg/L	03.11.2021 16:05	
1,2-Dichloroethane	<0.00100	0.0500	0.0480	96	0.0474	95	68-127	1	25	mg/L	03.11.2021 16:05	
1,1-Dichloroethene	<0.00100	0.0500	0.0464	93	0.0452	90	59-172	3	25	mg/L	03.11.2021 16:05	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0471	94	0.0471	94	75-125	0	25	mg/L	03.11.2021 16:05	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0449	90	0.0446	89	75-125	1	25	mg/L	03.11.2021 16:05	
1,2-Dichloropropane	<0.00500	0.0500	0.0467	93	0.0471	94	74-125	1	25	mg/L	03.11.2021 16:05	
1,3-Dichloropropane	<0.00500	0.0500	0.0475	95	0.0494	99	75-125	4	25	mg/L	03.11.2021 16:05	
2,2-Dichloropropane	<0.00500	0.0500	0.0480	96	0.0467	93	75-125	3	25	mg/L	03.11.2021 16:05	
1,1-Dichloropropene	<0.00500	0.0500	0.0465	93	0.0451	90	75-125	3	25	mg/L	03.11.2021 16:05	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0489	98	0.0489	98	74-125	0	25	mg/L	03.11.2021 16:05	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0479	96	0.0495	99	66-125	3	25	mg/L	03.11.2021 16:05	
Ethylbenzene	<0.00100	0.0500	0.0454	91	0.0459	92	75-125	1	25	mg/L	03.11.2021 16:05	
Hexachlorobutadiene	<0.00500	0.0500	0.0471	94	0.0480	96	75-125	2	25	mg/L	03.11.2021 16:05	
Isopropylbenzene	<0.00100	0.0500	0.0473	95	0.0474	95	75-125	0	25	mg/L	03.11.2021 16:05	
Methylene Chloride	<0.00500	0.0500	0.0439	88	0.0436	87	75-125	1	25	mg/L	03.11.2021 16:05	
MTBE	<0.00500	0.0500	0.0522	104	0.0529	106	65-135	1	25	mg/L	03.11.2021 16:05	
Naphthalene	<0.0100	0.0500	0.0577	115	0.0672	134	70-130	15	25	mg/L	03.11.2021 16:05	H
n-Propylbenzene	<0.00100	0.0500	0.0457	91	0.0469	94	75-125	3	25	mg/L	03.11.2021 16:05	
Styrene	<0.00100	0.0500	0.0483	97	0.0479	96	75-125	1	25	mg/L	03.11.2021 16:05	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0475	95	0.0471	94	72-125	1	25	mg/L	03.11.2021 16:05	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0514	103	0.0534	107	74-125	4	25	mg/L	03.11.2021 16:05	
Tetrachloroethylene	<0.00100	0.0500	0.0425	85	0.0442	88	71-125	4	25	mg/L	03.11.2021 16:05	
Toluene	<0.00100	0.0500	0.0436	87	0.0450	90	59-139	3	25	mg/L	03.11.2021 16:05	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0471	94	0.0573	115	75-137	20	25	mg/L	03.11.2021 16:05	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum
Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3153371

MB Sample Id: 7723124-1-BLK

Matrix: Water

LCS Sample Id: 7723124-1-BKS

Prep Method: SW5030B

Date Prep: 03.11.2021

LCSD Sample Id: 7723124-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0538	108	0.0579	116	75-135	7	25	mg/L	03.11.2021 16:05	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0463	93	0.0458	92	75-125	1	25	mg/L	03.11.2021 16:05	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0480	96	0.0501	100	75-127	4	25	mg/L	03.11.2021 16:05	
Trichloroethylene	<0.00500	0.0500	0.0453	91	0.0445	89	62-137	2	25	mg/L	03.11.2021 16:05	
Trichlorofluoromethane	<0.00100	0.0500	0.0474	95	0.0458	92	60-140	3	25	mg/L	03.11.2021 16:05	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0508	102	0.0536	107	75-125	5	25	mg/L	03.11.2021 16:05	
1,2,4-Trimethylbenzene	<0.00100	0.0500	0.0466	93	0.0473	95	75-125	1	25	mg/L	03.11.2021 16:05	
1,3,5-Trimethylbenzene	<0.00100	0.0500	0.0465	93	0.0476	95	70-125	2	25	mg/L	03.11.2021 16:05	
o-Xylene	<0.00100	0.0500	0.0468	94	0.0472	94	75-125	1	25	mg/L	03.11.2021 16:05	
m,p-Xylenes	<0.0100	0.100	0.0931	93	0.0935	94	75-125	0	25	mg/L	03.11.2021 16:05	
Vinyl Chloride	<0.00200	0.0500	0.0454	91	0.0444	89	60-140	2	25	mg/L	03.11.2021 16:05	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		101		102		75-131			%	03.11.2021 16:05	
1,2-Dichloroethane-D4	104		100		100		63-144			%	03.11.2021 16:05	
Toluene-D8	99		96		98		80-117			%	03.11.2021 16:05	
4-Bromofluorobenzene	103		99		100		74-124			%	03.11.2021 16:05	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3153371

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 03.11.2021

Parent Sample Id: 691272-001

MS Sample Id: 691272-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.00143	0.0500	0.0485	94	66-142	mg/L	03.11.2021 16:44	
Bromobenzene	<0.00100	0.0500	0.0464	93	75-125	mg/L	03.11.2021 16:44	
Bromochloromethane	<0.00100	0.0500	0.0492	98	60-140	mg/L	03.11.2021 16:44	
Bromodichloromethane	<0.00100	0.0500	0.0490	98	75-125	mg/L	03.11.2021 16:44	
Bromoform	<0.00500	0.0500	0.0539	108	75-125	mg/L	03.11.2021 16:44	
Methyl bromide	<0.00500	0.0500	0.0414	83	60-140	mg/L	03.11.2021 16:44	
2-Butanone	<0.0500	0.250	0.266	106	60-140	mg/L	03.11.2021 16:44	
n-Butylbenzene	<0.00100	0.0500	0.0468	94	75-125	mg/L	03.11.2021 16:44	
Sec-Butylbenzene	<0.00100	0.0500	0.0474	95	75-125	mg/L	03.11.2021 16:44	
tert-Butylbenzene	<0.00100	0.0500	0.0460	92	75-125	mg/L	03.11.2021 16:44	
Carbon Tetrachloride	<0.00500	0.0500	0.0475	95	62-125	mg/L	03.11.2021 16:44	
Chlorobenzene	<0.00100	0.0500	0.0474	95	60-133	mg/L	03.11.2021 16:44	
Chloroethane	<0.0100	0.0500	0.0508	102	60-140	mg/L	03.11.2021 16:44	
Chloroform	<0.00100	0.0500	0.0484	97	70-130	mg/L	03.11.2021 16:44	
Methyl Chloride	<0.0100	0.0500	0.0426	85	60-140	mg/L	03.11.2021 16:44	
2-Chlorotoluene	<0.00100	0.0500	0.0468	94	73-125	mg/L	03.11.2021 16:44	
4-Chlorotoluene	<0.00100	0.0500	0.0461	92	74-125	mg/L	03.11.2021 16:44	
p-Cymene (p-Isopropyltoluene)	<0.00100	0.0500	0.0479	96	75-125	mg/L	03.11.2021 16:44	
Dibromochloromethane	<0.00500	0.0500	0.0506	101	73-125	mg/L	03.11.2021 16:44	
1,2-Dibromo-3-Chloropropane	<0.00100	0.0500	0.0575	115	59-125	mg/L	03.11.2021 16:44	
1,2-Dibromoethane	<0.00500	0.0500	0.0500	100	73-125	mg/L	03.11.2021 16:44	
Methylene Bromide	<0.00100	0.0500	0.0503	101	69-127	mg/L	03.11.2021 16:44	
1,2-Dichlorobenzene	<0.00100	0.0500	0.0503	101	75-125	mg/L	03.11.2021 16:44	
1,3-Dichlorobenzene	<0.00100	0.0500	0.0496	99	75-125	mg/L	03.11.2021 16:44	
1,4-Dichlorobenzene	<0.00100	0.0500	0.0480	96	75-125	mg/L	03.11.2021 16:44	
Dichlorodifluoromethane	<0.00100	0.0500	0.0466	93	60-140	mg/L	03.11.2021 16:44	
1,1-Dichloroethane	<0.00100	0.0500	0.0476	95	72-125	mg/L	03.11.2021 16:44	
1,2-Dichloroethane	<0.00100	0.0500	0.0486	97	68-127	mg/L	03.11.2021 16:44	
1,1-Dichloroethene	<0.00100	0.0500	0.0469	94	59-172	mg/L	03.11.2021 16:44	
cis-1,2-Dichloroethylene	<0.00100	0.0500	0.0489	98	75-125	mg/L	03.11.2021 16:44	
trans-1,2-dichloroethylene	<0.00100	0.0500	0.0465	93	75-125	mg/L	03.11.2021 16:44	
1,2-Dichloropropane	<0.00500	0.0500	0.0487	97	74-125	mg/L	03.11.2021 16:44	
1,3-Dichloropropane	<0.00500	0.0500	0.0508	102	75-125	mg/L	03.11.2021 16:44	
2,2-Dichloropropane	<0.00500	0.0500	0.0491	98	75-125	mg/L	03.11.2021 16:44	
1,1-Dichloropropene	<0.00500	0.0500	0.0472	94	75-125	mg/L	03.11.2021 16:44	
cis-1,3-Dichloropropene	<0.00500	0.0500	0.0500	100	74-125	mg/L	03.11.2021 16:44	
trans-1,3-dichloropropene	<0.00500	0.0500	0.0515	103	66-125	mg/L	03.11.2021 16:44	
Ethylbenzene	0.000490	0.0500	0.0482	95	75-125	mg/L	03.11.2021 16:44	
Hexachlorobutadiene	<0.00500	0.0500	0.0418	84	75-125	mg/L	03.11.2021 16:44	
Isopropylbenzene	0.000200	0.0500	0.0487	97	75-125	mg/L	03.11.2021 16:44	
Methylene Chloride	<0.00500	0.0500	0.0457	91	75-125	mg/L	03.11.2021 16:44	
MTBE	<0.00500	0.0500	0.0523	105	65-135	mg/L	03.11.2021 16:44	
Naphthalene	<0.0100	0.0500	0.0660	132	70-130	mg/L	03.11.2021 16:44	X
n-Propylbenzene	<0.00100	0.0500	0.0462	92	75-125	mg/L	03.11.2021 16:44	
Styrene	<0.00100	0.0500	0.0497	99	75-125	mg/L	03.11.2021 16:44	
1,1,1,2-Tetrachloroethane	<0.00100	0.0500	0.0488	98	72-125	mg/L	03.11.2021 16:44	
1,1,2,2-Tetrachloroethane	<0.00100	0.0500	0.0527	105	74-125	mg/L	03.11.2021 16:44	
Tetrachloroethylene	<0.00100	0.0500	0.0454	91	71-125	mg/L	03.11.2021 16:44	
Toluene	<0.00100	0.0500	0.0464	93	59-139	mg/L	03.11.2021 16:44	
1,2,3-Trichlorobenzene	<0.00500	0.0500	0.0570	114	75-137	mg/L	03.11.2021 16:44	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum
Levey Well Hobbs NM

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3153371

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 03.11.2021

Parent Sample Id: 691272-001

MS Sample Id: 691272-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00500	0.0500	0.0569	114	75-135	mg/L	03.11.2021 16:44	
1,1,1-Trichloroethane	<0.00500	0.0500	0.0480	96	75-125	mg/L	03.11.2021 16:44	
1,1,2-Trichloroethane	<0.00100	0.0500	0.0507	101	75-127	mg/L	03.11.2021 16:44	
Trichloroethylene	<0.00500	0.0500	0.0463	93	62-137	mg/L	03.11.2021 16:44	
Trichlorofluoromethane	<0.00100	0.0500	0.0475	95	60-140	mg/L	03.11.2021 16:44	
1,2,3-Trichloropropane	<0.00100	0.0500	0.0520	104	75-125	mg/L	03.11.2021 16:44	
1,2,4-Trimethylbenzene	0.000780	0.0500	0.0473	93	75-125	mg/L	03.11.2021 16:44	
1,3,5-Trimethylbenzene	0.000370	0.0500	0.0468	93	70-125	mg/L	03.11.2021 16:44	
o-Xylene	<0.00100	0.0500	0.0482	96	75-125	mg/L	03.11.2021 16:44	
m,p-Xylenes	0.000900	0.100	0.0971	96	75-125	mg/L	03.11.2021 16:44	
Vinyl Chloride	<0.00200	0.0500	0.0466	93	60-140	mg/L	03.11.2021 16:44	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		75-131	%	03.11.2021 16:44
1,2-Dichloroethane-D4	101		63-144	%	03.11.2021 16:44
Toluene-D8	98		80-117	%	03.11.2021 16:44
4-Bromofluorobenzene	96		74-124	%	03.11.2021 16:44

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 091213

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3333
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 448-8800 Tampa, FL (813) 281-2222
Hobbs, NM (575) 382-7550

www.xenco.com Page 1 of 1

Project Manager:		Beaux Jennings	Bill to: (if different)	
Company Name:		Ensolum LLC	Company Name:	
Address:		705 W Wadley #210	Address:	
City, State ZIP:		Midland TX	City, State ZIP:	
Phone:	432-230-3344		Email:	bjennings@ensolum.com

Work Order Comments	
Program: UST/PST ☐ PPR ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting Level I ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Deliverables: EDD ☐	ADAPT ☐ Other:

[illegible]

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and sub-contractors. 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 service. 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. 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.

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
<i>Circle Method(s) and Metal(s) to be analyzed</i>			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
		3/10/21			

Inter-Office Shipment

IOS Number : **79299**

Date/Time: 03.10.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 773121615266

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
691273-001	W	Levey Well	03.10.2021 10:10	SW8260C	VOCs by SW-846 8260C	03.11.2021	03.24.2021	JKR	BDCME BRBZ BRCLME	
691273-001	W	Levey Well	03.10.2021 10:10	E200.7	Recoverable Metals per ICP by EPA 200	03.11.2021	09.06.2021	JKR	CA K MG NA SI	
691273-001	W	Levey Well	03.10.2021 10:10	E300	Inorganic Anions by EPA 300/300.1	03.11.2021	03.12.2021 10:10	JKR	BR CL F NO2N NO3N SC	
691273-001	W	Levey Well	03.10.2021 10:10	SM4500-H	pH by SM4500-H	03.11.2021	03.10.2021 10:25	JKR		
691273-001	W	Levey Well	03.10.2021 10:10	SM2540C	TDS by SM2540C	03.11.2021	03.17.2021	JKR	TDS	
691273-001	W	Levey Well	03.10.2021 10:10	SM2320B	Alkalinity by SM2320B	03.11.2021	03.24.2021	JKR	ALK ALKB ALKC	
691273-001	W	Levey Well	03.10.2021 10:10	SM1030E	Cation-Anion Balance Calculation	03.11.2021	04.09.2021	JKR	Cation-Anion Balance	

Inter Office Shipment or Sample Comments:

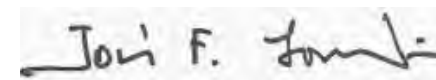
Relinquished By:



Brianna Teel

Date Relinquished: 03.10.2021

Received By:



Jose Londono

Date Received: 03.11.2021

Cooler Temperature: 3.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 79299

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 03.10.2021 03.41 PM

Received By: Jose Londono

Date Received: 03.11.2021 11.38 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 03.11.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 03.10.2021 03.27.00 PM

Work Order #: 691273

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 03.10.2021

Checklist reviewed by:



Chad Bechtold

Date: 03.11.2021

Certificate of Analysis Summary 683055



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 12.30.2020 16:49
Report Date: 01.06.2021 11:02
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 683055-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 12.30.2020 12:20	Lab Id: 683055-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 12.30.2020 13:55				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-38	Extracted: Analyzed: 01.04.2021 18:23 Units/RL: mg/L RL	Extracted: Analyzed: 01.04.2021 18:23 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	1170 K+ 0.370	1090 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-38	Extracted: 01.04.2021 09:44 Analyzed: 01.04.2021 15:04 Units/RL: mg/L RL	Extracted: 01.04.2021 09:44 Analyzed: 01.04.2021 15:29 Units/RL: mg/L RL				
Chloride	347 0.500	153 0.500				
Sulfide by SM4500-S-F SUB: T104704215-20-38	Extracted: Analyzed: 01.04.2021 16:36 Units/RL: mg/L RL	Extracted: Analyzed: 01.04.2021 16:36 Units/RL: mg/L RL				
Sulfide, total	<0.495 5.00	<0.495 5.00				
TPH by SW8015 Mod	Extracted: 12.31.2020 09:00 Analyzed: 12.31.2020 11:02 Units/RL: mg/L RL	Extracted: 12.31.2020 09:00 Analyzed: 12.31.2020 12:00 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.917 2.32	<0.893 2.26				
Diesel Range Organics (DRO)	<0.847 2.32	<0.825 2.26				
Motor Oil Range Hydrocarbons (MRO)	<0.847 2.32	<0.825 2.26				
Total TPH	<0.847 2.32	<0.825 2.26				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683055

Ensolum, Dallas, TX

Project Name: South Hobbs

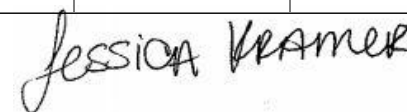
Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 12.30.2020 16:49
Report Date: 01.06.2021 11:02
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683055-001	683055-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	12.30.2020 12:20	12.30.2020 13:55				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.04.2021 08:50	01.04.2021 08:50				
	Analyzed:	01.04.2021 16:07	01.04.2021 16:28				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00194	0.00100	0.0200	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00270	0.0500	<0.00270	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000550 J	0.00100		
Sec-Butylbenzene		0.000230 J	0.00100	0.000680 J	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000540 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 683055



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 12.30.2020 16:49
Report Date: 01.06.2021 11:02
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683055-001	683055-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	12.30.2020 12:20	12.30.2020 13:55				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.04.2021 08:50	01.04.2021 08:50				
	Analyzed:	01.04.2021 16:07	01.04.2021 16:28				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000470 J	0.00100	0.0185	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000240 J	0.00100	0.00603	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00170	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683055



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 12.30.2020 16:49
Report Date: 01.06.2021 11:02
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683055-001	683055-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	12.30.2020 12:20	12.30.2020 13:55				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.04.2021 08:50	01.04.2021 08:50				
	Analyzed:	01.04.2021 16:07	01.04.2021 16:28				
	Units/RL:	mg/L RL	mg/L RL				
		<0.000500 0.00100	0.0242 0.00100				
		<0.00200 0.00500	<0.00200 0.00500				
		<0.00200 0.00500	<0.00200 0.00500				
		<0.000504 0.00500	<0.000504 0.00500				
		<0.000228 0.00100	<0.000228 0.00100				
		<0.000424 0.00500	<0.000424 0.00500				
		<0.000245 0.00100	<0.000245 0.00100				
		<0.000283 0.00100	<0.000283 0.00100				
		0.00154 0.00100	0.0116 0.00100				
		0.000750 J 0.00100	0.00533 0.00100				
		<0.000192 0.00100	0.0146 0.00100				
		0.00148 J 0.0100	0.0592 0.0100				
		<0.000234 0.00200	<0.000234 0.00200				
		0.00148 0.00100	0.0738 0.00100				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.04.2021 12:16	01.04.2021 12:16				
	Units/RL:	Deg C RL	Deg C RL				
		13.1 K	12.1 K				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.04.2021 12:16	01.04.2021 12:16				
	Units/RL:	SU RL	SU RL				
		6.37 K	6.15 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 683055

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

01.06.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.06.2021

Project Manager: **Beaux Jennings****Ensolum**

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **683055****South Hobbs**

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683055. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 683055 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 683055

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	12.30.2020 12:20		683055-001
MW-2	W	12.30.2020 13:55		683055-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 683055Report Date: 01.06.2021
Date Received: 12.30.2020

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3146741 VOCs by SW-846 8260C

Lab Sample ID 683055-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Dichlorodifluoromethane recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 683055-001, -002.

The Laboratory Control Sample for Dichlorodifluoromethane is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683055-001

Matrix: Ground Water
Date Collected: 12.30.2020 12:20

Date Received: 12.30.2020 16:49

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.04.2021 09:44

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146652

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	347	0.500	0.0738	mg/L	01.04.2021 15:04		1

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146606

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.37			SU	01.04.2021 12:16	K	1
Temperature	TEMP	13.1			Deg C	01.04.2021 12:16	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D

Tech: ALA

Analyst: ALA

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1170	0.370	0.100	mg/L	01.04.2021 18:23	K+	1

Analytical Method: Sulfide by SM4500-S-F

Tech: YAV

Analyst: YAV

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146671

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	01.04.2021 16:36	U	1



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683055-001

Matrix: Ground Water
Date Collected: 12.30.2020 12:20

Date Received: 12.30.2020 16:49

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: DVM

Date Prep: 12.31.2020 09:00

% Moisture:

Seq Number: 3146752

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.917	2.32	0.917	mg/L	12.31.2020 11:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.847	2.32	0.847	mg/L	12.31.2020 11:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.847	2.32	0.847	mg/L	12.31.2020 11:02	U	1
Total TPH	PHC635	<0.847	2.32	0.847	mg/L	12.31.2020 11:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	12.31.2020 11:02	
o-Terphenyl	84-15-1	88	%	70-135	12.31.2020 11:02	



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683055-001

Matrix: Ground Water
Date Collected: 12.30.2020 12:20

Date Received: 12.30.2020 16:49

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 01.04.2021 08:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146741

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00194	0.00100	0.000214	mg/L	01.04.2021 16:07		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.04.2021 16:07	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.04.2021 16:07	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.04.2021 16:07	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.04.2021 16:07	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.04.2021 16:07	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.04.2021 16:07	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	01.04.2021 16:07	U	1
Sec-Butylbenzene	135-98-8	0.000230	0.00100	0.000199	mg/L	01.04.2021 16:07	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.04.2021 16:07	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.04.2021 16:07	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.04.2021 16:07	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.04.2021 16:07	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.04.2021 16:07	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.04.2021 16:07	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.04.2021 16:07	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.04.2021 16:07	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	01.04.2021 16:07	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.04.2021 16:07	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.04.2021 16:07	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.04.2021 16:07	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.04.2021 16:07	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.04.2021 16:07	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.04.2021 16:07	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.04.2021 16:07	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.04.2021 16:07	UX	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.04.2021 16:07	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.04.2021 16:07	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.04.2021 16:07	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.04.2021 16:07	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.04.2021 16:07	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.04.2021 16:07	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.04.2021 16:07	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.04.2021 16:07	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.04.2021 16:07	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.04.2021 16:07	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.04.2021 16:07	U	1
Ethylbenzene	100-41-4	0.000470	0.00100	0.000146	mg/L	01.04.2021 16:07	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.04.2021 16:07	U	1
Isopropylbenzene	98-82-8	0.000240	0.00100	0.000161	mg/L	01.04.2021 16:07	J	1



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683055-001

Matrix: Ground Water
Date Collected: 12.30.2020 12:20

Date Received: 12.30.2020 16:49

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 01.04.2021 08:50

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.04.2021 16:07	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.04.2021 16:07	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.04.2021 16:07	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	01.04.2021 16:07	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.04.2021 16:07	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.04.2021 16:07	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.04.2021 16:07	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.04.2021 16:07	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	01.04.2021 16:07	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.04.2021 16:07	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.04.2021 16:07	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.04.2021 16:07	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.04.2021 16:07	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.04.2021 16:07	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.04.2021 16:07	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.04.2021 16:07	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00154	0.00100	0.000252	mg/L	01.04.2021 16:07		1
1,3,5-Trimethylbenzene	108-67-8	0.000750	0.00100	0.000279	mg/L	01.04.2021 16:07	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	01.04.2021 16:07	U	1
m,p-Xylenes	179601-23-1	0.00148	0.0100	0.000330	mg/L	01.04.2021 16:07	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.04.2021 16:07	U	1
Total Xylenes	1330-20-7	0.00148	0.00100	0.000192	mg/L	01.04.2021 16:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	75-131	01.04.2021 16:07	
1,2-Dichloroethane-D4	17060-07-0	103	%	63-144	01.04.2021 16:07	
Toluene-D8	2037-26-5	101	%	80-117	01.04.2021 16:07	
4-Bromofluorobenzene	460-00-4	101	%	74-124	01.04.2021 16:07	



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683055-002

Matrix: Ground Water
Date Collected: 12.30.2020 13:55

Date Received: 12.30.2020 16:49

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.04.2021 09:44

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146652

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	153	0.500	0.0738	mg/L	01.04.2021 15:29		1

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146606

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.15			SU	01.04.2021 12:16	K	1
Temperature	TEMP	12.1			Deg C	01.04.2021 12:16	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D

Tech: ALA

Analyst: ALA

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146676

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1090	0.370	0.100	mg/L	01.04.2021 18:23	K+	1

Analytical Method: Sulfide by SM4500-S-F

Tech: YAV

Analyst: YAV

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146671

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	01.04.2021 16:36	U	1



Certificate of Analytical Results 683055

Ensolum, Dallas, TX
South Hobbs

Sample Id: MW-2
Lab Sample Id: 683055-002

Matrix: Ground Water
Date Collected: 12.30.2020 13:55

Date Received:12.30.2020 16:49

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: DVM
Seq Number: 3146752

Prep Method: SW8015P
% Moisture:

Date Prep: 12.31.2020 09:00

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.893	2.26	0.893	mg/L	12.31.2020 12:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.825	2.26	0.825	mg/L	12.31.2020 12:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.825	2.26	0.825	mg/L	12.31.2020 12:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.31.2020 12:00	
o-Terphenyl	84-15-1	116	%	70-135	12.31.2020 12:00	



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683055-002

Matrix: Ground Water
Date Collected: 12.30.2020 13:55

Date Received: 12.30.2020 16:49

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 01.04.2021 08:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3146741

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0200	0.00100	0.000214	mg/L	01.04.2021 16:28		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.04.2021 16:28	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.04.2021 16:28	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.04.2021 16:28	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.04.2021 16:28	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.04.2021 16:28	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.04.2021 16:28	U	1
n-Butylbenzene	104-51-8	0.000550	0.00100	0.000286	mg/L	01.04.2021 16:28	J	1
Sec-Butylbenzene	135-98-8	0.000680	0.00100	0.000199	mg/L	01.04.2021 16:28	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.04.2021 16:28	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.04.2021 16:28	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.04.2021 16:28	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.04.2021 16:28	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.04.2021 16:28	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.04.2021 16:28	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.04.2021 16:28	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.04.2021 16:28	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000540	0.00100	0.000233	mg/L	01.04.2021 16:28	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.04.2021 16:28	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.04.2021 16:28	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.04.2021 16:28	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.04.2021 16:28	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.04.2021 16:28	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.04.2021 16:28	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.04.2021 16:28	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.04.2021 16:28	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.04.2021 16:28	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.04.2021 16:28	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.04.2021 16:28	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.04.2021 16:28	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.04.2021 16:28	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.04.2021 16:28	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.04.2021 16:28	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.04.2021 16:28	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.04.2021 16:28	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.04.2021 16:28	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.04.2021 16:28	U	1
Ethylbenzene	100-41-4	0.0185	0.00100	0.000146	mg/L	01.04.2021 16:28		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.04.2021 16:28	U	1
Isopropylbenzene	98-82-8	0.00603	0.00100	0.000161	mg/L	01.04.2021 16:28		1



Certificate of Analytical Results 683055

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683055-002

Matrix: Ground Water
Date Collected: 12.30.2020 13:55

Date Received: 12.30.2020 16:49

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 01.04.2021 08:50

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.04.2021 16:28	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.04.2021 16:28	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.04.2021 16:28	U	1
n-Propylbenzene	103-65-1	0.00170	0.00100	0.000179	mg/L	01.04.2021 16:28		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.04.2021 16:28	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.04.2021 16:28	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.04.2021 16:28	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.04.2021 16:28	U	1
Toluene	108-88-3	0.0242	0.00100	0.000500	mg/L	01.04.2021 16:28		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.04.2021 16:28	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.04.2021 16:28	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.04.2021 16:28	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.04.2021 16:28	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.04.2021 16:28	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.04.2021 16:28	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.04.2021 16:28	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0116	0.00100	0.000252	mg/L	01.04.2021 16:28		1
1,3,5-Trimethylbenzene	108-67-8	0.00533	0.00100	0.000279	mg/L	01.04.2021 16:28		1
o-Xylene	95-47-6	0.0146	0.00100	0.000192	mg/L	01.04.2021 16:28		1
m,p-Xylenes	179601-23-1	0.0592	0.0100	0.000330	mg/L	01.04.2021 16:28		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.04.2021 16:28	U	1
Total Xylenes	1330-20-7	0.0738	0.00100	0.000192	mg/L	01.04.2021 16:28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	97	%	75-131	01.04.2021 16:28	
1,2-Dichloroethane-D4	17060-07-0	99	%	63-144	01.04.2021 16:28	
Toluene-D8	2037-26-5	99	%	80-117	01.04.2021 16:28	
4-Bromofluorobenzene	460-00-4	101	%	74-124	01.04.2021 16:28	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3146652

Matrix: Water

Prep Method: E300P

Date Prep: 01.04.2021

MB Sample Id: 7718357-1-BLK

LCS Sample Id: 7718357-1-BKS

LCSD Sample Id: 7718357-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	9.32	93	9.24	92	90-110	1	20	mg/L	01.04.2021 09:54	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3146652

Matrix: Water

Prep Method: E300P

Date Prep: 01.04.2021

Parent Sample Id: 683056-001

MS Sample Id: 683056-001 S

MSD Sample Id: 683056-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	493	10.0	494	10	494	10	90-110	0	20	mg/L	01.04.2021 14:28	X

Analytical Method: pH by SM4500-H

Seq Number: 3146606

Matrix: Ground Water

Parent Sample Id: 683055-001

MD Sample Id: 683055-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.37	6.40	0	20	SU	01.04.2021 12:16	
Temperature	13.1	12.0	9	20	Deg C	01.04.2021 12:16	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3146671

Matrix: Water

MB Sample Id: 3146671-1-BLK

LCS Sample Id: 3146671-1-BKS

LCSD Sample Id: 3146671-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	44.2	88	44.4	89	80-120	0	20	mg/L	01.04.2021 16:36	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3146671

Matrix: Ground Water

Parent Sample Id: 683055-001

MS Sample Id: 683055-001 S

MSD Sample Id: 683055-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	46.4	93	46.0	92	80-120	1	20	mg/L	01.04.2021 16:36	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3146752

MB Sample Id: 7718331-1-BLK

Matrix: Water

LCS Sample Id: 7718331-1-BKS

Prep Method: SW8015P

Date Prep: 12.31.2020

LCSD Sample Id: 7718331-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.900	91.2	87.6	96	84.8	93	70-135	3	20	mg/L	12.31.2020 10:24	
Diesel Range Organics (DRO)	<0.832	91.2	84.2	92	90.7	100	70-135	7	20	mg/L	12.31.2020 10:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		104		132		70-135	%	12.31.2020 10:24
o-Terphenyl	98		101		110		70-135	%	12.31.2020 10:24

Analytical Method: TPH by SW8015 Mod

Seq Number: 3146752

Matrix: Water

MB Sample Id: 7718331-1-BLK

Prep Method: SW8015P

Date Prep: 12.31.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.832	mg/L	12.31.2020 10:01	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3146752

Matrix: Ground Water

Parent Sample Id: 683055-001

MS Sample Id: 683055-001 S

Prep Method: SW8015P

Date Prep: 12.31.2020

MSD Sample Id: 683055-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.883	89.4	73.2	82	72.1	81	70-135	2	20	mg/L	12.31.2020 11:22	
Diesel Range Organics (DRO)	<0.816	89.4	68.1	76	68.2	76	70-135	0	20	mg/L	12.31.2020 11:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		81		70-135	%	12.31.2020 11:22
o-Terphenyl	72		73		70-135	%	12.31.2020 11:22

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3146741

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.04.2021

MB Sample Id: 7718441-1-BLK

LCS Sample Id: 7718441-1-BKS

LCSD Sample Id: 7718441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0479	96	0.0471	94	66-142	2	25	mg/L	01.04.2021 10:12	
Bromobenzene	<0.000300	0.0500	0.0504	101	0.0499	100	75-125	1	25	mg/L	01.04.2021 10:12	
Bromochloromethane	<0.000209	0.0500	0.0482	96	0.0493	99	60-140	2	25	mg/L	01.04.2021 10:12	
Bromodichloromethane	<0.000231	0.0500	0.0501	100	0.0492	98	75-125	2	25	mg/L	01.04.2021 10:12	
Bromoform	<0.000630	0.0500	0.0508	102	0.0514	103	75-125	1	25	mg/L	01.04.2021 10:12	
Methyl bromide	<0.00105	0.0500	0.0474	95	0.0490	98	60-140	3	25	mg/L	01.04.2021 10:12	
2-Butanone	<0.00270	0.250	0.229	92	0.235	94	60-140	3	25	mg/L	01.04.2021 10:12	
n-Butylbenzene	<0.000286	0.0500	0.0544	109	0.0531	106	75-125	2	25	mg/L	01.04.2021 10:12	
Sec-Butylbenzene	<0.000199	0.0500	0.0534	107	0.0520	104	75-125	3	25	mg/L	01.04.2021 10:12	
tert-Butylbenzene	<0.000195	0.0500	0.0519	104	0.0510	102	75-125	2	25	mg/L	01.04.2021 10:12	
Carbon Tetrachloride	<0.000423	0.0500	0.0510	102	0.0491	98	62-125	4	25	mg/L	01.04.2021 10:12	
Chlorobenzene	<0.000159	0.0500	0.0490	98	0.0482	96	60-133	2	25	mg/L	01.04.2021 10:12	
Chloroethane	<0.000433	0.0500	0.0436	87	0.0449	90	60-140	3	25	mg/L	01.04.2021 10:12	
Chloroform	<0.000259	0.0500	0.0479	96	0.0478	96	70-130	0	25	mg/L	01.04.2021 10:12	
Methyl Chloride	<0.000318	0.0500	0.0398	80	0.0403	81	60-140	1	25	mg/L	01.04.2021 10:12	
2-Chlorotoluene	<0.000214	0.0500	0.0508	102	0.0504	101	73-125	1	25	mg/L	01.04.2021 10:12	
4-Chlorotoluene	<0.000183	0.0500	0.0519	104	0.0510	102	74-125	2	25	mg/L	01.04.2021 10:12	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0539	108	0.0521	104	75-125	3	25	mg/L	01.04.2021 10:12	
Dibromochloromethane	<0.000739	0.0500	0.0514	103	0.0506	101	73-125	2	25	mg/L	01.04.2021 10:12	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0506	101	0.0513	103	59-125	1	25	mg/L	01.04.2021 10:12	
1,2-Dibromoethane	<0.000337	0.0500	0.0494	99	0.0501	100	73-125	1	25	mg/L	01.04.2021 10:12	
Methylene Bromide	<0.000130	0.0500	0.0485	97	0.0476	95	69-127	2	25	mg/L	01.04.2021 10:12	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0508	102	0.0507	101	75-125	0	25	mg/L	01.04.2021 10:12	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0514	103	0.0508	102	75-125	1	25	mg/L	01.04.2021 10:12	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0518	104	0.0506	101	75-125	2	25	mg/L	01.04.2021 10:12	
Dichlorodifluoromethane	<0.000316	0.0500	0.0313	63	0.0327	65	60-140	4	25	mg/L	01.04.2021 10:12	
1,1-Dichloroethane	<0.000244	0.0500	0.0473	95	0.0467	93	72-125	1	25	mg/L	01.04.2021 10:12	
1,2-Dichloroethane	<0.000285	0.0500	0.0483	97	0.0475	95	68-127	2	25	mg/L	01.04.2021 10:12	
1,1-Dichloroethene	<0.000216	0.0500	0.0472	94	0.0456	91	59-172	3	25	mg/L	01.04.2021 10:12	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0477	95	0.0479	96	75-125	0	25	mg/L	01.04.2021 10:12	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0473	95	0.0471	94	75-125	0	25	mg/L	01.04.2021 10:12	
1,2-Dichloropropane	<0.000396	0.0500	0.0483	97	0.0484	97	74-125	0	25	mg/L	01.04.2021 10:12	
1,3-Dichloropropane	<0.000439	0.0500	0.0480	96	0.0486	97	75-125	1	25	mg/L	01.04.2021 10:12	
2,2-Dichloropropane	<0.000360	0.0500	0.0502	100	0.0489	98	75-125	3	25	mg/L	01.04.2021 10:12	
1,1-Dichloropropene	<0.000481	0.0500	0.0488	98	0.0476	95	75-125	2	25	mg/L	01.04.2021 10:12	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0507	101	0.0500	100	74-125	1	25	mg/L	01.04.2021 10:12	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0511	102	0.0507	101	66-125	1	25	mg/L	01.04.2021 10:12	
Ethylbenzene	<0.000146	0.0500	0.0502	100	0.0490	98	75-125	2	25	mg/L	01.04.2021 10:12	
Hexachlorobutadiene	<0.00200	0.0500	0.0527	105	0.0514	103	75-125	2	25	mg/L	01.04.2021 10:12	
Isopropylbenzene	<0.000161	0.0500	0.0510	102	0.0499	100	75-125	2	25	mg/L	01.04.2021 10:12	
Methylene Chloride	<0.00191	0.0500	0.0459	92	0.0470	94	75-125	2	25	mg/L	01.04.2021 10:12	
MTBE	<0.000571	0.0500	0.0466	93	0.0472	94	65-135	1	25	mg/L	01.04.2021 10:12	
Naphthalene	<0.00200	0.0500	0.0493	99	0.0496	99	70-130	1	25	mg/L	01.04.2021 10:12	
n-Propylbenzene	<0.000179	0.0500	0.0525	105	0.0514	103	75-125	2	25	mg/L	01.04.2021 10:12	
Styrene	<0.000162	0.0500	0.0506	101	0.0501	100	75-125	1	25	mg/L	01.04.2021 10:12	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0510	102	0.0507	101	72-125	1	25	mg/L	01.04.2021 10:12	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0494	99	0.0498	100	74-125	1	25	mg/L	01.04.2021 10:12	
Tetrachloroethylene	<0.000500	0.0500	0.0499	100	0.0488	98	71-125	2	25	mg/L	01.04.2021 10:12	
Toluene	<0.000500	0.0500	0.0493	99	0.0484	97	59-139	2	25	mg/L	01.04.2021 10:12	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0487	97	0.0496	99	75-137	2	25	mg/L	01.04.2021 10:12	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3146741

MB Sample Id: 7718441-1-BLK

Matrix: Water

LCS Sample Id: 7718441-1-BKS

Prep Method: SW5030B

Date Prep: 01.04.2021

LCSD Sample Id: 7718441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0511	102	0.0511	102	75-135	0	25	mg/L	01.04.2021 10:12	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0491	98	0.0479	96	75-125	2	25	mg/L	01.04.2021 10:12	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0484	97	0.0481	96	75-127	1	25	mg/L	01.04.2021 10:12	
Trichloroethylene	<0.000424	0.0500	0.0483	97	0.0470	94	62-137	3	25	mg/L	01.04.2021 10:12	
Trichlorofluoromethane	<0.000245	0.0500	0.0491	98	0.0505	101	60-140	3	25	mg/L	01.04.2021 10:12	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0491	98	0.0497	99	75-125	1	25	mg/L	01.04.2021 10:12	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0528	106	0.0520	104	75-125	2	25	mg/L	01.04.2021 10:12	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0523	105	0.0512	102	70-125	2	25	mg/L	01.04.2021 10:12	
o-Xylene	<0.000192	0.0500	0.0498	100	0.0497	99	75-125	0	25	mg/L	01.04.2021 10:12	
m,p-Xylenes	<0.000330	0.100	0.102	102	0.0992	99	75-125	3	25	mg/L	01.04.2021 10:12	
Vinyl Chloride	<0.000234	0.0500	0.0427	85	0.0440	88	60-140	3	25	mg/L	01.04.2021 10:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		99		99		75-131	%	01.04.2021 10:12
1,2-Dichloroethane-D4	102		96		98		63-144	%	01.04.2021 10:12
Toluene-D8	99		100		100		80-117	%	01.04.2021 10:12
4-Bromofluorobenzene	99		101		102		74-124	%	01.04.2021 10:12

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3146741

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 683055-001

MS Sample Id: 683055-001 S

Date Prep: 01.04.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.00194	0.0500	0.0459	88	66-142	mg/L	01.04.2021 13:57	
Bromobenzene	<0.000300	0.0500	0.0418	84	75-125	mg/L	01.04.2021 13:57	
Bromochloromethane	<0.000209	0.0500	0.0445	89	60-140	mg/L	01.04.2021 13:57	
Bromodichloromethane	<0.000231	0.0500	0.0453	91	75-125	mg/L	01.04.2021 13:57	
Bromoform	<0.000630	0.0500	0.0482	96	75-125	mg/L	01.04.2021 13:57	
Methyl bromide	<0.00105	0.0500	0.0395	79	60-140	mg/L	01.04.2021 13:57	
2-Butanone	<0.00270	0.250	0.213	85	60-140	mg/L	01.04.2021 13:57	
n-Butylbenzene	<0.000286	0.0500	0.0468	94	75-125	mg/L	01.04.2021 13:57	
Sec-Butylbenzene	0.000230	0.0500	0.0466	93	75-125	mg/L	01.04.2021 13:57	
tert-Butylbenzene	<0.000195	0.0500	0.0449	90	75-125	mg/L	01.04.2021 13:57	
Carbon Tetrachloride	<0.000423	0.0500	0.0497	99	62-125	mg/L	01.04.2021 13:57	
Chlorobenzene	<0.000159	0.0500	0.0433	87	60-133	mg/L	01.04.2021 13:57	
Chloroethane	<0.000433	0.0500	0.0401	80	60-140	mg/L	01.04.2021 13:57	
Chloroform	<0.000259	0.0500	0.0440	88	70-130	mg/L	01.04.2021 13:57	
Methyl Chloride	<0.000318	0.0500	0.0343	69	60-140	mg/L	01.04.2021 13:57	
2-Chlorotoluene	<0.000214	0.0500	0.0433	87	73-125	mg/L	01.04.2021 13:57	
4-Chlorotoluene	<0.000183	0.0500	0.0437	87	74-125	mg/L	01.04.2021 13:57	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0458	92	75-125	mg/L	01.04.2021 13:57	
Dibromochloromethane	<0.000739	0.0500	0.0459	92	73-125	mg/L	01.04.2021 13:57	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0472	94	59-125	mg/L	01.04.2021 13:57	
1,2-Dibromoethane	<0.000337	0.0500	0.0459	92	73-125	mg/L	01.04.2021 13:57	
Methylene Bromide	<0.000130	0.0500	0.0448	90	69-127	mg/L	01.04.2021 13:57	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0433	87	75-125	mg/L	01.04.2021 13:57	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0430	86	75-125	mg/L	01.04.2021 13:57	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0426	85	75-125	mg/L	01.04.2021 13:57	
Dichlorodifluoromethane	<0.000316	0.0500	0.0278	56	60-140	mg/L	01.04.2021 13:57	X
1,1-Dichloroethane	<0.000244	0.0500	0.0436	87	72-125	mg/L	01.04.2021 13:57	
1,2-Dichloroethane	<0.000285	0.0500	0.0447	89	68-127	mg/L	01.04.2021 13:57	
1,1-Dichloroethene	<0.000216	0.0500	0.0470	94	59-172	mg/L	01.04.2021 13:57	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0435	87	75-125	mg/L	01.04.2021 13:57	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0447	89	75-125	mg/L	01.04.2021 13:57	
1,2-Dichloropropane	<0.000396	0.0500	0.0445	89	74-125	mg/L	01.04.2021 13:57	
1,3-Dichloropropane	<0.000439	0.0500	0.0443	89	75-125	mg/L	01.04.2021 13:57	
2,2-Dichloropropane	<0.000360	0.0500	0.0485	97	75-125	mg/L	01.04.2021 13:57	
1,1-Dichloropropene	<0.000481	0.0500	0.0469	94	75-125	mg/L	01.04.2021 13:57	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0461	92	74-125	mg/L	01.04.2021 13:57	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0457	91	66-125	mg/L	01.04.2021 13:57	
Ethylbenzene	0.000470	0.0500	0.0457	90	75-125	mg/L	01.04.2021 13:57	
Hexachlorobutadiene	<0.00200	0.0500	0.0454	91	75-125	mg/L	01.04.2021 13:57	
Isopropylbenzene	0.000240	0.0500	0.0467	93	75-125	mg/L	01.04.2021 13:57	
Methylene Chloride	<0.00191	0.0500	0.0422	84	75-125	mg/L	01.04.2021 13:57	
MTBE	<0.000571	0.0500	0.0436	87	65-135	mg/L	01.04.2021 13:57	
Naphthalene	<0.00200	0.0500	0.0431	86	70-130	mg/L	01.04.2021 13:57	
n-Propylbenzene	<0.000179	0.0500	0.0456	91	75-125	mg/L	01.04.2021 13:57	
Styrene	<0.000162	0.0500	0.0445	89	75-125	mg/L	01.04.2021 13:57	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0447	89	72-125	mg/L	01.04.2021 13:57	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0443	89	74-125	mg/L	01.04.2021 13:57	
Tetrachloroethylene	<0.000500	0.0500	0.0469	94	71-125	mg/L	01.04.2021 13:57	
Toluene	<0.000500	0.0500	0.0439	88	59-139	mg/L	01.04.2021 13:57	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0418	84	75-137	mg/L	01.04.2021 13:57	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3146741

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 683055-001

MS Sample Id: 683055-001 S

Date Prep: 01.04.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0436	87	75-135	mg/L	01.04.2021 13:57	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0467	93	75-125	mg/L	01.04.2021 13:57	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0444	89	75-127	mg/L	01.04.2021 13:57	
Trichloroethylene	<0.000424	0.0500	0.0451	90	62-137	mg/L	01.04.2021 13:57	
Trichlorofluoromethane	<0.000245	0.0500	0.0472	94	60-140	mg/L	01.04.2021 13:57	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0450	90	75-125	mg/L	01.04.2021 13:57	
1,2,4-Trimethylbenzene	0.00154	0.0500	0.0457	88	75-125	mg/L	01.04.2021 13:57	
1,3,5-Trimethylbenzene	0.000750	0.0500	0.0449	88	70-125	mg/L	01.04.2021 13:57	
o-Xylene	<0.000192	0.0500	0.0449	90	75-125	mg/L	01.04.2021 13:57	
m,p-Xylenes	0.00148	0.100	0.0922	91	75-125	mg/L	01.04.2021 13:57	
Vinyl Chloride	<0.000234	0.0500	0.0394	79	60-140	mg/L	01.04.2021 13:57	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		75-131	%	01.04.2021 13:57
1,2-Dichloroethane-D4	102		63-144	%	01.04.2021 13:57
Toluene-D8	98		80-117	%	01.04.2021 13:57
4-Bromofluorobenzene	97		74-124	%	01.04.2021 13:57

 MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

$$[D] = 100 * (C - A) / B$$

$$RPD = 200 * |(C - E) / (C + E)|$$

$$[D] = 100 * (C) / [B]$$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

 LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

 MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 083065

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)

www.xenco.com Page 1 of 1

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@ensolum.com

Program: ☒ UST/ ☒ PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund	
State of Project:	
Reporting Level: ☐ Level II ☐ Level III ☐ PT/UST ☐ RRP ☐ Level IV	
Deliverables: ☐ EDD ☐ ADAPT ☐ Other:	

Project Name:	South Hobbs	Turn Around		ANALYSIS REQUEST	Work Order Notes
Project Number:	03B1417002	Routine ☐			
P.O. Number:	03B1417002	Rush: 24 Hr			
Sampler's Name:	Shane Diller	Due Date:			
SAMPLE RECEIPT					
Temperature (°C):	43.4.8	Temp Blank:	Yes No	Wet Ice:	Yes No
Received Intact:	Yes No	Thermometer ID	128		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	.5		
Sample Custody Seals:	Yes No N/A	Total Containers:			
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	
MW-1	GW	12-30-20	1220		
MW-2	GW	12-30-20	1355		
Number of Containers					
Dissolved Carbon Dioxide 4500 CO2 c					
Dissovled 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					
TAT starts the day received by the lab, if received by 4:30pm					
Sample Comments					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
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)
1. <i>[Signature]</i>	2. <i>[Signature]</i>	12-30-20 1449	
3. <i>[Signature]</i>			
5.			

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.

CUSTODY SEAL

ENVIRONMENTAL SAMPLING SUPPLY
www.essvia.com 800-233-8425

Date: 12-30-26
Signature: 

Inter-Office Shipment

IOS Number : **75751**

Date/Time: 12.31.2020

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772512721172

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
683055-001	W	MW-1	12.30.2020 12:20	SW8260C	VOCs by SW-846 8260C	12.31.2020	01.13.2021	JKR	BDCME BRBZ BRCLME	
683055-001	W	MW-1	12.30.2020 12:20	SM4500-H	pH by SM4500-H	12.31.2020	12.30.2020 12:35	JKR		
683055-001	W	MW-1	12.30.2020 12:20	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	12.31.2020	12.31.2020 12:20	JKR		
683055-001	W	MW-1	12.30.2020 12:20	SM4500SF00	Sulfide by SM4500-S-F	12.31.2020	01.06.2021 12:20	JKR	S	
683055-001	W	MW-1	12.30.2020 12:20	E300	Inorganic Anions by EPA 300	12.31.2020	01.27.2021	JKR	CL	
683055-002	W	MW-2	12.30.2020 13:55	SM4500-H	pH by SM4500-H	12.31.2020	12.30.2020 14:10	JKR		
683055-002	W	MW-2	12.30.2020 13:55	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	12.31.2020	12.31.2020 13:55	JKR		
683055-002	W	MW-2	12.30.2020 13:55	E300	Inorganic Anions by EPA 300	12.31.2020	01.27.2021	JKR	CL	
683055-002	W	MW-2	12.30.2020 13:55	SM4500SF00	Sulfide by SM4500-S-F	12.31.2020	01.06.2021 13:55	JKR	S	
683055-002	W	MW-2	12.30.2020 13:55	SW8260C	VOCs by SW-846 8260C	12.31.2020	01.13.2021	JKR	BDCME BRBZ BRCLME	

Inter Office Shipment or Sample Comments:

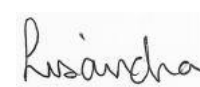
Relinquished By:



Brianna Teel

Date Relinquished: 12.31.2020

Received By:



Lisandra Torres

Date Received: 01.04.2021

Cooler Temperature: 3.2



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 75751

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 12.31.2020 08.28 AM

Received By: Lisandra Torres

Date Received: 01.04.2021 10.35 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	No

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Lisandra Torres

Date: 01.04.2021

Certificate of Analysis Summary 683638



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 683638-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 01.06.2021 11:30	Lab Id: 683638-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 01.06.2021 12:50				
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.07.2021 11:57 Analyzed: 01.07.2021 13:07 Units/RL: mg/L RL	Extracted: 01.07.2021 11:57 Analyzed: 01.07.2021 13:21 Units/RL: mg/L RL				
Alkalinity, Total (as CaCO3)	1040 4.00	1360 4.00				
Alkalinity, Bicarbonate (as CaCO3)	1040 4.00	1360 4.00				
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-38	Extracted: Analyzed: 01.07.2021 13:00 Units/RL: mg/L RL	Extracted: Analyzed: 01.07.2021 13:00 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	585 K+ 0.370	1240 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-38	Extracted: 01.07.2021 11:03 Analyzed: 01.07.2021 12:26 Units/RL: mg/L RL	Extracted: 01.07.2021 11:03 Analyzed: 01.07.2021 12:51 Units/RL: mg/L RL				
Chloride	325 0.500	124 0.500				
Sulfide by SM4500-S-F SUB: T104704215-20-38	Extracted: Analyzed: 01.07.2021 14:10 Units/RL: mg/L RL	Extracted: Analyzed: 01.07.2021 14:10 Units/RL: mg/L RL				
Sulfide, total	<0.495 5.00	<0.495 5.00				
TPH by SW8015 Mod	Extracted: 01.06.2021 16:00 Analyzed: 01.06.2021 17:53 Units/RL: mg/L RL	Extracted: 01.06.2021 16:00 Analyzed: 01.06.2021 18:12 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.897 2.27	1.99 J 2.26				
Diesel Range Organics (DRO)	<0.829 2.27	<0.824 2.26				
Motor Oil Range Hydrocarbons (MRO)	<0.829 2.27	<0.824 2.26				
Total TPH	<0.829 2.27	1.99 J 2.26				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683638



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683638-001	683638-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.06.2021 11:30	01.06.2021 12:50				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.07.2021 12:00	01.07.2021 12:00				
	Analyzed:	01.07.2021 13:16	01.07.2021 13:36				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00209	0.00100	0.0200	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00270	0.0500	<0.00270	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000390 J	0.00100		
Sec-Butylbenzene		0.000310 J	0.00100	0.00117	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		0.000260 J	0.00100	0.00105	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683638-001	683638-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.06.2021 11:30	01.06.2021 12:50				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.07.2021 12:00	01.07.2021 12:00				
	Analyzed:	01.07.2021 13:16	01.07.2021 13:36				
	Units/RL:	mg/L RL	mg/L RL				
1,4-Dichlorobenzene		<0.000199 0.00100	<0.000199 0.00100				
Dichlorodifluoromethane		<0.000316 0.00100	<0.000316 0.00100				
1,1-Dichloroethane		<0.000244 0.00100	<0.000244 0.00100				
1,2-Dichloroethane		<0.000285 0.00100	0.000500 J 0.00100				
1,1-Dichloroethene		<0.000216 0.00100	<0.000216 0.00100				
cis-1,2-Dichloroethylene		<0.000174 0.00100	<0.000174 0.00100				
trans-1,2-dichloroethylene		<0.000256 0.00100	<0.000256 0.00100				
1,2-Dichloropropane		<0.000396 0.00500	<0.000396 0.00500				
1,3-Dichloropropane		<0.000439 0.00500	<0.000439 0.00500				
2,2-Dichloropropane		<0.000360 0.00500	<0.000360 0.00500				
1,1-Dichloropropene		<0.000481 0.00500	<0.000481 0.00500				
cis-1,3-Dichloropropene		<0.000690 0.00500	<0.000690 0.00500				
trans-1,3-dichloropropene		<0.000752 0.00500	<0.000752 0.00500				
Ethylbenzene		0.000330 J 0.00100	0.0231 0.00100				
Hexachlorobutadiene		<0.00200 0.00500	<0.00200 0.00500				
Isopropylbenzene		0.000190 J 0.00100	0.00815 0.00100				
Methylene Chloride		<0.00191 0.00500	<0.00191 0.00500				
MTBE		<0.000571 0.00500	<0.000571 0.00500				
Naphthalene		<0.00200 0.0100	<0.00200 0.0100				
n-Propylbenzene		<0.000179 0.00100	0.00267 0.00100				
Styrene		<0.000162 0.00100	<0.000162 0.00100				
1,1,1,2-Tetrachloroethane		<0.000327 0.00100	<0.000327 0.00100				
1,1,2,2-Tetrachloroethane		<0.000284 0.00100	<0.000284 0.00100				
Tetrachloroethylene		<0.000500 0.00100	<0.000500 0.00100				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 683638



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.06.2021 15:39
Report Date: 01.07.2021 18:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683638-001	683638-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.06.2021 11:30	01.06.2021 12:50				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.07.2021 12:00	01.07.2021 12:00				
	Analyzed:	01.07.2021 13:16	01.07.2021 13:36				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0169 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	0.000800 J 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.00219 0.00100	0.0339 0.00100				
	1,3,5-Trimethylbenzene	0.00103 0.00100	0.0103 0.00100				
	o-Xylene	<0.000192 0.00100	0.0169 0.00100				
	m,p-Xylenes	0.00122 J 0.0100	0.118 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00122 0.00100	0.135 0.00100				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.07.2021 14:38	01.07.2021 14:38				
	Units/RL:	Deg C RL	Deg C RL				
	Temperature	12.7 K	13.1 K				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.07.2021 14:38	01.07.2021 14:38				
	Units/RL:	SU RL	SU RL				
	pH	6.51 K	6.24 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 683638

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

01.07.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.07.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **683638**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683638. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 683638 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 683638

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	01.06.2021 11:30		683638-001
MW-2	W	01.06.2021 12:50		683638-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**

Project ID: 03B1417002
Work Order Number(s): 683638

Report Date: 01.07.2021
Date Received: 01.06.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683638-001

Matrix: Ground Water
Date Collected: 01.06.2021 11:30

Date Received: 01.06.2021 15:39

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.07.2021 11:57

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147034

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1040	4.00	4.00	mg/L	01.07.2021 13:07		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1040	4.00	4.00	mg/L	01.07.2021 13:07		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.07.2021 13:07	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.07.2021 11:03

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	325	0.500	0.0738	mg/L	01.07.2021 12:26		1

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147021

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.51			SU	01.07.2021 14:38	K	1
Temperature	TEMP	12.7			Deg C	01.07.2021 14:38	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147049

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	585	0.370	0.100	mg/L	01.07.2021 13:00	K+	1



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683638-001

Matrix: Ground Water
Date Collected: 01.06.2021 11:30

Date Received: 01.06.2021 15:39

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3147025

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	01.07.2021 14:10	U	1

Analytical Method: TPH by SW8015 Mod

Tech: MNR

Analyst: ARM

Seq Number: 3147003

Date Prep: 01.06.2021 16:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.897	2.27	0.897	mg/L	01.06.2021 17:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.829	2.27	0.829	mg/L	01.06.2021 17:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.829	2.27	0.829	mg/L	01.06.2021 17:53	U	1
Total TPH	PHC635	<0.829	2.27	0.829	mg/L	01.06.2021 17:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.06.2021 17:53	
o-Terphenyl	84-15-1	112	%	70-135	01.06.2021 17:53	



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683638-001

Matrix: Ground Water
Date Collected: 01.06.2021 11:30

Date Received: 01.06.2021 15:39

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.07.2021 12:00

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147038

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00209	0.00100	0.000214	mg/L	01.07.2021 13:16		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.07.2021 13:16	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.07.2021 13:16	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.07.2021 13:16	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.07.2021 13:16	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.07.2021 13:16	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.07.2021 13:16	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	01.07.2021 13:16	U	1
Sec-Butylbenzene	135-98-8	0.000310	0.00100	0.000199	mg/L	01.07.2021 13:16	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.07.2021 13:16	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.07.2021 13:16	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.07.2021 13:16	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.07.2021 13:16	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.07.2021 13:16	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.07.2021 13:16	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.07.2021 13:16	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.07.2021 13:16	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000260	0.00100	0.000233	mg/L	01.07.2021 13:16	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.07.2021 13:16	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.07.2021 13:16	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.07.2021 13:16	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.07.2021 13:16	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.07.2021 13:16	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.07.2021 13:16	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.07.2021 13:16	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.07.2021 13:16	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.07.2021 13:16	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.07.2021 13:16	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.07.2021 13:16	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.07.2021 13:16	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.07.2021 13:16	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.07.2021 13:16	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.07.2021 13:16	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.07.2021 13:16	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.07.2021 13:16	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.07.2021 13:16	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.07.2021 13:16	U	1
Ethylbenzene	100-41-4	0.000330	0.00100	0.000146	mg/L	01.07.2021 13:16	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.07.2021 13:16	U	1
Isopropylbenzene	98-82-8	0.000190	0.00100	0.000161	mg/L	01.07.2021 13:16	J	1



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 683638-001

Matrix: Ground Water
Date Collected: 01.06.2021 11:30

Date Received: 01.06.2021 15:39

Analytical Method: VOCs by SW-846 8260C

Tech: DTG

Analyst: DTG

Date Prep: 01.07.2021 12:00

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.07.2021 13:16	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.07.2021 13:16	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.07.2021 13:16	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	01.07.2021 13:16	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.07.2021 13:16	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.07.2021 13:16	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.07.2021 13:16	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.07.2021 13:16	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	01.07.2021 13:16	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.07.2021 13:16	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.07.2021 13:16	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.07.2021 13:16	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.07.2021 13:16	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.07.2021 13:16	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.07.2021 13:16	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.07.2021 13:16	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00219	0.00100	0.000252	mg/L	01.07.2021 13:16		1
1,3,5-Trimethylbenzene	108-67-8	0.00103	0.00100	0.000279	mg/L	01.07.2021 13:16		1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	01.07.2021 13:16	U	1
m,p-Xylenes	179601-23-1	0.00122	0.0100	0.000330	mg/L	01.07.2021 13:16	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.07.2021 13:16	U	1
Total Xylenes	1330-20-7	0.00122	0.00100	0.000192	mg/L	01.07.2021 13:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	75-131	01.07.2021 13:16	
1,2-Dichloroethane-D4	17060-07-0	103	%	63-144	01.07.2021 13:16	
Toluene-D8	2037-26-5	103	%	80-117	01.07.2021 13:16	
4-Bromofluorobenzene	460-00-4	105	%	74-124	01.07.2021 13:16	



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683638-002

Matrix: Ground Water
Date Collected: 01.06.2021 12:50

Date Received: 01.06.2021 15:39

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.07.2021 11:57

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147034

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1360	4.00	4.00	mg/L	01.07.2021 13:21		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1360	4.00	4.00	mg/L	01.07.2021 13:21		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.07.2021 13:21	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.07.2021 11:03

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	124	0.500	0.0738	mg/L	01.07.2021 12:51		1

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147021

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.24			SU	01.07.2021 14:38	K	1
Temperature	TEMP	13.1			Deg C	01.07.2021 14:38	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147049

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1240	0.370	0.100	mg/L	01.07.2021 13:00	K+	1



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683638-002

Matrix: Ground Water
Date Collected: 01.06.2021 12:50

Date Received: 01.06.2021 15:39

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3147025

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	01.07.2021 14:10	U	1

Analytical Method: TPH by SW8015 Mod

Tech: MNR

Analyst: ARM

Seq Number: 3147003

Date Prep: 01.06.2021 16:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.99	2.26	0.892	mg/L	01.06.2021 18:12	J	1
Diesel Range Organics (DRO)	C10C28DRO	<0.824	2.26	0.824	mg/L	01.06.2021 18:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.824	2.26	0.824	mg/L	01.06.2021 18:12	U	1
Total TPH	PHC635	1.99	2.26	0.824	mg/L	01.06.2021 18:12	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	01.06.2021 18:12	
o-Terphenyl	84-15-1	79	%	70-135	01.06.2021 18:12	



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683638-002

Matrix: Ground Water
Date Collected: 01.06.2021 12:50

Date Received: 01.06.2021 15:39

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.07.2021 12:00

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147038

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0200	0.00100	0.000214	mg/L	01.07.2021 13:36		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.07.2021 13:36	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.07.2021 13:36	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.07.2021 13:36	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.07.2021 13:36	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.07.2021 13:36	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.07.2021 13:36	U	1
n-Butylbenzene	104-51-8	0.000390	0.00100	0.000286	mg/L	01.07.2021 13:36	J	1
Sec-Butylbenzene	135-98-8	0.00117	0.00100	0.000199	mg/L	01.07.2021 13:36		1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.07.2021 13:36	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.07.2021 13:36	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.07.2021 13:36	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.07.2021 13:36	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.07.2021 13:36	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.07.2021 13:36	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.07.2021 13:36	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.07.2021 13:36	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00105	0.00100	0.000233	mg/L	01.07.2021 13:36		1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.07.2021 13:36	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.07.2021 13:36	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.07.2021 13:36	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.07.2021 13:36	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.07.2021 13:36	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.07.2021 13:36	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.07.2021 13:36	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.07.2021 13:36	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.07.2021 13:36	U	1
1,2-Dichloroethane	107-06-2	0.000500	0.00100	0.000285	mg/L	01.07.2021 13:36	J	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.07.2021 13:36	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.07.2021 13:36	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.07.2021 13:36	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.07.2021 13:36	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.07.2021 13:36	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.07.2021 13:36	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.07.2021 13:36	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.07.2021 13:36	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.07.2021 13:36	U	1
Ethylbenzene	100-41-4	0.0231	0.00100	0.000146	mg/L	01.07.2021 13:36		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.07.2021 13:36	U	1
Isopropylbenzene	98-82-8	0.00815	0.00100	0.000161	mg/L	01.07.2021 13:36		1



Certificate of Analytical Results 683638

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 683638-002

Matrix: Ground Water
Date Collected: 01.06.2021 12:50

Date Received: 01.06.2021 15:39

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.07.2021 12:00

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.07.2021 13:36	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.07.2021 13:36	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.07.2021 13:36	U	1
n-Propylbenzene	103-65-1	0.00267	0.00100	0.000179	mg/L	01.07.2021 13:36		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.07.2021 13:36	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.07.2021 13:36	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.07.2021 13:36	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.07.2021 13:36	U	1
Toluene	108-88-3	0.0169	0.00100	0.000500	mg/L	01.07.2021 13:36		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.07.2021 13:36	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.07.2021 13:36	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.07.2021 13:36	U	1
1,1,2-Trichloroethane	79-00-5	0.000800	0.00100	0.000228	mg/L	01.07.2021 13:36	J	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.07.2021 13:36	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.07.2021 13:36	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.07.2021 13:36	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0339	0.00100	0.000252	mg/L	01.07.2021 13:36		1
1,3,5-Trimethylbenzene	108-67-8	0.0103	0.00100	0.000279	mg/L	01.07.2021 13:36		1
o-Xylene	95-47-6	0.0169	0.00100	0.000192	mg/L	01.07.2021 13:36		1
m,p-Xylenes	179601-23-1	0.118	0.0100	0.000330	mg/L	01.07.2021 13:36		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.07.2021 13:36	U	1
Total Xylenes	1330-20-7	0.135	0.00100	0.000192	mg/L	01.07.2021 13:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	96	%	75-131	01.07.2021 13:36	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	01.07.2021 13:36	
Toluene-D8	2037-26-5	100	%	80-117	01.07.2021 13:36	
4-Bromofluorobenzene	460-00-4	99	%	74-124	01.07.2021 13:36	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

MB Sample Id: 7718637-1-BLK

Matrix: Water

LCS Sample Id: 7718637-1-BKS

Prep Method: SM2320P

Date Prep: 01.07.2021

LCSD Sample Id: 7718637-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	261	104	265	106	85-115	2	20	mg/L	01.07.2021 12:21	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

MB Sample Id: 7718637-1-BLK

Matrix: Water

MB Sample Id: 7718637-1-BLK

Prep Method: SM2320P

Date Prep: 01.07.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	01.07.2021 12:13	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	01.07.2021 12:13	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

Parent Sample Id: 682270-001

Matrix: Ground Water

MD Sample Id: 682270-001 D

Prep Method: SM2320P

Date Prep: 01.07.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	200	199	1	20	mg/L	01.07.2021 12:40	
Alkalinity, Bicarbonate (as CaCO ₃)	200	199	1	20	mg/L	01.07.2021 12:40	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.07.2021 12:40	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147034

Parent Sample Id: 682844-001

Matrix: Water

MD Sample Id: 682844-001 D

Prep Method: SM2320P

Date Prep: 01.07.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	129	125	3	20	mg/L	01.07.2021 14:22	
Alkalinity, Bicarbonate (as CaCO ₃)	129	125	3	20	mg/L	01.07.2021 14:22	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.07.2021 14:22	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147056

MB Sample Id: 7718617-1-BLK

Matrix: Water

LCS Sample Id: 7718617-1-BKS

Prep Method: E300P

Date Prep: 01.07.2021

LCSD Sample Id: 7718617-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	10.1	101	10.1	101	90-110	0	20	mg/L	01.07.2021 11:37	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147056

Parent Sample Id: 683832-001

Matrix: Water

MS Sample Id: 683832-001 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683832-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	111	10.0	119	80	119	80	90-110	0	20	mg/L	01.07.2021 13:52	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147056

Parent Sample Id: 683832-002

Matrix: Water

MS Sample Id: 683832-002 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683832-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	111	10.0	119	80	119	80	90-110	0	20	mg/L	01.07.2021 14:29	X

Analytical Method: pH by SM4500-H

Seq Number: 3147021

Parent Sample Id: 683359-001

Matrix: Water

MD Sample Id: 683359-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.47	7.55	1	20	SU	01.07.2021 14:38	
Temperature	14.4	13.9	4	20	Deg C	01.07.2021 14:38	

Analytical Method: pH by SM4500-H

Seq Number: 3147021

Parent Sample Id: 683571-002

Matrix: Water

MD Sample Id: 683571-002 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Temperature	13.6	13.0	5	20	Deg C	01.07.2021 14:38	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3147025

MB Sample Id: 3147025-1-BLK

Matrix: Water

LCS Sample Id: 3147025-1-BKS

LCSD Sample Id: 3147025-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	42.4	85	42.4	85	80-120	0	20	mg/L	01.07.2021 14:10	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147003

MB Sample Id: 7718605-1-BLK

Matrix: Water

Prep Method: SW8015P

Date Prep: 01.06.2021

LCS Sample Id: 7718605-1-BKS

LCSD Sample Id: 7718605-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.899	91.0	84.5	93	77.2	85	70-135	9	20	mg/L	01.06.2021 12:40	
Diesel Range Organics (DRO)	<0.830	91.0	85.3	94	79.4	87	70-135	7	20	mg/L	01.06.2021 12:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	70		109		104		70-135	%	01.06.2021 12:40
o-Terphenyl	82		100		93		70-135	%	01.06.2021 12:40

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147003

Matrix: Water

Prep Method: SW8015P

Date Prep: 01.06.2021

MB Sample Id: 7718605-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.831	mg/L	01.06.2021 12:20	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147003

Matrix: Water

Prep Method: SW8015P

Date Prep: 01.06.2021

Parent Sample Id: 682803-001

MS Sample Id: 682803-001 S

MSD Sample Id: 682803-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.878	88.9	69.0	78	68.6	77	70-135	1	20	mg/L	01.06.2021 13:37	
Diesel Range Organics (DRO)	<0.811	88.9	68.3	77	71.9	81	70-135	5	20	mg/L	01.06.2021 13:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		92		70-135	%	01.06.2021 13:37
o-Terphenyl	77		76		70-135	%	01.06.2021 13:37

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.07.2021

MB Sample Id: 7718639-1-BLK

LCS Sample Id: 7718639-1-BKS

LCSD Sample Id: 7718639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0486	97	0.0465	93	66-142	4	25	mg/L	01.07.2021 10:21	
Bromobenzene	<0.000300	0.0500	0.0498	100	0.0501	100	75-125	1	25	mg/L	01.07.2021 10:21	
Bromochloromethane	<0.000209	0.0500	0.0489	98	0.0472	94	60-140	4	25	mg/L	01.07.2021 10:21	
Bromodichloromethane	<0.000231	0.0500	0.0483	97	0.0475	95	75-125	2	25	mg/L	01.07.2021 10:21	
Bromoform	<0.000630	0.0500	0.0469	94	0.0483	97	75-125	3	25	mg/L	01.07.2021 10:21	
Methyl bromide	<0.00105	0.0500	0.0408	82	0.0396	79	60-140	3	25	mg/L	01.07.2021 10:21	
2-Butanone	<0.00270	0.250	0.210	84	0.216	86	60-140	3	25	mg/L	01.07.2021 10:21	
n-Butylbenzene	<0.000286	0.0500	0.0541	108	0.0543	109	75-125	0	25	mg/L	01.07.2021 10:21	
Sec-Butylbenzene	<0.000199	0.0500	0.0536	107	0.0538	108	75-125	0	25	mg/L	01.07.2021 10:21	
tert-Butylbenzene	<0.000195	0.0500	0.0524	105	0.0523	105	75-125	0	25	mg/L	01.07.2021 10:21	
Carbon Tetrachloride	<0.000423	0.0500	0.0529	106	0.0493	99	62-125	7	25	mg/L	01.07.2021 10:21	
Chlorobenzene	<0.000159	0.0500	0.0481	96	0.0477	95	60-133	1	25	mg/L	01.07.2021 10:21	
Chloroethane	<0.000433	0.0500	0.0484	97	0.0457	91	60-140	6	25	mg/L	01.07.2021 10:21	
Chloroform	<0.000259	0.0500	0.0483	97	0.0464	93	70-130	4	25	mg/L	01.07.2021 10:21	
Methyl Chloride	<0.000318	0.0500	0.0446	89	0.0423	85	60-140	5	25	mg/L	01.07.2021 10:21	
2-Chlorotoluene	<0.000214	0.0500	0.0517	103	0.0522	104	73-125	1	25	mg/L	01.07.2021 10:21	
4-Chlorotoluene	<0.000183	0.0500	0.0509	102	0.0514	103	74-125	1	25	mg/L	01.07.2021 10:21	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0532	106	0.0532	106	75-125	0	25	mg/L	01.07.2021 10:21	
Dibromochloromethane	<0.000739	0.0500	0.0479	96	0.0481	96	73-125	0	25	mg/L	01.07.2021 10:21	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0448	90	0.0480	96	59-125	7	25	mg/L	01.07.2021 10:21	
1,2-Dibromoethane	<0.000337	0.0500	0.0475	95	0.0484	97	73-125	2	25	mg/L	01.07.2021 10:21	
Methylene Bromide	<0.000130	0.0500	0.0472	94	0.0469	94	69-127	1	25	mg/L	01.07.2021 10:21	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0501	100	0.0511	102	75-125	2	25	mg/L	01.07.2021 10:21	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0504	101	0.0509	102	75-125	1	25	mg/L	01.07.2021 10:21	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0497	99	0.0505	101	75-125	2	25	mg/L	01.07.2021 10:21	
Dichlorodifluoromethane	<0.000316	0.0500	0.0472	94	0.0435	87	60-140	8	25	mg/L	01.07.2021 10:21	
1,1-Dichloroethane	<0.000244	0.0500	0.0489	98	0.0460	92	72-125	6	25	mg/L	01.07.2021 10:21	
1,2-Dichloroethane	<0.000285	0.0500	0.0491	98	0.0486	97	68-127	1	25	mg/L	01.07.2021 10:21	
1,1-Dichloroethene	<0.000216	0.0500	0.0500	100	0.0471	94	59-172	6	25	mg/L	01.07.2021 10:21	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0469	94	0.0458	92	75-125	2	25	mg/L	01.07.2021 10:21	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0491	98	0.0464	93	75-125	6	25	mg/L	01.07.2021 10:21	
1,2-Dichloropropane	<0.000396	0.0500	0.0487	97	0.0472	94	74-125	3	25	mg/L	01.07.2021 10:21	
1,3-Dichloropropane	<0.000439	0.0500	0.0466	93	0.0476	95	75-125	2	25	mg/L	01.07.2021 10:21	
2,2-Dichloropropane	<0.000360	0.0500	0.0508	102	0.0470	94	75-125	8	25	mg/L	01.07.2021 10:21	
1,1-Dichloropropene	<0.000481	0.0500	0.0512	102	0.0489	98	75-125	5	25	mg/L	01.07.2021 10:21	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0490	98	0.0472	94	74-125	4	25	mg/L	01.07.2021 10:21	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0481	96	0.0470	94	66-125	2	25	mg/L	01.07.2021 10:21	
Ethylbenzene	<0.000146	0.0500	0.0496	99	0.0489	98	75-125	1	25	mg/L	01.07.2021 10:21	
Hexachlorobutadiene	<0.00200	0.0500	0.0531	106	0.0556	111	75-125	5	25	mg/L	01.07.2021 10:21	
Isopropylbenzene	<0.000161	0.0500	0.0505	101	0.0497	99	75-125	2	25	mg/L	01.07.2021 10:21	
Methylene Chloride	<0.00191	0.0500	0.0448	90	0.0430	86	75-125	4	25	mg/L	01.07.2021 10:21	
MTBE	<0.000571	0.0500	0.0492	98	0.0481	96	65-135	2	25	mg/L	01.07.2021 10:21	
Naphthalene	<0.00200	0.0500	0.0451	90	0.0512	102	70-130	13	25	mg/L	01.07.2021 10:21	
n-Propylbenzene	<0.000179	0.0500	0.0535	107	0.0534	107	75-125	0	25	mg/L	01.07.2021 10:21	
Styrene	<0.000162	0.0500	0.0479	96	0.0474	95	75-125	1	25	mg/L	01.07.2021 10:21	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0479	96	0.0474	95	72-125	1	25	mg/L	01.07.2021 10:21	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0490	98	0.0520	104	74-125	6	25	mg/L	01.07.2021 10:21	
Tetrachloroethylene	<0.000500	0.0500	0.0498	100	0.0498	100	71-125	0	25	mg/L	01.07.2021 10:21	
Toluene	<0.000500	0.0500	0.0475	95	0.0472	94	59-139	1	25	mg/L	01.07.2021 10:21	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0463	93	0.0520	104	75-137	12	25	mg/L	01.07.2021 10:21	

MS/MSD Percent Recovery
Relative Percent Difference
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

MB Sample Id: 7718639-1-BLK

Matrix: Water

LCS Sample Id: 7718639-1-BKS

Prep Method: SW5030B

Date Prep: 01.07.2021

LCSD Sample Id: 7718639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0476	95	0.0516	103	75-135	8	25	mg/L	01.07.2021 10:21	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0503	101	0.0475	95	75-125	6	25	mg/L	01.07.2021 10:21	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0463	93	0.0471	94	75-127	2	25	mg/L	01.07.2021 10:21	
Trichloroethylene	<0.000424	0.0500	0.0487	97	0.0464	93	62-137	5	25	mg/L	01.07.2021 10:21	
Trichlorofluoromethane	<0.000245	0.0500	0.0557	111	0.0517	103	60-140	7	25	mg/L	01.07.2021 10:21	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0486	97	0.0504	101	75-125	4	25	mg/L	01.07.2021 10:21	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0512	102	0.0521	104	75-125	2	25	mg/L	01.07.2021 10:21	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0522	104	0.0522	104	70-125	0	25	mg/L	01.07.2021 10:21	
o-Xylene	<0.000192	0.0500	0.0485	97	0.0477	95	75-125	2	25	mg/L	01.07.2021 10:21	
m,p-Xylenes	<0.000330	0.100	0.0990	99	0.0979	98	75-125	1	25	mg/L	01.07.2021 10:21	
Vinyl Chloride	<0.000234	0.0500	0.0497	99	0.0464	93	60-140	7	25	mg/L	01.07.2021 10:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		101		101		75-131	%	01.07.2021 10:21
1,2-Dichloroethane-D4	101		101		101		63-144	%	01.07.2021 10:21
Toluene-D8	99		99		102		80-117	%	01.07.2021 10:21
4-Bromofluorobenzene	102		104		104		74-124	%	01.07.2021 10:21

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

Parent Sample Id: 683082-001

Matrix: Waste Water

MS Sample Id: 683082-001 S

Prep Method: SW5030B

Date Prep: 01.07.2021

MSD Sample Id: 683082-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0480	96	0.0460	92	66-142	4	25	mg/L	01.07.2021 10:59	
Bromobenzene	<0.000300	0.0500	0.0481	96	0.0466	93	75-125	3	25	mg/L	01.07.2021 10:59	
Bromochloromethane	<0.000209	0.0500	0.0483	97	0.0466	93	60-140	4	25	mg/L	01.07.2021 10:59	
Bromodichloromethane	<0.000231	0.0500	0.0479	96	0.0466	93	75-125	3	25	mg/L	01.07.2021 10:59	
Bromoform	<0.000630	0.0500	0.0465	93	0.0458	92	75-125	2	25	mg/L	01.07.2021 10:59	
Methyl bromide	<0.00105	0.0500	0.0422	84	0.0405	81	60-140	4	25	mg/L	01.07.2021 10:59	
2-Butanone	<0.00270	0.250	0.218	87	0.222	89	60-140	2	25	mg/L	01.07.2021 10:59	
n-Butylbenzene	<0.000286	0.0500	0.0526	105	0.0500	100	75-125	5	25	mg/L	01.07.2021 10:59	
Sec-Butylbenzene	<0.000199	0.0500	0.0514	103	0.0490	98	75-125	5	25	mg/L	01.07.2021 10:59	
tert-Butylbenzene	<0.000195	0.0500	0.0503	101	0.0476	95	75-125	6	25	mg/L	01.07.2021 10:59	
Carbon Tetrachloride	<0.000423	0.0500	0.0517	103	0.0494	99	62-125	5	25	mg/L	01.07.2021 10:59	
Chlorobenzene	<0.000159	0.0500	0.0479	96	0.0464	93	60-133	3	25	mg/L	01.07.2021 10:59	
Chloroethane	<0.000433	0.0500	0.0490	98	0.0466	93	60-140	5	25	mg/L	01.07.2021 10:59	
Chloroform	<0.000259	0.0500	0.0478	96	0.0469	94	70-130	2	25	mg/L	01.07.2021 10:59	
Methyl Chloride	<0.000318	0.0500	0.0427	85	0.0417	83	60-140	2	25	mg/L	01.07.2021 10:59	
2-Chlorotoluene	<0.000214	0.0500	0.0498	100	0.0474	95	73-125	5	25	mg/L	01.07.2021 10:59	
4-Chlorotoluene	<0.000183	0.0500	0.0493	99	0.0473	95	74-125	4	25	mg/L	01.07.2021 10:59	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0512	102	0.0489	98	75-125	5	25	mg/L	01.07.2021 10:59	
Dibromochloromethane	<0.000739	0.0500	0.0477	95	0.0466	93	73-125	2	25	mg/L	01.07.2021 10:59	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0455	91	0.0464	93	59-125	2	25	mg/L	01.07.2021 10:59	
1,2-Dibromoethane	<0.000337	0.0500	0.0488	98	0.0471	94	73-125	4	25	mg/L	01.07.2021 10:59	
Methylene Bromide	<0.000130	0.0500	0.0469	94	0.0463	93	69-127	1	25	mg/L	01.07.2021 10:59	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0487	97	0.0470	94	75-125	4	25	mg/L	01.07.2021 10:59	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0481	96	0.0466	93	75-125	3	25	mg/L	01.07.2021 10:59	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0483	97	0.0465	93	75-125	4	25	mg/L	01.07.2021 10:59	
Dichlorodifluoromethane	<0.000316	0.0500	0.0444	89	0.0421	84	60-140	5	25	mg/L	01.07.2021 10:59	
1,1-Dichloroethane	<0.000244	0.0500	0.0481	96	0.0460	92	72-125	4	25	mg/L	01.07.2021 10:59	
1,2-Dichloroethane	<0.000285	0.0500	0.0493	99	0.0480	96	68-127	3	25	mg/L	01.07.2021 10:59	
1,1-Dichloroethene	<0.000216	0.0500	0.0494	99	0.0469	94	59-172	5	25	mg/L	01.07.2021 10:59	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0466	93	0.0457	91	75-125	2	25	mg/L	01.07.2021 10:59	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0485	97	0.0464	93	75-125	4	25	mg/L	01.07.2021 10:59	
1,2-Dichloropropane	<0.000396	0.0500	0.0486	97	0.0472	94	74-125	3	25	mg/L	01.07.2021 10:59	
1,3-Dichloropropane	<0.000439	0.0500	0.0469	94	0.0460	92	75-125	2	25	mg/L	01.07.2021 10:59	
2,2-Dichloropropane	<0.000360	0.0500	0.0503	101	0.0474	95	75-125	6	25	mg/L	01.07.2021 10:59	
1,1-Dichloropropene	<0.000481	0.0500	0.0496	99	0.0490	98	75-125	1	25	mg/L	01.07.2021 10:59	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0491	98	0.0470	94	74-125	4	25	mg/L	01.07.2021 10:59	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0480	96	0.0466	93	66-125	3	25	mg/L	01.07.2021 10:59	
Ethylbenzene	<0.000146	0.0500	0.0497	99	0.0470	94	75-125	6	25	mg/L	01.07.2021 10:59	
Hexachlorobutadiene	<0.00200	0.0500	0.0525	105	0.0503	101	75-125	4	25	mg/L	01.07.2021 10:59	
Isopropylbenzene	<0.000161	0.0500	0.0496	99	0.0477	95	75-125	4	25	mg/L	01.07.2021 10:59	
Methylene Chloride	<0.00191	0.0500	0.0452	90	0.0430	86	75-125	5	25	mg/L	01.07.2021 10:59	
MTBE	<0.000571	0.0500	0.0490	98	0.0488	98	65-135	0	25	mg/L	01.07.2021 10:59	
Naphthalene	<0.00200	0.0500	0.0488	98	0.0486	97	70-130	0	25	mg/L	01.07.2021 10:59	
n-Propylbenzene	<0.000179	0.0500	0.0512	102	0.0489	98	75-125	5	25	mg/L	01.07.2021 10:59	
Styrene	<0.000162	0.0500	0.0476	95	0.0464	93	75-125	3	25	mg/L	01.07.2021 10:59	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0471	94	0.0457	91	72-125	3	25	mg/L	01.07.2021 10:59	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0484	97	0.0477	95	74-125	1	25	mg/L	01.07.2021 10:59	
Tetrachloroethylene	<0.000500	0.0500	0.0498	100	0.0473	95	71-125	5	25	mg/L	01.07.2021 10:59	
Toluene	<0.000500	0.0500	0.0478	96	0.0456	91	59-139	5	25	mg/L	01.07.2021 10:59	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0491	98	0.0496	99	75-137	1	25	mg/L	01.07.2021 10:59	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147038

Parent Sample Id: 683082-001

Matrix: Waste Water

MS Sample Id: 683082-001 S

Prep Method: SW5030B

Date Prep: 01.07.2021

MSD Sample Id: 683082-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0487	97	0.0474	95	75-135	3	25	mg/L	01.07.2021 10:59	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0500	100	0.0480	96	75-125	4	25	mg/L	01.07.2021 10:59	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0466	93	0.0465	93	75-127	0	25	mg/L	01.07.2021 10:59	
Trichloroethylene	<0.000424	0.0500	0.0482	96	0.0460	92	62-137	5	25	mg/L	01.07.2021 10:59	
Trichlorofluoromethane	<0.000245	0.0500	0.0546	109	0.0517	103	60-140	5	25	mg/L	01.07.2021 10:59	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0479	96	0.0472	94	75-125	1	25	mg/L	01.07.2021 10:59	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0502	100	0.0477	95	75-125	5	25	mg/L	01.07.2021 10:59	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0506	101	0.0482	96	70-125	5	25	mg/L	01.07.2021 10:59	
o-Xylene	<0.000192	0.0500	0.0479	96	0.0463	93	75-125	3	25	mg/L	01.07.2021 10:59	
m,p-Xylenes	<0.000330	0.100	0.0983	98	0.0934	93	75-125	5	25	mg/L	01.07.2021 10:59	
Vinyl Chloride	<0.000234	0.0500	0.0487	97	0.0462	92	60-140	5	25	mg/L	01.07.2021 10:59	

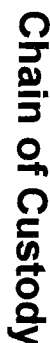
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		103		75-131	%	01.07.2021 10:59
1,2-Dichloroethane-D4	101		98		63-144	%	01.07.2021 10:59
Toluene-D8	100		99		80-117	%	01.07.2021 10:59
4-Bromofluorobenzene	103		101		74-124	%	01.07.2021 10:59

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Work Order No: 1083438

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0030 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-992-7550)
Hobbs, NM (575-392-7550)

Work Order Comments	
Program: UST/ST	☐ PPP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:	
Reporting Level II	☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other: ☐

Project Name:	South Hobbs	Turn Around	ANALYSIS REQUEST							Work Order Notes
Project Number:	03B1417002	Routine ☐								
P.O. Number:	03B1417002	Rush: 24 Hr								
Sampler's Name:	Shane Diller	Due Date:								
			500 CO2 c							
			6.2							
			00							

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	7.2/7.7	Thermometer ID					
Received intact:	Yes/ No						
Cooler Custody Seals:	Yes No N/A	Correction Factor:					
Sample Custody Seals:	Yes No N/A	Total Containers:					

for of Containers

ed Carbon Dioxide 48

ed Sulfide SW-846 #37

-846 #8260

A Method #8015

EPA Method #846 30

SW-846 Method 150.1

TAT starts the day received by the lab, if received by 4:30pm

[illegible]

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		TCLIP / 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 almost any company to Xencio, its affiliate and subcontractors. It assigns standard terms and conditions of service. Xencio 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 Xencio. A minimum charge of \$75.00 will be applied to each project and a charge of \$8 for each sample submitted to Xencio, 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
1	[Signature]	[Signature]	10-27-1539	2		
3				4		
5				6		

Inter-Office Shipment

IOS Number : **75979**

Date/Time: 01.06.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority: Fedex

Address: 1211 W. Florida Ave

Lab# To: **Houston**

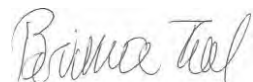
Air Bill No.: 772556180336

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
683638-001	W	MW-1	01.06.2021 11:30	SM2320B	Alkalinity by SM2320B	01.07.2021	01.20.2021	JKR	ALK ALKB ALKC	
683638-001	W	MW-1	01.06.2021 11:30	E300	Inorganic Anions by EPA 300	01.07.2021	02.03.2021	JKR	CL	
683638-001	W	MW-1	01.06.2021 11:30	SM4500SF00	Sulfide by SM4500-S-F	01.07.2021	01.13.2021	JKR	S	
683638-001	W	MW-1	01.06.2021 11:30	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.07.2021	01.07.2021 11:30	JKR		
683638-001	W	MW-1	01.06.2021 11:30	SM4500-H	pH by SM4500-H	01.07.2021	01.06.2021 11:30	JKR		
683638-001	W	MW-1	01.06.2021 11:30	SW8260C	VOCs by SW-846 8260C	01.07.2021	01.20.2021	JKR	BDCME BRBZ BRCLME	
683638-002	W	MW-2	01.06.2021 12:50	SW8260C	VOCs by SW-846 8260C	01.07.2021	01.20.2021	JKR	BDCME BRBZ BRCLME	
683638-002	W	MW-2	01.06.2021 12:50	SM4500SF00	Sulfide by SM4500-S-F	01.07.2021	01.13.2021	JKR	S	
683638-002	W	MW-2	01.06.2021 12:50	E300	Inorganic Anions by EPA 300	01.07.2021	02.03.2021	JKR	CL	
683638-002	W	MW-2	01.06.2021 12:50	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.07.2021	01.07.2021 12:50	JKR		
683638-002	W	MW-2	01.06.2021 12:50	SM2320B	Alkalinity by SM2320B	01.07.2021	01.20.2021	JKR	ALK ALKB ALKC	
683638-002	W	MW-2	01.06.2021 12:50	SM4500-H	pH by SM4500-H	01.07.2021	01.06.2021 12:50	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.06.2021

Received By:



Jhyrom Edralin

Date Received: 01.06.2021

Cooler Temperature: 2.6



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 75979

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.06.2021 03.46 PM

Received By: Jhyrom Edralin

Date Received: 01.06.2021 10.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.07.2021

Certificate of Analysis Summary 684397

Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Tue 01.12.2021 15:35
 Report Date: 01.14.2021 16:13
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684397-001	684397-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.12.2021 11:30	01.12.2021 12:50				
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted:	01.13.2021 11:25	01.13.2021 11:25				
	Analyzed:	01.13.2021 12:31	01.13.2021 12:47				
	Units/RL:	mg/L RL	mg/L RL				
Alkalinity, Total (as CaCO ₃)		1160 4.00	1350 4.00				
Alkalinity, Bicarbonate (as CaCO ₃)		1160 4.00	1350 4.00				
Alkalinity, Carbonate (as CaCO ₃)		<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.13.2021 12:31	01.13.2021 12:47				
	Units/RL:	mg/L RL	mg/L RL				
Carbon Dioxide, (Free)		731 0.370	1450 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-38	Extracted:	01.13.2021 10:05	01.13.2021 10:05				
	Analyzed:	01.13.2021 12:24	01.13.2021 12:36				
	Units/RL:	mg/L RL	mg/L RL				
Chloride		359 5.00	141 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.13.2021 12:55	01.13.2021 12:55				
	Units/RL:	mg/L RL	mg/L RL				
Sulfide, total		<0.495 5.00	11.2 5.00				
TPH by SW8015 Mod	Extracted:	01.14.2021 11:00	01.14.2021 11:00				
	Analyzed:	01.14.2021 12:46	01.14.2021 13:41				
	Units/RL:	mg/L RL	mg/L RL				
Gasoline Range Hydrocarbons (GRO)		<0.891 2.26	1.64 J 2.28				
Diesel Range Organics (DRO)		<0.823 2.26	<0.833 2.28				
Motor Oil Range Hydrocarbons (MRO)		<0.823 2.26	<0.833 2.28				
Total TPH		<0.823 2.26	1.64 J 2.28				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 684397



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 16:13
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684397-001	684397-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.12.2021 11:30	01.12.2021 12:50				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.13.2021 10:50	01.13.2021 10:50				
	Analyzed:	01.13.2021 16:33	01.13.2021 16:54				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00211	0.00100	0.0193	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00270	0.0500	<0.00270	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000690 J	0.00100		
Sec-Butylbenzene		0.000220 J	0.00100	<0.000199	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000710 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 684397



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 16:13
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684397-001	684397-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.12.2021 11:30	01.12.2021 12:50				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.13.2021 10:50	01.13.2021 10:50				
	Analyzed:	01.13.2021 16:33	01.13.2021 16:54				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000540 J	0.00100	0.0198	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000200 J	0.00100	0.00756	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00242	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 684397



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Tue 01.12.2021 15:35
Report Date: 01.14.2021 16:13
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	684397-001	684397-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.12.2021 11:30	01.12.2021 12:50				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.13.2021 10:50	01.13.2021 10:50				
	Analyzed:	01.13.2021 16:33	01.13.2021 16:54				
	Units/RL:	mg/L RL	mg/L RL				
		0.000690 J 0.00100	0.0185 0.00100				
		<0.00200 0.00500	<0.00200 0.00500				
		<0.00200 0.00500	<0.00200 0.00500				
		<0.000504 0.00500	<0.000504 0.00500				
		<0.000228 0.00100	<0.000228 0.00100				
		<0.000424 0.00500	<0.000424 0.00500				
		<0.000245 0.00100	<0.000245 0.00100				
		<0.000283 0.00100	<0.000283 0.00100				
		0.00143 0.00100	0.0259 0.00100				
		0.000670 J 0.00100	0.00698 0.00100				
		<0.000192 0.00100	0.0144 0.00100				
		0.00163 J 0.0100	0.0922 0.0100				
		<0.000234 0.00200	<0.000234 0.00200				
		0.00163 0.00100	0.107 0.00100				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.13.2021 14:04	01.13.2021 14:04				
	Units/RL:	Deg C RL	Deg C RL				
		14.6 K	13.9 K				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.13.2021 14:04	01.13.2021 14:04				
	Units/RL:	SU RL	SU RL				
		6.42 K	6.20 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 684397

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

01.14.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.14.2021

Project Manager: **Beaux Jennings****Ensolum**

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **684397****South Hobbs**

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 684397. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 684397 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 684397

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	01.12.2021 11:30		684397-001
MW-2	W	01.12.2021 12:50		684397-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**

Project ID: 03B1417002
Work Order Number(s): 684397

Report Date: 01.14.2021
Date Received: 01.12.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 684397-001

Matrix: Ground Water
Date Collected: 01.12.2021 11:30

Date Received: 01.12.2021 15:35

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.13.2021 11:25

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147675

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1160	4.00	4.00	mg/L	01.13.2021 12:31		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1160	4.00	4.00	mg/L	01.13.2021 12:31		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.13.2021 12:31	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.13.2021 10:05

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147703

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	359	5.00	0.738	mg/L	01.13.2021 12:24		10

Analytical Method: pH by SM4500-H

Tech: DTN

Analyst: DTN

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147660

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.42			SU	01.13.2021 14:04	K	1
Temperature	TEMP	14.6			Deg C	01.13.2021 14:04	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147704

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	731	0.370	0.100	mg/L	01.13.2021 12:31		1



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 684397-001

Matrix: Ground Water
Date Collected: 01.12.2021 11:30

Date Received: 01.12.2021 15:35

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3147659

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	01.13.2021 12:55	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3147809

Date Prep: 01.14.2021 11:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.891	2.26	0.891	mg/L	01.14.2021 12:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.823	2.26	0.823	mg/L	01.14.2021 12:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.823	2.26	0.823	mg/L	01.14.2021 12:46	U	1
Total TPH	PHC635	<0.823	2.26	0.823	mg/L	01.14.2021 12:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	01.14.2021 12:46	
o-Terphenyl	84-15-1	109	%	70-135	01.14.2021 12:46	



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 684397-001

Matrix: Ground Water
Date Collected: 01.12.2021 11:30

Date Received: 01.12.2021 15:35

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.13.2021 10:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147726

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00211	0.00100	0.000214	mg/L	01.13.2021 16:33		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.13.2021 16:33	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.13.2021 16:33	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.13.2021 16:33	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.13.2021 16:33	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.13.2021 16:33	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.13.2021 16:33	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	01.13.2021 16:33	U	1
Sec-Butylbenzene	135-98-8	0.000220	0.00100	0.000199	mg/L	01.13.2021 16:33	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.13.2021 16:33	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.13.2021 16:33	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.13.2021 16:33	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.13.2021 16:33	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.13.2021 16:33	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.13.2021 16:33	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.13.2021 16:33	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.13.2021 16:33	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	01.13.2021 16:33	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.13.2021 16:33	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.13.2021 16:33	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.13.2021 16:33	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.13.2021 16:33	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.13.2021 16:33	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.13.2021 16:33	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.13.2021 16:33	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.13.2021 16:33	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.13.2021 16:33	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.13.2021 16:33	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.13.2021 16:33	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.13.2021 16:33	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.13.2021 16:33	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.13.2021 16:33	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.13.2021 16:33	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.13.2021 16:33	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.13.2021 16:33	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.13.2021 16:33	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.13.2021 16:33	U	1
Ethylbenzene	100-41-4	0.000540	0.00100	0.000146	mg/L	01.13.2021 16:33	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.13.2021 16:33	U	1
Isopropylbenzene	98-82-8	0.000200	0.00100	0.000161	mg/L	01.13.2021 16:33	J	1



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 684397-001

Matrix: Ground Water
Date Collected: 01.12.2021 11:30

Date Received: 01.12.2021 15:35

Analytical Method: VOCs by SW-846 8260C

Tech: DTG

Analyst: DTG

Date Prep: 01.13.2021 10:50

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.13.2021 16:33	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.13.2021 16:33	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.13.2021 16:33	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	01.13.2021 16:33	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.13.2021 16:33	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.13.2021 16:33	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.13.2021 16:33	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.13.2021 16:33	U	1
Toluene	108-88-3	0.000690	0.00100	0.000500	mg/L	01.13.2021 16:33	J	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.13.2021 16:33	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.13.2021 16:33	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.13.2021 16:33	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.13.2021 16:33	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.13.2021 16:33	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.13.2021 16:33	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.13.2021 16:33	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00143	0.00100	0.000252	mg/L	01.13.2021 16:33		1
1,3,5-Trimethylbenzene	108-67-8	0.000670	0.00100	0.000279	mg/L	01.13.2021 16:33	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	01.13.2021 16:33	U	1
m,p-Xylenes	179601-23-1	0.00163	0.0100	0.000330	mg/L	01.13.2021 16:33	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.13.2021 16:33	U	1
Total Xylenes	1330-20-7	0.00163	0.00100	0.000192	mg/L	01.13.2021 16:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	75-131	01.13.2021 16:33	
1,2-Dichloroethane-D4	17060-07-0	102	%	63-144	01.13.2021 16:33	
Toluene-D8	2037-26-5	99	%	80-117	01.13.2021 16:33	
4-Bromofluorobenzene	460-00-4	99	%	74-124	01.13.2021 16:33	



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 684397-002

Matrix: Ground Water
Date Collected: 01.12.2021 12:50

Date Received: 01.12.2021 15:35

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.13.2021 11:25

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147675

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1350	4.00	4.00	mg/L	01.13.2021 12:47		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1350	4.00	4.00	mg/L	01.13.2021 12:47		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.13.2021 12:47	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.13.2021 10:05

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147703

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	5.00	0.738	mg/L	01.13.2021 12:36		10

Analytical Method: pH by SM4500-H

Tech: DTN

Analyst: DTN

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147660

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.20			SU	01.13.2021 14:04	K	1
Temperature	TEMP	13.9			Deg C	01.13.2021 14:04	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147704

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1450	0.370	0.100	mg/L	01.13.2021 12:47		1



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 684397-002

Matrix: Ground Water
Date Collected: 01.12.2021 12:50

Date Received: 01.12.2021 15:35

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3147659

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	11.2	5.00	0.495	mg/L	01.13.2021 12:55		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3147809

Date Prep: 01.14.2021 11:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.64	2.28	0.902	mg/L	01.14.2021 13:41	J	1
Diesel Range Organics (DRO)	C10C28DRO	<0.833	2.28	0.833	mg/L	01.14.2021 13:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.833	2.28	0.833	mg/L	01.14.2021 13:41	U	1
Total TPH	PHC635	1.64	2.28	0.833	mg/L	01.14.2021 13:41	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	01.14.2021 13:41	
o-Terphenyl	84-15-1	79	%	70-135	01.14.2021 13:41	



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 684397-002

Matrix: Ground Water
Date Collected: 01.12.2021 12:50

Date Received: 01.12.2021 15:35

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.13.2021 10:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3147726

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0193	0.00100	0.000214	mg/L	01.13.2021 16:54		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.13.2021 16:54	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.13.2021 16:54	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.13.2021 16:54	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.13.2021 16:54	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.13.2021 16:54	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.13.2021 16:54	U	1
n-Butylbenzene	104-51-8	0.000690	0.00100	0.000286	mg/L	01.13.2021 16:54	J	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	01.13.2021 16:54	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.13.2021 16:54	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.13.2021 16:54	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.13.2021 16:54	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.13.2021 16:54	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.13.2021 16:54	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.13.2021 16:54	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.13.2021 16:54	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.13.2021 16:54	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000710	0.00100	0.000233	mg/L	01.13.2021 16:54	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.13.2021 16:54	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.13.2021 16:54	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.13.2021 16:54	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.13.2021 16:54	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.13.2021 16:54	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.13.2021 16:54	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.13.2021 16:54	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.13.2021 16:54	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.13.2021 16:54	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.13.2021 16:54	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.13.2021 16:54	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.13.2021 16:54	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.13.2021 16:54	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.13.2021 16:54	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.13.2021 16:54	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.13.2021 16:54	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.13.2021 16:54	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.13.2021 16:54	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.13.2021 16:54	U	1
Ethylbenzene	100-41-4	0.0198	0.00100	0.000146	mg/L	01.13.2021 16:54		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.13.2021 16:54	U	1
Isopropylbenzene	98-82-8	0.00756	0.00100	0.000161	mg/L	01.13.2021 16:54		1



Certificate of Analytical Results 684397

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 684397-002

Matrix: Ground Water
Date Collected: 01.12.2021 12:50

Date Received: 01.12.2021 15:35

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.13.2021 10:50

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.13.2021 16:54	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.13.2021 16:54	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.13.2021 16:54	U	1
n-Propylbenzene	103-65-1	0.00242	0.00100	0.000179	mg/L	01.13.2021 16:54		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.13.2021 16:54	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.13.2021 16:54	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.13.2021 16:54	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.13.2021 16:54	U	1
Toluene	108-88-3	0.0185	0.00100	0.000500	mg/L	01.13.2021 16:54		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.13.2021 16:54	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.13.2021 16:54	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.13.2021 16:54	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.13.2021 16:54	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.13.2021 16:54	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.13.2021 16:54	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.13.2021 16:54	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0259	0.00100	0.000252	mg/L	01.13.2021 16:54		1
1,3,5-Trimethylbenzene	108-67-8	0.00698	0.00100	0.000279	mg/L	01.13.2021 16:54		1
o-Xylene	95-47-6	0.0144	0.00100	0.000192	mg/L	01.13.2021 16:54		1
m,p-Xylenes	179601-23-1	0.0922	0.0100	0.000330	mg/L	01.13.2021 16:54		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.13.2021 16:54	U	1
Total Xylenes	1330-20-7	0.107	0.00100	0.000192	mg/L	01.13.2021 16:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	95	%	75-131	01.13.2021 16:54	
1,2-Dichloroethane-D4	17060-07-0	97	%	63-144	01.13.2021 16:54	
Toluene-D8	2037-26-5	98	%	80-117	01.13.2021 16:54	
4-Bromofluorobenzene	460-00-4	104	%	74-124	01.13.2021 16:54	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

MB Sample Id: 7719076-1-BLK

Matrix: Water

LCS Sample Id: 7719076-1-BKS

Prep Method: SM2320P

Date Prep: 01.13.2021

LCSD Sample Id: 7719076-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	258	103	261	104	85-115	1	20	mg/L	01.13.2021 11:49	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

Matrix: Water

MB Sample Id: 7719076-1-BLK

Prep Method: SM2320P

Date Prep: 01.13.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	01.13.2021 11:41	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	01.13.2021 11:41	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

Matrix: Water

Parent Sample Id: 684027-005

MD Sample Id: 684027-005 D

Prep Method: SM2320P

Date Prep: 01.13.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	104	103	1	20	mg/L	01.13.2021 14:04	
Alkalinity, Bicarbonate (as CaCO ₃)	104	103	1	20	mg/L	01.13.2021 14:04	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.13.2021 14:04	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3147675

Matrix: Water

Parent Sample Id: 684085-007

MD Sample Id: 684085-007 D

Prep Method: SM2320P

Date Prep: 01.13.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	927	925	0	20	mg/L	01.13.2021 12:18	
Alkalinity, Bicarbonate (as CaCO ₃)	927	925	0	20	mg/L	01.13.2021 12:18	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.13.2021 12:18	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147703

Matrix: Water

MB Sample Id: 7719046-1-BLK

LCS Sample Id: 7719046-1-BKS

Prep Method: E300P

Date Prep: 01.13.2021

LCSD Sample Id: 7719046-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	10.2	102	10.2	102	90-110	0	20	mg/L	01.13.2021 09:50	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147703

Matrix: Water

Prep Method: E300P

Date Prep: 01.13.2021

Parent Sample Id: 684431-005

MS Sample Id: 684431-005 S

MSD Sample Id: 684431-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2310	200	2550	120	2550	120	90-110	0	20	mg/L	01.13.2021 12:48	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147703

Matrix: Water

Prep Method: E300P

Date Prep: 01.13.2021

Parent Sample Id: 684431-006

MS Sample Id: 684431-006 S

MSD Sample Id: 684431-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2310	200	2530	110	2530	110	90-110	0	20	mg/L	01.13.2021 13:23	

Analytical Method: pH by SM4500-H

Seq Number: 3147660

Matrix: Ground Water

Parent Sample Id: 684397-001

MD Sample Id: 684397-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.42	6.44	0	20	SU	01.13.2021 14:04	
Temperature	14.6	14.0	4	20	Deg C	01.13.2021 14:04	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3147659

Matrix: Water

MB Sample Id: 3147659-1-BLK

LCS Sample Id: 3147659-1-BKS

LCSD Sample Id: 3147659-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	46.0	92	46.2	92	80-120	0	20	mg/L	01.13.2021 12:55	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3147659

Matrix: Water

Parent Sample Id: 684085-007

MS Sample Id: 684085-007 S

MSD Sample Id: 684085-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	41.2	82	42.0	84	80-120	2	20	mg/L	01.13.2021 12:55	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147809

MB Sample Id: 7719173-1-BLK

Matrix: Water

LCS Sample Id: 7719173-1-BKS

Prep Method: SW8015P

Date Prep: 01.14.2021

LCSD Sample Id: 7719173-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.898	90.9	76.1	84	81.0	89	70-135	6	20	mg/L	01.14.2021 12:09	
Diesel Range Organics (DRO)	<0.829	90.9	80.6	89	82.5	91	70-135	2	20	mg/L	01.14.2021 12:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		90		100		70-135	%	01.14.2021 12:09
o-Terphenyl	92		94		99		70-135	%	01.14.2021 12:09

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147809

Matrix: Water

MB Sample Id: 7719173-1-BLK

Prep Method: SW8015P

Date Prep: 01.14.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.831	mg/L	01.14.2021 11:51	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147809

Matrix: Ground Water

Parent Sample Id: 684397-001

MS Sample Id: 684397-001 S

Prep Method: SW8015P

Date Prep: 01.14.2021

MSD Sample Id: 684397-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.894	90.5	74.8	83	80.0	89	70-135	7	20	mg/L	01.14.2021 13:22	
Diesel Range Organics (DRO)	<0.826	90.5	77.3	85	77.0	86	70-135	0	20	mg/L	01.14.2021 13:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		96		70-135	%	01.14.2021 13:22
o-Terphenyl	80		81		70-135	%	01.14.2021 13:22

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.13.2021

MB Sample Id: 7719107-1-BLK

LCS Sample Id: 7719107-1-BKS

LCSD Sample Id: 7719107-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0506	101	0.0495	99	66-142	2	25	mg/L	01.13.2021 12:00	
Bromobenzene	<0.000300	0.0500	0.0509	102	0.0502	100	75-125	1	25	mg/L	01.13.2021 12:00	
Bromochloromethane	<0.000209	0.0500	0.0508	102	0.0504	101	60-140	1	25	mg/L	01.13.2021 12:00	
Bromodichloromethane	<0.000231	0.0500	0.0512	102	0.0500	100	75-125	2	25	mg/L	01.13.2021 12:00	
Bromoform	<0.000630	0.0500	0.0523	105	0.0518	104	75-125	1	25	mg/L	01.13.2021 12:00	
Methyl bromide	<0.00105	0.0500	0.0491	98	0.0485	97	60-140	1	25	mg/L	01.13.2021 12:00	
2-Butanone	<0.00270	0.250	0.209	84	0.224	90	60-140	7	25	mg/L	01.13.2021 12:00	
n-Butylbenzene	<0.000286	0.0500	0.0544	109	0.0519	104	75-125	5	25	mg/L	01.13.2021 12:00	
Sec-Butylbenzene	<0.000199	0.0500	0.0536	107	0.0518	104	75-125	3	25	mg/L	01.13.2021 12:00	
tert-Butylbenzene	<0.000195	0.0500	0.0533	107	0.0508	102	75-125	5	25	mg/L	01.13.2021 12:00	
Carbon Tetrachloride	<0.000423	0.0500	0.0533	107	0.0510	102	62-125	4	25	mg/L	01.13.2021 12:00	
Chlorobenzene	<0.000159	0.0500	0.0513	103	0.0493	99	60-133	4	25	mg/L	01.13.2021 12:00	
Chloroethane	<0.000433	0.0500	0.0464	93	0.0441	88	60-140	5	25	mg/L	01.13.2021 12:00	
Chloroform	<0.000259	0.0500	0.0497	99	0.0486	97	70-130	2	25	mg/L	01.13.2021 12:00	
Methyl Chloride	<0.000318	0.0500	0.0489	98	0.0485	97	60-140	1	25	mg/L	01.13.2021 12:00	
2-Chlorotoluene	<0.000214	0.0500	0.0517	103	0.0495	99	73-125	4	25	mg/L	01.13.2021 12:00	
4-Chlorotoluene	<0.000183	0.0500	0.0520	104	0.0502	100	74-125	4	25	mg/L	01.13.2021 12:00	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0545	109	0.0525	105	75-125	4	25	mg/L	01.13.2021 12:00	
Dibromochloromethane	<0.000739	0.0500	0.0533	107	0.0521	104	73-125	2	25	mg/L	01.13.2021 12:00	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0492	98	0.0506	101	59-125	3	25	mg/L	01.13.2021 12:00	
1,2-Dibromoethane	<0.000337	0.0500	0.0514	103	0.0514	103	73-125	0	25	mg/L	01.13.2021 12:00	
Methylene Bromide	<0.000130	0.0500	0.0496	99	0.0499	100	69-127	1	25	mg/L	01.13.2021 12:00	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0518	104	0.0496	99	75-125	4	25	mg/L	01.13.2021 12:00	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0522	104	0.0503	101	75-125	4	25	mg/L	01.13.2021 12:00	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0518	104	0.0501	100	75-125	3	25	mg/L	01.13.2021 12:00	
Dichlorodifluoromethane	<0.000316	0.0500	0.0496	99	0.0523	105	60-140	5	25	mg/L	01.13.2021 12:00	
1,1-Dichloroethane	<0.000244	0.0500	0.0507	101	0.0494	99	72-125	3	25	mg/L	01.13.2021 12:00	
1,2-Dichloroethane	<0.000285	0.0500	0.0506	101	0.0506	101	68-127	0	25	mg/L	01.13.2021 12:00	
1,1-Dichloroethene	<0.000216	0.0500	0.0541	108	0.0517	103	59-172	5	25	mg/L	01.13.2021 12:00	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0511	102	0.0505	101	75-125	1	25	mg/L	01.13.2021 12:00	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0516	103	0.0500	100	75-125	3	25	mg/L	01.13.2021 12:00	
1,2-Dichloropropane	<0.000396	0.0500	0.0507	101	0.0504	101	74-125	1	25	mg/L	01.13.2021 12:00	
1,3-Dichloropropane	<0.000439	0.0500	0.0510	102	0.0497	99	75-125	3	25	mg/L	01.13.2021 12:00	
2,2-Dichloropropane	<0.000360	0.0500	0.0540	108	0.0526	105	75-125	3	25	mg/L	01.13.2021 12:00	
1,1-Dichloropropene	<0.000481	0.0500	0.0525	105	0.0501	100	75-125	5	25	mg/L	01.13.2021 12:00	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0533	107	0.0524	105	74-125	2	25	mg/L	01.13.2021 12:00	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0532	106	0.0519	104	66-125	2	25	mg/L	01.13.2021 12:00	
Ethylbenzene	<0.000146	0.0500	0.0524	105	0.0497	99	75-125	5	25	mg/L	01.13.2021 12:00	
Hexachlorobutadiene	<0.00200	0.0500	0.0564	113	0.0540	108	75-125	4	25	mg/L	01.13.2021 12:00	
Isopropylbenzene	<0.000161	0.0500	0.0535	107	0.0509	102	75-125	5	25	mg/L	01.13.2021 12:00	
Methylene Chloride	<0.00191	0.0500	0.0455	91	0.0457	91	75-125	0	25	mg/L	01.13.2021 12:00	
MTBE	<0.000571	0.0500	0.0499	100	0.0505	101	65-135	1	25	mg/L	01.13.2021 12:00	
Naphthalene	<0.00200	0.0500	0.0520	104	0.0534	107	70-130	3	25	mg/L	01.13.2021 12:00	
n-Propylbenzene	<0.000179	0.0500	0.0523	105	0.0500	100	75-125	4	25	mg/L	01.13.2021 12:00	
Styrene	<0.000162	0.0500	0.0535	107	0.0511	102	75-125	5	25	mg/L	01.13.2021 12:00	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0526	105	0.0511	102	72-125	3	25	mg/L	01.13.2021 12:00	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0483	97	0.0488	98	74-125	1	25	mg/L	01.13.2021 12:00	
Tetrachloroethylene	<0.000500	0.0500	0.0523	105	0.0495	99	71-125	6	25	mg/L	01.13.2021 12:00	
Toluene	<0.000500	0.0500	0.0551	110	0.0518	104	59-139	6	25	mg/L	01.13.2021 12:00	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0527	105	0.0535	107	75-137	2	25	mg/L	01.13.2021 12:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

MB Sample Id: 7719107-1-BLK

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.13.2021

LCS Sample Id: 7719107-1-BKS

LCSD Sample Id: 7719107-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0534	107	0.0522	104	75-135	2	25	mg/L	01.13.2021 12:00	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0528	106	0.0509	102	75-125	4	25	mg/L	01.13.2021 12:00	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0492	98	0.0483	97	75-127	2	25	mg/L	01.13.2021 12:00	
Trichloroethylene	<0.000424	0.0500	0.0518	104	0.0500	100	62-137	4	25	mg/L	01.13.2021 12:00	
Trichlorofluoromethane	<0.000245	0.0500	0.0538	108	0.0505	101	60-140	6	25	mg/L	01.13.2021 12:00	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0479	96	0.0492	98	75-125	3	25	mg/L	01.13.2021 12:00	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0531	106	0.0513	103	75-125	3	25	mg/L	01.13.2021 12:00	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0531	106	0.0515	103	70-125	3	25	mg/L	01.13.2021 12:00	
o-Xylene	<0.000192	0.0500	0.0529	106	0.0502	100	75-125	5	25	mg/L	01.13.2021 12:00	
m,p-Xylenes	<0.000330	0.100	0.107	107	0.102	102	75-125	5	25	mg/L	01.13.2021 12:00	
Vinyl Chloride	<0.000234	0.0500	0.0516	103	0.0509	102	60-140	1	25	mg/L	01.13.2021 12:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	97		99		99		75-131	%	01.13.2021 12:00
1,2-Dichloroethane-D4	102		98		98		63-144	%	01.13.2021 12:00
Toluene-D8	102		99		98		80-117	%	01.13.2021 12:00
4-Bromofluorobenzene	103		99		101		74-124	%	01.13.2021 12:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 684397-001

MS Sample Id: 684397-001 S

Date Prep: 01.13.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.00211	0.0500	0.0481	92	66-142	mg/L	01.13.2021 13:24	
Bromobenzene	<0.000300	0.0500	0.0467	93	75-125	mg/L	01.13.2021 13:24	
Bromochloromethane	<0.000209	0.0500	0.0456	91	60-140	mg/L	01.13.2021 13:24	
Bromodichloromethane	<0.000231	0.0500	0.0464	93	75-125	mg/L	01.13.2021 13:24	
Bromoform	<0.000630	0.0500	0.0485	97	75-125	mg/L	01.13.2021 13:24	
Methyl bromide	<0.00105	0.0500	0.0431	86	60-140	mg/L	01.13.2021 13:24	
2-Butanone	<0.00270	0.250	0.192	77	60-140	mg/L	01.13.2021 13:24	
n-Butylbenzene	<0.000286	0.0500	0.0484	97	75-125	mg/L	01.13.2021 13:24	
Sec-Butylbenzene	0.000220	0.0500	0.0485	97	75-125	mg/L	01.13.2021 13:24	
tert-Butylbenzene	<0.000195	0.0500	0.0477	95	75-125	mg/L	01.13.2021 13:24	
Carbon Tetrachloride	<0.000423	0.0500	0.0467	93	62-125	mg/L	01.13.2021 13:24	
Chlorobenzene	<0.000159	0.0500	0.0473	95	60-133	mg/L	01.13.2021 13:24	
Chloroethane	<0.000433	0.0500	0.0424	85	60-140	mg/L	01.13.2021 13:24	
Chloroform	<0.000259	0.0500	0.0449	90	70-130	mg/L	01.13.2021 13:24	
Methyl Chloride	<0.000318	0.0500	0.0414	83	60-140	mg/L	01.13.2021 13:24	
2-Chlorotoluene	<0.000214	0.0500	0.0472	94	73-125	mg/L	01.13.2021 13:24	
4-Chlorotoluene	<0.000183	0.0500	0.0481	96	74-125	mg/L	01.13.2021 13:24	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0493	99	75-125	mg/L	01.13.2021 13:24	
Dibromochloromethane	<0.000739	0.0500	0.0484	97	73-125	mg/L	01.13.2021 13:24	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0489	98	59-125	mg/L	01.13.2021 13:24	
1,2-Dibromoethane	<0.000337	0.0500	0.0471	94	73-125	mg/L	01.13.2021 13:24	
Methylene Bromide	<0.000130	0.0500	0.0454	91	69-127	mg/L	01.13.2021 13:24	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0470	94	75-125	mg/L	01.13.2021 13:24	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0482	96	75-125	mg/L	01.13.2021 13:24	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0478	96	75-125	mg/L	01.13.2021 13:24	
Dichlorodifluoromethane	<0.000316	0.0500	0.0427	85	60-140	mg/L	01.13.2021 13:24	
1,1-Dichloroethane	<0.000244	0.0500	0.0459	92	72-125	mg/L	01.13.2021 13:24	
1,2-Dichloroethane	<0.000285	0.0500	0.0459	92	68-127	mg/L	01.13.2021 13:24	
1,1-Dichloroethene	<0.000216	0.0500	0.0474	95	59-172	mg/L	01.13.2021 13:24	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0461	92	75-125	mg/L	01.13.2021 13:24	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0468	94	75-125	mg/L	01.13.2021 13:24	
1,2-Dichloropropane	<0.000396	0.0500	0.0466	93	74-125	mg/L	01.13.2021 13:24	
1,3-Dichloropropane	<0.000439	0.0500	0.0467	93	75-125	mg/L	01.13.2021 13:24	
2,2-Dichloropropane	<0.000360	0.0500	0.0481	96	75-125	mg/L	01.13.2021 13:24	
1,1-Dichloropropene	<0.000481	0.0500	0.0462	92	75-125	mg/L	01.13.2021 13:24	
cis-1,3-Dichloropropene	RPD = 0.000690	0.0500	0.0484	97	74-125	mg/L	01.13.2021 13:24	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0485	97	66-125	mg/L	01.13.2021 13:24	
Ethylbenzene	0.000540	0.0500	0.0473	94	75-125	mg/L	01.13.2021 13:24	
Hexachlorobutadiene	<0.00200	0.0500	0.0504	101	75-125	mg/L	01.13.2021 13:24	
Isopropylbenzene	0.000200	0.0500	0.0482	96	75-125	mg/L	01.13.2021 13:24	
Methylene Chloride	<0.00191	0.0500	0.0401	80	75-125	mg/L	01.13.2021 13:24	
MTBE	<0.000571	0.0500	0.0462	92	65-135	mg/L	01.13.2021 13:24	
Naphthalene	<0.00200	0.0500	0.0520	104	70-130	mg/L	01.13.2021 13:24	
n-Propylbenzene	<0.000179	0.0500	0.0474	95	75-125	mg/L	01.13.2021 13:24	
Styrene	<0.000162	0.0500	0.0485	97	75-125	mg/L	01.13.2021 13:24	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0478	96	72-125	mg/L	01.13.2021 13:24	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0470	94	74-125	mg/L	01.13.2021 13:24	
Tetrachloroethylene	<0.000500	0.0500	0.0465	93	71-125	mg/L	01.13.2021 13:24	
Toluene	0.000690	0.0500	0.0484	95	59-139	mg/L	01.13.2021 13:24	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0527	105	75-137	mg/L	01.13.2021 13:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3147726

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 684397-001

MS Sample Id: 684397-001 S

Date Prep: 01.13.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0502	100	75-135	mg/L	01.13.2021 13:24	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0464	93	75-125	mg/L	01.13.2021 13:24	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0456	91	75-127	mg/L	01.13.2021 13:24	
Trichloroethylene	<0.000424	0.0500	0.0463	93	62-137	mg/L	01.13.2021 13:24	
Trichlorofluoromethane	<0.000245	0.0500	0.0453	91	60-140	mg/L	01.13.2021 13:24	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0509	102	75-125	mg/L	01.13.2021 13:24	
1,2,4-Trimethylbenzene	0.00143	0.0500	0.0499	97	75-125	mg/L	01.13.2021 13:24	
1,3,5-Trimethylbenzene	0.000670	0.0500	0.0493	97	70-125	mg/L	01.13.2021 13:24	
o-Xylene	<0.000192	0.0500	0.0473	95	75-125	mg/L	01.13.2021 13:24	
m,p-Xylenes	0.00163	0.100	0.0981	96	75-125	mg/L	01.13.2021 13:24	
Vinyl Chloride	<0.000234	0.0500	0.0455	91	60-140	mg/L	01.13.2021 13:24	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	97		75-131	%	01.13.2021 13:24
1,2-Dichloroethane-D4	97		63-144	%	01.13.2021 13:24
Toluene-D8	99		80-117	%	01.13.2021 13:24
4-Bromofluorobenzene	101		74-124	%	01.13.2021 13:24

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 508-3333
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1286
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813)

www.xenco.com Page 1 of 1

Chain of Custody

Work Order No.

✓ 0821397

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@ensolum.com

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

Project Name:	South Hobbs	Turn Around	ANALYSIS REQUEST							Work Order Notes
Project Number:	03B1417002	Routine ☐								
P.O. Number:	03B1417002	Rush: 24 Hr								
Sampler's Name:	Shane Diller	Due Date:								
			500 CO2 c							
			76.2							
			00							
			1							

SAMPLE RECEIPT	Temp Blank:		Yes	No	Wet Ice:	Yes	No
	Temperature (°C):	23.8 d. 23 Thermometer ID					
	Received Intact:	Yes No					
	Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		
	Sample Custody Seals:	Yes	No	N/A	Total Containers:		

Number of Containers

Reduced Carbon Dioxide 4

Reduced Sulfide SW-846 #3

SW-846 #8260

SW-846 Method #8015

SW-846 Method #846 3

SW-846 Method 150.

TAT starts the day received by the lab, if received by 4:30pm

[illegible]

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
<i>Circle Method(s) and Metal(s) to be analyzed</i>		TC1P / SPLP 6010:		8RCRA	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U												
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 \$3 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.																																	
		1631 / 245.1 / 7470 / 7471 : Hg																															

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		1/12/04			
					


CUSTODY SEAL
ENVIRONMENTAL SAMPLING SUPPLY
www.essvia.com 800-233-8425

Date: 1-12-21
Signature: [Handwritten Signature]

Inter-Office Shipment

IOS Number : **76271**

Date/Time: 01.12.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

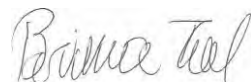
Air Bill No.: 772608611558

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
684397-001	W	MW-1	01.12.2021 11:30	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.13.2021	01.13.2021 11:30	JKR		
684397-001	W	MW-1	01.12.2021 11:30	SM4500-H	pH by SM4500-H	01.13.2021	01.12.2021 11:45	JKR		
684397-001	W	MW-1	01.12.2021 11:30	SM2320B	Alkalinity by SM2320B	01.13.2021	01.26.2021	JKR	ALK ALKB ALKC	
684397-001	W	MW-1	01.12.2021 11:30	SW8260C	VOCs by SW-846 8260C	01.13.2021	01.26.2021	JKR	BDCME BRBZ BRCLME	
684397-001	W	MW-1	01.12.2021 11:30	SM4500SF00	Sulfide by SM4500-S-F	01.13.2021	01.19.2021	JKR	S	
684397-001	W	MW-1	01.12.2021 11:30	E300	Inorganic Anions by EPA 300	01.13.2021	02.09.2021	JKR	CL	
684397-002	W	MW-2	01.12.2021 12:50	SM2320B	Alkalinity by SM2320B	01.13.2021	01.26.2021	JKR	ALK ALKB ALKC	
684397-002	W	MW-2	01.12.2021 12:50	SM4500SF00	Sulfide by SM4500-S-F	01.13.2021	01.19.2021	JKR	S	
684397-002	W	MW-2	01.12.2021 12:50	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.13.2021	01.13.2021 12:50	JKR		
684397-002	W	MW-2	01.12.2021 12:50	E300	Inorganic Anions by EPA 300	01.13.2021	02.09.2021	JKR	CL	
684397-002	W	MW-2	01.12.2021 12:50	SW8260C	VOCs by SW-846 8260C	01.13.2021	01.26.2021	JKR	BDCME BRBZ BRCLME	
684397-002	W	MW-2	01.12.2021 12:50	SM4500-H	pH by SM4500-H	01.13.2021	01.12.2021 13:05	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.12.2021

Received By:



Jhyrom Edralin

Date Received: 01.13.2021

Cooler Temperature: 3.6



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 76271

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.12.2021 03.58 PM

Received By: Jhyrom Edralin

Date Received: 01.13.2021 11.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.13.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.12.2021 03.35.00 PM

Work Order #: 684397

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 01.12.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.13.2021

Certificate of Analysis Summary 685458



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Wed 01.20.2021 16:52
 Report Date: 01.22.2021 18:00
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685458-001	685458-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.20.2021 12:10	01.20.2021 13:25				
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted:	01.22.2021 12:14	01.22.2021 12:14				
	Analyzed:	01.22.2021 13:12	01.22.2021 13:26				
	Units/RL:	mg/L RL	mg/L RL				
Alkalinity, Total (as CaCO3)		1160 4.00	1360 4.00				
Alkalinity, Bicarbonate (as CaCO3)		1160 4.00	1360 4.00				
Alkalinity, Carbonate (as CaCO3)		<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.22.2021 13:12	01.22.2021 13:26				
	Units/RL:	mg/L RL	mg/L RL				
Carbon Dioxide, (Free)		667 K+ 0.370	1390 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-38	Extracted:	01.22.2021 08:20	01.22.2021 08:20				
	Analyzed:	01.22.2021 12:05	01.22.2021 12:29				
	Units/RL:	mg/L RL	mg/L RL				
Chloride		353 0.500	133 0.500				
Sulfide by SM4500-S-F SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.22.2021 13:48	01.22.2021 13:48				
	Units/RL:	mg/L RL	mg/L RL				
Sulfide, total		0.600 J 5.00	9.60 5.00				
TPH by SW8015 Mod	Extracted:	01.21.2021 11:00	01.21.2021 11:00				
	Analyzed:	01.21.2021 12:45	01.21.2021 13:43				
	Units/RL:	mg/L RL	mg/L RL				
Gasoline Range Hydrocarbons (GRO)		<0.889 2.25	<0.907 2.30				
Diesel Range Organics (DRO)		<0.821 2.25	<0.838 2.30				
Motor Oil Range Hydrocarbons (MRO)		<0.821 2.25	<0.838 2.30				
Total TPH		<0.821 2.25	<0.838 2.30				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685458



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685458-001	685458-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.20.2021 12:10	01.20.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.22.2021 16:13	01.22.2021 16:13				
	Analyzed:	*** ** *	*** ** *				
	Units/RL:	mg/L RL	mg/L RL				
Benzene		0.00222 0.00100	0.0229 0.00100				
Bromobenzene		<0.000300 0.00100	<0.000300 0.00100				
Bromochloromethane		<0.000209 0.00100	<0.000209 0.00100				
Bromodichloromethane		<0.000231 0.00100	<0.000231 0.00100				
Bromoform		<0.000630 0.00500	<0.000630 0.00500				
Methyl bromide		<0.00105 0.00500	<0.00105 0.00500				
2-Butanone		<0.00270 0.0500	0.00394 J 0.0500				
n-Butylbenzene		<0.000286 0.00100	0.000400 J 0.00100				
Sec-Butylbenzene		<0.000199 0.00100	<0.000199 0.00100				
tert-Butylbenzene		<0.000195 0.00100	<0.000195 0.00100				
Carbon Tetrachloride		<0.000423 0.00500	<0.000423 0.00500				
Chlorobenzene		<0.000159 0.00100	<0.000159 0.00100				
Chloroethane		<0.000433 0.0100	<0.000433 0.0100				
Chloroform		<0.000259 0.00100	<0.000259 0.00100				
Methyl Chloride		<0.000318 0.0100	<0.000318 0.0100				
2-Chlorotoluene		<0.000214 0.00100	<0.000214 0.00100				
4-Chlorotoluene		<0.000183 0.00100	<0.000183 0.00100				
p-Cymene (p-Isopropyltoluene)		<0.000233 0.00100	0.000470 J 0.00100				
Dibromochloromethane		<0.000739 0.00500	<0.000739 0.00500				
1,2-Dibromo-3-Chloropropane		<0.000319 0.00100	<0.000319 0.00100				
1,2-Dibromoethane		<0.000337 0.00500	<0.000337 0.00500				
Methylene Bromide		<0.000130 0.00100	<0.000130 0.00100				
1,2-Dichlorobenzene		<0.000236 0.00100	<0.000236 0.00100				
1,3-Dichlorobenzene		<0.000197 0.00100	<0.000197 0.00100				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685458



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685458-001	685458-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.20.2021 12:10	01.20.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.22.2021 16:13	01.22.2021 16:13				
	Analyzed:	*** ** *	*** ** *				
	Units/RL:	mg/L RL	mg/L RL				
1,4-Dichlorobenzene		<0.000199 0.00100	<0.000199 0.00100				
Dichlorodifluoromethane		<0.000316 0.00100	<0.000316 0.00100				
1,1-Dichloroethane		<0.000244 0.00100	<0.000244 0.00100				
1,2-Dichloroethane		<0.000285 0.00100	<0.000285 0.00100				
1,1-Dichloroethene		<0.000216 0.00100	<0.000216 0.00100				
cis-1,2-Dichloroethylene		<0.000174 0.00100	<0.000174 0.00100				
trans-1,2-dichloroethylene		<0.000256 0.00100	<0.000256 0.00100				
1,2-Dichloropropane		<0.000396 0.00500	<0.000396 0.00500				
1,3-Dichloropropane		<0.000439 0.00500	<0.000439 0.00500				
2,2-Dichloropropane		<0.000360 0.00500	<0.000360 0.00500				
1,1-Dichloropropene		<0.000481 0.00500	<0.000481 0.00500				
cis-1,3-Dichloropropene		<0.000690 0.00500	<0.000690 0.00500				
trans-1,3-dichloropropene		<0.000752 0.00500	<0.000752 0.00500				
Ethylbenzene		0.000430 J 0.00100	0.0190 0.00100				
Hexachlorobutadiene		<0.00200 0.00500	<0.00200 0.00500				
Isopropylbenzene		0.000210 J 0.00100	0.00640 0.00100				
Methylene Chloride		<0.00191 0.00500	<0.00191 0.00500				
MTBE		<0.000571 0.00500	<0.000571 0.00500				
Naphthalene		<0.00200 0.0100	<0.00200 0.0100				
n-Propylbenzene		<0.000179 0.00100	0.00177 0.00100				
Styrene		<0.000162 0.00100	<0.000162 0.00100				
1,1,1,2-Tetrachloroethane		<0.000327 0.00100	<0.000327 0.00100				
1,1,2,2-Tetrachloroethane		<0.000284 0.00100	<0.000284 0.00100				
Tetrachloroethylene		<0.000500 0.00100	<0.000500 0.00100				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.20.2021 16:52
Report Date: 01.22.2021 18:00
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685458-001	685458-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.20.2021 12:10	01.20.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.22.2021 16:13	01.22.2021 16:13				
	Analyzed:	*** ** *	*** ** *				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0169 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.00140 0.00100	0.0202 0.00100				
	1,3,5-Trimethylbenzene	0.000720 J 0.00100	0.00517 0.00100				
	o-Xylene	<0.000192 0.00100	0.0136 0.00100				
	m,p-Xylenes	0.00137 J 0.0100	0.0829 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00137 0.00100	0.0965 0.00100				
pH by SM4500-H SUB: T104704215-20-38	Extracted:	01.22.2021 15:33	01.22.2021 15:33				
	Analyzed:	01.22.2021 15:33	01.22.2021 15:33				
	Units/RL:	Deg C RL	Deg C RL				
Temperature		17.6 K	18.2 K				
pH by SM4500-H SUB: T104704215-20-38	Extracted:	01.22.2021 15:33	01.22.2021 15:33				
	Analyzed:	01.22.2021 15:33	01.22.2021 15:33				
	Units/RL:	SU RL	SU RL				
pH		6.34 K	6.12 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 685458

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

01.22.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.22.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **685458**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 685458. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 685458 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 685458

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	01.20.2021 12:10		685458-001
MW-2	W	01.20.2021 13:25		685458-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 685458Report Date: 01.22.2021
Date Received: 01.20.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 685458-001

Matrix: Ground Water
Date Collected: 01.20.2021 12:10

Date Received: 01.20.2021 16:52

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.22.2021 12:14

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148653

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1160	4.00	4.00	mg/L	01.22.2021 13:12		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1160	4.00	4.00	mg/L	01.22.2021 13:12		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.22.2021 13:12	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.22.2021 08:20

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148638

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	353	0.500	0.0738	mg/L	01.22.2021 12:05		1

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148654

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.34			SU	01.22.2021 15:33	K	1
Temperature	TEMP	17.6			Deg C	01.22.2021 15:33	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148689

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	667	0.370	0.100	mg/L	01.22.2021 13:12	K+	1



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 685458-001

Matrix: Ground Water
Date Collected: 01.20.2021 12:10

Date Received: 01.20.2021 16:52

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3148645

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	0.600	5.00	0.495	mg/L	01.22.2021 13:48	J	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3148628

Date Prep: 01.21.2021 11:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.889	2.25	0.889	mg/L	01.21.2021 12:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.821	2.25	0.821	mg/L	01.21.2021 12:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.821	2.25	0.821	mg/L	01.21.2021 12:45	U	1
Total TPH	PHC635	<0.821	2.25	0.821	mg/L	01.21.2021 12:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.21.2021 12:45	
o-Terphenyl	84-15-1	122	%	70-135	01.21.2021 12:45	



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 685458-001

Matrix: Ground Water
Date Collected: 01.20.2021 12:10

Date Received: 01.20.2021 16:52

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.22.2021 16:13

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00222	0.00100	0.000214	mg/L	01.22.2021 13:40		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.22.2021 13:40	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.22.2021 13:40	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.22.2021 13:40	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.22.2021 13:40	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.22.2021 13:40	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	01.22.2021 13:40	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	01.22.2021 13:40	U	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	01.22.2021 13:40	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.22.2021 13:40	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.22.2021 13:40	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.22.2021 13:40	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.22.2021 13:40	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.22.2021 13:40	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.22.2021 13:40	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.22.2021 13:40	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.22.2021 13:40	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	01.22.2021 13:40	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.22.2021 13:40	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.22.2021 13:40	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.22.2021 13:40	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.22.2021 13:40	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.22.2021 13:40	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.22.2021 13:40	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.22.2021 13:40	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.22.2021 13:40	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.22.2021 13:40	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.22.2021 13:40	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.22.2021 13:40	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.22.2021 13:40	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.22.2021 13:40	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.22.2021 13:40	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.22.2021 13:40	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.22.2021 13:40	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.22.2021 13:40	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.22.2021 13:40	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.22.2021 13:40	U	1
Ethylbenzene	100-41-4	0.000430	0.00100	0.000146	mg/L	01.22.2021 13:40	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.22.2021 13:40	U	1
Isopropylbenzene	98-82-8	0.000210	0.00100	0.000161	mg/L	01.22.2021 13:40	J	1



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 685458-001

Matrix: Ground Water
Date Collected: 01.20.2021 12:10

Date Received: 01.20.2021 16:52

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.22.2021 16:13

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.22.2021 13:40	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.22.2021 13:40	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.22.2021 13:40	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	01.22.2021 13:40	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.22.2021 13:40	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.22.2021 13:40	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.22.2021 13:40	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.22.2021 13:40	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	01.22.2021 13:40	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.22.2021 13:40	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.22.2021 13:40	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.22.2021 13:40	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.22.2021 13:40	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.22.2021 13:40	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.22.2021 13:40	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.22.2021 13:40	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00140	0.00100	0.000252	mg/L	01.22.2021 13:40		1
1,3,5-Trimethylbenzene	108-67-8	0.000720	0.00100	0.000279	mg/L	01.22.2021 13:40	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	01.22.2021 13:40	U	1
m,p-Xylenes	179601-23-1	0.00137	0.0100	0.000330	mg/L	01.22.2021 13:40	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.22.2021 13:40	U	1
Total Xylenes	1330-20-7	0.00137	0.00100	0.000192	mg/L	01.22.2021 13:40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	75-131	01.22.2021 13:40	
1,2-Dichloroethane-D4	17060-07-0	99	%	63-144	01.22.2021 13:40	
Toluene-D8	2037-26-5	101	%	80-117	01.22.2021 13:40	
4-Bromofluorobenzene	460-00-4	100	%	74-124	01.22.2021 13:40	



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 685458-002

Matrix: Ground Water
Date Collected: 01.20.2021 13:25

Date Received: 01.20.2021 16:52

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.22.2021 12:14

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148653

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1360	4.00	4.00	mg/L	01.22.2021 13:26		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1360	4.00	4.00	mg/L	01.22.2021 13:26		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.22.2021 13:26	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.22.2021 08:20

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148638

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	0.500	0.0738	mg/L	01.22.2021 12:29		1

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148654

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.12			SU	01.22.2021 15:33	K	1
Temperature	TEMP	18.2			Deg C	01.22.2021 15:33	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148689

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1390	0.370	0.100	mg/L	01.22.2021 13:26	K+	1



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 685458-002

Matrix: Ground Water
Date Collected: 01.20.2021 13:25

Date Received: 01.20.2021 16:52

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3148645

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	9.60	5.00	0.495	mg/L	01.22.2021 13:48		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3148628

Date Prep: 01.21.2021 11:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.907	2.30	0.907	mg/L	01.21.2021 13:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.838	2.30	0.838	mg/L	01.21.2021 13:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.838	2.30	0.838	mg/L	01.21.2021 13:43	U	1
Total TPH	PHC635	<0.838	2.30	0.838	mg/L	01.21.2021 13:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.21.2021 13:43	
o-Terphenyl	84-15-1	98	%	70-135	01.21.2021 13:43	



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 685458-002

Matrix: Ground Water
Date Collected: 01.20.2021 13:25

Date Received: 01.20.2021 16:52

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.22.2021 16:13

% Moisture:
SUB: T104704215-20-38

Seq Number: 3148667

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0229	0.00100	0.000214	mg/L	01.22.2021 14:01		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.22.2021 14:01	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.22.2021 14:01	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.22.2021 14:01	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.22.2021 14:01	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.22.2021 14:01	U	1
2-Butanone	78-93-3	0.00394	0.0500	0.00270	mg/L	01.22.2021 14:01	J	1
n-Butylbenzene	104-51-8	0.000400	0.00100	0.000286	mg/L	01.22.2021 14:01	J	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	01.22.2021 14:01	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.22.2021 14:01	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.22.2021 14:01	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.22.2021 14:01	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.22.2021 14:01	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.22.2021 14:01	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.22.2021 14:01	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.22.2021 14:01	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.22.2021 14:01	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000470	0.00100	0.000233	mg/L	01.22.2021 14:01	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.22.2021 14:01	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.22.2021 14:01	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.22.2021 14:01	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.22.2021 14:01	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.22.2021 14:01	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.22.2021 14:01	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.22.2021 14:01	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.22.2021 14:01	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.22.2021 14:01	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.22.2021 14:01	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.22.2021 14:01	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.22.2021 14:01	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.22.2021 14:01	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.22.2021 14:01	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.22.2021 14:01	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.22.2021 14:01	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.22.2021 14:01	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.22.2021 14:01	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.22.2021 14:01	U	1
Ethylbenzene	100-41-4	0.0190	0.00100	0.000146	mg/L	01.22.2021 14:01		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.22.2021 14:01	U	1
Isopropylbenzene	98-82-8	0.00640	0.00100	0.000161	mg/L	01.22.2021 14:01		1



Certificate of Analytical Results 685458

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 685458-002

Matrix: Ground Water
Date Collected: 01.20.2021 13:25

Date Received: 01.20.2021 16:52

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.22.2021 16:13

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.22.2021 14:01	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.22.2021 14:01	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.22.2021 14:01	U	1
n-Propylbenzene	103-65-1	0.00177	0.00100	0.000179	mg/L	01.22.2021 14:01		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.22.2021 14:01	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.22.2021 14:01	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.22.2021 14:01	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.22.2021 14:01	U	1
Toluene	108-88-3	0.0169	0.00100	0.000500	mg/L	01.22.2021 14:01		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.22.2021 14:01	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.22.2021 14:01	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.22.2021 14:01	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.22.2021 14:01	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.22.2021 14:01	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.22.2021 14:01	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.22.2021 14:01	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0202	0.00100	0.000252	mg/L	01.22.2021 14:01		1
1,3,5-Trimethylbenzene	108-67-8	0.00517	0.00100	0.000279	mg/L	01.22.2021 14:01		1
o-Xylene	95-47-6	0.0136	0.00100	0.000192	mg/L	01.22.2021 14:01		1
m,p-Xylenes	179601-23-1	0.0829	0.0100	0.000330	mg/L	01.22.2021 14:01		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.22.2021 14:01	U	1
Total Xylenes	1330-20-7	0.0965	0.00100	0.000192	mg/L	01.22.2021 14:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	01.22.2021 14:01	
1,2-Dichloroethane-D4	17060-07-0	101	%	63-144	01.22.2021 14:01	
Toluene-D8	2037-26-5	100	%	80-117	01.22.2021 14:01	
4-Bromofluorobenzene	460-00-4	105	%	74-124	01.22.2021 14:01	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

MB Sample Id: 7719773-1-BLK

Matrix: Water

LCS Sample Id: 7719773-1-BKS

Prep Method: SM2320P

Date Prep: 01.22.2021

LCSD Sample Id: 7719773-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	263	105	266	106	85-115	1	20	mg/L	01.22.2021 12:37	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

Matrix: Water

MB Sample Id: 7719773-1-BLK

Prep Method: SM2320P

Date Prep: 01.22.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	01.22.2021 12:29	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	01.22.2021 12:29	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

Matrix: Water

Parent Sample Id: 685367-001

MD Sample Id: 685367-001 D

Prep Method: SM2320P

Date Prep: 01.22.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	375	374	0	20	mg/L	01.22.2021 12:59	
Alkalinity, Bicarbonate (as CaCO ₃)	375	374	0	20	mg/L	01.22.2021 12:59	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.22.2021 12:59	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3148653

Matrix: Water

Parent Sample Id: 685390-001

MD Sample Id: 685390-001 D

Prep Method: SM2320P

Date Prep: 01.22.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	284	284	0	20	mg/L	01.22.2021 14:49	
Alkalinity, Bicarbonate (as CaCO ₃)	284	284	0	20	mg/L	01.22.2021 14:49	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	01.22.2021 14:49	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3148638

Matrix: Water

MB Sample Id: 7719736-1-BLK

LCS Sample Id: 7719736-1-BKS

Prep Method: E300P

Date Prep: 01.22.2021

LCSD Sample Id: 7719736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	10.3	103	10.3	103	90-110	0	20	mg/L	01.22.2021 05:57	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3148638

Matrix: Water

Prep Method: E300P

Parent Sample Id: 685610-003

MS Sample Id: 685610-003 S

Date Prep: 01.22.2021

MSD Sample Id: 685610-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2370	200	2600	115	2600	115	90-110	0	20	mg/L	01.22.2021 09:07	X

Analytical Method: pH by SM4500-H

Seq Number: 3148654

Matrix: Water

Parent Sample Id: 685457-001

MD Sample Id: 685457-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.24	6.28	1	20	SU	01.22.2021 15:33	
Temperature	17.7	17.0	4	20	Deg C	01.22.2021 15:33	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3148645

Matrix: Water

MB Sample Id: 3148645-1-BLK

LCS Sample Id: 3148645-1-BKS

LCSD Sample Id: 3148645-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	45.0	90	45.2	90	80-120	0	20	mg/L	01.22.2021 13:48	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3148645

Matrix: Water

Parent Sample Id: 685398-001

MS Sample Id: 685398-001 S

MSD Sample Id: 685398-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	44.0	88	45.2	90	80-120	3	20	mg/L	01.22.2021 13:48	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3148628

Matrix: Water

MB Sample Id: 7719778-1-BLK

LCS Sample Id: 7719778-1-BKS

Prep Method: SW8015P

Date Prep: 01.21.2021

LCSD Sample Id: 7719778-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.897	90.8	82.9	91	76.7	84	70-135	8	20	mg/L	01.21.2021 12:07	
Diesel Range Organics (DRO)	<0.829	90.8	76.6	84	77.0	85	70-135	1	20	mg/L	01.21.2021 12:07	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		102		97		70-135	%	01.21.2021 12:07
o-Terphenyl	104		104		97		70-135	%	01.21.2021 12:07

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3148628

Matrix: Water

Prep Method: SW8015P

Date Prep: 01.21.2021

MB Sample Id: 7719778-1-BLK

Parameter

MB
Result

Units

Analysis
Date

Flag

Motor Oil Range Hydrocarbons (MRO)

<0.822

mg/L

01.21.2021 11:49

Analytical Method: TPH by SW8015 Mod

Seq Number: 3148628

Matrix: Ground Water

Prep Method: SW8015P

Date Prep: 01.21.2021

Parent Sample Id: 685458-001

MS Sample Id: 685458-001 S

MSD Sample Id: 685458-001 SD

Parameter

Parent
ResultSpike
AmountMS
ResultMS
%RecMSD
ResultMSD
%Rec

Limits

%RPD

RPD
Limit

Units

Analysis
Date

Flag

Gasoline Range Hydrocarbons (GRO)

<0.903

91.4

82.3

90

75.1

82

70-135

9

20

mg/L

01.21.2021 13:05

Diesel Range Organics (DRO)

<0.834

91.4

73.6

81

75.7

83

70-135

3

20

mg/L

01.21.2021 13:05

Surrogate

MS
%RecMS
FlagMSD
%RecMSD
Flag

Limits

Units

Analysis
Date

1-Chlorooctane

83

91

70-135

%

01.21.2021 13:05

o-Terphenyl

77

85

70-135

%

01.21.2021 13:05

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

MB Sample Id: 7719804-1-BLK

Matrix: Water

LCS Sample Id: 7719804-1-BKS

Prep Method: SW5030B

Date Prep: 01.22.2021

LCSD Sample Id: 7719804-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0475	95	0.0445	89	66-142	7	25	mg/L	01.22.2021 10:33	
Bromobenzene	<0.000300	0.0500	0.0478	96	0.0460	92	75-125	4	25	mg/L	01.22.2021 10:33	
Bromochloromethane	<0.000209	0.0500	0.0499	100	0.0471	94	60-140	6	25	mg/L	01.22.2021 10:33	
Bromodichloromethane	<0.000231	0.0500	0.0505	101	0.0479	96	75-125	5	25	mg/L	01.22.2021 10:33	
Bromoform	<0.000630	0.0500	0.0511	102	0.0508	102	75-125	1	25	mg/L	01.22.2021 10:33	
Methyl bromide	<0.00105	0.0500	0.0444	89	0.0413	83	60-140	7	25	mg/L	01.22.2021 10:33	
2-Butanone	<0.00270	0.250	0.215	86	0.223	89	60-140	4	25	mg/L	01.22.2021 10:33	
n-Butylbenzene	<0.000286	0.0500	0.0496	99	0.0466	93	75-125	6	25	mg/L	01.22.2021 10:33	
Sec-Butylbenzene	<0.000199	0.0500	0.0491	98	0.0460	92	75-125	7	25	mg/L	01.22.2021 10:33	
tert-Butylbenzene	<0.000195	0.0500	0.0493	99	0.0462	92	75-125	6	25	mg/L	01.22.2021 10:33	
Carbon Tetrachloride	<0.000423	0.0500	0.0488	98	0.0450	90	62-125	8	25	mg/L	01.22.2021 10:33	
Chlorobenzene	<0.000159	0.0500	0.0474	95	0.0449	90	60-133	5	25	mg/L	01.22.2021 10:33	
Chloroethane	<0.000433	0.0500	0.0468	94	0.0425	85	60-140	10	25	mg/L	01.22.2021 10:33	
Chloroform	<0.000259	0.0500	0.0478	96	0.0450	90	70-130	6	25	mg/L	01.22.2021 10:33	
Methyl Chloride	<0.000318	0.0500	0.0463	93	0.0429	86	60-140	8	25	mg/L	01.22.2021 10:33	
2-Chlorotoluene	<0.000214	0.0500	0.0478	96	0.0451	90	73-125	6	25	mg/L	01.22.2021 10:33	
4-Chlorotoluene	<0.000183	0.0500	0.0478	96	0.0455	91	74-125	5	25	mg/L	01.22.2021 10:33	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0494	99	0.0467	93	75-125	6	25	mg/L	01.22.2021 10:33	
Dibromochloromethane	<0.000739	0.0500	0.0514	103	0.0498	100	73-125	3	25	mg/L	01.22.2021 10:33	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0546	109	0.0564	113	59-125	3	25	mg/L	01.22.2021 10:33	
1,2-Dibromoethane	<0.000337	0.0500	0.0479	96	0.0473	95	73-125	1	25	mg/L	01.22.2021 10:33	
Methylene Bromide	<0.000130	0.0500	0.0488	98	0.0475	95	69-127	3	25	mg/L	01.22.2021 10:33	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0482	96	0.0464	93	75-125	4	25	mg/L	01.22.2021 10:33	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0475	95	0.0451	90	75-125	5	25	mg/L	01.22.2021 10:33	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0470	94	0.0451	90	75-125	4	25	mg/L	01.22.2021 10:33	
Dichlorodifluoromethane	<0.000316	0.0500	0.0518	104	0.0468	94	60-140	10	25	mg/L	01.22.2021 10:33	
1,1-Dichloroethane	<0.000244	0.0500	0.0484	97	0.0449	90	72-125	8	25	mg/L	01.22.2021 10:33	
1,2-Dichloroethane	<0.000285	0.0500	0.0484	97	0.0467	93	68-127	4	25	mg/L	01.22.2021 10:33	
1,1-Dichloroethene	<0.000216	0.0500	0.0484	97	0.0438	88	59-172	10	25	mg/L	01.22.2021 10:33	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0481	96	0.0453	91	75-125	6	25	mg/L	01.22.2021 10:33	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0473	95	0.0438	88	75-125	8	25	mg/L	01.22.2021 10:33	
1,2-Dichloropropane	<0.000396	0.0500	0.0492	98	0.0469	94	74-125	5	25	mg/L	01.22.2021 10:33	
1,3-Dichloropropane	<0.000439	0.0500	0.0489	98	0.0482	96	75-125	1	25	mg/L	01.22.2021 10:33	
2,2-Dichloropropane	<0.000360	0.0500	0.0495	99	0.0451	90	75-125	9	25	mg/L	01.22.2021 10:33	
1,1-Dichloropropene	<0.000481	0.0500	0.0482	96	0.0438	88	75-125	10	25	mg/L	01.22.2021 10:33	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0506	101	0.0484	97	74-125	4	25	mg/L	01.22.2021 10:33	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0502	100	0.0495	99	66-125	1	25	mg/L	01.22.2021 10:33	
Ethylbenzene	<0.000146	0.0500	0.0471	94	0.0446	89	75-125	5	25	mg/L	01.22.2021 10:33	
Hexachlorobutadiene	<0.00200	0.0500	0.0484	97	0.0480	96	75-125	1	25	mg/L	01.22.2021 10:33	
Isopropylbenzene	<0.000161	0.0500	0.0485	97	0.0459	92	75-125	6	25	mg/L	01.22.2021 10:33	
Methylene Chloride	<0.00191	0.0500	0.0473	95	0.0444	89	75-125	6	25	mg/L	01.22.2021 10:33	
MTBE	<0.000571	0.0500	0.0503	101	0.0490	98	65-135	3	25	mg/L	01.22.2021 10:33	
Naphthalene	<0.00200	0.0500	0.0630	126	0.0648	130	70-130	3	25	mg/L	01.22.2021 10:33	
n-Propylbenzene	<0.000179	0.0500	0.0480	96	0.0452	90	75-125	6	25	mg/L	01.22.2021 10:33	
Styrene	<0.000162	0.0500	0.0489	98	0.0464	93	75-125	5	25	mg/L	01.22.2021 10:33	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0502	100	0.0478	96	72-125	5	25	mg/L	01.22.2021 10:33	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0491	98	0.0496	99	74-125	1	25	mg/L	01.22.2021 10:33	
Tetrachloroethylene	<0.000500	0.0500	0.0461	92	0.0441	88	71-125	4	25	mg/L	01.22.2021 10:33	
Toluene	<0.000500	0.0500	0.0466	93	0.0439	88	59-139	6	25	mg/L	01.22.2021 10:33	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0628	126	0.0622	124	75-137	1	25	mg/L	01.22.2021 10:33	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

MB Sample Id: 7719804-1-BLK

Matrix: Water

LCS Sample Id: 7719804-1-BKS

Prep Method: SW5030B

Date Prep: 01.22.2021

LCSD Sample Id: 7719804-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0538	108	0.0530	106	75-135	1	25	mg/L	01.22.2021 10:33	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0479	96	0.0446	89	75-125	7	25	mg/L	01.22.2021 10:33	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0495	99	0.0474	95	75-127	4	25	mg/L	01.22.2021 10:33	
Trichloroethylene	<0.000424	0.0500	0.0469	94	0.0438	88	62-137	7	25	mg/L	01.22.2021 10:33	
Trichlorofluoromethane	<0.000245	0.0500	0.0488	98	0.0439	88	60-140	11	25	mg/L	01.22.2021 10:33	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0489	98	0.0492	98	75-125	1	25	mg/L	01.22.2021 10:33	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0488	98	0.0458	92	75-125	6	25	mg/L	01.22.2021 10:33	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0485	97	0.0458	92	70-125	6	25	mg/L	01.22.2021 10:33	
o-Xylene	<0.000192	0.0500	0.0484	97	0.0456	91	75-125	6	25	mg/L	01.22.2021 10:33	
m,p-Xylenes	<0.000330	0.100	0.0954	95	0.0899	90	75-125	6	25	mg/L	01.22.2021 10:33	
Vinyl Chloride	<0.000234	0.0500	0.0477	95	0.0434	87	60-140	9	25	mg/L	01.22.2021 10:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		101		99		75-131	%	01.22.2021 10:33
1,2-Dichloroethane-D4	100		100		100		63-144	%	01.22.2021 10:33
Toluene-D8	102		100		100		80-117	%	01.22.2021 10:33
4-Bromofluorobenzene	99		100		101		74-124	%	01.22.2021 10:33

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.22.2021

Parent Sample Id: 685152-001

MS Sample Id: 685152-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0489	98	66-142	mg/L	01.22.2021 11:34	
Bromobenzene	<0.000300	0.0500	0.0503	101	75-125	mg/L	01.22.2021 11:34	
Bromochloromethane	<0.000209	0.0500	0.0498	100	60-140	mg/L	01.22.2021 11:34	
Bromodichloromethane	<0.000231	0.0500	0.0521	104	75-125	mg/L	01.22.2021 11:34	
Bromoform	<0.000630	0.0500	0.0566	113	75-125	mg/L	01.22.2021 11:34	
Methyl bromide	<0.00105	0.0500	0.0415	83	60-140	mg/L	01.22.2021 11:34	
2-Butanone	<0.00270	0.250	0.198	79	60-140	mg/L	01.22.2021 11:34	
n-Butylbenzene	<0.000286	0.0500	0.0544	109	75-125	mg/L	01.22.2021 11:34	
Sec-Butylbenzene	<0.000199	0.0500	0.0508	102	75-125	mg/L	01.22.2021 11:34	
tert-Butylbenzene	<0.000195	0.0500	0.0531	106	75-125	mg/L	01.22.2021 11:34	
Carbon Tetrachloride	<0.000423	0.0500	0.0517	103	62-125	mg/L	01.22.2021 11:34	
Chlorobenzene	<0.000159	0.0500	0.0497	99	60-133	mg/L	01.22.2021 11:34	
Chloroethane	<0.000433	0.0500	0.0539	108	60-140	mg/L	01.22.2021 11:34	
Chloroform	<0.000259	0.0500	0.0510	102	70-130	mg/L	01.22.2021 11:34	
Methyl Chloride	<0.000318	0.0500	0.0552	110	60-140	mg/L	01.22.2021 11:34	
2-Chlorotoluene	<0.000214	0.0500	0.0504	101	73-125	mg/L	01.22.2021 11:34	
4-Chlorotoluene	<0.000183	0.0500	0.0507	101	74-125	mg/L	01.22.2021 11:34	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0466	93	75-125	mg/L	01.22.2021 11:34	
Dibromochloromethane	<0.000739	0.0500	0.0556	111	73-125	mg/L	01.22.2021 11:34	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0540	108	59-125	mg/L	01.22.2021 11:34	
1,2-Dibromoethane	<0.000337	0.0500	0.0490	98	73-125	mg/L	01.22.2021 11:34	
Methylene Bromide	<0.000130	0.0500	0.0498	100	69-127	mg/L	01.22.2021 11:34	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0510	102	75-125	mg/L	01.22.2021 11:34	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0500	100	75-125	mg/L	01.22.2021 11:34	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0481	96	75-125	mg/L	01.22.2021 11:34	
Dichlorodifluoromethane	<0.000316	0.0500	0.0962	192	60-140	mg/L	01.22.2021 11:34	X
1,1-Dichloroethane	<0.000244	0.0500	0.0550	110	72-125	mg/L	01.22.2021 11:34	
1,2-Dichloroethane	<0.000285	0.0500	0.0502	100	68-127	mg/L	01.22.2021 11:34	
1,1-Dichloroethene	<0.000216	0.0500	0.0520	104	59-172	mg/L	01.22.2021 11:34	
cis-1,2-Dichloroethylene	0.0263	0.0500	0.0806	109	75-125	mg/L	01.22.2021 11:34	
trans-1,2-dichloroethylene	0.000450	0.0500	0.0491	97	75-125	mg/L	01.22.2021 11:34	
1,2-Dichloropropane	<0.000396	0.0500	0.0523	105	74-125	mg/L	01.22.2021 11:34	
1,3-Dichloropropane	<0.000439	0.0500	0.0525	105	75-125	mg/L	01.22.2021 11:34	
2,2-Dichloropropane	<0.000360	0.0500	0.0542	108	75-125	mg/L	01.22.2021 11:34	
1,1-Dichloropropene	<0.000481	0.0500	0.0440	88	75-125	mg/L	01.22.2021 11:34	
cis-1,3-Dichloropropene	RPD = 0.000690	0.0500	0.0538	108	74-125	mg/L	01.22.2021 11:34	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0536	107	66-125	mg/L	01.22.2021 11:34	
Ethylbenzene	<0.000146	0.0500	0.0487	97	75-125	mg/L	01.22.2021 11:34	
Hexachlorobutadiene	<0.00200	0.0500	0.0534	107	75-125	mg/L	01.22.2021 11:34	
Isopropylbenzene	<0.000161	0.0500	0.0489	98	75-125	mg/L	01.22.2021 11:34	
Methylene Chloride	<0.00191	0.0500	0.0479	96	75-125	mg/L	01.22.2021 11:34	
MTBE	0.0125	0.0500	0.0603	96	65-135	mg/L	01.22.2021 11:34	
Naphthalene	<0.00200	0.0500	0.0656	131	70-130	mg/L	01.22.2021 11:34	X
n-Propylbenzene	<0.000179	0.0500	0.0515	103	75-125	mg/L	01.22.2021 11:34	
Styrene	<0.000162	0.0500	0.0425	85	75-125	mg/L	01.22.2021 11:34	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0523	105	72-125	mg/L	01.22.2021 11:34	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0490	98	74-125	mg/L	01.22.2021 11:34	
Tetrachloroethylene	<0.000500	0.0500	0.0487	97	71-125	mg/L	01.22.2021 11:34	
Toluene	<0.000500	0.0500	0.0491	98	59-139	mg/L	01.22.2021 11:34	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0634	127	75-137	mg/L	01.22.2021 11:34	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3148667

Matrix: Water

Prep Method: SW5030B

Parent Sample Id: 685152-001

MS Sample Id: 685152-001 S

Date Prep: 01.22.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0566	113	75-135	mg/L	01.22.2021 11:34	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0522	104	75-125	mg/L	01.22.2021 11:34	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0509	102	75-127	mg/L	01.22.2021 11:34	
Trichloroethylene	0.00629	0.0500	0.0581	104	62-137	mg/L	01.22.2021 11:34	
Trichlorofluoromethane	<0.000245	0.0500	0.0564	113	60-140	mg/L	01.22.2021 11:34	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0503	101	75-125	mg/L	01.22.2021 11:34	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0509	102	75-125	mg/L	01.22.2021 11:34	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0510	102	70-125	mg/L	01.22.2021 11:34	
o-Xylene	<0.000192	0.0500	0.0505	101	75-125	mg/L	01.22.2021 11:34	
m,p-Xylenes	<0.000330	0.100	0.101	101	75-125	mg/L	01.22.2021 11:34	
Vinyl Chloride	0.00122	0.0500	0.0643	126	60-140	mg/L	01.22.2021 11:34	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		75-131	%	01.22.2021 11:34
1,2-Dichloroethane-D4	99		63-144	%	01.22.2021 11:34
Toluene-D8	98		80-117	%	01.22.2021 11:34
4-Bromofluorobenzene	100		74-124	%	01.22.2021 11:34

 MS/MSD Percent Recovery
 Relative Percent Difference
 LCS/LCSD Recovery
 Log Difference

$$[D] = 100 * (C - A) / B$$

$$RPD = 200 * |(C - E) / (C + E)|$$

$$[D] = 100 * (C) / [B]$$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

 LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

 MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No.:

1085458

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
Phoenix, AZ (602) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 392-1550
Hobbs, NM (575) 392-1550

Page 1 of 1

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	

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

[illegible]

SAMPLE RECEIPT			
Temp Blank:	Yes	No	Wet Ice: ☒ Yes ☐ No
Temperature (°C):	Thermometer ID		
Received Inact:	☒ Yes ☐ No	1285	
Cooler Custody Seals:	☒ Yes ☐ No	N/A	
Sample Custody Seals:	Yes	No	Total Containers:

Number of Containers

Red Carbon Dioxide 4500

Red Sulfide SW-846 #376

SW-846 #8260

Method #8015

EPA Method #846 300

SW-846 Method 150.1

TAT starts the day received by the lab
if received by 4:30pm

[illegible]

Total 200.7 / 6010 200,8 / 6020:

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

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
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 774

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 \$750.00 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>	1-20-21 4:50			

Inter-Office Shipment

IOS Number : **76810**

Date/Time: 01.21.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

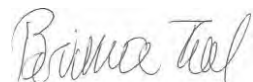
Air Bill No.: 772696408941

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
685458-001	W	MW-1	01.20.2021 12:10	SM4500-H	pH by SM4500-H	01.22.2021	01.20.2021 12:25	JKR		
685458-001	W	MW-1	01.20.2021 12:10	SM2320B	Alkalinity by SM2320B	01.22.2021	02.03.2021	JKR	ALK ALKB ALKC	
685458-001	W	MW-1	01.20.2021 12:10	SW8260C	VOCs by SW-846 8260C	01.22.2021	02.03.2021	JKR	BDCME BRBZ BRCLME	
685458-001	W	MW-1	01.20.2021 12:10	E300	Inorganic Anions by EPA 300	01.22.2021	02.17.2021	JKR	CL	
685458-001	W	MW-1	01.20.2021 12:10	SM4500SF00	Sulfide by SM4500-S-F	01.22.2021	01.27.2021 12:10	JKR	S	
685458-001	W	MW-1	01.20.2021 12:10	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.22.2021	01.21.2021 12:10	JKR		
685458-002	W	MW-2	01.20.2021 13:25	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.22.2021	01.21.2021 13:25	JKR		
685458-002	W	MW-2	01.20.2021 13:25	SM2320B	Alkalinity by SM2320B	01.22.2021	02.03.2021	JKR	ALK ALKB ALKC	
685458-002	W	MW-2	01.20.2021 13:25	SM4500SF00	Sulfide by SM4500-S-F	01.22.2021	01.27.2021 13:25	JKR	S	
685458-002	W	MW-2	01.20.2021 13:25	E300	Inorganic Anions by EPA 300	01.22.2021	02.17.2021	JKR	CL	
685458-002	W	MW-2	01.20.2021 13:25	SW8260C	VOCs by SW-846 8260C	01.22.2021	02.03.2021	JKR	BDCME BRBZ BRCLME	
685458-002	W	MW-2	01.20.2021 13:25	SM4500-H	pH by SM4500-H	01.22.2021	01.20.2021 13:40	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.21.2021

Received By:



Jhyrom Edralin

Date Received: 01.22.2021

Cooler Temperature: 4.7



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 76810

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.21.2021 07.47 AM

Received By: Jhyrom Edralin

Date Received: 01.22.2021 10.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	4.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.22.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.20.2021 04.52.00 PM

Work Order #: 685458

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 01.21.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.21.2021

Certificate of Analysis Summary 686340



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 02.01.2021 16:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 686340-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 01.27.2021 12:00	Lab Id: 686340-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 01.27.2021 13:25				
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.29.2021 12:06 Analyzed: 01.29.2021 13:00 Units/RL: mg/L RL	Extracted: 01.29.2021 12:06 Analyzed: 01.29.2021 13:14 Units/RL: mg/L RL				
Alkalinity, Total (as CaCO3)	1010 4.00	1360 4.00				
Alkalinity, Bicarbonate (as CaCO3)	1010 4.00	1360 4.00				
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 13:00 Units/RL: mg/L RL	Extracted: Analyzed: 01.29.2021 13:14 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	668 K+ 0.370	1600 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-38	Extracted: 01.29.2021 08:20 Analyzed: 01.29.2021 12:57 Units/RL: mg/L RL	Extracted: 01.29.2021 08:20 Analyzed: 01.29.2021 13:09 Units/RL: mg/L RL				
Chloride	334 5.00	140 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 12:24 Units/RL: mg/L RL	Extracted: Analyzed: 01.29.2021 12:24 Units/RL: mg/L RL				
Sulfide, total	0.800 J 5.00	15.0 5.00				
TPH by SW8015 Mod	Extracted: 01.29.2021 08:00 Analyzed: 01.29.2021 13:33 Units/RL: mg/L RL	Extracted: 01.29.2021 08:00 Analyzed: 01.29.2021 14:44 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.909 2.30	1.31 J 2.29				
Diesel Range Organics (DRO)	<0.840 2.30	<0.834 2.29				
Motor Oil Range Hydrocarbons (MRO)	<0.840 2.30	<0.834 2.29				
Total TPH	<0.840 2.30	1.31 J 2.29				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686340

Ensolum, Dallas, TX

Project Name: South Hobbs

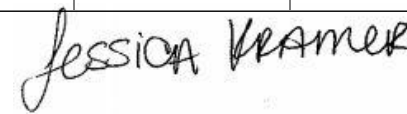
Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
 Report Date: 02.01.2021 16:24
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686340-001	686340-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.27.2021 12:00	01.27.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.29.2021 08:50	01.29.2021 08:50				
	Analyzed:	01.29.2021 14:35	01.29.2021 14:56				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00157	0.00100	0.0298	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		0.00398 J	0.0500	0.00504 J	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.00103	0.00100		
Sec-Butylbenzene		0.000270 J	0.00100	<0.000199	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.00116	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 686340



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 02.01.2021 16:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686340-001	686340-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.27.2021 12:00	01.27.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.29.2021 08:50	01.29.2021 08:50				
	Analyzed:	01.29.2021 14:35	01.29.2021 14:56				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000400 J	0.00100	0.0282	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000210 J	0.00100	0.0117	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00343	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686340



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 02.01.2021 16:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686340-001	686340-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.27.2021 12:00	01.27.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.29.2021 08:50	01.29.2021 08:50				
	Analyzed:	01.29.2021 14:35	01.29.2021 14:56				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0276 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.00153 0.00100	0.0500 0.00100				
	1,3,5-Trimethylbenzene	0.000830 J 0.00100	0.0129 0.00100				
	o-Xylene	<0.000192 0.00100	0.0269 0.00100				
	m,p-Xylenes	0.00123 J 0.0100	0.155 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00123 0.00100	0.182 0.00100				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.29.2021 12:25	01.29.2021 12:25				
	Units/RL:	Deg C RL	Deg C RL				
	Temperature	18.0 K	13.4 K				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.29.2021 12:25	01.29.2021 12:25				
	Units/RL:	SU RL	SU RL				
	pH	6.44 K	6.24 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 686340

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

02.01.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.01.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **686340**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 686340. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 686340 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 686340

Ensolum, Dallas, TX

South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	01.27.2021 12:00		686340-001
MW-2	W	01.27.2021 13:25		686340-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 686340Report Date: 02.01.2021
Date Received: 01.27.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3149586 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 686340-002.



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.29.2021 12:06

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149389

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1010	4.00	4.00	mg/L	01.29.2021 13:00		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1010	4.00	4.00	mg/L	01.29.2021 13:00		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.29.2021 13:00	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.29.2021 08:20

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149384

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	334	5.00	0.738	mg/L	01.29.2021 12:57		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149339

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.44			SU	01.29.2021 12:25	K	1
Temperature	TEMP	18.0			Deg C	01.29.2021 12:25	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149403

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	668	0.370	0.100	mg/L	01.29.2021 13:00	K+	1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3149371

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	0.800	5.00	0.495	mg/L	01.29.2021 12:24	J	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3149586

Date Prep: 01.29.2021 08:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.909	2.30	0.909	mg/L	01.29.2021 13:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.840	2.30	0.840	mg/L	01.29.2021 13:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.840	2.30	0.840	mg/L	01.29.2021 13:33	U	1
Total TPH	PHC635	<0.840	2.30	0.840	mg/L	01.29.2021 13:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	01.29.2021 13:33	
o-Terphenyl	84-15-1	92	%	70-135	01.29.2021 13:33	



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.29.2021 08:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149421

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00157	0.00100	0.000214	mg/L	01.29.2021 14:35		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.29.2021 14:35	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.29.2021 14:35	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.29.2021 14:35	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.29.2021 14:35	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.29.2021 14:35	U	1
2-Butanone	78-93-3	0.00398	0.0500	0.00270	mg/L	01.29.2021 14:35	J	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	01.29.2021 14:35	U	1
Sec-Butylbenzene	135-98-8	0.000270	0.00100	0.000199	mg/L	01.29.2021 14:35	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.29.2021 14:35	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.29.2021 14:35	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.29.2021 14:35	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.29.2021 14:35	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.29.2021 14:35	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.29.2021 14:35	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.29.2021 14:35	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.29.2021 14:35	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	01.29.2021 14:35	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.29.2021 14:35	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.29.2021 14:35	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.29.2021 14:35	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.29.2021 14:35	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.29.2021 14:35	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.29.2021 14:35	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.29.2021 14:35	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.29.2021 14:35	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.29.2021 14:35	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.29.2021 14:35	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.29.2021 14:35	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.29.2021 14:35	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.29.2021 14:35	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.29.2021 14:35	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.29.2021 14:35	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.29.2021 14:35	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.29.2021 14:35	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.29.2021 14:35	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.29.2021 14:35	U	1
Ethylbenzene	100-41-4	0.000400	0.00100	0.000146	mg/L	01.29.2021 14:35	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:35	U	1
Isopropylbenzene	98-82-8	0.000210	0.00100	0.000161	mg/L	01.29.2021 14:35	J	1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.29.2021 08:50

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.29.2021 14:35	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.29.2021 14:35	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.29.2021 14:35	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	01.29.2021 14:35	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.29.2021 14:35	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.29.2021 14:35	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.29.2021 14:35	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.29.2021 14:35	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	01.29.2021 14:35	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:35	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:35	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.29.2021 14:35	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.29.2021 14:35	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.29.2021 14:35	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.29.2021 14:35	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.29.2021 14:35	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00153	0.00100	0.000252	mg/L	01.29.2021 14:35		1
1,3,5-Trimethylbenzene	108-67-8	0.000830	0.00100	0.000279	mg/L	01.29.2021 14:35	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	01.29.2021 14:35	U	1
m,p-Xylenes	179601-23-1	0.00123	0.0100	0.000330	mg/L	01.29.2021 14:35	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.29.2021 14:35	U	1
Total Xylenes	1330-20-7	0.00123	0.00100	0.000192	mg/L	01.29.2021 14:35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	01.29.2021 14:35	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	01.29.2021 14:35	
Toluene-D8	2037-26-5	104	%	80-117	01.29.2021 14:35	
4-Bromofluorobenzene	460-00-4	102	%	74-124	01.29.2021 14:35	



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.29.2021 12:06

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149389

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1360	4.00	4.00	mg/L	01.29.2021 13:14		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1360	4.00	4.00	mg/L	01.29.2021 13:14		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.29.2021 13:14	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.29.2021 08:20

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149384

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	140	5.00	0.738	mg/L	01.29.2021 13:09		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149339

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.24			SU	01.29.2021 12:25	K	1
Temperature	TEMP	13.4			Deg C	01.29.2021 12:25	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149403

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1600	0.370	0.100	mg/L	01.29.2021 13:14	K+	1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3149371

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	15.0	5.00	0.495	mg/L	01.29.2021 12:24		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3149586

Date Prep: 01.29.2021 08:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.31	2.29	0.903	mg/L	01.29.2021 14:44	J	1
Diesel Range Organics (DRO)	C10C28DRO	<0.834	2.29	0.834	mg/L	01.29.2021 14:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.834	2.29	0.834	mg/L	01.29.2021 14:44	U	1
Total TPH	PHC635	1.31	2.29	0.834	mg/L	01.29.2021 14:44	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	65	%	70-135	01.29.2021 14:44	**
o-Terphenyl	84-15-1	72	%	70-135	01.29.2021 14:44	



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.29.2021 08:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149421

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0298	0.00100	0.000214	mg/L	01.29.2021 14:56		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.29.2021 14:56	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.29.2021 14:56	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.29.2021 14:56	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.29.2021 14:56	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.29.2021 14:56	U	1
2-Butanone	78-93-3	0.00504	0.0500	0.00270	mg/L	01.29.2021 14:56	J	1
n-Butylbenzene	104-51-8	0.00103	0.00100	0.000286	mg/L	01.29.2021 14:56		1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	01.29.2021 14:56	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.29.2021 14:56	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.29.2021 14:56	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.29.2021 14:56	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.29.2021 14:56	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.29.2021 14:56	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.29.2021 14:56	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.29.2021 14:56	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.29.2021 14:56	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00116	0.00100	0.000233	mg/L	01.29.2021 14:56		1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.29.2021 14:56	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.29.2021 14:56	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.29.2021 14:56	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.29.2021 14:56	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.29.2021 14:56	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.29.2021 14:56	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.29.2021 14:56	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.29.2021 14:56	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.29.2021 14:56	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.29.2021 14:56	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.29.2021 14:56	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.29.2021 14:56	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.29.2021 14:56	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.29.2021 14:56	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.29.2021 14:56	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.29.2021 14:56	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.29.2021 14:56	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.29.2021 14:56	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.29.2021 14:56	U	1
Ethylbenzene	100-41-4	0.0282	0.00100	0.000146	mg/L	01.29.2021 14:56		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:56	U	1
Isopropylbenzene	98-82-8	0.0117	0.00100	0.000161	mg/L	01.29.2021 14:56		1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.29.2021 08:50

SUB: T104704215-20-38

Seq Number: 3149421

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.29.2021 14:56	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.29.2021 14:56	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.29.2021 14:56	U	1
n-Propylbenzene	103-65-1	0.00343	0.00100	0.000179	mg/L	01.29.2021 14:56		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.29.2021 14:56	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.29.2021 14:56	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.29.2021 14:56	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.29.2021 14:56	U	1
Toluene	108-88-3	0.0276	0.00100	0.000500	mg/L	01.29.2021 14:56		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:56	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:56	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.29.2021 14:56	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.29.2021 14:56	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.29.2021 14:56	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.29.2021 14:56	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.29.2021 14:56	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0500	0.00100	0.000252	mg/L	01.29.2021 14:56		1
1,3,5-Trimethylbenzene	108-67-8	0.0129	0.00100	0.000279	mg/L	01.29.2021 14:56		1
o-Xylene	95-47-6	0.0269	0.00100	0.000192	mg/L	01.29.2021 14:56		1
m,p-Xylenes	179601-23-1	0.155	0.0100	0.000330	mg/L	01.29.2021 14:56		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.29.2021 14:56	U	1
Total Xylenes	1330-20-7	0.182	0.00100	0.000192	mg/L	01.29.2021 14:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	75-131	01.29.2021 14:56	
1,2-Dichloroethane-D4	17060-07-0	104	%	63-144	01.29.2021 14:56	
Toluene-D8	2037-26-5	102	%	80-117	01.29.2021 14:56	
4-Bromofluorobenzene	460-00-4	104	%	74-124	01.29.2021 14:56	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

MB Sample Id: 7720339-1-BLK

Matrix: Water

LCS Sample Id: 7720339-1-BKS

Prep Method: SM2320P

Date Prep: 01.29.2021

LCSD Sample Id: 7720339-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	258	103	261	104	85-115	1	20	mg/L	01.29.2021 12:28	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

MB Sample Id: 7720339-1-BLK

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

Parent Sample Id: 685548-001

MD Sample Id: 685548-001 D

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	211	209	1	20	mg/L	01.29.2021 12:48	
Alkalinity, Bicarbonate (as CaCO3)	211	209	1	20	mg/L	01.29.2021 12:48	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 12:48	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

Parent Sample Id: 686047-003

MD Sample Id: 686047-003 D

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	136	136	0	20	mg/L	01.29.2021 14:30	
Alkalinity, Bicarbonate (as CaCO3)	136	136	0	20	mg/L	01.29.2021 14:30	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 14:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3149384

Matrix: Water

MB Sample Id: 7720271-1-BLK

LCS Sample Id: 7720271-1-BKS

Prep Method: E300P

Date Prep: 01.29.2021

LCSD Sample Id: 7720271-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	9.91	99	9.92	99	90-110	0	20	mg/L	01.29.2021 07:12	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3149384

Parent Sample Id: 686554-003

Matrix: Water

MS Sample Id: 686554-003 S

Prep Method: E300P

Date Prep: 01.29.2021

MSD Sample Id: 686554-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.0	10.0	21.5	105	21.4	104	90-110	0	20	mg/L	01.29.2021 09:12	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3149384

Parent Sample Id: 686554-005

Matrix: Water

MS Sample Id: 686554-005 S

Prep Method: E300P

Date Prep: 01.29.2021

MSD Sample Id: 686554-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	124	10.0	131	70	131	70	90-110	0	20	mg/L	01.29.2021 11:11	X

Analytical Method: pH by SM4500-H

Seq Number: 3149339

Parent Sample Id: 686339-001

Matrix: Water

MD Sample Id: 686339-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.38	6.44	1	20	SU	01.29.2021 12:25	
Temperature	11.4	11.8	3	20	Deg C	01.29.2021 12:25	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3149371

MB Sample Id: 3149371-1-BLK

Matrix: Water

LCS Sample Id: 3149371-1-BKS

LCSD Sample Id: 3149371-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	42.4	85	42.4	85	80-120	0	20	mg/L	01.29.2021 12:24	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3149371

Parent Sample Id: 686340-001

Matrix: Ground Water

MS Sample Id: 686340-001 S

MSD Sample Id: 686340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	0.800	50.0	41.6	82	42.0	82	80-120	1	20	mg/L	01.29.2021 12:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3149586

MB Sample Id: 7720316-1-BLK

Matrix: Water

LCS Sample Id: 7720316-1-BKS

Prep Method: SW8015P

Date Prep: 01.29.2021

LCSD Sample Id: 7720316-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.899	91.0	85.7	94	90.4	99	70-135	5	20	mg/L	01.29.2021 12:51	
Diesel Range Organics (DRO)	<0.830	91.0	81.4	89	83.7	92	70-135	3	20	mg/L	01.29.2021 12:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		92		102		70-135	%	01.29.2021 12:51
o-Terphenyl	80		91		96		70-135	%	01.29.2021 12:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3149586

Matrix: Water

MB Sample Id: 7720316-1-BLK

Prep Method: SW8015P

Date Prep: 01.29.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.830	mg/L	01.29.2021 12:30	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3149586

Matrix: Ground Water

Parent Sample Id: 686340-001

MS Sample Id: 686340-001 S

Prep Method: SW8015P

Date Prep: 01.29.2021

MSD Sample Id: 686340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.894	90.5	75.5	83	82.5	91	70-135	9	20	mg/L	01.29.2021 13:54	
Diesel Range Organics (DRO)	<0.826	90.5	69.3	77	74.4	82	70-135	7	20	mg/L	01.29.2021 13:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	70		78		70-135	%	01.29.2021 13:54
o-Terphenyl	77		87		70-135	%	01.29.2021 13:54

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.29.2021

MB Sample Id: 7720358-1-BLK

LCS Sample Id: 7720358-1-BKS

LCSD Sample Id: 7720358-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0476	95	0.0460	92	66-142	3	25	mg/L	01.29.2021 10:23	
Bromobenzene	<0.000300	0.0500	0.0509	102	0.0500	100	75-125	2	25	mg/L	01.29.2021 10:23	
Bromochloromethane	<0.000209	0.0500	0.0489	98	0.0487	97	60-140	0	25	mg/L	01.29.2021 10:23	
Bromodichloromethane	<0.000231	0.0500	0.0486	97	0.0477	95	75-125	2	25	mg/L	01.29.2021 10:23	
Bromoform	<0.000630	0.0500	0.0530	106	0.0516	103	75-125	3	25	mg/L	01.29.2021 10:23	
Methyl bromide	<0.00105	0.0500	0.0455	91	0.0426	85	60-140	7	25	mg/L	01.29.2021 10:23	
2-Butanone	<0.00270	0.250	0.210	84	0.220	88	60-140	5	25	mg/L	01.29.2021 10:23	
n-Butylbenzene	<0.000286	0.0500	0.0523	105	0.0506	101	75-125	3	25	mg/L	01.29.2021 10:23	
Sec-Butylbenzene	<0.000199	0.0500	0.0523	105	0.0506	101	75-125	3	25	mg/L	01.29.2021 10:23	
tert-Butylbenzene	<0.000195	0.0500	0.0520	104	0.0503	101	75-125	3	25	mg/L	01.29.2021 10:23	
Carbon Tetrachloride	<0.000423	0.0500	0.0474	95	0.0454	91	62-125	4	25	mg/L	01.29.2021 10:23	
Chlorobenzene	<0.000159	0.0500	0.0497	99	0.0474	95	60-133	5	25	mg/L	01.29.2021 10:23	
Chloroethane	<0.000433	0.0500	0.0486	97	0.0458	92	60-140	6	25	mg/L	01.29.2021 10:23	
Chloroform	<0.000259	0.0500	0.0468	94	0.0456	91	70-130	3	25	mg/L	01.29.2021 10:23	
Methyl Chloride	<0.000318	0.0500	0.0440	88	0.0436	87	60-140	1	25	mg/L	01.29.2021 10:23	
2-Chlorotoluene	<0.000214	0.0500	0.0507	101	0.0494	99	73-125	3	25	mg/L	01.29.2021 10:23	
4-Chlorotoluene	<0.000183	0.0500	0.0515	103	0.0496	99	74-125	4	25	mg/L	01.29.2021 10:23	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0528	106	0.0509	102	75-125	4	25	mg/L	01.29.2021 10:23	
Dibromochloromethane	<0.000739	0.0500	0.0528	106	0.0511	102	73-125	3	25	mg/L	01.29.2021 10:23	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0539	108	0.0542	108	59-125	1	25	mg/L	01.29.2021 10:23	
1,2-Dibromoethane	<0.000337	0.0500	0.0513	103	0.0502	100	73-125	2	25	mg/L	01.29.2021 10:23	
Methylene Bromide	<0.000130	0.0500	0.0493	99	0.0483	97	69-127	2	25	mg/L	01.29.2021 10:23	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0513	103	0.0499	100	75-125	3	25	mg/L	01.29.2021 10:23	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0511	102	0.0494	99	75-125	3	25	mg/L	01.29.2021 10:23	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0513	103	0.0495	99	75-125	4	25	mg/L	01.29.2021 10:23	
Dichlorodifluoromethane	<0.000316	0.0500	0.0483	97	0.0461	92	60-140	5	25	mg/L	01.29.2021 10:23	
1,1-Dichloroethane	<0.000244	0.0500	0.0466	93	0.0458	92	72-125	2	25	mg/L	01.29.2021 10:23	
1,2-Dichloroethane	<0.000285	0.0500	0.0483	97	0.0475	95	68-127	2	25	mg/L	01.29.2021 10:23	
1,1-Dichloroethene	<0.000216	0.0500	0.0472	94	0.0448	90	59-172	5	25	mg/L	01.29.2021 10:23	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0466	93	0.0462	92	75-125	1	25	mg/L	01.29.2021 10:23	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0458	92	0.0442	88	75-125	4	25	mg/L	01.29.2021 10:23	
1,2-Dichloropropane	<0.000396	0.0500	0.0485	97	0.0473	95	74-125	3	25	mg/L	01.29.2021 10:23	
1,3-Dichloropropane	<0.000439	0.0500	0.0506	101	0.0494	99	75-125	2	25	mg/L	01.29.2021 10:23	
2,2-Dichloropropane	<0.000360	0.0500	0.0477	95	0.0452	90	75-125	5	25	mg/L	01.29.2021 10:23	
1,1-Dichloropropene	<0.000481	0.0500	0.0464	93	0.0445	89	75-125	4	25	mg/L	01.29.2021 10:23	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0503	101	0.0490	98	74-125	3	25	mg/L	01.29.2021 10:23	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0532	106	0.0514	103	66-125	3	25	mg/L	01.29.2021 10:23	
Ethylbenzene	<0.000146	0.0500	0.0495	99	0.0471	94	75-125	5	25	mg/L	01.29.2021 10:23	
Hexachlorobutadiene	<0.00200	0.0500	0.0501	100	0.0482	96	75-125	4	25	mg/L	01.29.2021 10:23	
Isopropylbenzene	<0.000161	0.0500	0.0504	101	0.0477	95	75-125	6	25	mg/L	01.29.2021 10:23	
Methylene Chloride	<0.00191	0.0500	0.0470	94	0.0461	92	75-125	2	25	mg/L	01.29.2021 10:23	
MTBE	<0.000571	0.0500	0.0490	98	0.0488	98	65-135	0	25	mg/L	01.29.2021 10:23	
Naphthalene	<0.00200	0.0500	0.0514	103	0.0514	103	70-130	0	25	mg/L	01.29.2021 10:23	
n-Propylbenzene	<0.000179	0.0500	0.0513	103	0.0496	99	75-125	3	25	mg/L	01.29.2021 10:23	
Styrene	<0.000162	0.0500	0.0496	99	0.0476	95	75-125	4	25	mg/L	01.29.2021 10:23	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0513	103	0.0498	100	72-125	3	25	mg/L	01.29.2021 10:23	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0524	105	0.0535	107	74-125	2	25	mg/L	01.29.2021 10:23	
Tetrachloroethylene	<0.000500	0.0500	0.0474	95	0.0454	91	71-125	4	25	mg/L	01.29.2021 10:23	
Toluene	<0.000500	0.0500	0.0487	97	0.0466	93	59-139	4	25	mg/L	01.29.2021 10:23	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0489	98	0.0467	93	75-137	5	25	mg/L	01.29.2021 10:23	

MS/MSD Percent Recovery
Relative Percent Difference
Log/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

MB Sample Id: 7720358-1-BLK

Matrix: Water

LCS Sample Id: 7720358-1-BKS

Prep Method: SW5030B

Date Prep: 01.29.2021

LCSD Sample Id: 7720358-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0515	103	0.0490	98	75-135	5	25	mg/L	01.29.2021 10:23	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0466	93	0.0449	90	75-125	4	25	mg/L	01.29.2021 10:23	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0505	101	0.0495	99	75-127	2	25	mg/L	01.29.2021 10:23	
Trichloroethylene	<0.000424	0.0500	0.0474	95	0.0452	90	62-137	5	25	mg/L	01.29.2021 10:23	
Trichlorofluoromethane	<0.000245	0.0500	0.0457	91	0.0440	88	60-140	4	25	mg/L	01.29.2021 10:23	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0537	107	0.0535	107	75-125	0	25	mg/L	01.29.2021 10:23	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0522	104	0.0512	102	75-125	2	25	mg/L	01.29.2021 10:23	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0521	104	0.0507	101	70-125	3	25	mg/L	01.29.2021 10:23	
o-Xylene	<0.000192	0.0500	0.0502	100	0.0483	97	75-125	4	25	mg/L	01.29.2021 10:23	
m,p-Xylenes	<0.000330	0.100	0.0995	100	0.0952	95	75-125	4	25	mg/L	01.29.2021 10:23	
Vinyl Chloride	<0.000234	0.0500	0.0432	86	0.0421	84	60-140	3	25	mg/L	01.29.2021 10:23	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	98		99		100		75-131			%	01.29.2021 10:23	
1,2-Dichloroethane-D4	101		101		100		63-144			%	01.29.2021 10:23	
Toluene-D8	104		103		101		80-117			%	01.29.2021 10:23	
4-Bromofluorobenzene	105		101		103		74-124			%	01.29.2021 10:23	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Parent Sample Id: 686308-005

Matrix: Water

MS Sample Id: 686308-005 S

Prep Method: SW5030B

Date Prep: 01.29.2021

MSD Sample Id: 686308-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0486	97	0.0467	93	66-142	4	25	mg/L	01.29.2021 11:47	
Bromobenzene	<0.000300	0.0500	0.0541	108	0.0487	97	75-125	11	25	mg/L	01.29.2021 11:47	
Bromochloromethane	<0.000209	0.0500	0.0509	102	0.0502	100	60-140	1	25	mg/L	01.29.2021 11:47	
Bromodichloromethane	<0.000231	0.0500	0.0518	104	0.0500	100	75-125	4	25	mg/L	01.29.2021 11:47	
Bromoform	<0.000630	0.0500	0.0624	125	0.0588	118	75-125	6	25	mg/L	01.29.2021 11:47	
Methyl bromide	<0.00105	0.0500	0.0393	79	0.0419	84	60-140	6	25	mg/L	01.29.2021 11:47	
2-Butanone	<0.00270	0.250	0.229	92	0.230	92	60-140	0	25	mg/L	01.29.2021 11:47	
n-Butylbenzene	<0.000286	0.0500	0.0575	115	0.0515	103	75-125	11	25	mg/L	01.29.2021 11:47	
Sec-Butylbenzene	<0.000199	0.0500	0.0546	109	0.0486	97	75-125	12	25	mg/L	01.29.2021 11:47	
tert-Butylbenzene	<0.000195	0.0500	0.0571	114	0.0513	103	75-125	11	25	mg/L	01.29.2021 11:47	
Carbon Tetrachloride	<0.000423	0.0500	0.0491	98	0.0478	96	62-125	3	25	mg/L	01.29.2021 11:47	
Chlorobenzene	<0.000159	0.0500	0.0518	104	0.0498	100	60-133	4	25	mg/L	01.29.2021 11:47	
Chloroethane	<0.000433	0.0500	0.0542	108	0.0509	102	60-140	6	25	mg/L	01.29.2021 11:47	
Chloroform	<0.000259	0.0500	0.0501	100	0.0489	98	70-130	2	25	mg/L	01.29.2021 11:47	
Methyl Chloride	<0.000318	0.0500	0.0504	101	0.0523	105	60-140	4	25	mg/L	01.29.2021 11:47	
2-Chlorotoluene	<0.000214	0.0500	0.0549	110	0.0496	99	73-125	10	25	mg/L	01.29.2021 11:47	
4-Chlorotoluene	<0.000183	0.0500	0.0550	110	0.0496	99	74-125	10	25	mg/L	01.29.2021 11:47	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0508	102	0.0448	90	75-125	13	25	mg/L	01.29.2021 11:47	
Dibromochloromethane	<0.000739	0.0500	0.0582	116	0.0558	112	73-125	4	25	mg/L	01.29.2021 11:47	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0616	123	0.0554	111	59-125	11	25	mg/L	01.29.2021 11:47	
1,2-Dibromoethane	<0.000337	0.0500	0.0545	109	0.0530	106	73-125	3	25	mg/L	01.29.2021 11:47	
Methylene Bromide	<0.000130	0.0500	0.0520	104	0.0503	101	69-127	3	25	mg/L	01.29.2021 11:47	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0566	113	0.0507	101	75-125	11	25	mg/L	01.29.2021 11:47	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0552	110	0.0487	97	75-125	13	25	mg/L	01.29.2021 11:47	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0529	106	0.0477	95	75-125	10	25	mg/L	01.29.2021 11:47	
Dichlorodifluoromethane	<0.000316	0.0500	0.0684	137	0.0706	141	60-140	3	25	mg/L	01.29.2021 11:47	X
1,1-Dichloroethane	<0.000244	0.0500	0.0535	107	0.0525	105	72-125	2	25	mg/L	01.29.2021 11:47	
1,2-Dichloroethane	<0.000285	0.0500	0.0517	103	0.0499	100	68-127	4	25	mg/L	01.29.2021 11:47	
1,1-Dichloroethene	<0.000216	0.0500	0.0474	95	0.0459	92	59-172	3	25	mg/L	01.29.2021 11:47	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0490	98	0.0475	95	75-125	3	25	mg/L	01.29.2021 11:47	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0462	92	0.0461	92	75-125	0	25	mg/L	01.29.2021 11:47	
1,2-Dichloropropane	<0.000396	0.0500	0.0524	105	0.0500	100	74-125	5	25	mg/L	01.29.2021 11:47	
1,3-Dichloropropane	<0.000439	0.0500	0.0561	112	0.0541	108	75-125	4	25	mg/L	01.29.2021 11:47	
2,2-Dichloropropane	<0.000360	0.0500	0.0507	101	0.0496	99	75-125	2	25	mg/L	01.29.2021 11:47	
1,1-Dichloropropene	<0.000481	0.0500	0.0416	83	0.0408	82	75-125	2	25	mg/L	01.29.2021 11:47	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0534	107	0.0517	103	74-125	3	25	mg/L	01.29.2021 11:47	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0576	115	0.0553	111	66-125	4	25	mg/L	01.29.2021 11:47	
Ethylbenzene	<0.000146	0.0500	0.0508	102	0.0479	96	75-125	6	25	mg/L	01.29.2021 11:47	
Hexachlorobutadiene	<0.00200	0.0500	0.0553	111	0.0494	99	75-125	11	25	mg/L	01.29.2021 11:47	
Isopropylbenzene	<0.000161	0.0500	0.0504	101	0.0478	96	75-125	5	25	mg/L	01.29.2021 11:47	
Methylene Chloride	<0.00191	0.0500	0.0478	96	0.0470	94	75-125	2	25	mg/L	01.29.2021 11:47	
MTBE	<0.000571	0.0500	0.0513	103	0.0509	102	65-135	1	25	mg/L	01.29.2021 11:47	
Naphthalene	<0.00200	0.0500	0.0634	127	0.0544	109	70-130	15	25	mg/L	01.29.2021 11:47	
n-Propylbenzene	<0.000179	0.0500	0.0557	111	0.0498	100	75-125	11	25	mg/L	01.29.2021 11:47	
Styrene	<0.000162	0.0500	0.0106	21	0.0111	22	75-125	5	25	mg/L	01.29.2021 11:47	X
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0547	109	0.0526	105	72-125	4	25	mg/L	01.29.2021 11:47	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0585	117	0.0541	108	74-125	8	25	mg/L	01.29.2021 11:47	
Tetrachloroethylene	<0.000500	0.0500	0.0489	98	0.0456	91	71-125	7	25	mg/L	01.29.2021 11:47	
Toluene	<0.000500	0.0500	0.0511	102	0.0488	98	59-139	5	25	mg/L	01.29.2021 11:47	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0567	113	0.0481	96	75-137	16	25	mg/L	01.29.2021 11:47	

MS/MSD Percent Recovery
Relative Percent Difference
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Parent Sample Id: 686308-005

Matrix: Water

MS Sample Id: 686308-005 S

Prep Method: SW5030B

Date Prep: 01.29.2021

MSD Sample Id: 686308-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0571	114	0.0501	100	75-135	13	25	mg/L	01.29.2021 11:47	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0505	101	0.0491	98	75-125	3	25	mg/L	01.29.2021 11:47	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0555	111	0.0527	105	75-127	5	25	mg/L	01.29.2021 11:47	
Trichloroethylene	<0.000424	0.0500	0.0496	99	0.0484	97	62-137	2	25	mg/L	01.29.2021 11:47	
Trichlorofluoromethane	<0.000245	0.0500	0.0491	98	0.0506	101	60-140	3	25	mg/L	01.29.2021 11:47	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0611	122	0.0549	110	75-125	11	25	mg/L	01.29.2021 11:47	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0563	113	0.0507	101	75-125	10	25	mg/L	01.29.2021 11:47	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0560	112	0.0497	99	70-125	12	25	mg/L	01.29.2021 11:47	
o-Xylene	<0.000192	0.0500	0.0526	105	0.0501	100	75-125	5	25	mg/L	01.29.2021 11:47	
m,p-Xylenes	<0.000330	0.100	0.104	104	0.0990	99	75-125	5	25	mg/L	01.29.2021 11:47	
Vinyl Chloride	<0.000234	0.0500	0.0525	105	0.0548	110	60-140	4	25	mg/L	01.29.2021 11:47	

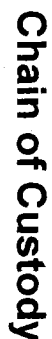
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		99		75-131	%	01.29.2021 11:47
1,2-Dichloroethane-D4	101		99		63-144	%	01.29.2021 11:47
Toluene-D8	103		101		80-117	%	01.29.2021 11:47
4-Bromofluorobenzene	102		100		74-124	%	01.29.2021 11:47

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Work Order No: 686340

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

[illegible]

of service. Xencro 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 Xencro. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated. Notice: Signature of this document relinquishment of samples constitutes a valid purchase order from client company to Xencro, its affiliates and subcontractors. It assigns standard terms and conditions to Xencro.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/21/08			
3						
5						

Inter-Office Shipment

IOS Number : **77214**

Date/Time: 01.28.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

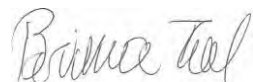
Air Bill No.: 772761771126

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
686340-001	W	MW-1	01.27.2021 12:00	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.28.2021	01.28.2021 12:00	JKR		
686340-001	W	MW-1	01.27.2021 12:00	SM4500-H	pH by SM4500-H	01.28.2021	01.27.2021 12:00	JKR		
686340-001	W	MW-1	01.27.2021 12:00	SM2320B	Alkalinity by SM2320B	01.28.2021	02.10.2021	JKR	ALK ALKB ALKC	
686340-001	W	MW-1	01.27.2021 12:00	SW8260C	VOCs by SW-846 8260C	01.28.2021	02.10.2021	JKR	BDCME BRBZ BRCLME	
686340-001	W	MW-1	01.27.2021 12:00	SM4500SF00	Sulfide by SM4500-S-F	01.28.2021	02.03.2021 12:00	JKR	S	
686340-001	W	MW-1	01.27.2021 12:00	E300	Inorganic Anions by EPA 300	01.28.2021	02.24.2021	JKR	CL	
686340-002	W	MW-2	01.27.2021 13:25	SM2320B	Alkalinity by SM2320B	01.28.2021	02.10.2021	JKR	ALK ALKB ALKC	
686340-002	W	MW-2	01.27.2021 13:25	SM4500SF00	Sulfide by SM4500-S-F	01.28.2021	02.03.2021 13:25	JKR	S	
686340-002	W	MW-2	01.27.2021 13:25	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.28.2021	01.28.2021 13:25	JKR		
686340-002	W	MW-2	01.27.2021 13:25	E300	Inorganic Anions by EPA 300	01.28.2021	02.24.2021	JKR	CL	
686340-002	W	MW-2	01.27.2021 13:25	SW8260C	VOCs by SW-846 8260C	01.28.2021	02.10.2021	JKR	BDCME BRBZ BRCLME	
686340-002	W	MW-2	01.27.2021 13:25	SM4500-H	pH by SM4500-H	01.28.2021	01.27.2021 13:25	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.28.2021

Received By:



Jhyrom Edralin

Date Received: 01.29.2021

Cooler Temperature: 1.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 77214

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.28.2021 08.26 AM

Received By: Jhyrom Edralin

Date Received: 01.29.2021 10.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.29.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.27.2021 04.58.00 PM

Work Order #: 686340

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 01.28.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.28.2021

Certificate of Analysis Summary 686340



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 02.01.2021 16:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 686340-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 01.27.2021 12:00	Lab Id: 686340-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 01.27.2021 13:25				
Alkalinity by SM2320B SUB: T104704215-20-38	Extracted: 01.29.2021 12:06 Analyzed: 01.29.2021 13:00 Units/RL: mg/L RL	Extracted: 01.29.2021 12:06 Analyzed: 01.29.2021 13:14 Units/RL: mg/L RL				
Alkalinity, Total (as CaCO3)	1010 4.00	1360 4.00				
Alkalinity, Bicarbonate (as CaCO3)	1010 4.00	1360 4.00				
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 13:00 Units/RL: mg/L RL	Extracted: Analyzed: 01.29.2021 13:14 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	668 K+ 0.370	1600 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-38	Extracted: 01.29.2021 08:20 Analyzed: 01.29.2021 12:57 Units/RL: mg/L RL	Extracted: 01.29.2021 08:20 Analyzed: 01.29.2021 13:09 Units/RL: mg/L RL				
Chloride	334 5.00	140 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-38	Extracted: Analyzed: 01.29.2021 12:24 Units/RL: mg/L RL	Extracted: Analyzed: 01.29.2021 12:24 Units/RL: mg/L RL				
Sulfide, total	0.800 J 5.00	15.0 5.00				
TPH by SW8015 Mod	Extracted: 01.29.2021 08:00 Analyzed: 01.29.2021 13:33 Units/RL: mg/L RL	Extracted: 01.29.2021 08:00 Analyzed: 01.29.2021 14:44 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.909 2.30	1.31 J 2.29				
Diesel Range Organics (DRO)	<0.840 2.30	<0.834 2.29				
Motor Oil Range Hydrocarbons (MRO)	<0.840 2.30	<0.834 2.29				
Total TPH	<0.840 2.30	1.31 J 2.29				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686340



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 02.01.2021 16:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686340-001	686340-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.27.2021 12:00	01.27.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.29.2021 08:50	01.29.2021 08:50				
	Analyzed:	01.29.2021 14:35	01.29.2021 14:56				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00157	0.00100	0.0298	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		0.00398 J	0.0500	0.00504 J	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.00103	0.00100		
Sec-Butylbenzene		0.000270 J	0.00100	<0.000199	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.00116	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

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Certificate of Analysis Summary 686340



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
Report Date: 02.01.2021 16:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686340-001	686340-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.27.2021 12:00	01.27.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.29.2021 08:50	01.29.2021 08:50				
	Analyzed:	01.29.2021 14:35	01.29.2021 14:56				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000400 J	0.00100	0.0282	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000210 J	0.00100	0.0117	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00343	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

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Certificate of Analysis Summary 686340

Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Wed 01.27.2021 16:58
 Report Date: 02.01.2021 16:24
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686340-001	686340-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	01.27.2021 12:00	01.27.2021 13:25				
VOCs by SW-846 8260C SUB: T104704215-20-38	Extracted:	01.29.2021 08:50	01.29.2021 08:50				
	Analyzed:	01.29.2021 14:35	01.29.2021 14:56				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0276 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.00153 0.00100	0.0500 0.00100				
	1,3,5-Trimethylbenzene	0.000830 J 0.00100	0.0129 0.00100				
	o-Xylene	<0.000192 0.00100	0.0269 0.00100				
	m,p-Xylenes	0.00123 J 0.0100	0.155 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00123 0.00100	0.182 0.00100				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.29.2021 12:25	01.29.2021 12:25				
	Units/RL:	Deg C RL	Deg C RL				
	Temperature	18.0 K	13.4 K				
pH by SM4500-H SUB: T104704215-20-38	Extracted:						
	Analyzed:	01.29.2021 12:25	01.29.2021 12:25				
	Units/RL:	SU RL	SU RL				
	pH	6.44 K	6.24 K				

BRL - Below Reporting Limit

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Analytical Report 686340

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

02.01.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.01.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **686340**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 686340. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 686340 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

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Sample Cross Reference 686340

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	01.27.2021 12:00		686340-001
MW-2	W	01.27.2021 13:25		686340-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 686340Report Date: 02.01.2021
Date Received: 01.27.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3149586 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 686340-002.



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.29.2021 12:06

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149389

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1010	4.00	4.00	mg/L	01.29.2021 13:00		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1010	4.00	4.00	mg/L	01.29.2021 13:00		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.29.2021 13:00	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.29.2021 08:20

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149384

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	334	5.00	0.738	mg/L	01.29.2021 12:57		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149339

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.44			SU	01.29.2021 12:25	K	1
Temperature	TEMP	18.0			Deg C	01.29.2021 12:25	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149403

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	668	0.370	0.100	mg/L	01.29.2021 13:00	K+	1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3149371

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	0.800	5.00	0.495	mg/L	01.29.2021 12:24	J	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3149586

Date Prep: 01.29.2021 08:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.909	2.30	0.909	mg/L	01.29.2021 13:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.840	2.30	0.840	mg/L	01.29.2021 13:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.840	2.30	0.840	mg/L	01.29.2021 13:33	U	1
Total TPH	PHC635	<0.840	2.30	0.840	mg/L	01.29.2021 13:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	01.29.2021 13:33	
o-Terphenyl	84-15-1	92	%	70-135	01.29.2021 13:33	



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.29.2021 08:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149421

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00157	0.00100	0.000214	mg/L	01.29.2021 14:35		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.29.2021 14:35	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.29.2021 14:35	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.29.2021 14:35	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.29.2021 14:35	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.29.2021 14:35	U	1
2-Butanone	78-93-3	0.00398	0.0500	0.00270	mg/L	01.29.2021 14:35	J	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	01.29.2021 14:35	U	1
Sec-Butylbenzene	135-98-8	0.000270	0.00100	0.000199	mg/L	01.29.2021 14:35	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.29.2021 14:35	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.29.2021 14:35	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.29.2021 14:35	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.29.2021 14:35	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.29.2021 14:35	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.29.2021 14:35	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.29.2021 14:35	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.29.2021 14:35	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	01.29.2021 14:35	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.29.2021 14:35	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.29.2021 14:35	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.29.2021 14:35	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.29.2021 14:35	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.29.2021 14:35	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.29.2021 14:35	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.29.2021 14:35	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.29.2021 14:35	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.29.2021 14:35	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.29.2021 14:35	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.29.2021 14:35	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.29.2021 14:35	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.29.2021 14:35	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.29.2021 14:35	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.29.2021 14:35	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.29.2021 14:35	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.29.2021 14:35	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.29.2021 14:35	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.29.2021 14:35	U	1
Ethylbenzene	100-41-4	0.000400	0.00100	0.000146	mg/L	01.29.2021 14:35	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:35	U	1
Isopropylbenzene	98-82-8	0.000210	0.00100	0.000161	mg/L	01.29.2021 14:35	J	1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 686340-001

Matrix: Ground Water
Date Collected: 01.27.2021 12:00

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

% Moisture:

Analyst: DTG

Date Prep: 01.29.2021 08:50

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.29.2021 14:35	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.29.2021 14:35	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.29.2021 14:35	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	01.29.2021 14:35	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.29.2021 14:35	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.29.2021 14:35	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.29.2021 14:35	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.29.2021 14:35	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	01.29.2021 14:35	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:35	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:35	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.29.2021 14:35	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.29.2021 14:35	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.29.2021 14:35	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.29.2021 14:35	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.29.2021 14:35	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00153	0.00100	0.000252	mg/L	01.29.2021 14:35		1
1,3,5-Trimethylbenzene	108-67-8	0.000830	0.00100	0.000279	mg/L	01.29.2021 14:35	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	01.29.2021 14:35	U	1
m,p-Xylenes	179601-23-1	0.00123	0.0100	0.000330	mg/L	01.29.2021 14:35	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.29.2021 14:35	U	1
Total Xylenes	1330-20-7	0.00123	0.00100	0.000192	mg/L	01.29.2021 14:35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	01.29.2021 14:35	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	01.29.2021 14:35	
Toluene-D8	2037-26-5	104	%	80-117	01.29.2021 14:35	
4-Bromofluorobenzene	460-00-4	102	%	74-124	01.29.2021 14:35	



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 01.29.2021 12:06

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149389

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1360	4.00	4.00	mg/L	01.29.2021 13:14		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1360	4.00	4.00	mg/L	01.29.2021 13:14		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	01.29.2021 13:14	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 01.29.2021 08:20

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149384

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	140	5.00	0.738	mg/L	01.29.2021 13:09		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149339

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.24			SU	01.29.2021 12:25	K	1
Temperature	TEMP	13.4			Deg C	01.29.2021 12:25	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149403

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1600	0.370	0.100	mg/L	01.29.2021 13:14	K+	1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3149371

% Moisture:
SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	15.0	5.00	0.495	mg/L	01.29.2021 12:24		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3149586

Date Prep: 01.29.2021 08:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.31	2.29	0.903	mg/L	01.29.2021 14:44	J	1
Diesel Range Organics (DRO)	C10C28DRO	<0.834	2.29	0.834	mg/L	01.29.2021 14:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.834	2.29	0.834	mg/L	01.29.2021 14:44	U	1
Total TPH	PHC635	1.31	2.29	0.834	mg/L	01.29.2021 14:44	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	65	%	70-135	01.29.2021 14:44	**
o-Terphenyl	84-15-1	72	%	70-135	01.29.2021 14:44	



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 01.29.2021 08:50

% Moisture:
SUB: T104704215-20-38

Seq Number: 3149421

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0298	0.00100	0.000214	mg/L	01.29.2021 14:56		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	01.29.2021 14:56	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	01.29.2021 14:56	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	01.29.2021 14:56	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	01.29.2021 14:56	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	01.29.2021 14:56	U	1
2-Butanone	78-93-3	0.00504	0.0500	0.00270	mg/L	01.29.2021 14:56	J	1
n-Butylbenzene	104-51-8	0.00103	0.00100	0.000286	mg/L	01.29.2021 14:56		1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	01.29.2021 14:56	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	01.29.2021 14:56	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	01.29.2021 14:56	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	01.29.2021 14:56	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	01.29.2021 14:56	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	01.29.2021 14:56	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	01.29.2021 14:56	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	01.29.2021 14:56	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	01.29.2021 14:56	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00116	0.00100	0.000233	mg/L	01.29.2021 14:56		1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	01.29.2021 14:56	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	01.29.2021 14:56	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	01.29.2021 14:56	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	01.29.2021 14:56	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	01.29.2021 14:56	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	01.29.2021 14:56	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	01.29.2021 14:56	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	01.29.2021 14:56	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	01.29.2021 14:56	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	01.29.2021 14:56	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	01.29.2021 14:56	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	01.29.2021 14:56	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	01.29.2021 14:56	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	01.29.2021 14:56	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	01.29.2021 14:56	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	01.29.2021 14:56	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	01.29.2021 14:56	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	01.29.2021 14:56	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	01.29.2021 14:56	U	1
Ethylbenzene	100-41-4	0.0282	0.00100	0.000146	mg/L	01.29.2021 14:56		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:56	U	1
Isopropylbenzene	98-82-8	0.0117	0.00100	0.000161	mg/L	01.29.2021 14:56		1



Certificate of Analytical Results 686340

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 686340-002

Matrix: Ground Water
Date Collected: 01.27.2021 13:25

Date Received: 01.27.2021 16:58

Analytical Method: VOCs by SW-846 8260C

Tech: DTG

Analyst: DTG

Date Prep: 01.29.2021 08:50

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	01.29.2021 14:56	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	01.29.2021 14:56	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	01.29.2021 14:56	U	1
n-Propylbenzene	103-65-1	0.00343	0.00100	0.000179	mg/L	01.29.2021 14:56		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	01.29.2021 14:56	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	01.29.2021 14:56	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	01.29.2021 14:56	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	01.29.2021 14:56	U	1
Toluene	108-88-3	0.0276	0.00100	0.000500	mg/L	01.29.2021 14:56		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:56	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	01.29.2021 14:56	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	01.29.2021 14:56	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	01.29.2021 14:56	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	01.29.2021 14:56	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	01.29.2021 14:56	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	01.29.2021 14:56	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0500	0.00100	0.000252	mg/L	01.29.2021 14:56		1
1,3,5-Trimethylbenzene	108-67-8	0.0129	0.00100	0.000279	mg/L	01.29.2021 14:56		1
o-Xylene	95-47-6	0.0269	0.00100	0.000192	mg/L	01.29.2021 14:56		1
m,p-Xylenes	179601-23-1	0.155	0.0100	0.000330	mg/L	01.29.2021 14:56		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	01.29.2021 14:56	U	1
Total Xylenes	1330-20-7	0.182	0.00100	0.000192	mg/L	01.29.2021 14:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	75-131	01.29.2021 14:56	
1,2-Dichloroethane-D4	17060-07-0	104	%	63-144	01.29.2021 14:56	
Toluene-D8	2037-26-5	102	%	80-117	01.29.2021 14:56	
4-Bromofluorobenzene	460-00-4	104	%	74-124	01.29.2021 14:56	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

MB Sample Id: 7720339-1-BLK

Matrix: Water

LCS Sample Id: 7720339-1-BKS

Prep Method: SM2320P

Date Prep: 01.29.2021

LCSD Sample Id: 7720339-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	258	103	261	104	85-115	1	20	mg/L	01.29.2021 12:28	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

MB Sample Id: 7720339-1-BLK

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	01.29.2021 12:21	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

Parent Sample Id: 685548-001

MD Sample Id: 685548-001 D

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	211	209	1	20	mg/L	01.29.2021 12:48	
Alkalinity, Bicarbonate (as CaCO3)	211	209	1	20	mg/L	01.29.2021 12:48	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 12:48	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3149389

Matrix: Water

Parent Sample Id: 686047-003

MD Sample Id: 686047-003 D

Prep Method: SM2320P

Date Prep: 01.29.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	136	136	0	20	mg/L	01.29.2021 14:30	
Alkalinity, Bicarbonate (as CaCO3)	136	136	0	20	mg/L	01.29.2021 14:30	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	01.29.2021 14:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3149384

Matrix: Water

MB Sample Id: 7720271-1-BLK

LCS Sample Id: 7720271-1-BKS

Prep Method: E300P

Date Prep: 01.29.2021

LCSD Sample Id: 7720271-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	9.91	99	9.92	99	90-110	0	20	mg/L	01.29.2021 07:12	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3149384

Parent Sample Id: 686554-003

Matrix: Water

MS Sample Id: 686554-003 S

Prep Method: E300P

Date Prep: 01.29.2021

MSD Sample Id: 686554-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.0	10.0	21.5	105	21.4	104	90-110	0	20	mg/L	01.29.2021 09:12	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3149384

Parent Sample Id: 686554-005

Matrix: Water

MS Sample Id: 686554-005 S

Prep Method: E300P

Date Prep: 01.29.2021

MSD Sample Id: 686554-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	124	10.0	131	70	131	70	90-110	0	20	mg/L	01.29.2021 11:11	X

Analytical Method: pH by SM4500-H

Seq Number: 3149339

Parent Sample Id: 686339-001

Matrix: Water

MD Sample Id: 686339-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.38	6.44	1	20	SU	01.29.2021 12:25	
Temperature	11.4	11.8	3	20	Deg C	01.29.2021 12:25	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3149371

MB Sample Id: 3149371-1-BLK

Matrix: Water

LCS Sample Id: 3149371-1-BKS

LCSD Sample Id: 3149371-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	42.4	85	42.4	85	80-120	0	20	mg/L	01.29.2021 12:24	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3149371

Parent Sample Id: 686340-001

Matrix: Ground Water

MS Sample Id: 686340-001 S

MSD Sample Id: 686340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	0.800	50.0	41.6	82	42.0	82	80-120	1	20	mg/L	01.29.2021 12:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3149586

MB Sample Id: 7720316-1-BLK

Matrix: Water

LCS Sample Id: 7720316-1-BKS

Prep Method: SW8015P

Date Prep: 01.29.2021

LCSD Sample Id: 7720316-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.899	91.0	85.7	94	90.4	99	70-135	5	20	mg/L	01.29.2021 12:51	
Diesel Range Organics (DRO)	<0.830	91.0	81.4	89	83.7	92	70-135	3	20	mg/L	01.29.2021 12:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		92		102		70-135	%	01.29.2021 12:51
o-Terphenyl	80		91		96		70-135	%	01.29.2021 12:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3149586

Matrix: Water

MB Sample Id: 7720316-1-BLK

Prep Method: SW8015P

Date Prep: 01.29.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.830	mg/L	01.29.2021 12:30	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3149586

Matrix: Ground Water

Parent Sample Id: 686340-001

MS Sample Id: 686340-001 S

Prep Method: SW8015P

Date Prep: 01.29.2021

MSD Sample Id: 686340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.894	90.5	75.5	83	82.5	91	70-135	9	20	mg/L	01.29.2021 13:54	
Diesel Range Organics (DRO)	<0.826	90.5	69.3	77	74.4	82	70-135	7	20	mg/L	01.29.2021 13:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	70		78		70-135	%	01.29.2021 13:54
o-Terphenyl	77		87		70-135	%	01.29.2021 13:54

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Matrix: Water

Prep Method: SW5030B

Date Prep: 01.29.2021

MB Sample Id: 7720358-1-BLK

LCS Sample Id: 7720358-1-BKS

LCSD Sample Id: 7720358-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0476	95	0.0460	92	66-142	3	25	mg/L	01.29.2021 10:23	
Bromobenzene	<0.000300	0.0500	0.0509	102	0.0500	100	75-125	2	25	mg/L	01.29.2021 10:23	
Bromochloromethane	<0.000209	0.0500	0.0489	98	0.0487	97	60-140	0	25	mg/L	01.29.2021 10:23	
Bromodichloromethane	<0.000231	0.0500	0.0486	97	0.0477	95	75-125	2	25	mg/L	01.29.2021 10:23	
Bromoform	<0.000630	0.0500	0.0530	106	0.0516	103	75-125	3	25	mg/L	01.29.2021 10:23	
Methyl bromide	<0.00105	0.0500	0.0455	91	0.0426	85	60-140	7	25	mg/L	01.29.2021 10:23	
2-Butanone	<0.00270	0.250	0.210	84	0.220	88	60-140	5	25	mg/L	01.29.2021 10:23	
n-Butylbenzene	<0.000286	0.0500	0.0523	105	0.0506	101	75-125	3	25	mg/L	01.29.2021 10:23	
Sec-Butylbenzene	<0.000199	0.0500	0.0523	105	0.0506	101	75-125	3	25	mg/L	01.29.2021 10:23	
tert-Butylbenzene	<0.000195	0.0500	0.0520	104	0.0503	101	75-125	3	25	mg/L	01.29.2021 10:23	
Carbon Tetrachloride	<0.000423	0.0500	0.0474	95	0.0454	91	62-125	4	25	mg/L	01.29.2021 10:23	
Chlorobenzene	<0.000159	0.0500	0.0497	99	0.0474	95	60-133	5	25	mg/L	01.29.2021 10:23	
Chloroethane	<0.000433	0.0500	0.0486	97	0.0458	92	60-140	6	25	mg/L	01.29.2021 10:23	
Chloroform	<0.000259	0.0500	0.0468	94	0.0456	91	70-130	3	25	mg/L	01.29.2021 10:23	
Methyl Chloride	<0.000318	0.0500	0.0440	88	0.0436	87	60-140	1	25	mg/L	01.29.2021 10:23	
2-Chlorotoluene	<0.000214	0.0500	0.0507	101	0.0494	99	73-125	3	25	mg/L	01.29.2021 10:23	
4-Chlorotoluene	<0.000183	0.0500	0.0515	103	0.0496	99	74-125	4	25	mg/L	01.29.2021 10:23	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0528	106	0.0509	102	75-125	4	25	mg/L	01.29.2021 10:23	
Dibromochloromethane	<0.000739	0.0500	0.0528	106	0.0511	102	73-125	3	25	mg/L	01.29.2021 10:23	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0539	108	0.0542	108	59-125	1	25	mg/L	01.29.2021 10:23	
1,2-Dibromoethane	<0.000337	0.0500	0.0513	103	0.0502	100	73-125	2	25	mg/L	01.29.2021 10:23	
Methylene Bromide	<0.000130	0.0500	0.0493	99	0.0483	97	69-127	2	25	mg/L	01.29.2021 10:23	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0513	103	0.0499	100	75-125	3	25	mg/L	01.29.2021 10:23	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0511	102	0.0494	99	75-125	3	25	mg/L	01.29.2021 10:23	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0513	103	0.0495	99	75-125	4	25	mg/L	01.29.2021 10:23	
Dichlorodifluoromethane	<0.000316	0.0500	0.0483	97	0.0461	92	60-140	5	25	mg/L	01.29.2021 10:23	
1,1-Dichloroethane	<0.000244	0.0500	0.0466	93	0.0458	92	72-125	2	25	mg/L	01.29.2021 10:23	
1,2-Dichloroethane	<0.000285	0.0500	0.0483	97	0.0475	95	68-127	2	25	mg/L	01.29.2021 10:23	
1,1-Dichloroethene	<0.000216	0.0500	0.0472	94	0.0448	90	59-172	5	25	mg/L	01.29.2021 10:23	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0466	93	0.0462	92	75-125	1	25	mg/L	01.29.2021 10:23	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0458	92	0.0442	88	75-125	4	25	mg/L	01.29.2021 10:23	
1,2-Dichloropropane	<0.000396	0.0500	0.0485	97	0.0473	95	74-125	3	25	mg/L	01.29.2021 10:23	
1,3-Dichloropropane	<0.000439	0.0500	0.0506	101	0.0494	99	75-125	2	25	mg/L	01.29.2021 10:23	
2,2-Dichloropropane	<0.000360	0.0500	0.0477	95	0.0452	90	75-125	5	25	mg/L	01.29.2021 10:23	
1,1-Dichloropropene	<0.000481	0.0500	0.0464	93	0.0445	89	75-125	4	25	mg/L	01.29.2021 10:23	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0503	101	0.0490	98	74-125	3	25	mg/L	01.29.2021 10:23	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0532	106	0.0514	103	66-125	3	25	mg/L	01.29.2021 10:23	
Ethylbenzene	<0.000146	0.0500	0.0495	99	0.0471	94	75-125	5	25	mg/L	01.29.2021 10:23	
Hexachlorobutadiene	<0.00200	0.0500	0.0501	100	0.0482	96	75-125	4	25	mg/L	01.29.2021 10:23	
Isopropylbenzene	<0.000161	0.0500	0.0504	101	0.0477	95	75-125	6	25	mg/L	01.29.2021 10:23	
Methylene Chloride	<0.00191	0.0500	0.0470	94	0.0461	92	75-125	2	25	mg/L	01.29.2021 10:23	
MTBE	<0.000571	0.0500	0.0490	98	0.0488	98	65-135	0	25	mg/L	01.29.2021 10:23	
Naphthalene	<0.00200	0.0500	0.0514	103	0.0514	103	70-130	0	25	mg/L	01.29.2021 10:23	
n-Propylbenzene	<0.000179	0.0500	0.0513	103	0.0496	99	75-125	3	25	mg/L	01.29.2021 10:23	
Styrene	<0.000162	0.0500	0.0496	99	0.0476	95	75-125	4	25	mg/L	01.29.2021 10:23	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0513	103	0.0498	100	72-125	3	25	mg/L	01.29.2021 10:23	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0524	105	0.0535	107	74-125	2	25	mg/L	01.29.2021 10:23	
Tetrachloroethylene	<0.000500	0.0500	0.0474	95	0.0454	91	71-125	4	25	mg/L	01.29.2021 10:23	
Toluene	<0.000500	0.0500	0.0487	97	0.0466	93	59-139	4	25	mg/L	01.29.2021 10:23	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0489	98	0.0467	93	75-137	5	25	mg/L	01.29.2021 10:23	

MS/MSD Percent Recovery
Relative Percent Difference
Log/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

MB Sample Id: 7720358-1-BLK

Matrix: Water

LCS Sample Id: 7720358-1-BKS

Prep Method: SW5030B

Date Prep: 01.29.2021

LCSD Sample Id: 7720358-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0515	103	0.0490	98	75-135	5	25	mg/L	01.29.2021 10:23	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0466	93	0.0449	90	75-125	4	25	mg/L	01.29.2021 10:23	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0505	101	0.0495	99	75-127	2	25	mg/L	01.29.2021 10:23	
Trichloroethylene	<0.000424	0.0500	0.0474	95	0.0452	90	62-137	5	25	mg/L	01.29.2021 10:23	
Trichlorofluoromethane	<0.000245	0.0500	0.0457	91	0.0440	88	60-140	4	25	mg/L	01.29.2021 10:23	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0537	107	0.0535	107	75-125	0	25	mg/L	01.29.2021 10:23	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0522	104	0.0512	102	75-125	2	25	mg/L	01.29.2021 10:23	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0521	104	0.0507	101	70-125	3	25	mg/L	01.29.2021 10:23	
o-Xylene	<0.000192	0.0500	0.0502	100	0.0483	97	75-125	4	25	mg/L	01.29.2021 10:23	
m,p-Xylenes	<0.000330	0.100	0.0995	100	0.0952	95	75-125	4	25	mg/L	01.29.2021 10:23	
Vinyl Chloride	<0.000234	0.0500	0.0432	86	0.0421	84	60-140	3	25	mg/L	01.29.2021 10:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		99		100		75-131	%	01.29.2021 10:23
1,2-Dichloroethane-D4	101		101		100		63-144	%	01.29.2021 10:23
Toluene-D8	104		103		101		80-117	%	01.29.2021 10:23
4-Bromofluorobenzene	105		101		103		74-124	%	01.29.2021 10:23

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Parent Sample Id: 686308-005

Matrix: Water

MS Sample Id: 686308-005 S

Prep Method: SW5030B

Date Prep: 01.29.2021

MSD Sample Id: 686308-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0486	97	0.0467	93	66-142	4	25	mg/L	01.29.2021 11:47	
Bromobenzene	<0.000300	0.0500	0.0541	108	0.0487	97	75-125	11	25	mg/L	01.29.2021 11:47	
Bromochloromethane	<0.000209	0.0500	0.0509	102	0.0502	100	60-140	1	25	mg/L	01.29.2021 11:47	
Bromodichloromethane	<0.000231	0.0500	0.0518	104	0.0500	100	75-125	4	25	mg/L	01.29.2021 11:47	
Bromoform	<0.000630	0.0500	0.0624	125	0.0588	118	75-125	6	25	mg/L	01.29.2021 11:47	
Methyl bromide	<0.00105	0.0500	0.0393	79	0.0419	84	60-140	6	25	mg/L	01.29.2021 11:47	
2-Butanone	<0.00270	0.250	0.229	92	0.230	92	60-140	0	25	mg/L	01.29.2021 11:47	
n-Butylbenzene	<0.000286	0.0500	0.0575	115	0.0515	103	75-125	11	25	mg/L	01.29.2021 11:47	
Sec-Butylbenzene	<0.000199	0.0500	0.0546	109	0.0486	97	75-125	12	25	mg/L	01.29.2021 11:47	
tert-Butylbenzene	<0.000195	0.0500	0.0571	114	0.0513	103	75-125	11	25	mg/L	01.29.2021 11:47	
Carbon Tetrachloride	<0.000423	0.0500	0.0491	98	0.0478	96	62-125	3	25	mg/L	01.29.2021 11:47	
Chlorobenzene	<0.000159	0.0500	0.0518	104	0.0498	100	60-133	4	25	mg/L	01.29.2021 11:47	
Chloroethane	<0.000433	0.0500	0.0542	108	0.0509	102	60-140	6	25	mg/L	01.29.2021 11:47	
Chloroform	<0.000259	0.0500	0.0501	100	0.0489	98	70-130	2	25	mg/L	01.29.2021 11:47	
Methyl Chloride	<0.000318	0.0500	0.0504	101	0.0523	105	60-140	4	25	mg/L	01.29.2021 11:47	
2-Chlorotoluene	<0.000214	0.0500	0.0549	110	0.0496	99	73-125	10	25	mg/L	01.29.2021 11:47	
4-Chlorotoluene	<0.000183	0.0500	0.0550	110	0.0496	99	74-125	10	25	mg/L	01.29.2021 11:47	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0508	102	0.0448	90	75-125	13	25	mg/L	01.29.2021 11:47	
Dibromochloromethane	<0.000739	0.0500	0.0582	116	0.0558	112	73-125	4	25	mg/L	01.29.2021 11:47	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0616	123	0.0554	111	59-125	11	25	mg/L	01.29.2021 11:47	
1,2-Dibromoethane	<0.000337	0.0500	0.0545	109	0.0530	106	73-125	3	25	mg/L	01.29.2021 11:47	
Methylene Bromide	<0.000130	0.0500	0.0520	104	0.0503	101	69-127	3	25	mg/L	01.29.2021 11:47	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0566	113	0.0507	101	75-125	11	25	mg/L	01.29.2021 11:47	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0552	110	0.0487	97	75-125	13	25	mg/L	01.29.2021 11:47	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0529	106	0.0477	95	75-125	10	25	mg/L	01.29.2021 11:47	
Dichlorodifluoromethane	<0.000316	0.0500	0.0684	137	0.0706	141	60-140	3	25	mg/L	01.29.2021 11:47	X
1,1-Dichloroethane	<0.000244	0.0500	0.0535	107	0.0525	105	72-125	2	25	mg/L	01.29.2021 11:47	
1,2-Dichloroethane	<0.000285	0.0500	0.0517	103	0.0499	100	68-127	4	25	mg/L	01.29.2021 11:47	
1,1-Dichloroethene	<0.000216	0.0500	0.0474	95	0.0459	92	59-172	3	25	mg/L	01.29.2021 11:47	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0490	98	0.0475	95	75-125	3	25	mg/L	01.29.2021 11:47	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0462	92	0.0461	92	75-125	0	25	mg/L	01.29.2021 11:47	
1,2-Dichloropropane	<0.000396	0.0500	0.0524	105	0.0500	100	74-125	5	25	mg/L	01.29.2021 11:47	
1,3-Dichloropropane	<0.000439	0.0500	0.0561	112	0.0541	108	75-125	4	25	mg/L	01.29.2021 11:47	
2,2-Dichloropropane	<0.000360	0.0500	0.0507	101	0.0496	99	75-125	2	25	mg/L	01.29.2021 11:47	
1,1-Dichloropropene	<0.000481	0.0500	0.0416	83	0.0408	82	75-125	2	25	mg/L	01.29.2021 11:47	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0534	107	0.0517	103	74-125	3	25	mg/L	01.29.2021 11:47	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0576	115	0.0553	111	66-125	4	25	mg/L	01.29.2021 11:47	
Ethylbenzene	<0.000146	0.0500	0.0508	102	0.0479	96	75-125	6	25	mg/L	01.29.2021 11:47	
Hexachlorobutadiene	<0.00200	0.0500	0.0553	111	0.0494	99	75-125	11	25	mg/L	01.29.2021 11:47	
Isopropylbenzene	<0.000161	0.0500	0.0504	101	0.0478	96	75-125	5	25	mg/L	01.29.2021 11:47	
Methylene Chloride	<0.00191	0.0500	0.0478	96	0.0470	94	75-125	2	25	mg/L	01.29.2021 11:47	
MTBE	<0.000571	0.0500	0.0513	103	0.0509	102	65-135	1	25	mg/L	01.29.2021 11:47	
Naphthalene	<0.00200	0.0500	0.0634	127	0.0544	109	70-130	15	25	mg/L	01.29.2021 11:47	
n-Propylbenzene	<0.000179	0.0500	0.0557	111	0.0498	100	75-125	11	25	mg/L	01.29.2021 11:47	
Styrene	<0.000162	0.0500	0.0106	21	0.0111	22	75-125	5	25	mg/L	01.29.2021 11:47	X
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0547	109	0.0526	105	72-125	4	25	mg/L	01.29.2021 11:47	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0585	117	0.0541	108	74-125	8	25	mg/L	01.29.2021 11:47	
Tetrachloroethylene	<0.000500	0.0500	0.0489	98	0.0456	91	71-125	7	25	mg/L	01.29.2021 11:47	
Toluene	<0.000500	0.0500	0.0511	102	0.0488	98	59-139	5	25	mg/L	01.29.2021 11:47	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0567	113	0.0481	96	75-137	16	25	mg/L	01.29.2021 11:47	

MS/MSD Percent Recovery
Relative Percent Difference
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum

South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3149421

Parent Sample Id: 686308-005

Matrix: Water

MS Sample Id: 686308-005 S

Prep Method: SW5030B

Date Prep: 01.29.2021

MSD Sample Id: 686308-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0571	114	0.0501	100	75-135	13	25	mg/L	01.29.2021 11:47	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0505	101	0.0491	98	75-125	3	25	mg/L	01.29.2021 11:47	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0555	111	0.0527	105	75-127	5	25	mg/L	01.29.2021 11:47	
Trichloroethylene	<0.000424	0.0500	0.0496	99	0.0484	97	62-137	2	25	mg/L	01.29.2021 11:47	
Trichlorofluoromethane	<0.000245	0.0500	0.0491	98	0.0506	101	60-140	3	25	mg/L	01.29.2021 11:47	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0611	122	0.0549	110	75-125	11	25	mg/L	01.29.2021 11:47	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0563	113	0.0507	101	75-125	10	25	mg/L	01.29.2021 11:47	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0560	112	0.0497	99	70-125	12	25	mg/L	01.29.2021 11:47	
o-Xylene	<0.000192	0.0500	0.0526	105	0.0501	100	75-125	5	25	mg/L	01.29.2021 11:47	
m,p-Xylenes	<0.000330	0.100	0.104	104	0.0990	99	75-125	5	25	mg/L	01.29.2021 11:47	
Vinyl Chloride	<0.000234	0.0500	0.0525	105	0.0548	110	60-140	4	25	mg/L	01.29.2021 11:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		99		75-131	%	01.29.2021 11:47
1,2-Dichloroethane-D4	101		99		63-144	%	01.29.2021 11:47
Toluene-D8	103		101		80-117	%	01.29.2021 11:47
4-Bromofluorobenzene	102		100		74-124	%	01.29.2021 11:47

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 1686340

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

www.xenco.com Page 1 of 1

Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@ensolum.com

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

Project Name:	South Hobbs	Turn Around		ANALYSIS REQUEST	Work Order Notes
Project Number:	03B1417002	Routine ☐			
P.O. Number:	03B1417002	Rush: 24 Hr			
Sampler's Name:	Shane Diller	Due Date:			
SAMPLE RECEIPT		Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	5.1	Thermometer ID			
Received Intact:	Yes No				
Cooler Custody Seals:	Yes No	Correction Factor: .5			
Sample Custody Seals:	Yes No	Total Containers:			
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	
MMW-1	GW	1-27-21	1200		
MMW-2	GW	1-27-21	1325		
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					
Sample Comments					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
1. [Signature]	[Signature]	1/27/21 10:35			
3. [Signature]		4			
5. [Signature]		6			

Inter-Office Shipment

IOS Number : **77214**

Date/Time: 01.28.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

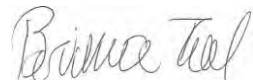
Air Bill No.: 772761771126

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
686340-001	W	MW-1	01.27.2021 12:00	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.28.2021	01.28.2021 12:00	JKR		
686340-001	W	MW-1	01.27.2021 12:00	SM4500-H	pH by SM4500-H	01.28.2021	01.27.2021 12:00	JKR		
686340-001	W	MW-1	01.27.2021 12:00	SM2320B	Alkalinity by SM2320B	01.28.2021	02.10.2021	JKR	ALK ALKB ALKC	
686340-001	W	MW-1	01.27.2021 12:00	SW8260C	VOCs by SW-846 8260C	01.28.2021	02.10.2021	JKR	BDCME BRBZ BRCLME	
686340-001	W	MW-1	01.27.2021 12:00	SM4500SF00	Sulfide by SM4500-S-F	01.28.2021	02.03.2021 12:00	JKR	S	
686340-001	W	MW-1	01.27.2021 12:00	E300	Inorganic Anions by EPA 300	01.28.2021	02.24.2021	JKR	CL	
686340-002	W	MW-2	01.27.2021 13:25	SM2320B	Alkalinity by SM2320B	01.28.2021	02.10.2021	JKR	ALK ALKB ALKC	
686340-002	W	MW-2	01.27.2021 13:25	SM4500SF00	Sulfide by SM4500-S-F	01.28.2021	02.03.2021 13:25	JKR	S	
686340-002	W	MW-2	01.27.2021 13:25	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	01.28.2021	01.28.2021 13:25	JKR		
686340-002	W	MW-2	01.27.2021 13:25	E300	Inorganic Anions by EPA 300	01.28.2021	02.24.2021	JKR	CL	
686340-002	W	MW-2	01.27.2021 13:25	SW8260C	VOCs by SW-846 8260C	01.28.2021	02.10.2021	JKR	BDCME BRBZ BRCLME	
686340-002	W	MW-2	01.27.2021 13:25	SM4500-H	pH by SM4500-H	01.28.2021	01.27.2021 13:25	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.28.2021

Received By:



Jhyrom Edralin

Date Received: 01.29.2021

Cooler Temperature: 1.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 77214

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 01.28.2021 08.26 AM

Received By: Jhyrom Edralin

Date Received: 01.29.2021 10.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 01.29.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 01.27.2021 04.58.00 PM

Work Order #: 686340

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 01.28.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.28.2021

Certificate of Analysis Summary 687229



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.08.2021 16:18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 687229-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 02.03.2021 10:35	Lab Id: 687229-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 02.03.2021 12:00				
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 02.04.2021 12:40 Analyzed: 02.04.2021 13:17 Units/RL: mg/L RL	Extracted: 02.04.2021 12:40 Analyzed: 02.04.2021 13:44 Units/RL: mg/L RL				
Alkalinity, Total (as CaCO3)	1130 4.00	1390 4.00				
Alkalinity, Bicarbonate (as CaCO3)	1130 4.00	1390 4.00				
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-39	Extracted: Analyzed: 02.04.2021 13:17 Units/RL: mg/L RL	Extracted: Analyzed: 02.04.2021 13:44 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	699 K+ 0.370	1030 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-39	Extracted: 02.04.2021 09:05 Analyzed: 02.04.2021 12:47 Units/RL: mg/L RL	Extracted: 02.04.2021 09:05 Analyzed: 02.04.2021 12:59 Units/RL: mg/L RL				
Chloride	368 5.00	178 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-39	Extracted: Analyzed: 02.04.2021 12:46 Units/RL: mg/L RL	Extracted: Analyzed: 02.04.2021 12:46 Units/RL: mg/L RL				
Sulfide, total	<0.495 5.00	<0.495 5.00				
TPH by SW8015 Mod	Extracted: 02.06.2021 09:00 Analyzed: 02.06.2021 12:55 Units/RL: mg/L RL	Extracted: 02.06.2021 09:00 Analyzed: 02.06.2021 13:59 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.907 2.30	0.955 J 2.23				
Diesel Range Organics (DRO)	<0.838 2.30	1.15 J 2.23				
Motor Oil Range Hydrocarbons (MRO)	<0.838 2.30	<0.813 2.23				
Total TPH	<0.838 2.30	2.11 J 2.23				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 687229



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.08.2021 16:18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	687229-001	687229-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.03.2021 10:35	02.03.2021 12:00				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.04.2021 12:59	02.04.2021 12:59				
	Analyzed:	02.04.2021 13:43	02.04.2021 14:03				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00203	0.00100	0.0286	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00270	0.0500	<0.00270	0.0500		
n-Butylbenzene		<0.000286	0.00100	<0.000286	0.00100		
Sec-Butylbenzene		<0.000199	0.00100	0.000850 J	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000590 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 687229



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.08.2021 16:18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	687229-001	687229-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.03.2021 10:35	02.03.2021 12:00				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.04.2021 12:59	02.04.2021 12:59				
	Analyzed:	02.04.2021 13:43	02.04.2021 14:03				
	Units/RL:	mg/L RL	mg/L RL				
1,4-Dichlorobenzene		<0.000199 0.00100	<0.000199 0.00100				
Dichlorodifluoromethane		<0.000316 0.00100	<0.000316 0.00100				
1,1-Dichloroethane		<0.000244 0.00100	<0.000244 0.00100				
1,2-Dichloroethane		<0.000285 0.00100	<0.000285 0.00100				
1,1-Dichloroethene		<0.000216 0.00100	<0.000216 0.00100				
cis-1,2-Dichloroethylene		<0.000174 0.00100	<0.000174 0.00100				
trans-1,2-dichloroethylene		<0.000256 0.00100	<0.000256 0.00100				
1,2-Dichloropropane		<0.000396 0.00500	<0.000396 0.00500				
1,3-Dichloropropane		<0.000439 0.00500	<0.000439 0.00500				
2,2-Dichloropropane		<0.000360 0.00500	<0.000360 0.00500				
1,1-Dichloropropene		<0.000481 0.00500	<0.000481 0.00500				
cis-1,3-Dichloropropene		<0.000690 0.00500	<0.000690 0.00500				
trans-1,3-dichloropropene		<0.000752 0.00500	<0.000752 0.00500				
Ethylbenzene		0.000430 J 0.00100	0.0258 0.00100				
Hexachlorobutadiene		<0.00200 0.00500	<0.00200 0.00500				
Isopropylbenzene		0.000180 J 0.00100	0.00817 0.00100				
Methylene Chloride		<0.00191 0.00500	<0.00191 0.00500				
MTBE		<0.000571 0.00500	<0.000571 0.00500				
Naphthalene		<0.00200 0.0100	<0.00200 0.0100				
n-Propylbenzene		<0.000179 0.00100	0.00240 0.00100				
Styrene		<0.000162 0.00100	<0.000162 0.00100				
1,1,1,2-Tetrachloroethane		<0.000327 0.00100	<0.000327 0.00100				
1,1,2,2-Tetrachloroethane		<0.000284 0.00100	<0.000284 0.00100				
Tetrachloroethylene		<0.000500 0.00100	<0.000500 0.00100				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.03.2021 16:11
Report Date: 02.08.2021 16:18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	687229-001	687229-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.03.2021 10:35	02.03.2021 12:00				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.04.2021 12:59	02.04.2021 12:59				
	Analyzed:	02.04.2021 13:43	02.04.2021 14:03				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0392 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.00105 0.00100	0.0267 0.00100				
	1,3,5-Trimethylbenzene	0.000510 J 0.00100	0.00674 0.00100				
	o-Xylene	<0.000192 0.00100	0.0236 0.00100				
	m,p-Xylenes	0.00100 J 0.0100	0.111 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00100 J 0.00100	0.135 0.00100				
pH by SM4500-H SUB: T104704215-20-39	Extracted:	02.04.2021 15:29	02.04.2021 15:29				
	Analyzed:	02.04.2021 15:29	02.04.2021 15:29				
	Units/RL:	Deg C RL	Deg C RL				
	Temperature	20.6 K	20.9 K				
pH by SM4500-H SUB: T104704215-20-39	Extracted:	02.04.2021 15:29	02.04.2021 15:29				
	Analyzed:	02.04.2021 15:29	02.04.2021 15:29				
	Units/RL:	SU RL	SU RL				
	pH	6.38 K	6.17 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 687229

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

02.08.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.08.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **687229**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 687229. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 687229 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 687229

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	02.03.2021 10:35		687229-001
MW-2	W	02.03.2021 12:00		687229-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 687229Report Date: 02.08.2021
Date Received: 02.03.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3150031 VOCs by SW-846 8260C

1,2-Dibromo-3-Chloropropane, Naphthalene recovered above QC limits in the Blank Spike Duplicate.
Samples in the analytical batch are: 687229-001, -002.



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 687229-001

Matrix: Ground Water
Date Collected: 02.03.2021 10:35

Date Received: 02.03.2021 16:11

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.04.2021 12:40

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150019

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1130	4.00	4.00	mg/L	02.04.2021 13:17		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1130	4.00	4.00	mg/L	02.04.2021 13:17		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.04.2021 13:17	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.04.2021 09:05

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150028

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	368	5.00	0.738	mg/L	02.04.2021 12:47		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150023

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.38			SU	02.04.2021 15:29	K	1
Temperature	TEMP	20.6			Deg C	02.04.2021 15:29	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150025

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	699	0.370	0.100	mg/L	02.04.2021 13:17	K+	1



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 687229-001

Matrix: Ground Water
Date Collected: 02.03.2021 10:35

Date Received: 02.03.2021 16:11

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3150003

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	02.04.2021 12:46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3150328

Date Prep: 02.06.2021 09:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.907	2.30	0.907	mg/L	02.06.2021 12:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<0.838	2.30	0.838	mg/L	02.06.2021 12:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.838	2.30	0.838	mg/L	02.06.2021 12:55	U	1
Total TPH	PHC635	<0.838	2.30	0.838	mg/L	02.06.2021 12:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.06.2021 12:55	
o-Terphenyl	84-15-1	97	%	70-135	02.06.2021 12:55	



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 687229-001

Matrix: Ground Water
Date Collected: 02.03.2021 10:35

Date Received: 02.03.2021 16:11

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.04.2021 12:59

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150031

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00203	0.00100	0.000214	mg/L	02.04.2021 13:43		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.04.2021 13:43	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.04.2021 13:43	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.04.2021 13:43	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.04.2021 13:43	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.04.2021 13:43	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	02.04.2021 13:43	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	02.04.2021 13:43	U	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	02.04.2021 13:43	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.04.2021 13:43	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.04.2021 13:43	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.04.2021 13:43	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.04.2021 13:43	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.04.2021 13:43	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.04.2021 13:43	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.04.2021 13:43	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.04.2021 13:43	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	02.04.2021 13:43	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.04.2021 13:43	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.04.2021 13:43	UH	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.04.2021 13:43	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.04.2021 13:43	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.04.2021 13:43	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.04.2021 13:43	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.04.2021 13:43	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.04.2021 13:43	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.04.2021 13:43	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.04.2021 13:43	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.04.2021 13:43	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.04.2021 13:43	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.04.2021 13:43	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.04.2021 13:43	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.04.2021 13:43	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.04.2021 13:43	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.04.2021 13:43	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.04.2021 13:43	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.04.2021 13:43	U	1
Ethylbenzene	100-41-4	0.000430	0.00100	0.000146	mg/L	02.04.2021 13:43	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.04.2021 13:43	U	1
Isopropylbenzene	98-82-8	0.000180	0.00100	0.000161	mg/L	02.04.2021 13:43	J	1



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 687229-001

Matrix: Ground Water
Date Collected: 02.03.2021 10:35

Date Received: 02.03.2021 16:11

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 02.04.2021 12:59

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.04.2021 13:43	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.04.2021 13:43	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.04.2021 13:43	UH	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	02.04.2021 13:43	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.04.2021 13:43	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.04.2021 13:43	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.04.2021 13:43	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.04.2021 13:43	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	02.04.2021 13:43	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.04.2021 13:43	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.04.2021 13:43	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.04.2021 13:43	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.04.2021 13:43	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.04.2021 13:43	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.04.2021 13:43	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.04.2021 13:43	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00105	0.00100	0.000252	mg/L	02.04.2021 13:43		1
1,3,5-Trimethylbenzene	108-67-8	0.000510	0.00100	0.000279	mg/L	02.04.2021 13:43	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	02.04.2021 13:43	U	1
m,p-Xylenes	179601-23-1	0.00100	0.0100	0.000330	mg/L	02.04.2021 13:43	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.04.2021 13:43	U	1
Total Xylenes	1330-20-7	0.00100	0.00100	0.000192	mg/L	02.04.2021 13:43	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	75-131	02.04.2021 13:43	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	02.04.2021 13:43	
Toluene-D8	2037-26-5	99	%	80-117	02.04.2021 13:43	
4-Bromofluorobenzene	460-00-4	102	%	74-124	02.04.2021 13:43	



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 687229-002

Matrix: Ground Water
Date Collected: 02.03.2021 12:00

Date Received: 02.03.2021 16:11

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.04.2021 12:40

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150019

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1390	4.00	4.00	mg/L	02.04.2021 13:44		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1390	4.00	4.00	mg/L	02.04.2021 13:44		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.04.2021 13:44	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.04.2021 09:05

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150028

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	178	5.00	0.738	mg/L	02.04.2021 12:59		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150023

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.17			SU	02.04.2021 15:29	K	1
Temperature	TEMP	20.9			Deg C	02.04.2021 15:29	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150025

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1030	0.370	0.100	mg/L	02.04.2021 13:44	K+	1



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 687229-002

Matrix: Ground Water
Date Collected: 02.03.2021 12:00

Date Received: 02.03.2021 16:11

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3150003

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	02.04.2021 12:46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3150328

Date Prep: 02.06.2021 09:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	0.955	2.23	0.881	mg/L	02.06.2021 13:59	J	1
Diesel Range Organics (DRO)	C10C28DRO	1.15	2.23	0.813	mg/L	02.06.2021 13:59	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.813	2.23	0.813	mg/L	02.06.2021 13:59	U	1
Total TPH	PHC635	2.11	2.23	0.813	mg/L	02.06.2021 13:59	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.06.2021 13:59	
o-Terphenyl	84-15-1	102	%	70-135	02.06.2021 13:59	



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 687229-002

Matrix: Ground Water
Date Collected: 02.03.2021 12:00

Date Received: 02.03.2021 16:11

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.04.2021 12:59

% Moisture:
SUB: T104704215-20-39

Seq Number: 3150031

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0286	0.00100	0.000214	mg/L	02.04.2021 14:03		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.04.2021 14:03	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.04.2021 14:03	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.04.2021 14:03	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.04.2021 14:03	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.04.2021 14:03	U	1
2-Butanone	78-93-3	<0.00270	0.0500	0.00270	mg/L	02.04.2021 14:03	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	02.04.2021 14:03	U	1
Sec-Butylbenzene	135-98-8	0.000850	0.00100	0.000199	mg/L	02.04.2021 14:03	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.04.2021 14:03	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.04.2021 14:03	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.04.2021 14:03	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.04.2021 14:03	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.04.2021 14:03	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.04.2021 14:03	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.04.2021 14:03	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.04.2021 14:03	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000590	0.00100	0.000233	mg/L	02.04.2021 14:03	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.04.2021 14:03	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.04.2021 14:03	UH	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.04.2021 14:03	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.04.2021 14:03	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.04.2021 14:03	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.04.2021 14:03	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.04.2021 14:03	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.04.2021 14:03	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.04.2021 14:03	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.04.2021 14:03	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.04.2021 14:03	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.04.2021 14:03	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.04.2021 14:03	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.04.2021 14:03	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.04.2021 14:03	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.04.2021 14:03	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.04.2021 14:03	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.04.2021 14:03	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.04.2021 14:03	U	1
Ethylbenzene	100-41-4	0.0258	0.00100	0.000146	mg/L	02.04.2021 14:03		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.04.2021 14:03	U	1
Isopropylbenzene	98-82-8	0.00817	0.00100	0.000161	mg/L	02.04.2021 14:03		1



Certificate of Analytical Results 687229

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 687229-002

Matrix: Ground Water
Date Collected: 02.03.2021 12:00

Date Received: 02.03.2021 16:11

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 02.04.2021 12:59

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.04.2021 14:03	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.04.2021 14:03	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.04.2021 14:03	UH	1
n-Propylbenzene	103-65-1	0.00240	0.00100	0.000179	mg/L	02.04.2021 14:03		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.04.2021 14:03	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.04.2021 14:03	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.04.2021 14:03	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.04.2021 14:03	U	1
Toluene	108-88-3	0.0392	0.00100	0.000500	mg/L	02.04.2021 14:03		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.04.2021 14:03	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.04.2021 14:03	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.04.2021 14:03	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.04.2021 14:03	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.04.2021 14:03	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.04.2021 14:03	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.04.2021 14:03	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0267	0.00100	0.000252	mg/L	02.04.2021 14:03		1
1,3,5-Trimethylbenzene	108-67-8	0.00674	0.00100	0.000279	mg/L	02.04.2021 14:03		1
o-Xylene	95-47-6	0.0236	0.00100	0.000192	mg/L	02.04.2021 14:03		1
m,p-Xylenes	179601-23-1	0.111	0.0100	0.000330	mg/L	02.04.2021 14:03		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.04.2021 14:03	U	1
Total Xylenes	1330-20-7	0.135	0.00100	0.000192	mg/L	02.04.2021 14:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	75-131	02.04.2021 14:03	
1,2-Dichloroethane-D4	17060-07-0	102	%	63-144	02.04.2021 14:03	
Toluene-D8	2037-26-5	99	%	80-117	02.04.2021 14:03	
4-Bromofluorobenzene	460-00-4	101	%	74-124	02.04.2021 14:03	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3150019

MB Sample Id: 7720797-1-BLK

Matrix: Water

LCS Sample Id: 7720797-1-BKS

Prep Method: SM2320P

Date Prep: 02.04.2021

LCSD Sample Id: 7720797-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	259	104	263	105	85-115	2	20	mg/L	02.04.2021 12:56	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3150019

Matrix: Water

MB Sample Id: 7720797-1-BLK

Prep Method: SM2320P

Date Prep: 02.04.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	02.04.2021 12:49	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	02.04.2021 12:49	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3150019

Matrix: Ground Water

Parent Sample Id: 687229-001

MD Sample Id: 687229-001 D

Prep Method: SM2320P

Date Prep: 02.04.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	1130	1130	0	20	mg/L	02.04.2021 13:30	
Alkalinity, Bicarbonate (as CaCO ₃)	1130	1130	0	20	mg/L	02.04.2021 13:30	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.04.2021 13:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3150028

Matrix: Water

MB Sample Id: 7720745-1-BLK

LCS Sample Id: 7720745-1-BKS

Prep Method: E300P

Date Prep: 02.04.2021

LCSD Sample Id: 7720745-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	9.96	100	10.0	100	90-110	0	20	mg/L	02.04.2021 09:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3150028

Matrix: Water

Parent Sample Id: 687174-001

MS Sample Id: 687174-001 S

Prep Method: E300P

Date Prep: 02.04.2021

MSD Sample Id: 687174-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	27.2	10.0	36.5	93	36.5	93	90-110	0	20	mg/L	02.04.2021 09:48	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3150028

Matrix: Liquid

Parent Sample Id: 687335-001

MS Sample Id: 687335-001 S

Prep Method: E300P

Date Prep: 02.04.2021

MSD Sample Id: 687335-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	34.8	10.0	44.0	92	43.9	91	90-110	0	20	mg/L	02.04.2021 11:46	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: pH by SM4500-H

Seq Number: 3150023

Matrix: Water

Parent Sample Id: 687228-001

MD Sample Id: 687228-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.37	6.45	1	20	SU	02.04.2021 15:29	
Temperature	21.4	21.7	1	20	Deg C	02.04.2021 15:29	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3150003

Matrix: Water

MB Sample Id: 3150003-1-BLK

LCS Sample Id: 3150003-1-BKS

LCSD Sample Id: 3150003-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	42.2	84	41.6	83	80-120	1	20	mg/L	02.04.2021 12:46	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3150003

Matrix: Water

Parent Sample Id: 686876-001

MS Sample Id: 686876-001 S

MSD Sample Id: 686876-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	40.0	80	40.8	82	80-120	2	20	mg/L	02.04.2021 12:46	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150328

Matrix: Water

MB Sample Id: 7721017-1-BLK

LCS Sample Id: 7721017-1-BKS

Prep Method: SW8015P

Date Prep: 02.06.2021

LCSD Sample Id: 7721017-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.898	90.9	75.5	83	84.9	93	70-135	12	20	mg/L	02.06.2021 12:12	
Diesel Range Organics (DRO)	<0.829	90.9	75.9	83	84.5	93	70-135	11	20	mg/L	02.06.2021 12:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		87		97		70-135	%	02.06.2021 12:12
o-Terphenyl	96		89		98		70-135	%	02.06.2021 12:12

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150328

Matrix: Water

MB Sample Id: 7721017-1-BLK

Prep Method: SW8015P

Date Prep: 02.06.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.831	mg/L	02.06.2021 11:51	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150328

Parent Sample Id: 687229-001

Matrix: Ground Water

MS Sample Id: 687229-001 S

Prep Method: SW8015P

Date Prep: 02.06.2021

MSD Sample Id: 687229-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.897	90.8	83.2	92	83.0	91	70-135	0	20	mg/L	02.06.2021 13:16	
Diesel Range Organics (DRO)	<0.828	90.8	76.0	84	77.4	85	70-135	2	20	mg/L	02.06.2021 13:16	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			95		96		70-135			%	02.06.2021 13:16	
o-Terphenyl			95		96		70-135			%	02.06.2021 13:16	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

Matrix: Water

Prep Method: SW5030B

Date Prep: 02.04.2021

MB Sample Id: 7720808-1-BLK

LCS Sample Id: 7720808-1-BKS

LCSD Sample Id: 7720808-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0534	107	0.0515	103	66-142	4	25	mg/L	02.04.2021 09:29	
Bromobenzene	<0.000300	0.0500	0.0549	110	0.0526	105	75-125	4	25	mg/L	02.04.2021 09:29	
Bromochloromethane	<0.000209	0.0500	0.0551	110	0.0552	110	60-140	0	25	mg/L	02.04.2021 09:29	
Bromodichloromethane	<0.000231	0.0500	0.0544	109	0.0542	108	75-125	0	25	mg/L	02.04.2021 09:29	
Bromoform	<0.000630	0.0500	0.0583	117	0.0596	119	75-125	2	25	mg/L	02.04.2021 09:29	
Methyl bromide	<0.00105	0.0500	0.0569	114	0.0566	113	60-140	1	25	mg/L	02.04.2021 09:29	
2-Butanone	<0.00270	0.250	0.297	119	0.323	129	60-140	8	25	mg/L	02.04.2021 09:29	
n-Butylbenzene	<0.000286	0.0500	0.0582	116	0.0553	111	75-125	5	25	mg/L	02.04.2021 09:29	
Sec-Butylbenzene	<0.000199	0.0500	0.0579	116	0.0554	111	75-125	4	25	mg/L	02.04.2021 09:29	
tert-Butylbenzene	<0.000195	0.0500	0.0565	113	0.0535	107	75-125	5	25	mg/L	02.04.2021 09:29	
Carbon Tetrachloride	<0.000423	0.0500	0.0574	115	0.0558	112	62-125	3	25	mg/L	02.04.2021 09:29	
Chlorobenzene	<0.000159	0.0500	0.0542	108	0.0535	107	60-133	1	25	mg/L	02.04.2021 09:29	
Chloroethane	<0.000433	0.0500	0.0540	108	0.0508	102	60-140	6	25	mg/L	02.04.2021 09:29	
Chloroform	<0.000259	0.0500	0.0528	106	0.0518	104	70-130	2	25	mg/L	02.04.2021 09:29	
Methyl Chloride	<0.000318	0.0500	0.0525	105	0.0502	100	60-140	4	25	mg/L	02.04.2021 09:29	
2-Chlorotoluene	<0.000214	0.0500	0.0573	115	0.0547	109	73-125	5	25	mg/L	02.04.2021 09:29	
4-Chlorotoluene	<0.000183	0.0500	0.0588	118	0.0555	111	74-125	6	25	mg/L	02.04.2021 09:29	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0588	118	0.0558	112	75-125	5	25	mg/L	02.04.2021 09:29	
Dibromochloromethane	<0.000739	0.0500	0.0566	113	0.0560	112	73-125	1	25	mg/L	02.04.2021 09:29	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0624	125	0.0628	126	59-125	1	25	mg/L	02.04.2021 09:29	H
1,2-Dibromoethane	<0.000337	0.0500	0.0558	112	0.0558	112	73-125	0	25	mg/L	02.04.2021 09:29	
Methylene Bromide	<0.000130	0.0500	0.0554	111	0.0558	112	69-127	1	25	mg/L	02.04.2021 09:29	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0560	112	0.0529	106	75-125	6	25	mg/L	02.04.2021 09:29	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0563	113	0.0530	106	75-125	6	25	mg/L	02.04.2021 09:29	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0543	109	0.0520	104	75-125	4	25	mg/L	02.04.2021 09:29	
Dichlorodifluoromethane	<0.000316	0.0500	0.0527	105	0.0503	101	60-140	5	25	mg/L	02.04.2021 09:29	
1,1-Dichloroethane	<0.000244	0.0500	0.0535	107	0.0528	106	72-125	1	25	mg/L	02.04.2021 09:29	
1,2-Dichloroethane	<0.000285	0.0500	0.0537	107	0.0526	105	68-127	2	25	mg/L	02.04.2021 09:29	
1,1-Dichloroethene	<0.000216	0.0500	0.0563	113	0.0556	111	59-172	1	25	mg/L	02.04.2021 09:29	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0521	104	0.0510	102	75-125	2	25	mg/L	02.04.2021 09:29	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0556	111	0.0534	107	75-125	4	25	mg/L	02.04.2021 09:29	
1,2-Dichloropropane	<0.000396	0.0500	0.0544	109	0.0532	106	74-125	2	25	mg/L	02.04.2021 09:29	
1,3-Dichloropropane	<0.000439	0.0500	0.0542	108	0.0528	106	75-125	3	25	mg/L	02.04.2021 09:29	
2,2-Dichloropropane	<0.000360	0.0500	0.0550	110	0.0538	108	75-125	2	25	mg/L	02.04.2021 09:29	
1,1-Dichloropropene	<0.000481	0.0500	0.0555	111	0.0542	108	75-125	2	25	mg/L	02.04.2021 09:29	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0538	108	0.0536	107	74-125	0	25	mg/L	02.04.2021 09:29	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0554	111	0.0545	109	66-125	2	25	mg/L	02.04.2021 09:29	
Ethylbenzene	<0.000146	0.0500	0.0553	111	0.0541	108	75-125	2	25	mg/L	02.04.2021 09:29	
Hexachlorobutadiene	<0.00200	0.0500	0.0553	111	0.0523	105	75-125	6	25	mg/L	02.04.2021 09:29	
Isopropylbenzene	<0.000161	0.0500	0.0592	118	0.0572	114	75-125	3	25	mg/L	02.04.2021 09:29	
Methylene Chloride	<0.00191	0.0500	0.0505	101	0.0504	101	75-125	0	25	mg/L	02.04.2021 09:29	
MTBE	<0.000571	0.0500	0.0565	113	0.0575	115	65-135	2	25	mg/L	02.04.2021 09:29	
Naphthalene	<0.00200	0.0500	0.0627	125	0.0672	134	70-130	7	25	mg/L	02.04.2021 09:29	H
n-Propylbenzene	<0.000179	0.0500	0.0574	115	0.0543	109	75-125	6	25	mg/L	02.04.2021 09:29	
Styrene	<0.000162	0.0500	0.0596	119	0.0577	115	75-125	3	25	mg/L	02.04.2021 09:29	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0554	111	0.0531	106	72-125	4	25	mg/L	02.04.2021 09:29	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0565	113	0.0575	115	74-125	2	25	mg/L	02.04.2021 09:29	
Tetrachloroethylene	<0.000500	0.0500	0.0546	109	0.0527	105	71-125	4	25	mg/L	02.04.2021 09:29	
Toluene	<0.000500	0.0500	0.0536	107	0.0519	104	59-139	3	25	mg/L	02.04.2021 09:29	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0593	119	0.0622	124	75-137	5	25	mg/L	02.04.2021 09:29	

MS/MSD Percent Recovery
Relative Percent Difference
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

MB Sample Id: 7720808-1-BLK

Matrix: Water

LCS Sample Id: 7720808-1-BKS

Prep Method: SW5030B

Date Prep: 02.04.2021

LCSD Sample Id: 7720808-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0566	113	0.0566	113	75-135	0	25	mg/L	02.04.2021 09:29	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0534	107	0.0529	106	75-125	1	25	mg/L	02.04.2021 09:29	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0538	108	0.0535	107	75-127	1	25	mg/L	02.04.2021 09:29	
Trichloroethylene	<0.000424	0.0500	0.0537	107	0.0524	105	62-137	2	25	mg/L	02.04.2021 09:29	
Trichlorofluoromethane	<0.000245	0.0500	0.0597	119	0.0591	118	60-140	1	25	mg/L	02.04.2021 09:29	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0561	112	0.0574	115	75-125	2	25	mg/L	02.04.2021 09:29	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0579	116	0.0556	111	75-125	4	25	mg/L	02.04.2021 09:29	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0589	118	0.0556	111	70-125	6	25	mg/L	02.04.2021 09:29	
o-Xylene	<0.000192	0.0500	0.0581	116	0.0567	113	75-125	2	25	mg/L	02.04.2021 09:29	
m,p-Xylenes	<0.000330	0.100	0.118	118	0.113	113	75-125	4	25	mg/L	02.04.2021 09:29	
Vinyl Chloride	<0.000234	0.0500	0.0540	108	0.0538	108	60-140	0	25	mg/L	02.04.2021 09:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		99		101		75-131	%	02.04.2021 09:29
1,2-Dichloroethane-D4	103		98		97		63-144	%	02.04.2021 09:29
Toluene-D8	98		98		98		80-117	%	02.04.2021 09:29
4-Bromofluorobenzene	97		98		97		74-124	%	02.04.2021 09:29

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 02.04.2021

Parent Sample Id: 686610-017

MS Sample Id: 686610-017 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0570	114	66-142	mg/L	02.04.2021 10:19	
Bromobenzene	<0.000300	0.0500	0.0611	122	75-125	mg/L	02.04.2021 10:19	
Bromochloromethane	<0.000209	0.0500	0.0581	116	60-140	mg/L	02.04.2021 10:19	
Bromodichloromethane	<0.000231	0.0500	0.0586	117	75-125	mg/L	02.04.2021 10:19	
Bromoform	<0.000630	0.0500	0.0640	128	75-125	mg/L	02.04.2021 10:19	X
Methyl bromide	<0.00105	0.0500	0.0610	122	60-140	mg/L	02.04.2021 10:19	
2-Butanone	<0.00270	0.250	0.292	117	60-140	mg/L	02.04.2021 10:19	
n-Butylbenzene	<0.000286	0.0500	0.0647	129	75-125	mg/L	02.04.2021 10:19	X
Sec-Butylbenzene	<0.000199	0.0500	0.0644	129	75-125	mg/L	02.04.2021 10:19	X
tert-Butylbenzene	<0.000195	0.0500	0.0623	125	75-125	mg/L	02.04.2021 10:19	
Carbon Tetrachloride	<0.000423	0.0500	0.0595	119	62-125	mg/L	02.04.2021 10:19	
Chlorobenzene	<0.000159	0.0500	0.0593	119	60-133	mg/L	02.04.2021 10:19	
Chloroethane	<0.000433	0.0500	0.0551	110	60-140	mg/L	02.04.2021 10:19	
Chloroform	<0.000259	0.0500	0.0567	113	70-130	mg/L	02.04.2021 10:19	
Methyl Chloride	<0.000318	0.0500	0.0530	106	60-140	mg/L	02.04.2021 10:19	
2-Chlorotoluene	<0.000214	0.0500	0.0631	126	73-125	mg/L	02.04.2021 10:19	X
4-Chlorotoluene	<0.000183	0.0500	0.0650	130	74-125	mg/L	02.04.2021 10:19	X
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0649	130	75-125	mg/L	02.04.2021 10:19	X
Dibromochloromethane	<0.000739	0.0500	0.0616	123	73-125	mg/L	02.04.2021 10:19	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0665	133	59-125	mg/L	02.04.2021 10:19	X
1,2-Dibromoethane	<0.000337	0.0500	0.0585	117	73-125	mg/L	02.04.2021 10:19	
Methylene Bromide	<0.000130	0.0500	0.0599	120	69-127	mg/L	02.04.2021 10:19	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0618	124	75-125	mg/L	02.04.2021 10:19	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0620	124	75-125	mg/L	02.04.2021 10:19	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0600	120	75-125	mg/L	02.04.2021 10:19	
Dichlorodifluoromethane	<0.000316	0.0500	0.0528	106	60-140	mg/L	02.04.2021 10:19	
1,1-Dichloroethane	<0.000244	0.0500	0.0569	114	72-125	mg/L	02.04.2021 10:19	
1,2-Dichloroethane	<0.000285	0.0500	0.0578	116	68-127	mg/L	02.04.2021 10:19	
1,1-Dichloroethene	<0.000216	0.0500	0.0592	118	59-172	mg/L	02.04.2021 10:19	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0545	109	75-125	mg/L	02.04.2021 10:19	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0580	116	75-125	mg/L	02.04.2021 10:19	
1,2-Dichloropropane	<0.000396	0.0500	0.0578	116	74-125	mg/L	02.04.2021 10:19	
1,3-Dichloropropane	<0.000439	0.0500	0.0572	114	75-125	mg/L	02.04.2021 10:19	
2,2-Dichloropropane	<0.000360	0.0500	0.0582	116	75-125	mg/L	02.04.2021 10:19	
1,1-Dichloropropene	<0.000481	0.0500	0.0586	117	75-125	mg/L	02.04.2021 10:19	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0584	117	74-125	mg/L	02.04.2021 10:19	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0593	119	66-125	mg/L	02.04.2021 10:19	
Ethylbenzene	<0.000146	0.0500	0.0602	120	75-125	mg/L	02.04.2021 10:19	
Hexachlorobutadiene	<0.00200	0.0500	0.0615	123	75-125	mg/L	02.04.2021 10:19	
Isopropylbenzene	<0.000161	0.0500	0.0645	129	75-125	mg/L	02.04.2021 10:19	X
Methylene Chloride	<0.00191	0.0500	0.0535	107	75-125	mg/L	02.04.2021 10:19	
MTBE	<0.000571	0.0500	0.0601	120	65-135	mg/L	02.04.2021 10:19	
Naphthalene	<0.00200	0.0500	0.0697	139	70-130	mg/L	02.04.2021 10:19	X
n-Propylbenzene	<0.000179	0.0500	0.0641	128	75-125	mg/L	02.04.2021 10:19	X
Styrene	<0.000162	0.0500	0.0641	128	75-125	mg/L	02.04.2021 10:19	X
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0591	118	72-125	mg/L	02.04.2021 10:19	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0641	128	74-125	mg/L	02.04.2021 10:19	X
Tetrachloroethylene	<0.000500	0.0500	0.0580	116	71-125	mg/L	02.04.2021 10:19	
Toluene	<0.000500	0.0500	0.0577	115	59-139	mg/L	02.04.2021 10:19	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0670	134	75-137	mg/L	02.04.2021 10:19	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3150031

Matrix: Ground Water

Prep Method: SW5030B

Parent Sample Id: 686610-017

MS Sample Id: 686610-017 S

Date Prep: 02.04.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0637	127	75-135	mg/L	02.04.2021 10:19	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0571	114	75-125	mg/L	02.04.2021 10:19	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0583	117	75-127	mg/L	02.04.2021 10:19	
Trichloroethylene	<0.000424	0.0500	0.0564	113	62-137	mg/L	02.04.2021 10:19	
Trichlorofluoromethane	<0.000245	0.0500	0.0622	124	60-140	mg/L	02.04.2021 10:19	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0638	128	75-125	mg/L	02.04.2021 10:19	X
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0646	129	75-125	mg/L	02.04.2021 10:19	X
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0648	130	70-125	mg/L	02.04.2021 10:19	X
o-Xylene	<0.000192	0.0500	0.0624	125	75-125	mg/L	02.04.2021 10:19	
m,p-Xylenes	<0.000330	0.100	0.126	126	75-125	mg/L	02.04.2021 10:19	X
Vinyl Chloride	<0.000234	0.0500	0.0580	116	60-140	mg/L	02.04.2021 10:19	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		75-131	%	02.04.2021 10:19
1,2-Dichloroethane-D4	98		63-144	%	02.04.2021 10:19
Toluene-D8	100		80-117	%	02.04.2021 10:19
4-Bromofluorobenzene	101		74-124	%	02.04.2021 10:19

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Work Order No: 1081229

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
Phoenix, AZ (480-355-0800) Atlanta, GA (770-449-8800) Tampa, FL (813)575-382-7550

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Project Manager:	Beaux Jennings	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	705 W Wadley #210	Address:	
City, State ZIP:	Midland TX	City, State ZIP:	
Phone:	432-230-3344	Email:	bjennings@ensolum.com

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

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	11.9	Thermometer ID					
Received Intact:	Yes No				128		
Cooler Custody Seals:	Yes No	N/A			Correction Factor:		0.5
Sample Custody Seals:	Yes No	N/A			Total Containers:		

[illegible][illegible]

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
1 		03/01/10	2		
3			4		
5			6		

Inter-Office Shipment

IOS Number : **77647**

Date/Time: 02.03.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address:

1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 772814844258

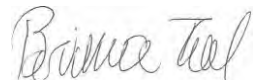
E-Mail:

jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
687229-001	W	MW-1	02.03.2021 10:35	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.04.2021	02.04.2021 10:35	JKR		
687229-001	W	MW-1	02.03.2021 10:35	SM4500-H	pH by SM4500-H	02.04.2021	02.03.2021 10:50	JKR		
687229-001	W	MW-1	02.03.2021 10:35	SM2320B	Alkalinity by SM2320B	02.04.2021	02.17.2021	JKR	ALK ALKB ALKC	
687229-001	W	MW-1	02.03.2021 10:35	SW8260C	VOCs by SW-846 8260C	02.04.2021	02.17.2021	JKR	BDCME BRBZ BRCLME	
687229-001	W	MW-1	02.03.2021 10:35	SM4500SF00	Sulfide by SM4500-S-F	02.04.2021	02.10.2021	JKR	S	
687229-001	W	MW-1	02.03.2021 10:35	E300	Inorganic Anions by EPA 300	02.04.2021	03.03.2021	JKR	CL	
687229-002	W	MW-2	02.03.2021 12:00	SM2320B	Alkalinity by SM2320B	02.04.2021	02.17.2021	JKR	ALK ALKB ALKC	
687229-002	W	MW-2	02.03.2021 12:00	SM4500SF00	Sulfide by SM4500-S-F	02.04.2021	02.10.2021	JKR	S	
687229-002	W	MW-2	02.03.2021 12:00	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.04.2021	02.04.2021 12:00	JKR		
687229-002	W	MW-2	02.03.2021 12:00	E300	Inorganic Anions by EPA 300	02.04.2021	03.03.2021	JKR	CL	
687229-002	W	MW-2	02.03.2021 12:00	SW8260C	VOCs by SW-846 8260C	02.04.2021	02.17.2021	JKR	BDCME BRBZ BRCLME	
687229-002	W	MW-2	02.03.2021 12:00	SM4500-H	pH by SM4500-H	02.04.2021	02.03.2021 12:15	JKR		

Inter Office Shipment or Sample Comments:

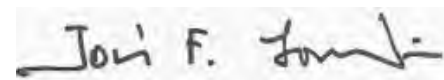
Relinquished By:



Brianna Teel

Date Relinquished: 02.03.2021

Received By:



Jose Londono

Date Received: 02.04.2021

Cooler Temperature: 2.2



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 77647

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 02.03.2021 04.17 PM

Received By: Jose Londono

Date Received: 02.04.2021 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 02.04.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.03.2021 04.11.00 PM

Work Order #: 687229

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	11.9	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	Cooling in progress
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	N/A	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.03.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.05.2021

Certificate of Analysis Summary 688058



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Wed 02.10.2021 16:09
 Report Date: 02.22.2021 18:12
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	688058-001	688058-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.10.2021 10:20	02.10.2021 11:50				
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted:	02.18.2021 12:39	02.18.2021 12:39				
	Analyzed:	02.18.2021 13:21	02.18.2021 13:49				
	Units/RL:	mg/L RL	mg/L RL				
Alkalinity, Total (as CaCO3)		1160 4.00	1380 4.00				
Alkalinity, Bicarbonate (as CaCO3)		1160 4.00	1380 4.00				
Alkalinity, Carbonate (as CaCO3)		<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-39	Extracted:						
	Analyzed:	02.18.2021 13:21	02.18.2021 13:49				
	Units/RL:	mg/L RL	mg/L RL				
Carbon Dioxide, (Free)		423 K+ 0.370	915 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-39	Extracted:	02.14.2021 11:00	02.14.2021 11:00				
	Analyzed:	02.14.2021 13:26	02.14.2021 13:37				
	Units/RL:	mg/L RL	mg/L RL				
Chloride		339 5.00	133 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-39	Extracted:						
	Analyzed:	02.18.2021 12:55	02.18.2021 12:55				
	Units/RL:	mg/L RL	mg/L RL				
Sulfide, total		1.20 JK 5.00	<0.495 5.00				
TPH by SW8015 Mod	Extracted:	02.11.2021 12:00	02.11.2021 12:00				
	Analyzed:	02.11.2021 16:53	02.11.2021 17:37				
	Units/RL:	mg/L RL	mg/L RL				
Gasoline Range Hydrocarbons (GRO)		1.66 BJXF 2.27	2.08 B 2.05				
Diesel Range Organics (DRO)		<0.828 2.27	<0.746 2.05				
Motor Oil Range Hydrocarbons (MRO)		<0.828 2.27	<0.746 2.05				
Total TPH		1.66 J 2.27	2.08 2.05				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 688058

Ensolum, Dallas, TX

Project Name: South Hobbs

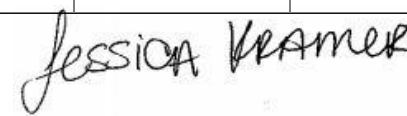
Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Wed 02.10.2021 16:09
 Report Date: 02.22.2021 18:12
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	688058-001	688058-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.10.2021 10:20	02.10.2021 11:50				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.18.2021 21:33	02.18.2021 21:33				
	Analyzed:	02.19.2021 07:04	02.19.2021 07:25				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00196	0.00100	0.0307	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00575	0.0500	<0.00575	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000870 J	0.00100		
Sec-Butylbenzene		0.000240 J	0.00100	<0.000199	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000940 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 688058

Ensolum, Dallas, TX

Project Name: South Hobbs

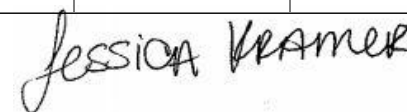
Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.10.2021 16:09
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	688058-001	688058-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.10.2021 10:20	02.10.2021 11:50				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.18.2021 21:33	02.18.2021 21:33				
	Analyzed:	02.19.2021 07:04	02.19.2021 07:25				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000560 J	0.00100	0.0329	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000300 J	0.00100	0.0120	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00331	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 688058



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.10.2021 16:09
Report Date: 02.22.2021 18:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	688058-001	688058-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.10.2021 10:20	02.10.2021 11:50				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.18.2021 21:33	02.18.2021 21:33				
	Analyzed:	02.19.2021 07:04	02.19.2021 07:25				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0201 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.00143 0.00100	0.0407 0.00100				
	1,3,5-Trimethylbenzene	0.000740 J 0.00100	0.00994 0.00100				
	o-Xylene	<0.000192 0.00100	0.0210 0.00100				
	m,p-Xylenes	0.00143 J 0.0100	0.159 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00143 0.00100	0.180 0.00100				
pH by SM4500-H SUB: T104704215-20-39	Extracted:						
	Analyzed:	02.19.2021 15:26	02.19.2021 15:26				
	Units/RL:	Deg C RL	Deg C RL				
Temperature		14.1 K	11.5 K				
pH by SM4500-H SUB: T104704215-20-39	Extracted:						
	Analyzed:	02.19.2021 15:26	02.19.2021 15:26				
	Units/RL:	SU RL	SU RL				
pH		6.45 K	6.19 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 688058

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

02.22.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.22.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **688058**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 688058. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 688058 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 688058

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	02.10.2021 10:20		688058-001
MW-2	W	02.10.2021 11:50		688058-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 688058Report Date: 02.22.2021
Date Received: 02.10.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3150886 TPH by SW8015 Mod

Lab Sample ID 688058-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 688058-001, -002.

The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO), Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 688058-001, -002

Detection for gasoline range in the method blank. Data deemed reportable because detection was <.5 the reporting limit. Likely detection in samples due to low level contamination on column.



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 688058-001

Matrix: Ground Water
Date Collected: 02.10.2021 10:20

Date Received: 02.10.2021 16:09

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.18.2021 12:39

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151107

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1160	4.00	4.00	mg/L	02.18.2021 13:21		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1160	4.00	4.00	mg/L	02.18.2021 13:21		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.18.2021 13:21	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.14.2021 11:00

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151019

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	339	5.00	0.738	mg/L	02.14.2021 13:26		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151202

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.45			SU	02.19.2021 15:26	K	1
Temperature	TEMP	14.1			Deg C	02.19.2021 15:26	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151334

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	423	0.370	0.100	mg/L	02.18.2021 13:21	K+	1



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 688058-001

Matrix: Ground Water
Date Collected: 02.10.2021 10:20

Date Received: 02.10.2021 16:09

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3151087

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	1.20	5.00	0.495	mg/L	02.18.2021 12:55	JK	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3150886

Date Prep: 02.11.2021 12:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.66	2.27	0.897	mg/L	02.11.2021 16:53	BJXF	1
Diesel Range Organics (DRO)	C10C28DRO	<0.828	2.27	0.828	mg/L	02.11.2021 16:53	UXF	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.828	2.27	0.828	mg/L	02.11.2021 16:53	U	1
Total TPH	PHC635	1.66	2.27	0.828	mg/L	02.11.2021 16:53	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	02.11.2021 16:53	
o-Terphenyl	84-15-1	105	%	70-135	02.11.2021 16:53	



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 688058-001

Matrix: Ground Water
Date Collected: 02.10.2021 10:20

Date Received: 02.10.2021 16:09

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 02.18.2021 21:33

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151396

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00196	0.00100	0.000214	mg/L	02.19.2021 07:04		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.19.2021 07:04	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.19.2021 07:04	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.19.2021 07:04	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.19.2021 07:04	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.19.2021 07:04	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	02.19.2021 07:04	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	02.19.2021 07:04	U	1
Sec-Butylbenzene	135-98-8	0.000240	0.00100	0.000199	mg/L	02.19.2021 07:04	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.19.2021 07:04	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.19.2021 07:04	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.19.2021 07:04	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.19.2021 07:04	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.19.2021 07:04	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.19.2021 07:04	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.19.2021 07:04	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.19.2021 07:04	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	02.19.2021 07:04	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.19.2021 07:04	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.19.2021 07:04	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.19.2021 07:04	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.19.2021 07:04	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.19.2021 07:04	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.19.2021 07:04	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.19.2021 07:04	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.19.2021 07:04	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.19.2021 07:04	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.19.2021 07:04	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.19.2021 07:04	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.19.2021 07:04	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.19.2021 07:04	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.19.2021 07:04	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.19.2021 07:04	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.19.2021 07:04	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.19.2021 07:04	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.19.2021 07:04	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.19.2021 07:04	U	1
Ethylbenzene	100-41-4	0.000560	0.00100	0.000146	mg/L	02.19.2021 07:04	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.19.2021 07:04	U	1
Isopropylbenzene	98-82-8	0.000300	0.00100	0.000161	mg/L	02.19.2021 07:04	J	1



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 688058-001

Matrix: Ground Water
Date Collected: 02.10.2021 10:20

Date Received: 02.10.2021 16:09

Analytical Method: VOCs by SW-846 8260C

Tech: DTG

Analyst: DTG

Date Prep: 02.18.2021 21:33

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.19.2021 07:04	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.19.2021 07:04	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.19.2021 07:04	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	02.19.2021 07:04	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.19.2021 07:04	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.19.2021 07:04	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.19.2021 07:04	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.19.2021 07:04	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	02.19.2021 07:04	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.19.2021 07:04	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.19.2021 07:04	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.19.2021 07:04	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.19.2021 07:04	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.19.2021 07:04	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.19.2021 07:04	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.19.2021 07:04	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00143	0.00100	0.000252	mg/L	02.19.2021 07:04		1
1,3,5-Trimethylbenzene	108-67-8	0.000740	0.00100	0.000279	mg/L	02.19.2021 07:04	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	02.19.2021 07:04	U	1
m,p-Xylenes	179601-23-1	0.00143	0.0100	0.000330	mg/L	02.19.2021 07:04	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.19.2021 07:04	U	1
Total Xylenes	1330-20-7	0.00143	0.00100	0.000192	mg/L	02.19.2021 07:04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	75-131	02.19.2021 07:04	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	02.19.2021 07:04	
Toluene-D8	2037-26-5	100	%	80-117	02.19.2021 07:04	
4-Bromofluorobenzene	460-00-4	104	%	74-124	02.19.2021 07:04	



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 688058-002

Matrix: Ground Water
Date Collected: 02.10.2021 11:50

Date Received: 02.10.2021 16:09

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.18.2021 12:39

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151107

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1380	4.00	4.00	mg/L	02.18.2021 13:49		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1380	4.00	4.00	mg/L	02.18.2021 13:49		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.18.2021 13:49	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.14.2021 11:00

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151019

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	5.00	0.738	mg/L	02.14.2021 13:37		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151202

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.19			SU	02.19.2021 15:26	K	1
Temperature	TEMP	11.5			Deg C	02.19.2021 15:26	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151334

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	915	0.370	0.100	mg/L	02.18.2021 13:49	K+	1



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 688058-002

Matrix: Ground Water
Date Collected: 02.10.2021 11:50

Date Received: 02.10.2021 16:09

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3151087

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	02.18.2021 12:55	UK	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3150886

Date Prep: 02.11.2021 12:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2.08	2.05	0.808	mg/L	02.11.2021 17:37	B	1
Diesel Range Organics (DRO)	C10C28DRO	<0.746	2.05	0.746	mg/L	02.11.2021 17:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.746	2.05	0.746	mg/L	02.11.2021 17:37	U	1
Total TPH	PHC635	2.08	2.05	0.746	mg/L	02.11.2021 17:37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.11.2021 17:37	
o-Terphenyl	84-15-1	118	%	70-135	02.11.2021 17:37	



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 688058-002

Matrix: Ground Water
Date Collected: 02.10.2021 11:50

Date Received: 02.10.2021 16:09

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: DTG

Analyst: DTG

Date Prep: 02.18.2021 21:33

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151396

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0307	0.00100	0.000214	mg/L	02.19.2021 07:25		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.19.2021 07:25	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.19.2021 07:25	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.19.2021 07:25	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.19.2021 07:25	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.19.2021 07:25	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	02.19.2021 07:25	U	1
n-Butylbenzene	104-51-8	0.000870	0.00100	0.000286	mg/L	02.19.2021 07:25	J	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	02.19.2021 07:25	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.19.2021 07:25	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.19.2021 07:25	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.19.2021 07:25	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.19.2021 07:25	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.19.2021 07:25	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.19.2021 07:25	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.19.2021 07:25	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.19.2021 07:25	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000940	0.00100	0.000233	mg/L	02.19.2021 07:25	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.19.2021 07:25	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.19.2021 07:25	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.19.2021 07:25	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.19.2021 07:25	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.19.2021 07:25	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.19.2021 07:25	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.19.2021 07:25	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.19.2021 07:25	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.19.2021 07:25	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.19.2021 07:25	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.19.2021 07:25	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.19.2021 07:25	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.19.2021 07:25	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.19.2021 07:25	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.19.2021 07:25	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.19.2021 07:25	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.19.2021 07:25	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.19.2021 07:25	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.19.2021 07:25	U	1
Ethylbenzene	100-41-4	0.0329	0.00100	0.000146	mg/L	02.19.2021 07:25		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.19.2021 07:25	U	1
Isopropylbenzene	98-82-8	0.0120	0.00100	0.000161	mg/L	02.19.2021 07:25		1



Certificate of Analytical Results 688058

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 688058-002

Matrix: Ground Water
Date Collected: 02.10.2021 11:50

Date Received: 02.10.2021 16:09

Analytical Method: VOCs by SW-846 8260C

Tech: DTG

Analyst: DTG

Date Prep: 02.18.2021 21:33

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.19.2021 07:25	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.19.2021 07:25	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.19.2021 07:25	U	1
n-Propylbenzene	103-65-1	0.00331	0.00100	0.000179	mg/L	02.19.2021 07:25		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.19.2021 07:25	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.19.2021 07:25	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.19.2021 07:25	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.19.2021 07:25	U	1
Toluene	108-88-3	0.0201	0.00100	0.000500	mg/L	02.19.2021 07:25		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.19.2021 07:25	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.19.2021 07:25	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.19.2021 07:25	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.19.2021 07:25	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.19.2021 07:25	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.19.2021 07:25	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.19.2021 07:25	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0407	0.00100	0.000252	mg/L	02.19.2021 07:25		1
1,3,5-Trimethylbenzene	108-67-8	0.00994	0.00100	0.000279	mg/L	02.19.2021 07:25		1
o-Xylene	95-47-6	0.0210	0.00100	0.000192	mg/L	02.19.2021 07:25		1
m,p-Xylenes	179601-23-1	0.159	0.0100	0.000330	mg/L	02.19.2021 07:25		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.19.2021 07:25	U	1
Total Xylenes	1330-20-7	0.180	0.00100	0.000192	mg/L	02.19.2021 07:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	106	%	75-131	02.19.2021 07:25	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	02.19.2021 07:25	
Toluene-D8	2037-26-5	98	%	80-117	02.19.2021 07:25	
4-Bromofluorobenzene	460-00-4	103	%	74-124	02.19.2021 07:25	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151107

MB Sample Id: 7721550-1-BLK

Matrix: Water

LCS Sample Id: 7721550-1-BKS

Prep Method: SM2320P

Date Prep: 02.18.2021

LCSD Sample Id: 7721550-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	<4.00	250	262	105	268	107	85-115	2	20	mg/L	02.18.2021 13:01	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151107

Matrix: Water

MB Sample Id: 7721550-1-BLK

Prep Method: SM2320P

Date Prep: 02.18.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO ₃)	<4.00	mg/L	02.18.2021 12:54	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	mg/L	02.18.2021 12:54	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151107

Matrix: Water

Parent Sample Id: 687970-002

MD Sample Id: 687970-002 D

Prep Method: SM2320P

Date Prep: 02.18.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	452	451	0	20	mg/L	02.18.2021 15:21	
Alkalinity, Bicarbonate (as CaCO ₃)	452	451	0	20	mg/L	02.18.2021 15:21	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.18.2021 15:21	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151107

Matrix: Ground Water

Parent Sample Id: 688058-001

MD Sample Id: 688058-001 D

Prep Method: SM2320P

Date Prep: 02.18.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO ₃)	1160	1160	0	20	mg/L	02.18.2021 13:35	
Alkalinity, Bicarbonate (as CaCO ₃)	1160	1160	0	20	mg/L	02.18.2021 13:35	
Alkalinity, Carbonate (as CaCO ₃)	<4.00	<4.00	0	20	mg/L	02.18.2021 13:35	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151019

Matrix: Water

MB Sample Id: 7721470-1-BLK

LCS Sample Id: 7721470-1-BKS

Prep Method: E300P

Date Prep: 02.14.2021

LCSD Sample Id: 7721470-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	9.73	97	9.68	97	90-110	1	20	mg/L	02.14.2021 10:37	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151019

Matrix: Water

Prep Method: E300P

Date Prep: 02.14.2021

Parent Sample Id: 688055-002

MS Sample Id: 688055-002 S

MSD Sample Id: 688055-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.9	10.0	63.2	83	63.4	85	90-110	0	20	mg/L	02.14.2021 11:36	X

Analytical Method: pH by SM4500-H

Seq Number: 3151202

Matrix: Water

Parent Sample Id: 688422-001

MD Sample Id: 688422-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.61	7.67	1	20	SU	02.19.2021 15:26	
Temperature	15.5	15.3	1	20	Deg C	02.19.2021 15:26	

Analytical Method: pH by SM4500-H

Seq Number: 3151202

Matrix: Water

Parent Sample Id: 688427-001

MD Sample Id: 688427-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.66	7.69	0	20	SU	02.19.2021 15:26	
Temperature	18.2	19.2	5	20	Deg C	02.19.2021 15:26	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3151087

Matrix: Water

MB Sample Id: 3151087-1-BLK

LCS Sample Id: 3151087-1-BKS

LCSD Sample Id: 3151087-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	46.6	93	46.2	92	80-120	1	20	mg/L	02.18.2021 12:55	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3151087

Matrix: Ground Water

Parent Sample Id: 688058-001

MS Sample Id: 688058-001 S

MSD Sample Id: 688058-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	1.20	50.0	46.8	91	46.0	90	80-120	2	20	mg/L	02.18.2021 12:55	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150886

MB Sample Id: 7721371-1-BLK

Matrix: Water

LCS Sample Id: 7721371-1-BKS

Prep Method: SW8015P

Date Prep: 02.11.2021

LCSD Sample Id: 7721371-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	1.29	91.1	84.5	93	78.8	87	70-135	7	20	mg/L	02.11.2021 15:48	
Diesel Range Organics (DRO)	<0.831	91.1	76.5	84	77.4	85	70-135	1	20	mg/L	02.11.2021 15:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	73		78		82		70-135	%	02.11.2021 15:48
o-Terphenyl	93		92		96		70-135	%	02.11.2021 15:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150886

Matrix: Water

MB Sample Id: 7721371-1-BLK

Prep Method: SW8015P

Date Prep: 02.11.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.831	mg/L	02.11.2021 15:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3150886

Matrix: Ground Water

Parent Sample Id: 688058-001

MS Sample Id: 688058-001 S

Prep Method: SW8015P

Date Prep: 02.11.2021

MSD Sample Id: 688058-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	1.66	89.4	69.0	75	1.62	0	70-135	191	20	mg/L	02.11.2021 16:32	XF
Diesel Range Organics (DRO)	<0.816	89.4	68.5	77	<0.819	0	70-135	200	20	mg/L	02.11.2021 16:32	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	73		80		70-135	%	02.11.2021 16:32
o-Terphenyl	86		109		70-135	%	02.11.2021 16:32

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

MB Sample Id: 7721653-1-BLK

Matrix: Water

LCS Sample Id: 7721653-1-BKS

Prep Method: SW5030B

Date Prep: 02.18.2021

LCSD Sample Id: 7721653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0460	92	0.0450	90	66-142	2	25	mg/L	02.19.2021 00:35	
Bromobenzene	<0.000300	0.0500	0.0499	100	0.0480	96	75-125	4	25	mg/L	02.19.2021 00:35	
Bromochloromethane	<0.000209	0.0500	0.0493	99	0.0481	96	60-140	2	25	mg/L	02.19.2021 00:35	
Bromodichloromethane	<0.000231	0.0500	0.0480	96	0.0468	94	75-125	3	25	mg/L	02.19.2021 00:35	
Bromoform	<0.000630	0.0500	0.0480	96	0.0466	93	75-125	3	25	mg/L	02.19.2021 00:35	
Methyl bromide	<0.00105	0.0500	0.0393	79	0.0386	77	60-140	2	25	mg/L	02.19.2021 00:35	
2-Butanone	<0.00575	0.250	0.192	77	0.184	74	60-140	4	25	mg/L	02.19.2021 00:35	
n-Butylbenzene	<0.000286	0.0500	0.0461	92	0.0447	89	75-125	3	25	mg/L	02.19.2021 00:35	
Sec-Butylbenzene	<0.000199	0.0500	0.0478	96	0.0466	93	75-125	3	25	mg/L	02.19.2021 00:35	
tert-Butylbenzene	<0.000195	0.0500	0.0490	98	0.0472	94	75-125	4	25	mg/L	02.19.2021 00:35	
Carbon Tetrachloride	<0.000423	0.0500	0.0454	91	0.0443	89	62-125	2	25	mg/L	02.19.2021 00:35	
Chlorobenzene	<0.000159	0.0500	0.0465	93	0.0462	92	60-133	1	25	mg/L	02.19.2021 00:35	
Chloroethane	<0.000433	0.0500	0.0407	81	0.0406	81	60-140	0	25	mg/L	02.19.2021 00:35	
Chloroform	<0.000259	0.0500	0.0450	90	0.0450	90	70-130	0	25	mg/L	02.19.2021 00:35	
Methyl Chloride	<0.000318	0.0500	0.0407	81	0.0394	79	60-140	3	25	mg/L	02.19.2021 00:35	
2-Chlorotoluene	<0.000214	0.0500	0.0477	95	0.0461	92	73-125	3	25	mg/L	02.19.2021 00:35	
4-Chlorotoluene	<0.000183	0.0500	0.0470	94	0.0453	91	74-125	4	25	mg/L	02.19.2021 00:35	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0492	98	0.0476	95	75-125	3	25	mg/L	02.19.2021 00:35	
Dibromochloromethane	<0.000739	0.0500	0.0496	99	0.0489	98	73-125	1	25	mg/L	02.19.2021 00:35	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0409	82	0.0399	80	59-125	2	25	mg/L	02.19.2021 00:35	
1,2-Dibromoethane	<0.000337	0.0500	0.0485	97	0.0473	95	73-125	3	25	mg/L	02.19.2021 00:35	
Methylene Bromide	<0.000130	0.0500	0.0485	97	0.0465	93	69-127	4	25	mg/L	02.19.2021 00:35	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0489	98	0.0471	94	75-125	4	25	mg/L	02.19.2021 00:35	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0480	96	0.0465	93	75-125	3	25	mg/L	02.19.2021 00:35	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0475	95	0.0462	92	75-125	3	25	mg/L	02.19.2021 00:35	
Dichlorodifluoromethane	<0.000316	0.0500	0.0362	72	0.0360	72	60-140	1	25	mg/L	02.19.2021 00:35	
1,1-Dichloroethane	<0.000244	0.0500	0.0459	92	0.0449	90	72-125	2	25	mg/L	02.19.2021 00:35	
1,2-Dichloroethane	<0.000285	0.0500	0.0485	97	0.0474	95	68-127	2	25	mg/L	02.19.2021 00:35	
1,1-Dichloroethene	<0.000216	0.0500	0.0401	80	0.0408	82	59-172	2	25	mg/L	02.19.2021 00:35	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0468	94	0.0457	91	75-125	2	25	mg/L	02.19.2021 00:35	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0455	91	0.0453	91	75-125	0	25	mg/L	02.19.2021 00:35	
1,2-Dichloropropane	<0.000396	0.0500	0.0476	95	0.0456	91	74-125	4	25	mg/L	02.19.2021 00:35	
1,3-Dichloropropane	<0.000439	0.0500	0.0485	97	0.0469	94	75-125	3	25	mg/L	02.19.2021 00:35	
2,2-Dichloropropane	<0.000360	0.0500	0.0406	81	0.0409	82	75-125	1	25	mg/L	02.19.2021 00:35	
1,1-Dichloropropene	<0.000481	0.0500	0.0447	89	0.0444	89	75-125	1	25	mg/L	02.19.2021 00:35	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0486	97	0.0471	94	74-125	3	25	mg/L	02.19.2021 00:35	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0487	97	0.0474	95	66-125	3	25	mg/L	02.19.2021 00:35	
Ethylbenzene	<0.000146	0.0500	0.0469	94	0.0460	92	75-125	2	25	mg/L	02.19.2021 00:35	
Hexachlorobutadiene	<0.00200	0.0500	0.0486	97	0.0471	94	75-125	3	25	mg/L	02.19.2021 00:35	
Isopropylbenzene	<0.000161	0.0500	0.0485	97	0.0478	96	75-125	1	25	mg/L	02.19.2021 00:35	
Methylene Chloride	<0.00191	0.0500	0.0431	86	0.0437	87	75-125	1	25	mg/L	02.19.2021 00:35	
MTBE	<0.000571	0.0500	0.0474	95	0.0464	93	65-135	2	25	mg/L	02.19.2021 00:35	
Naphthalene	<0.00200	0.0500	0.0449	90	0.0430	86	70-130	4	25	mg/L	02.19.2021 00:35	
n-Propylbenzene	<0.000179	0.0500	0.0473	95	0.0463	93	75-125	2	25	mg/L	02.19.2021 00:35	
Styrene	<0.000162	0.0500	0.0480	96	0.0471	94	75-125	2	25	mg/L	02.19.2021 00:35	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0499	100	0.0490	98	72-125	2	25	mg/L	02.19.2021 00:35	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0433	87	0.0410	82	74-125	5	25	mg/L	02.19.2021 00:35	
Tetrachloroethylene	<0.000500	0.0500	0.0468	94	0.0474	95	71-125	1	25	mg/L	02.19.2021 00:35	
Toluene	<0.000500	0.0500	0.0464	93	0.0459	92	59-139	1	25	mg/L	02.19.2021 00:35	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0440	88	0.0422	84	75-137	4	25	mg/L	02.19.2021 00:35	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

Matrix: Water

Prep Method: SW5030B

Date Prep: 02.18.2021

MB Sample Id: 7721653-1-BLK

LCS Sample Id: 7721653-1-BKS

LCSD Sample Id: 7721653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0470	94	0.0458	92	75-135	3	25	mg/L	02.19.2021 00:35	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0454	91	0.0452	90	75-125	0	25	mg/L	02.19.2021 00:35	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0487	97	0.0473	95	75-127	3	25	mg/L	02.19.2021 00:35	
Trichloroethylene	<0.000424	0.0500	0.0487	97	0.0476	95	62-137	2	25	mg/L	02.19.2021 00:35	
Trichlorofluoromethane	<0.000245	0.0500	0.0390	78	0.0386	77	60-140	1	25	mg/L	02.19.2021 00:35	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0455	91	0.0429	86	75-125	6	25	mg/L	02.19.2021 00:35	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0490	98	0.0472	94	75-125	4	25	mg/L	02.19.2021 00:35	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0490	98	0.0470	94	70-125	4	25	mg/L	02.19.2021 00:35	
o-Xylene	<0.000192	0.0500	0.0479	96	0.0470	94	75-125	2	25	mg/L	02.19.2021 00:35	
m,p-Xylenes	<0.000330	0.100	0.0958	96	0.0949	95	75-125	1	25	mg/L	02.19.2021 00:35	
Vinyl Chloride	<0.000234	0.0500	0.0379	76	0.0381	76	60-140	1	25	mg/L	02.19.2021 00:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	105		99		98		75-131	%	02.19.2021 00:35
1,2-Dichloroethane-D4	99		99		97		63-144	%	02.19.2021 00:35
Toluene-D8	102		100		99		80-117	%	02.19.2021 00:35
4-Bromofluorobenzene	102		100		98		74-124	%	02.19.2021 00:35

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

Matrix: Water

Prep Method: SW5030B

Date Prep: 02.18.2021

Parent Sample Id: 688197-001

MS Sample Id: 688197-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0489	98	66-142	mg/L	02.19.2021 02:38	
Bromobenzene	<0.000300	0.0500	0.0522	104	75-125	mg/L	02.19.2021 02:38	
Bromochloromethane	<0.000209	0.0500	0.0492	98	60-140	mg/L	02.19.2021 02:38	
Bromodichloromethane	0.00178	0.0500	0.0512	99	75-125	mg/L	02.19.2021 02:38	
Bromoform	<0.000630	0.0500	0.0484	97	75-125	mg/L	02.19.2021 02:38	
Methyl bromide	<0.00105	0.0500	0.0409	82	60-140	mg/L	02.19.2021 02:38	
2-Butanone	<0.00575	0.250	0.168	67	60-140	mg/L	02.19.2021 02:38	
n-Butylbenzene	<0.000286	0.0500	0.0493	99	75-125	mg/L	02.19.2021 02:38	
Sec-Butylbenzene	<0.000199	0.0500	0.0515	103	75-125	mg/L	02.19.2021 02:38	
tert-Butylbenzene	<0.000195	0.0500	0.0523	105	75-125	mg/L	02.19.2021 02:38	
Carbon Tetrachloride	<0.000423	0.0500	0.0479	96	62-125	mg/L	02.19.2021 02:38	
Chlorobenzene	<0.000159	0.0500	0.0499	100	60-133	mg/L	02.19.2021 02:38	
Chloroethane	<0.000433	0.0500	0.0419	84	60-140	mg/L	02.19.2021 02:38	
Chloroform	0.0292	0.0500	0.0709	83	70-130	mg/L	02.19.2021 02:38	
Methyl Chloride	<0.000318	0.0500	0.0415	83	60-140	mg/L	02.19.2021 02:38	
2-Chlorotoluene	<0.000214	0.0500	0.0508	102	73-125	mg/L	02.19.2021 02:38	
4-Chlorotoluene	<0.000183	0.0500	0.0497	99	74-125	mg/L	02.19.2021 02:38	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0526	105	75-125	mg/L	02.19.2021 02:38	
Dibromochloromethane	<0.000739	0.0500	0.0519	104	73-125	mg/L	02.19.2021 02:38	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0399	80	59-125	mg/L	02.19.2021 02:38	
1,2-Dibromoethane	<0.000337	0.0500	0.0483	97	73-125	mg/L	02.19.2021 02:38	
Methylene Bromide	<0.000130	0.0500	0.0483	97	69-127	mg/L	02.19.2021 02:38	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0519	104	75-125	mg/L	02.19.2021 02:38	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0512	102	75-125	mg/L	02.19.2021 02:38	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0508	102	75-125	mg/L	02.19.2021 02:38	
Dichlorodifluoromethane	<0.000316	0.0500	0.0386	77	60-140	mg/L	02.19.2021 02:38	
1,1-Dichloroethane	<0.000244	0.0500	0.0470	94	72-125	mg/L	02.19.2021 02:38	
1,2-Dichloroethane	<0.000285	0.0500	0.0489	98	68-127	mg/L	02.19.2021 02:38	
1,1-Dichloroethene	<0.000216	0.0500	0.0448	90	59-172	mg/L	02.19.2021 02:38	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0480	96	75-125	mg/L	02.19.2021 02:38	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0481	96	75-125	mg/L	02.19.2021 02:38	
1,2-Dichloropropane	<0.000396	0.0500	0.0488	98	74-125	mg/L	02.19.2021 02:38	
1,3-Dichloropropane	<0.000439	0.0500	0.0487	97	75-125	mg/L	02.19.2021 02:38	
2,2-Dichloropropane	<0.000360	0.0500	0.0422	84	75-125	mg/L	02.19.2021 02:38	
1,1-Dichloropropene	<0.000481	0.0500	0.0480	96	75-125	mg/L	02.19.2021 02:38	
cis-1,3-Dichloropropene	RPD = 200* (C-E) / (C+E)	0.0500	0.0498	100	74-125	mg/L	02.19.2021 02:38	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0493	99	66-125	mg/L	02.19.2021 02:38	
Ethylbenzene	<0.000146	0.0500	0.0501	100	75-125	mg/L	02.19.2021 02:38	
Hexachlorobutadiene	<0.00200	0.0500	0.0508	102	75-125	mg/L	02.19.2021 02:38	
Isopropylbenzene	<0.000161	0.0500	0.0520	104	75-125	mg/L	02.19.2021 02:38	
Methylene Chloride	<0.00191	0.0500	0.0444	89	75-125	mg/L	02.19.2021 02:38	
MTBE	<0.000571	0.0500	0.0461	92	65-135	mg/L	02.19.2021 02:38	
Naphthalene	<0.00200	0.0500	0.0430	86	70-130	mg/L	02.19.2021 02:38	
n-Propylbenzene	<0.000179	0.0500	0.0510	102	75-125	mg/L	02.19.2021 02:38	
Styrene	<0.000162	0.0500	0.0488	98	75-125	mg/L	02.19.2021 02:38	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0524	105	72-125	mg/L	02.19.2021 02:38	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0449	90	74-125	mg/L	02.19.2021 02:38	
Tetrachloroethylene	<0.000500	0.0500	0.0506	101	71-125	mg/L	02.19.2021 02:38	
Toluene	<0.000500	0.0500	0.0502	100	59-139	mg/L	02.19.2021 02:38	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0434	87	75-137	mg/L	02.19.2021 02:38	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151396

Matrix: Water

Prep Method: SW5030B

Parent Sample Id: 688197-001

MS Sample Id: 688197-001 S

Date Prep: 02.18.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0491	98	75-135	mg/L	02.19.2021 02:38	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0483	97	75-125	mg/L	02.19.2021 02:38	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0488	98	75-127	mg/L	02.19.2021 02:38	
Trichloroethylene	<0.000424	0.0500	0.0487	97	62-137	mg/L	02.19.2021 02:38	
Trichlorofluoromethane	<0.000245	0.0500	0.0401	80	60-140	mg/L	02.19.2021 02:38	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0436	87	75-125	mg/L	02.19.2021 02:38	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0520	104	75-125	mg/L	02.19.2021 02:38	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0521	104	70-125	mg/L	02.19.2021 02:38	
o-Xylene	<0.000192	0.0500	0.0513	103	75-125	mg/L	02.19.2021 02:38	
m,p-Xylenes	<0.000330	0.100	0.103	103	75-125	mg/L	02.19.2021 02:38	
Vinyl Chloride	<0.000234	0.0500	0.0415	83	60-140	mg/L	02.19.2021 02:38	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	95		75-131	%	02.19.2021 02:38
1,2-Dichloroethane-D4	98		63-144	%	02.19.2021 02:38
Toluene-D8	100		80-117	%	02.19.2021 02:38
4-Bromofluorobenzene	99		74-124	%	02.19.2021 02:38

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Chain of Custody

Work Order No: 18208

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)

Work Order Comments									
Program: UST/PS ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project: _____ Reporting Level: I ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other: _____									

[illegible]

	TAT starts the day received by the lab if received before 0900

[illegible]Revised Date 051418 Rev. 2018.

Inter-Office Shipment

IOS Number : **78022**

Date/Time: 02.10.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

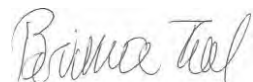
Air Bill No.: 772880042313

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
688058-001	W	MW-1	02.10.2021 10:20	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.17.2021	02.11.2021 10:20	JKR		
688058-001	W	MW-1	02.10.2021 10:20	SM4500-H	pH by SM4500-H	02.17.2021	02.10.2021 10:35	JKR		
688058-001	W	MW-1	02.10.2021 10:20	SM2320B	Alkalinity by SM2320B	02.17.2021	02.24.2021	JKR	ALK ALKB ALKC	
688058-001	W	MW-1	02.10.2021 10:20	SW8260C	VOCs by SW-846 8260C	02.17.2021	02.24.2021	JKR	BDCME BRBZ BRCLME	
688058-001	W	MW-1	02.10.2021 10:20	SM4500SF00	Sulfide by SM4500-S-F	02.17.2021	02.17.2021 10:20	JKR	S	
688058-001	W	MW-1	02.10.2021 10:20	E300	Inorganic Anions by EPA 300	02.17.2021	03.10.2021	JKR	CL	
688058-002	W	MW-2	02.10.2021 11:50	SM2320B	Alkalinity by SM2320B	02.17.2021	02.24.2021	JKR	ALK ALKB ALKC	
688058-002	W	MW-2	02.10.2021 11:50	SM4500SF00	Sulfide by SM4500-S-F	02.17.2021	02.17.2021 11:50	JKR	S	
688058-002	W	MW-2	02.10.2021 11:50	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.17.2021	02.11.2021 11:50	JKR		
688058-002	W	MW-2	02.10.2021 11:50	E300	Inorganic Anions by EPA 300	02.17.2021	03.10.2021	JKR	CL	
688058-002	W	MW-2	02.10.2021 11:50	SW8260C	VOCs by SW-846 8260C	02.17.2021	02.24.2021	JKR	BDCME BRBZ BRCLME	
688058-002	W	MW-2	02.10.2021 11:50	SM4500-H	pH by SM4500-H	02.17.2021	02.10.2021 12:05	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 02.10.2021

Received By:



Sandra Torres

Date Received: 02.13.2021

Cooler Temperature: 1.5



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 78022

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 02.10.2021 04.13 PM

Received By: Sandra Torres

Date Received: 02.13.2021 11.08 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received with appropriate temperature?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 *Custody Seals Signed and dated for Containers/coolers	Yes	
#6 *IOS present?	Yes	
#7 Any missing/extra samples?	No	
#8 IOS agrees with sample label(s)/matrix?	Yes	
#9 Sample matrix/ properties agree with IOS?	Yes	
#10 Samples in proper container/ bottle?	Yes	
#11 Samples properly preserved?	Yes	
#12 Sample container(s) intact?	Yes	
#13 Sufficient sample amount for indicated test(s)?	Yes	
#14 All samples received within hold time?	No	Due to the weather, Fedex did not deliver on time.

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Sandra Torres

Date: 02.13.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.10.2021 04:09.52 PM

Work Order #: 688058

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	11.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.10.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.12.2021

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689185-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 02.24.2021 11:40	Lab Id: 689185-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 02.24.2021 12:45				
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 02.26.2021 13:17 Analyzed: 02.26.2021 14:17 Units/RL: mg/L RL	Extracted: 02.26.2021 13:17 Analyzed: 02.26.2021 14:44 Units/RL: mg/L RL				
Alkalinity, Total (as CaCO3)	1070 4.00	1370 4.00				
Alkalinity, Bicarbonate (as CaCO3)	1070 4.00	1370 4.00				
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 16:17 Units/RL: mg/L RL	Extracted: Analyzed: 02.26.2021 16:17 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	448 K+ 0.370	793 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-39	Extracted: 02.26.2021 13:48 Analyzed: 02.26.2021 13:53 Units/RL: mg/L RL	Extracted: 02.26.2021 13:48 Analyzed: 02.26.2021 14:04 Units/RL: mg/L RL				
Chloride	343 5.00	146 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 14:30 Units/RL: mg/L RL	Extracted: Analyzed: 02.26.2021 14:30 Units/RL: mg/L RL				
Sulfide, total	0.600 J 5.00	<0.495 5.00				
TPH by SW8015 Mod	Extracted: 02.28.2021 09:00 Analyzed: 02.28.2021 10:04 Units/RL: mg/L RL	Extracted: 02.28.2021 09:00 Analyzed: 02.28.2021 11:08 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.884 2.24	1.01 J 2.28				
Diesel Range Organics (DRO)	<0.817 2.24	<0.832 2.28				
Motor Oil Range Hydrocarbons (MRO)	<0.817 2.24	<0.832 2.28				
Total TPH	<0.817 2.24	1.01 J 2.28				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	689185-001	689185-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.24.2021 11:40	02.24.2021 12:45				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.26.2021 11:33	02.26.2021 11:33				
	Analyzed:	02.26.2021 12:29	02.26.2021 12:49				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00158	0.00100	0.0218	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00575	0.0500	<0.00575	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000370 J	0.00100		
Sec-Butylbenzene		<0.000199	0.00100	0.000640 J	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000480 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	689185-001	689185-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.24.2021 11:40	02.24.2021 12:45				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.26.2021 11:33	02.26.2021 11:33				
	Analyzed:	02.26.2021 12:29	02.26.2021 12:49				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000460 J	0.00100	0.0164	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000210 J	0.00100	0.00596	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00175	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689185-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 02.24.2021 11:40	Lab Id: 689185-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 02.24.2021 12:45				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 02.26.2021 11:33 Analyzed: 02.26.2021 12:29 Units/RL: mg/L RL	Extracted: 02.26.2021 11:33 Analyzed: 02.26.2021 12:49 Units/RL: mg/L RL				
Toluene	<0.000500 0.00100	0.0122 0.00100				
1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
1,2,4-Trimethylbenzene	0.000930 J 0.00100	0.0191 0.00100				
1,3,5-Trimethylbenzene	0.000490 J 0.00100	0.00496 0.00100				
o-Xylene	<0.000192 0.00100	0.0111 0.00100				
m,p-Xylenes	0.00110 J 0.0100	0.0749 0.0100				
Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
Total Xylenes	0.00110 0.00100	0.0860 0.00100				
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 16:43 Units/RL: Deg C RL	Extracted: Analyzed: 02.26.2021 16:43 Units/RL: Deg C RL				
Temperature	18.0 K	19.4 K				
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 16:43 Units/RL: SU RL	Extracted: Analyzed: 02.26.2021 16:43 Units/RL: SU RL				
pH	6.45 K	6.17 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 689185

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

03.01.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.01.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **689185**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 689185. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 689185 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 689185

Ensolum, Dallas, TX

South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	02.24.2021 11:40		689185-001
MW-2	W	02.24.2021 12:45		689185-002



CASE NARRATIVE

Client Name: Ensolum**Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 689185Report Date: 03.01.2021
Date Received: 02.24.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3151928 VOCs by SW-846 8260C

1,1-Dichloroethene, 2-Butanone RPD was outside laboratory control limits.

Samples in the analytical batch are: 689185-001, -002

2-Butanone recovered above QC limits in the Blank Spike Duplicate. Analyte was not detected in any of the associated samples and therefore the data was accepted. Samples in the analytical batch are: 689185-001, -002.

Batch: LBA-3152066 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 689185-001 S.

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 689185-001, -002

Lab Sample ID 689185-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Diesel Range Organics (DRO) recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 689185-001, -002.

The Laboratory Control Sample for Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.26.2021 13:17

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151936

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1070	4.00	4.00	mg/L	02.26.2021 14:17		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1070	4.00	4.00	mg/L	02.26.2021 14:17		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.26.2021 14:17	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.26.2021 13:48

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151923

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	5.00	0.738	mg/L	02.26.2021 13:53		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151932

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.45			SU	02.26.2021 16:43	K	1
Temperature	TEMP	18.0			Deg C	02.26.2021 16:43	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: YAV

Analyst: YAV

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151921

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	448	0.370	0.100	mg/L	02.26.2021 16:17	K+	1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3151903

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	0.600	5.00	0.495	mg/L	02.26.2021 14:30	J	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3152066

Date Prep: 02.28.2021 09:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.884	2.24	0.884	mg/L	02.28.2021 10:04	UF	1
Diesel Range Organics (DRO)	C10C28DRO	<0.817	2.24	0.817	mg/L	02.28.2021 10:04	UXF	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.817	2.24	0.817	mg/L	02.28.2021 10:04	U	1
Total TPH	PHC635	<0.817	2.24	0.817	mg/L	02.28.2021 10:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.28.2021 10:04	
o-Terphenyl	84-15-1	111	%	70-135	02.28.2021 10:04	



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151928

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00158	0.00100	0.000214	mg/L	02.26.2021 12:29		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.26.2021 12:29	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.26.2021 12:29	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.26.2021 12:29	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.26.2021 12:29	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.26.2021 12:29	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	02.26.2021 12:29	UHF	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	02.26.2021 12:29	U	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	02.26.2021 12:29	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.26.2021 12:29	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.26.2021 12:29	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.26.2021 12:29	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.26.2021 12:29	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.26.2021 12:29	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.26.2021 12:29	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.26.2021 12:29	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.26.2021 12:29	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	02.26.2021 12:29	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.26.2021 12:29	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.26.2021 12:29	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.26.2021 12:29	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.26.2021 12:29	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.26.2021 12:29	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.26.2021 12:29	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.26.2021 12:29	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.26.2021 12:29	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.26.2021 12:29	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.26.2021 12:29	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.26.2021 12:29	UF	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.26.2021 12:29	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.26.2021 12:29	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.26.2021 12:29	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.26.2021 12:29	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.26.2021 12:29	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.26.2021 12:29	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.26.2021 12:29	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.26.2021 12:29	U	1
Ethylbenzene	100-41-4	0.000460	0.00100	0.000146	mg/L	02.26.2021 12:29	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:29	U	1
Isopropylbenzene	98-82-8	0.000210	0.00100	0.000161	mg/L	02.26.2021 12:29	J	1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.26.2021 12:29	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.26.2021 12:29	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.26.2021 12:29	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	02.26.2021 12:29	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.26.2021 12:29	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.26.2021 12:29	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.26.2021 12:29	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.26.2021 12:29	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	02.26.2021 12:29	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:29	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:29	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.26.2021 12:29	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.26.2021 12:29	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.26.2021 12:29	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.26.2021 12:29	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.26.2021 12:29	U	1
1,2,4-Trimethylbenzene	95-63-6	0.000930	0.00100	0.000252	mg/L	02.26.2021 12:29	J	1
1,3,5-Trimethylbenzene	108-67-8	0.000490	0.00100	0.000279	mg/L	02.26.2021 12:29	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	02.26.2021 12:29	U	1
m,p-Xylenes	179601-23-1	0.00110	0.0100	0.000330	mg/L	02.26.2021 12:29	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.26.2021 12:29	U	1
Total Xylenes	1330-20-7	0.00110	0.00100	0.000192	mg/L	02.26.2021 12:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	104	%	75-131	02.26.2021 12:29	
1,2-Dichloroethane-D4	17060-07-0	103	%	63-144	02.26.2021 12:29	
Toluene-D8	2037-26-5	99	%	80-117	02.26.2021 12:29	
4-Bromofluorobenzene	460-00-4	103	%	74-124	02.26.2021 12:29	



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.26.2021 13:17

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151936

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1370	4.00	4.00	mg/L	02.26.2021 14:44		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1370	4.00	4.00	mg/L	02.26.2021 14:44		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.26.2021 14:44	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.26.2021 13:48

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151923

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	5.00	0.738	mg/L	02.26.2021 14:04		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151932

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.17			SU	02.26.2021 16:43	K	1
Temperature	TEMP	19.4			Deg C	02.26.2021 16:43	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: YAV

Analyst: YAV

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151921

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	793	0.370	0.100	mg/L	02.26.2021 16:17	K+	1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3151903

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	02.26.2021 14:30	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3152066

Date Prep: 02.28.2021 09:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.01	2.28	0.901	mg/L	02.28.2021 11:08	J	1
Diesel Range Organics (DRO)	C10C28DRO	<0.832	2.28	0.832	mg/L	02.28.2021 11:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.832	2.28	0.832	mg/L	02.28.2021 11:08	U	1
Total TPH	PHC635	1.01	2.28	0.832	mg/L	02.28.2021 11:08	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.28.2021 11:08	
o-Terphenyl	84-15-1	123	%	70-135	02.28.2021 11:08	



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151928

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0218	0.00100	0.000214	mg/L	02.26.2021 12:49		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.26.2021 12:49	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.26.2021 12:49	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.26.2021 12:49	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.26.2021 12:49	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.26.2021 12:49	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	02.26.2021 12:49	UHF	1
n-Butylbenzene	104-51-8	0.000370	0.00100	0.000286	mg/L	02.26.2021 12:49	J	1
Sec-Butylbenzene	135-98-8	0.000640	0.00100	0.000199	mg/L	02.26.2021 12:49	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.26.2021 12:49	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.26.2021 12:49	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.26.2021 12:49	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.26.2021 12:49	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.26.2021 12:49	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.26.2021 12:49	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.26.2021 12:49	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.26.2021 12:49	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000480	0.00100	0.000233	mg/L	02.26.2021 12:49	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.26.2021 12:49	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.26.2021 12:49	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.26.2021 12:49	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.26.2021 12:49	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.26.2021 12:49	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.26.2021 12:49	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.26.2021 12:49	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.26.2021 12:49	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.26.2021 12:49	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.26.2021 12:49	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.26.2021 12:49	UF	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.26.2021 12:49	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.26.2021 12:49	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.26.2021 12:49	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.26.2021 12:49	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.26.2021 12:49	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.26.2021 12:49	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.26.2021 12:49	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.26.2021 12:49	U	1
Ethylbenzene	100-41-4	0.0164	0.00100	0.000146	mg/L	02.26.2021 12:49		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:49	U	1
Isopropylbenzene	98-82-8	0.00596	0.00100	0.000161	mg/L	02.26.2021 12:49		1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.26.2021 12:49	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.26.2021 12:49	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.26.2021 12:49	U	1
n-Propylbenzene	103-65-1	0.00175	0.00100	0.000179	mg/L	02.26.2021 12:49		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.26.2021 12:49	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.26.2021 12:49	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.26.2021 12:49	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.26.2021 12:49	U	1
Toluene	108-88-3	0.0122	0.00100	0.000500	mg/L	02.26.2021 12:49		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:49	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:49	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.26.2021 12:49	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.26.2021 12:49	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.26.2021 12:49	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.26.2021 12:49	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.26.2021 12:49	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0191	0.00100	0.000252	mg/L	02.26.2021 12:49		1
1,3,5-Trimethylbenzene	108-67-8	0.00496	0.00100	0.000279	mg/L	02.26.2021 12:49		1
o-Xylene	95-47-6	0.0111	0.00100	0.000192	mg/L	02.26.2021 12:49		1
m,p-Xylenes	179601-23-1	0.0749	0.0100	0.000330	mg/L	02.26.2021 12:49		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.26.2021 12:49	U	1
Total Xylenes	1330-20-7	0.0860	0.00100	0.000192	mg/L	02.26.2021 12:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	75-131	02.26.2021 12:49	
1,2-Dichloroethane-D4	17060-07-0	106	%	63-144	02.26.2021 12:49	
Toluene-D8	2037-26-5	98	%	80-117	02.26.2021 12:49	
4-Bromofluorobenzene	460-00-4	106	%	74-124	02.26.2021 12:49	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

MB Sample Id: 7722069-1-BLK

Matrix: Water

LCS Sample Id: 7722069-1-BKS

Prep Method: SM2320P

Date Prep: 02.26.2021

LCSD Sample Id: 7722069-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	265	106	266	106	85-115	0	20	mg/L	02.26.2021 13:58	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Water

MB Sample Id: 7722069-1-BLK

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	02.26.2021 13:50	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	02.26.2021 13:50	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Water

Parent Sample Id: 688931-011

MD Sample Id: 688931-011 D

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	356	357	0	20	mg/L	02.26.2021 16:16	
Alkalinity, Bicarbonate (as CaCO3)	356	357	0	20	mg/L	02.26.2021 16:16	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	02.26.2021 16:16	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Ground Water

Parent Sample Id: 689185-001

MD Sample Id: 689185-001 D

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	1070	1070	0	20	mg/L	02.26.2021 14:30	
Alkalinity, Bicarbonate (as CaCO3)	1070	1070	0	20	mg/L	02.26.2021 14:30	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	02.26.2021 14:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151923

Matrix: Water

MB Sample Id: 7722071-1-BLK

LCS Sample Id: 7722071-1-BKS

Prep Method: E300P

Date Prep: 02.26.2021

LCSD Sample Id: 7722071-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	10.7	107	10.7	107	90-110	0	20	mg/L	02.26.2021 13:31	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151923

Parent Sample Id: 688896-003

Matrix: Water

MS Sample Id: 688896-003 S

Prep Method: E300P

Date Prep: 02.26.2021

MSD Sample Id: 688896-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	60.0	10.0	69.4	94	69.7	97	90-110	0	20	mg/L	02.26.2021 14:59	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151923

Parent Sample Id: 689331-001

Matrix: Water

MS Sample Id: 689331-001 S

Prep Method: E300P

Date Prep: 02.26.2021

MSD Sample Id: 689331-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	81.5	10.0	90.7	92	90.6	91	90-110	0	20	mg/L	02.26.2021 18:39	

Analytical Method: pH by SM4500-H

Seq Number: 3151932

Parent Sample Id: 688758-001

Matrix: Water

MD Sample Id: 688758-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.80	6.89	1	20	SU	02.26.2021 16:43	
Temperature	19.5	19.7	1	20	Deg C	02.26.2021 16:43	

Analytical Method: pH by SM4500-H

Seq Number: 3151932

Parent Sample Id: 689113-004

Matrix: Waste Water

MD Sample Id: 689113-004 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.18	7.25	1	20	SU	02.26.2021 16:43	
Temperature	19.4	19.0	2	20	Deg C	02.26.2021 16:43	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3151903

MB Sample Id: 3151903-1-BLK

Matrix: Water

LCS Sample Id: 3151903-1-BKS

LCSD Sample Id: 3151903-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	44.8	90	44.0	88	80-120	2	20	mg/L	02.26.2021 14:30	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3151903

Parent Sample Id: 689185-001

Matrix: Ground Water

MS Sample Id: 689185-001 S

MSD Sample Id: 689185-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	0.600	50.0	45.6	90	43.6	86	80-120	4	20	mg/L	02.26.2021 14:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152066

MB Sample Id: 7722191-1-BLK

Matrix: Water

LCS Sample Id: 7722191-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.2021

LCSD Sample Id: 7722191-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.901	91.2	86.9	95	94.2	103	70-135	8	20	mg/L	02.28.2021 09:21	
Diesel Range Organics (DRO)	<0.832	91.2	79.5	87	85.9	94	70-135	8	20	mg/L	02.28.2021 09:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		88		96		70-135	%	02.28.2021 09:21
o-Terphenyl	114		93		103		70-135	%	02.28.2021 09:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152066

Matrix: Water

MB Sample Id: 7722191-1-BLK

Prep Method: SW8015P

Date Prep: 02.28.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.831	mg/L	02.28.2021 08:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152066

Matrix: Ground Water

Parent Sample Id: 689185-001

MS Sample Id: 689185-001 S

Prep Method: SW8015P

Date Prep: 02.28.2021

MSD Sample Id: 689185-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.902	91.3	68.3	75	88.0	96	70-135	25	20	mg/L	02.28.2021 10:26	F
Diesel Range Organics (DRO)	<0.833	91.3	59.6	65	75.1	82	70-135	23	20	mg/L	02.28.2021 10:26	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	65	**	84		70-135	%	02.28.2021 10:26
o-Terphenyl	71		88		70-135	%	02.28.2021 10:26

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

MB Sample Id: 7722090-1-BLK

Matrix: Water

LCS Sample Id: 7722090-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.2021

LCSD Sample Id: 7722090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0485	97	0.0511	102	66-142	5	25	mg/L	02.26.2021 15:24	
Bromobenzene	<0.000300	0.0500	0.0491	98	0.0528	106	75-125	7	25	mg/L	02.26.2021 15:24	
Bromochloromethane	<0.000209	0.0500	0.0513	103	0.0521	104	60-140	2	25	mg/L	02.26.2021 15:24	
Bromodichloromethane	<0.000231	0.0500	0.0517	103	0.0520	104	75-125	1	25	mg/L	02.26.2021 15:24	
Bromoform	<0.000630	0.0500	0.0571	114	0.0581	116	75-125	2	25	mg/L	02.26.2021 15:24	
Methyl bromide	<0.00105	0.0500	0.0540	108	0.0546	109	60-140	1	25	mg/L	02.26.2021 15:24	
2-Butanone	<0.00575	0.250	0.268	107	0.366	146	60-140	31	25	mg/L	02.26.2021 15:24	HF
n-Butylbenzene	<0.000286	0.0500	0.0533	107	0.0567	113	75-125	6	25	mg/L	02.26.2021 15:24	
Sec-Butylbenzene	<0.000199	0.0500	0.0489	98	0.0523	105	75-125	7	25	mg/L	02.26.2021 15:24	
tert-Butylbenzene	<0.000195	0.0500	0.0519	104	0.0545	109	75-125	5	25	mg/L	02.26.2021 15:24	
Carbon Tetrachloride	<0.000423	0.0500	0.0498	100	0.0521	104	62-125	5	25	mg/L	02.26.2021 15:24	
Chlorobenzene	<0.000159	0.0500	0.0506	101	0.0513	103	60-133	1	25	mg/L	02.26.2021 15:24	
Chloroethane	<0.000433	0.0500	0.0521	104	0.0507	101	60-140	3	25	mg/L	02.26.2021 15:24	
Chloroform	<0.000259	0.0500	0.0521	104	0.0518	104	70-130	1	25	mg/L	02.26.2021 15:24	
Methyl Chloride	<0.000318	0.0500	0.0456	91	0.0465	93	60-140	2	25	mg/L	02.26.2021 15:24	
2-Chlorotoluene	<0.000214	0.0500	0.0513	103	0.0543	109	73-125	6	25	mg/L	02.26.2021 15:24	
4-Chlorotoluene	<0.000183	0.0500	0.0513	103	0.0541	108	74-125	5	25	mg/L	02.26.2021 15:24	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0471	94	0.0500	100	75-125	6	25	mg/L	02.26.2021 15:24	
Dibromochloromethane	<0.000739	0.0500	0.0539	108	0.0555	111	73-125	3	25	mg/L	02.26.2021 15:24	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0486	97	0.0518	104	59-125	6	25	mg/L	02.26.2021 15:24	
1,2-Dibromoethane	<0.000337	0.0500	0.0522	104	0.0528	106	73-125	1	25	mg/L	02.26.2021 15:24	
Methylene Bromide	<0.000130	0.0500	0.0524	105	0.0521	104	69-127	1	25	mg/L	02.26.2021 15:24	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0499	100	0.0520	104	75-125	4	25	mg/L	02.26.2021 15:24	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0491	98	0.0519	104	75-125	6	25	mg/L	02.26.2021 15:24	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0487	97	0.0509	102	75-125	4	25	mg/L	02.26.2021 15:24	
Dichlorodifluoromethane	<0.000316	0.0500	0.0521	104	0.0516	103	60-140	1	25	mg/L	02.26.2021 15:24	
1,1-Dichloroethane	<0.000244	0.0500	0.0533	107	0.0559	112	72-125	5	25	mg/L	02.26.2021 15:24	
1,2-Dichloroethane	<0.000285	0.0500	0.0516	103	0.0516	103	68-127	0	25	mg/L	02.26.2021 15:24	
1,1-Dichloroethene	<0.000216	0.0500	0.0383	77	0.0526	105	59-172	31	25	mg/L	02.26.2021 15:24	F
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0483	97	0.0503	101	75-125	4	25	mg/L	02.26.2021 15:24	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0460	92	0.0503	101	75-125	9	25	mg/L	02.26.2021 15:24	
1,2-Dichloropropane	<0.000396	0.0500	0.0519	104	0.0526	105	74-125	1	25	mg/L	02.26.2021 15:24	
1,3-Dichloropropane	<0.000439	0.0500	0.0540	108	0.0540	108	75-125	0	25	mg/L	02.26.2021 15:24	
2,2-Dichloropropane	<0.000360	0.0500	0.0505	101	0.0527	105	75-125	4	25	mg/L	02.26.2021 15:24	
1,1-Dichloropropene	<0.000481	0.0500	0.0463	93	0.0480	96	75-125	4	25	mg/L	02.26.2021 15:24	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0543	109	0.0540	108	74-125	1	25	mg/L	02.26.2021 15:24	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0534	107	0.0535	107	66-125	0	25	mg/L	02.26.2021 15:24	
Ethylbenzene	<0.000146	0.0500	0.0507	101	0.0510	102	75-125	1	25	mg/L	02.26.2021 15:24	
Hexachlorobutadiene	<0.00200	0.0500	0.0470	94	0.0516	103	75-125	9	25	mg/L	02.26.2021 15:24	
Isopropylbenzene	<0.000161	0.0500	0.0497	99	0.0504	101	75-125	1	25	mg/L	02.26.2021 15:24	
Methylene Chloride	<0.00191	0.0500	0.0475	95	0.0501	100	75-125	5	25	mg/L	02.26.2021 15:24	
MTBE	<0.000571	0.0500	0.0514	103	0.0529	106	65-135	3	25	mg/L	02.26.2021 15:24	
Naphthalene	<0.00200	0.0500	0.0500	100	0.0550	110	70-130	10	25	mg/L	02.26.2021 15:24	
n-Propylbenzene	<0.000179	0.0500	0.0519	104	0.0551	110	75-125	6	25	mg/L	02.26.2021 15:24	
Styrene	<0.000162	0.0500	0.0528	106	0.0533	107	75-125	1	25	mg/L	02.26.2021 15:24	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0516	103	0.0517	103	72-125	0	25	mg/L	02.26.2021 15:24	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0532	106	0.0554	111	74-125	4	25	mg/L	02.26.2021 15:24	
Tetrachloroethylene	<0.000500	0.0500	0.0483	97	0.0507	101	71-125	5	25	mg/L	02.26.2021 15:24	
Toluene	<0.000500	0.0500	0.0503	101	0.0523	105	59-139	4	25	mg/L	02.26.2021 15:24	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0450	90	0.0512	102	75-137	13	25	mg/L	02.26.2021 15:24	

MS/MSD Percent Recovery
Relative Percent Difference
Log/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

MB Sample Id: 7722090-1-BLK

Matrix: Water

LCS Sample Id: 7722090-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.2021

LCSD Sample Id: 7722090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0482	96	0.0528	106	75-135	9	25	mg/L	02.26.2021 15:24	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0519	104	0.0527	105	75-125	2	25	mg/L	02.26.2021 15:24	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0537	107	0.0533	107	75-127	1	25	mg/L	02.26.2021 15:24	
Trichloroethylene	<0.000424	0.0500	0.0488	98	0.0511	102	62-137	5	25	mg/L	02.26.2021 15:24	
Trichlorofluoromethane	<0.000245	0.0500	0.0517	103	0.0503	101	60-140	3	25	mg/L	02.26.2021 15:24	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0537	107	0.0567	113	75-125	5	25	mg/L	02.26.2021 15:24	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0522	104	0.0555	111	75-125	6	25	mg/L	02.26.2021 15:24	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0521	104	0.0553	111	70-125	6	25	mg/L	02.26.2021 15:24	
o-Xylene	<0.000192	0.0500	0.0524	105	0.0536	107	75-125	2	25	mg/L	02.26.2021 15:24	
m,p-Xylenes	<0.000330	0.100	0.104	104	0.105	105	75-125	1	25	mg/L	02.26.2021 15:24	
Vinyl Chloride	<0.000234	0.0500	0.0536	107	0.0531	106	60-140	1	25	mg/L	02.26.2021 15:24	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		103		99		75-131			%	02.26.2021 15:24	
1,2-Dichloroethane-D4	101		100		100		63-144			%	02.26.2021 15:24	
Toluene-D8	100		99		102		80-117			%	02.26.2021 15:24	
4-Bromofluorobenzene	101		100		104		74-124			%	02.26.2021 15:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

Matrix: Waste Water

Prep Method: SW5030B

Date Prep: 02.26.2021

Parent Sample Id: 689420-001

MS Sample Id: 689420-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0493	99	66-142	mg/L	02.26.2021 10:09	
Bromobenzene	<0.000300	0.0500	0.0506	101	75-125	mg/L	02.26.2021 10:09	
Bromochloromethane	<0.000209	0.0500	0.0522	104	60-140	mg/L	02.26.2021 10:09	
Bromodichloromethane	0.00901	0.0500	0.0592	100	75-125	mg/L	02.26.2021 10:09	
Bromoform	0.0141	0.0500	0.0668	105	75-125	mg/L	02.26.2021 10:09	
Methyl bromide	<0.00105	0.0500	0.0529	106	60-140	mg/L	02.26.2021 10:09	
2-Butanone	<0.00575	0.250	0.326	130	60-140	mg/L	02.26.2021 10:09	
n-Butylbenzene	<0.000286	0.0500	0.0550	110	75-125	mg/L	02.26.2021 10:09	
Sec-Butylbenzene	<0.000199	0.0500	0.0506	101	75-125	mg/L	02.26.2021 10:09	
tert-Butylbenzene	<0.000195	0.0500	0.0533	107	75-125	mg/L	02.26.2021 10:09	
Carbon Tetrachloride	<0.000423	0.0500	0.0516	103	62-125	mg/L	02.26.2021 10:09	
Chlorobenzene	<0.000159	0.0500	0.0492	98	60-133	mg/L	02.26.2021 10:09	
Chloroethane	<0.000433	0.0500	0.0521	104	60-140	mg/L	02.26.2021 10:09	
Chloroform	0.00500	0.0500	0.0572	104	70-130	mg/L	02.26.2021 10:09	
Methyl Chloride	<0.000318	0.0500	0.0504	101	60-140	mg/L	02.26.2021 10:09	
2-Chlorotoluene	<0.000214	0.0500	0.0532	106	73-125	mg/L	02.26.2021 10:09	
4-Chlorotoluene	<0.000183	0.0500	0.0527	105	74-125	mg/L	02.26.2021 10:09	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0489	98	75-125	mg/L	02.26.2021 10:09	
Dibromochloromethane	0.0181	0.0500	0.0701	104	73-125	mg/L	02.26.2021 10:09	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0448	90	59-125	mg/L	02.26.2021 10:09	
1,2-Dibromoethane	<0.000337	0.0500	0.0484	97	73-125	mg/L	02.26.2021 10:09	
Methylene Bromide	0.000160	0.0500	0.0499	99	69-127	mg/L	02.26.2021 10:09	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0500	100	75-125	mg/L	02.26.2021 10:09	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0503	101	75-125	mg/L	02.26.2021 10:09	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0498	100	75-125	mg/L	02.26.2021 10:09	
Dichlorodifluoromethane	<0.000316	0.0500	0.0527	105	60-140	mg/L	02.26.2021 10:09	
1,1-Dichloroethane	<0.000244	0.0500	0.0555	111	72-125	mg/L	02.26.2021 10:09	
1,2-Dichloroethane	<0.000285	0.0500	0.0496	99	68-127	mg/L	02.26.2021 10:09	
1,1-Dichloroethene	<0.000216	0.0500	0.0537	107	59-172	mg/L	02.26.2021 10:09	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0499	100	75-125	mg/L	02.26.2021 10:09	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0517	103	75-125	mg/L	02.26.2021 10:09	
1,2-Dichloropropane	<0.000396	0.0500	0.0518	104	74-125	mg/L	02.26.2021 10:09	
1,3-Dichloropropane	<0.000439	0.0500	0.0507	101	75-125	mg/L	02.26.2021 10:09	
2,2-Dichloropropane	<0.000360	0.0500	0.0529	106	75-125	mg/L	02.26.2021 10:09	
1,1-Dichloropropene	<0.000481	0.0500	0.0476	95	75-125	mg/L	02.26.2021 10:09	
cis-1,3-Dichloropropene	RPD = 200* (C-E) / (C+E)	0.0500	0.0523	105	74-125	mg/L	02.26.2021 10:09	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0512	102	66-125	mg/L	02.26.2021 10:09	
Ethylbenzene	<0.000146	0.0500	0.0490	98	75-125	mg/L	02.26.2021 10:09	
Hexachlorobutadiene	<0.00200	0.0500	0.0515	103	75-125	mg/L	02.26.2021 10:09	
Isopropylbenzene	<0.000161	0.0500	0.0484	97	75-125	mg/L	02.26.2021 10:09	
Methylene Chloride	<0.00191	0.0500	0.0503	101	75-125	mg/L	02.26.2021 10:09	
MTBE	<0.000571	0.0500	0.0508	102	65-135	mg/L	02.26.2021 10:09	
Naphthalene	<0.00200	0.0500	0.0537	107	70-130	mg/L	02.26.2021 10:09	
n-Propylbenzene	<0.000179	0.0500	0.0534	107	75-125	mg/L	02.26.2021 10:09	
Styrene	<0.000162	0.0500	0.0511	102	75-125	mg/L	02.26.2021 10:09	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0500	100	72-125	mg/L	02.26.2021 10:09	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0512	102	74-125	mg/L	02.26.2021 10:09	
Tetrachloroethylene	<0.000500	0.0500	0.0494	99	71-125	mg/L	02.26.2021 10:09	
Toluene	<0.000500	0.0500	0.0500	100	59-139	mg/L	02.26.2021 10:09	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0510	102	75-137	mg/L	02.26.2021 10:09	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

Matrix: Waste Water

Prep Method: SW5030B

Parent Sample Id: 689420-001

MS Sample Id: 689420-001 S

Date Prep: 02.26.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0501	100	75-135	mg/L	02.26.2021 10:09	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0529	106	75-125	mg/L	02.26.2021 10:09	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0502	100	75-127	mg/L	02.26.2021 10:09	
Trichloroethylene	<0.000424	0.0500	0.0498	100	62-137	mg/L	02.26.2021 10:09	
Trichlorofluoromethane	<0.000245	0.0500	0.0515	103	60-140	mg/L	02.26.2021 10:09	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0521	104	75-125	mg/L	02.26.2021 10:09	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0536	107	75-125	mg/L	02.26.2021 10:09	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0542	108	70-125	mg/L	02.26.2021 10:09	
o-Xylene	<0.000192	0.0500	0.0508	102	75-125	mg/L	02.26.2021 10:09	
m,p-Xylenes	<0.000330	0.100	0.101	101	75-125	mg/L	02.26.2021 10:09	
Vinyl Chloride	<0.000234	0.0500	0.0545	109	60-140	mg/L	02.26.2021 10:09	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		75-131	%	02.26.2021 10:09
1,2-Dichloroethane-D4	95		63-144	%	02.26.2021 10:09
Toluene-D8	99		80-117	%	02.26.2021 10:09
4-Bromofluorobenzene	105		74-124	%	02.26.2021 10:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: 089187

www.xenco.com Page 1 of 1

Revised Date: 08/25/2020 Rev. 2020.2

Inter-Office Shipment

IOS Number : **78454**

Date/Time: 02.25.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: SW Cargo

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
689185-001	W	MW-1	02.24.2021 11:40	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.26.2021	02.25.2021 11:40	JKR		
689185-001	W	MW-1	02.24.2021 11:40	SM4500-H	pH by SM4500-H	02.26.2021	02.24.2021 11:40	JKR		
689185-001	W	MW-1	02.24.2021 11:40	SM2320B	Alkalinity by SM2320B	02.26.2021	03.10.2021	JKR	ALK ALKB ALKC	
689185-001	W	MW-1	02.24.2021 11:40	SW8260C	VOCs by SW-846 8260C	02.26.2021	03.10.2021	JKR	BDCME BRBZ BRCLME	
689185-001	W	MW-1	02.24.2021 11:40	SM4500SF00	Sulfide by SM4500-S-F	02.26.2021	03.03.2021 11:40	JKR	S	
689185-001	W	MW-1	02.24.2021 11:40	E300	Inorganic Anions by EPA 300	02.26.2021	03.24.2021	JKR	CL	
689185-002	W	MW-2	02.24.2021 12:45	SM2320B	Alkalinity by SM2320B	02.26.2021	03.10.2021	JKR	ALK ALKB ALKC	
689185-002	W	MW-2	02.24.2021 12:45	SM4500SF00	Sulfide by SM4500-S-F	02.26.2021	03.03.2021 12:45	JKR	S	
689185-002	W	MW-2	02.24.2021 12:45	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.26.2021	02.25.2021 12:45	JKR		
689185-002	W	MW-2	02.24.2021 12:45	E300	Inorganic Anions by EPA 300	02.26.2021	03.24.2021	JKR	CL	
689185-002	W	MW-2	02.24.2021 12:45	SW8260C	VOCs by SW-846 8260C	02.26.2021	03.10.2021	JKR	BDCME BRBZ BRCLME	
689185-002	W	MW-2	02.24.2021 12:45	SM4500-H	pH by SM4500-H	02.26.2021	02.24.2021 12:45	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer
 Jessica Kramer

Date Relinquished: 02.25.2021

Received By: Jose Londono
 Jose Londono

Date Received: 02.26.2021

Cooler Temperature: 2.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 78454

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 02.25.2021 08.00 AM

Received By: Jose Londono

Date Received: 02.26.2021 09.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 02.26.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.24.2021 04.00.00 PM

Work Order #: 689185

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.24.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.25.2021

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 689185-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 02.24.2021 11:40	Lab Id: 689185-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 02.24.2021 12:45				
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted: 02.26.2021 13:17 Analyzed: 02.26.2021 14:17 Units/RL: mg/L RL	Extracted: 02.26.2021 13:17 Analyzed: 02.26.2021 14:44 Units/RL: mg/L RL				
Alkalinity, Total (as CaCO3)	1070 4.00	1370 4.00				
Alkalinity, Bicarbonate (as CaCO3)	1070 4.00	1370 4.00				
Alkalinity, Carbonate (as CaCO3)	<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 16:17 Units/RL: mg/L RL	Extracted: Analyzed: 02.26.2021 16:17 Units/RL: mg/L RL				
Carbon Dioxide, (Free)	448 K+ 0.370	793 K+ 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-39	Extracted: 02.26.2021 13:48 Analyzed: 02.26.2021 13:53 Units/RL: mg/L RL	Extracted: 02.26.2021 13:48 Analyzed: 02.26.2021 14:04 Units/RL: mg/L RL				
Chloride	343 5.00	146 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-39	Extracted: Analyzed: 02.26.2021 14:30 Units/RL: mg/L RL	Extracted: Analyzed: 02.26.2021 14:30 Units/RL: mg/L RL				
Sulfide, total	0.600 J 5.00	<0.495 5.00				
TPH by SW8015 Mod	Extracted: 02.28.2021 09:00 Analyzed: 02.28.2021 10:04 Units/RL: mg/L RL	Extracted: 02.28.2021 09:00 Analyzed: 02.28.2021 11:08 Units/RL: mg/L RL				
Gasoline Range Hydrocarbons (GRO)	<0.884 2.24	1.01 J 2.28				
Diesel Range Organics (DRO)	<0.817 2.24	<0.832 2.28				
Motor Oil Range Hydrocarbons (MRO)	<0.817 2.24	<0.832 2.28				
Total TPH	<0.817 2.24	1.01 J 2.28				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	689185-001	689185-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.24.2021 11:40	02.24.2021 12:45				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.26.2021 11:33	02.26.2021 11:33				
	Analyzed:	02.26.2021 12:29	02.26.2021 12:49				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00158	0.00100	0.0218	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00575	0.0500	<0.00575	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000370 J	0.00100		
Sec-Butylbenzene		<0.000199	0.00100	0.000640 J	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000480 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

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Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	689185-001	689185-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.24.2021 11:40	02.24.2021 12:45				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.26.2021 11:33	02.26.2021 11:33				
	Analyzed:	02.26.2021 12:29	02.26.2021 12:49				
	Units/RL:	mg/L	RL	mg/L	RL		
1,4-Dichlorobenzene		<0.000199	0.00100	<0.000199	0.00100		
Dichlorodifluoromethane		<0.000316	0.00100	<0.000316	0.00100		
1,1-Dichloroethane		<0.000244	0.00100	<0.000244	0.00100		
1,2-Dichloroethane		<0.000285	0.00100	<0.000285	0.00100		
1,1-Dichloroethene		<0.000216	0.00100	<0.000216	0.00100		
cis-1,2-Dichloroethylene		<0.000174	0.00100	<0.000174	0.00100		
trans-1,2-dichloroethylene		<0.000256	0.00100	<0.000256	0.00100		
1,2-Dichloropropane		<0.000396	0.00500	<0.000396	0.00500		
1,3-Dichloropropane		<0.000439	0.00500	<0.000439	0.00500		
2,2-Dichloropropane		<0.000360	0.00500	<0.000360	0.00500		
1,1-Dichloropropene		<0.000481	0.00500	<0.000481	0.00500		
cis-1,3-Dichloropropene		<0.000690	0.00500	<0.000690	0.00500		
trans-1,3-dichloropropene		<0.000752	0.00500	<0.000752	0.00500		
Ethylbenzene		0.000460 J	0.00100	0.0164	0.00100		
Hexachlorobutadiene		<0.00200	0.00500	<0.00200	0.00500		
Isopropylbenzene		0.000210 J	0.00100	0.00596	0.00100		
Methylene Chloride		<0.00191	0.00500	<0.00191	0.00500		
MTBE		<0.000571	0.00500	<0.000571	0.00500		
Naphthalene		<0.00200	0.0100	<0.00200	0.0100		
n-Propylbenzene		<0.000179	0.00100	0.00175	0.00100		
Styrene		<0.000162	0.00100	<0.000162	0.00100		
1,1,1,2-Tetrachloroethane		<0.000327	0.00100	<0.000327	0.00100		
1,1,2,2-Tetrachloroethane		<0.000284	0.00100	<0.000284	0.00100		
Tetrachloroethylene		<0.000500	0.00100	<0.000500	0.00100		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 689185



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Wed 02.24.2021 16:00
Report Date: 03.01.2021 17:06
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	689185-001	689185-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	02.24.2021 11:40	02.24.2021 12:45				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	02.26.2021 11:33	02.26.2021 11:33				
	Analyzed:	02.26.2021 12:29	02.26.2021 12:49				
	Units/RL:	mg/L RL	mg/L RL				
	Toluene	<0.000500 0.00100	0.0122 0.00100				
	1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
	1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
	1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
	Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
	Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
	1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
	1,2,4-Trimethylbenzene	0.000930 J 0.00100	0.0191 0.00100				
	1,3,5-Trimethylbenzene	0.000490 J 0.00100	0.00496 0.00100				
	o-Xylene	<0.000192 0.00100	0.0111 0.00100				
	m,p-Xylenes	0.00110 J 0.0100	0.0749 0.0100				
	Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
	Total Xylenes	0.00110 0.00100	0.0860 0.00100				
pH by SM4500-H SUB: T104704215-20-39	Extracted:	02.26.2021 16:43	02.26.2021 16:43				
	Analyzed:	02.26.2021 16:43	02.26.2021 16:43				
	Units/RL:	Deg C RL	Deg C RL				
	Temperature	18.0 K	19.4 K				
pH by SM4500-H SUB: T104704215-20-39	Extracted:	02.26.2021 16:43	02.26.2021 16:43				
	Analyzed:	02.26.2021 16:43	02.26.2021 16:43				
	Units/RL:	SU RL	SU RL				
	pH	6.45 K	6.17 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 689185

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

03.01.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.01.2021

Project Manager: **Beaux Jennings**

Ensolum

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **689185**

South Hobbs

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 689185. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 689185 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 689185

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	02.24.2021 11:40		689185-001
MW-2	W	02.24.2021 12:45		689185-002



CASE NARRATIVE

Client Name: Ensolum**Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 689185Report Date: 03.01.2021
Date Received: 02.24.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3151928 VOCs by SW-846 8260C

1,1-Dichloroethene, 2-Butanone RPD was outside laboratory control limits.

Samples in the analytical batch are: 689185-001, -002

2-Butanone recovered above QC limits in the Blank Spike Duplicate. Analyte was not detected in any of the associated samples and therefore the data was accepted. Samples in the analytical batch are: 689185-001, -002.

Batch: LBA-3152066 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 689185-001 S.

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 689185-001, -002

Lab Sample ID 689185-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Diesel Range Organics (DRO) recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 689185-001, -002.

The Laboratory Control Sample for Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.26.2021 13:17

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151936

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1070	4.00	4.00	mg/L	02.26.2021 14:17		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1070	4.00	4.00	mg/L	02.26.2021 14:17		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.26.2021 14:17	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.26.2021 13:48

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151923

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	5.00	0.738	mg/L	02.26.2021 13:53		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151932

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.45			SU	02.26.2021 16:43	K	1
Temperature	TEMP	18.0			Deg C	02.26.2021 16:43	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: YAV

Analyst: YAV

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151921

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	448	0.370	0.100	mg/L	02.26.2021 16:17	K+	1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3151903

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	0.600	5.00	0.495	mg/L	02.26.2021 14:30	J	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3152066

Date Prep: 02.28.2021 09:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<0.884	2.24	0.884	mg/L	02.28.2021 10:04	UF	1
Diesel Range Organics (DRO)	C10C28DRO	<0.817	2.24	0.817	mg/L	02.28.2021 10:04	UXF	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.817	2.24	0.817	mg/L	02.28.2021 10:04	U	1
Total TPH	PHC635	<0.817	2.24	0.817	mg/L	02.28.2021 10:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.28.2021 10:04	
o-Terphenyl	84-15-1	111	%	70-135	02.28.2021 10:04	



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151928

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00158	0.00100	0.000214	mg/L	02.26.2021 12:29		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.26.2021 12:29	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.26.2021 12:29	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.26.2021 12:29	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.26.2021 12:29	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.26.2021 12:29	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	02.26.2021 12:29	UHF	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	02.26.2021 12:29	U	1
Sec-Butylbenzene	135-98-8	<0.000199	0.00100	0.000199	mg/L	02.26.2021 12:29	U	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.26.2021 12:29	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.26.2021 12:29	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.26.2021 12:29	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.26.2021 12:29	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.26.2021 12:29	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.26.2021 12:29	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.26.2021 12:29	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.26.2021 12:29	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	02.26.2021 12:29	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.26.2021 12:29	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.26.2021 12:29	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.26.2021 12:29	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.26.2021 12:29	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.26.2021 12:29	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.26.2021 12:29	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.26.2021 12:29	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.26.2021 12:29	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.26.2021 12:29	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.26.2021 12:29	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.26.2021 12:29	UF	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.26.2021 12:29	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.26.2021 12:29	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.26.2021 12:29	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.26.2021 12:29	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.26.2021 12:29	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.26.2021 12:29	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.26.2021 12:29	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.26.2021 12:29	U	1
Ethylbenzene	100-41-4	0.000460	0.00100	0.000146	mg/L	02.26.2021 12:29	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:29	U	1
Isopropylbenzene	98-82-8	0.000210	0.00100	0.000161	mg/L	02.26.2021 12:29	J	1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 689185-001

Matrix: Ground Water
Date Collected: 02.24.2021 11:40

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.26.2021 12:29	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.26.2021 12:29	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.26.2021 12:29	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00100	0.000179	mg/L	02.26.2021 12:29	U	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.26.2021 12:29	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.26.2021 12:29	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.26.2021 12:29	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.26.2021 12:29	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	02.26.2021 12:29	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:29	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:29	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.26.2021 12:29	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.26.2021 12:29	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.26.2021 12:29	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.26.2021 12:29	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.26.2021 12:29	U	1
1,2,4-Trimethylbenzene	95-63-6	0.000930	0.00100	0.000252	mg/L	02.26.2021 12:29	J	1
1,3,5-Trimethylbenzene	108-67-8	0.000490	0.00100	0.000279	mg/L	02.26.2021 12:29	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	02.26.2021 12:29	U	1
m,p-Xylenes	179601-23-1	0.00110	0.0100	0.000330	mg/L	02.26.2021 12:29	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.26.2021 12:29	U	1
Total Xylenes	1330-20-7	0.00110	0.00100	0.000192	mg/L	02.26.2021 12:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	104	%	75-131	02.26.2021 12:29	
1,2-Dichloroethane-D4	17060-07-0	103	%	63-144	02.26.2021 12:29	
Toluene-D8	2037-26-5	99	%	80-117	02.26.2021 12:29	
4-Bromofluorobenzene	460-00-4	103	%	74-124	02.26.2021 12:29	



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 02.26.2021 13:17

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151936

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1370	4.00	4.00	mg/L	02.26.2021 14:44		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1370	4.00	4.00	mg/L	02.26.2021 14:44		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	02.26.2021 14:44	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 02.26.2021 13:48

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151923

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	5.00	0.738	mg/L	02.26.2021 14:04		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151932

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.17			SU	02.26.2021 16:43	K	1
Temperature	TEMP	19.4			Deg C	02.26.2021 16:43	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: YAV

Analyst: YAV

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151921

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	793	0.370	0.100	mg/L	02.26.2021 16:17	K+	1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3151903

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	5.00	0.495	mg/L	02.26.2021 14:30	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3152066

Date Prep: 02.28.2021 09:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.01	2.28	0.901	mg/L	02.28.2021 11:08	J	1
Diesel Range Organics (DRO)	C10C28DRO	<0.832	2.28	0.832	mg/L	02.28.2021 11:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.832	2.28	0.832	mg/L	02.28.2021 11:08	U	1
Total TPH	PHC635	1.01	2.28	0.832	mg/L	02.28.2021 11:08	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.28.2021 11:08	
o-Terphenyl	84-15-1	123	%	70-135	02.28.2021 11:08	



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

% Moisture:
SUB: T104704215-20-39

Seq Number: 3151928

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0218	0.00100	0.000214	mg/L	02.26.2021 12:49		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	02.26.2021 12:49	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	02.26.2021 12:49	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	02.26.2021 12:49	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	02.26.2021 12:49	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	02.26.2021 12:49	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	02.26.2021 12:49	UHF	1
n-Butylbenzene	104-51-8	0.000370	0.00100	0.000286	mg/L	02.26.2021 12:49	J	1
Sec-Butylbenzene	135-98-8	0.000640	0.00100	0.000199	mg/L	02.26.2021 12:49	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	02.26.2021 12:49	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	02.26.2021 12:49	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	02.26.2021 12:49	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	02.26.2021 12:49	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	02.26.2021 12:49	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	02.26.2021 12:49	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	02.26.2021 12:49	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	02.26.2021 12:49	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000480	0.00100	0.000233	mg/L	02.26.2021 12:49	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	02.26.2021 12:49	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	02.26.2021 12:49	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	02.26.2021 12:49	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	02.26.2021 12:49	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	02.26.2021 12:49	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	02.26.2021 12:49	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	02.26.2021 12:49	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	02.26.2021 12:49	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	02.26.2021 12:49	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	02.26.2021 12:49	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	02.26.2021 12:49	UF	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	02.26.2021 12:49	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	02.26.2021 12:49	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	02.26.2021 12:49	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	02.26.2021 12:49	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	02.26.2021 12:49	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	02.26.2021 12:49	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	02.26.2021 12:49	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	02.26.2021 12:49	U	1
Ethylbenzene	100-41-4	0.0164	0.00100	0.000146	mg/L	02.26.2021 12:49		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:49	U	1
Isopropylbenzene	98-82-8	0.00596	0.00100	0.000161	mg/L	02.26.2021 12:49		1



Certificate of Analytical Results 689185

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 689185-002

Matrix: Ground Water
Date Collected: 02.24.2021 12:45

Date Received: 02.24.2021 16:00

Analytical Method: VOCs by SW-846 8260C

Tech: EZA

Analyst: EZA

Date Prep: 02.26.2021 11:33

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	02.26.2021 12:49	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	02.26.2021 12:49	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	02.26.2021 12:49	U	1
n-Propylbenzene	103-65-1	0.00175	0.00100	0.000179	mg/L	02.26.2021 12:49		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	02.26.2021 12:49	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	02.26.2021 12:49	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	02.26.2021 12:49	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	02.26.2021 12:49	U	1
Toluene	108-88-3	0.0122	0.00100	0.000500	mg/L	02.26.2021 12:49		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:49	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	02.26.2021 12:49	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	02.26.2021 12:49	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	02.26.2021 12:49	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	02.26.2021 12:49	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	02.26.2021 12:49	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	02.26.2021 12:49	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0191	0.00100	0.000252	mg/L	02.26.2021 12:49		1
1,3,5-Trimethylbenzene	108-67-8	0.00496	0.00100	0.000279	mg/L	02.26.2021 12:49		1
o-Xylene	95-47-6	0.0111	0.00100	0.000192	mg/L	02.26.2021 12:49		1
m,p-Xylenes	179601-23-1	0.0749	0.0100	0.000330	mg/L	02.26.2021 12:49		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	02.26.2021 12:49	U	1
Total Xylenes	1330-20-7	0.0860	0.00100	0.000192	mg/L	02.26.2021 12:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	75-131	02.26.2021 12:49	
1,2-Dichloroethane-D4	17060-07-0	106	%	63-144	02.26.2021 12:49	
Toluene-D8	2037-26-5	98	%	80-117	02.26.2021 12:49	
4-Bromofluorobenzene	460-00-4	106	%	74-124	02.26.2021 12:49	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

MB Sample Id: 7722069-1-BLK

Matrix: Water

LCS Sample Id: 7722069-1-BKS

Prep Method: SM2320P

Date Prep: 02.26.2021

LCSD Sample Id: 7722069-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	265	106	266	106	85-115	0	20	mg/L	02.26.2021 13:58	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Water

MB Sample Id: 7722069-1-BLK

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	02.26.2021 13:50	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	02.26.2021 13:50	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Water

Parent Sample Id: 688931-011

MD Sample Id: 688931-011 D

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	356	357	0	20	mg/L	02.26.2021 16:16	
Alkalinity, Bicarbonate (as CaCO3)	356	357	0	20	mg/L	02.26.2021 16:16	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	02.26.2021 16:16	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3151936

Matrix: Ground Water

Parent Sample Id: 689185-001

MD Sample Id: 689185-001 D

Prep Method: SM2320P

Date Prep: 02.26.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	1070	1070	0	20	mg/L	02.26.2021 14:30	
Alkalinity, Bicarbonate (as CaCO3)	1070	1070	0	20	mg/L	02.26.2021 14:30	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	02.26.2021 14:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151923

Matrix: Water

MB Sample Id: 7722071-1-BLK

LCS Sample Id: 7722071-1-BKS

Prep Method: E300P

Date Prep: 02.26.2021

LCSD Sample Id: 7722071-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	10.7	107	10.7	107	90-110	0	20	mg/L	02.26.2021 13:31	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151923

Matrix: Water

Prep Method: E300P

Parent Sample Id: 688896-003

MS Sample Id: 688896-003 S

Date Prep: 02.26.2021

MSD Sample Id: 688896-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	60.0	10.0	69.4	94	69.7	97	90-110	0	20	mg/L	02.26.2021 14:59	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3151923

Matrix: Water

Prep Method: E300P

Parent Sample Id: 689331-001

MS Sample Id: 689331-001 S

Date Prep: 02.26.2021

MSD Sample Id: 689331-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	81.5	10.0	90.7	92	90.6	91	90-110	0	20	mg/L	02.26.2021 18:39	

Analytical Method: pH by SM4500-H

Seq Number: 3151932

Matrix: Water

Parent Sample Id: 688758-001

MD Sample Id: 688758-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.80	6.89	1	20	SU	02.26.2021 16:43	
Temperature	19.5	19.7	1	20	Deg C	02.26.2021 16:43	

Analytical Method: pH by SM4500-H

Seq Number: 3151932

Matrix: Waste Water

Parent Sample Id: 689113-004

MD Sample Id: 689113-004 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.18	7.25	1	20	SU	02.26.2021 16:43	
Temperature	19.4	19.0	2	20	Deg C	02.26.2021 16:43	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3151903

Matrix: Water

MB Sample Id: 3151903-1-BLK

LCS Sample Id: 3151903-1-BKS

LCSD Sample Id: 3151903-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	44.8	90	44.0	88	80-120	2	20	mg/L	02.26.2021 14:30	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3151903

Matrix: Ground Water

Parent Sample Id: 689185-001

MS Sample Id: 689185-001 S

MSD Sample Id: 689185-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	0.600	50.0	45.6	90	43.6	86	80-120	4	20	mg/L	02.26.2021 14:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152066

MB Sample Id: 7722191-1-BLK

Matrix: Water

LCS Sample Id: 7722191-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.2021

LCSD Sample Id: 7722191-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.901	91.2	86.9	95	94.2	103	70-135	8	20	mg/L	02.28.2021 09:21	
Diesel Range Organics (DRO)	<0.832	91.2	79.5	87	85.9	94	70-135	8	20	mg/L	02.28.2021 09:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		88		96		70-135	%	02.28.2021 09:21
o-Terphenyl	114		93		103		70-135	%	02.28.2021 09:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152066

Matrix: Water

MB Sample Id: 7722191-1-BLK

Prep Method: SW8015P

Date Prep: 02.28.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<0.831	mg/L	02.28.2021 08:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152066

Matrix: Ground Water

Parent Sample Id: 689185-001

MS Sample Id: 689185-001 S

Prep Method: SW8015P

Date Prep: 02.28.2021

MSD Sample Id: 689185-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.902	91.3	68.3	75	88.0	96	70-135	25	20	mg/L	02.28.2021 10:26	F
Diesel Range Organics (DRO)	<0.833	91.3	59.6	65	75.1	82	70-135	23	20	mg/L	02.28.2021 10:26	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	65	**	84		70-135	%	02.28.2021 10:26
o-Terphenyl	71		88		70-135	%	02.28.2021 10:26

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

MB Sample Id: 7722090-1-BLK

Matrix: Water

LCS Sample Id: 7722090-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.2021

LCSD Sample Id: 7722090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0485	97	0.0511	102	66-142	5	25	mg/L	02.26.2021 15:24	
Bromobenzene	<0.000300	0.0500	0.0491	98	0.0528	106	75-125	7	25	mg/L	02.26.2021 15:24	
Bromochloromethane	<0.000209	0.0500	0.0513	103	0.0521	104	60-140	2	25	mg/L	02.26.2021 15:24	
Bromodichloromethane	<0.000231	0.0500	0.0517	103	0.0520	104	75-125	1	25	mg/L	02.26.2021 15:24	
Bromoform	<0.000630	0.0500	0.0571	114	0.0581	116	75-125	2	25	mg/L	02.26.2021 15:24	
Methyl bromide	<0.00105	0.0500	0.0540	108	0.0546	109	60-140	1	25	mg/L	02.26.2021 15:24	
2-Butanone	<0.00575	0.250	0.268	107	0.366	146	60-140	31	25	mg/L	02.26.2021 15:24	HF
n-Butylbenzene	<0.000286	0.0500	0.0533	107	0.0567	113	75-125	6	25	mg/L	02.26.2021 15:24	
Sec-Butylbenzene	<0.000199	0.0500	0.0489	98	0.0523	105	75-125	7	25	mg/L	02.26.2021 15:24	
tert-Butylbenzene	<0.000195	0.0500	0.0519	104	0.0545	109	75-125	5	25	mg/L	02.26.2021 15:24	
Carbon Tetrachloride	<0.000423	0.0500	0.0498	100	0.0521	104	62-125	5	25	mg/L	02.26.2021 15:24	
Chlorobenzene	<0.000159	0.0500	0.0506	101	0.0513	103	60-133	1	25	mg/L	02.26.2021 15:24	
Chloroethane	<0.000433	0.0500	0.0521	104	0.0507	101	60-140	3	25	mg/L	02.26.2021 15:24	
Chloroform	<0.000259	0.0500	0.0521	104	0.0518	104	70-130	1	25	mg/L	02.26.2021 15:24	
Methyl Chloride	<0.000318	0.0500	0.0456	91	0.0465	93	60-140	2	25	mg/L	02.26.2021 15:24	
2-Chlorotoluene	<0.000214	0.0500	0.0513	103	0.0543	109	73-125	6	25	mg/L	02.26.2021 15:24	
4-Chlorotoluene	<0.000183	0.0500	0.0513	103	0.0541	108	74-125	5	25	mg/L	02.26.2021 15:24	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0471	94	0.0500	100	75-125	6	25	mg/L	02.26.2021 15:24	
Dibromochloromethane	<0.000739	0.0500	0.0539	108	0.0555	111	73-125	3	25	mg/L	02.26.2021 15:24	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0486	97	0.0518	104	59-125	6	25	mg/L	02.26.2021 15:24	
1,2-Dibromoethane	<0.000337	0.0500	0.0522	104	0.0528	106	73-125	1	25	mg/L	02.26.2021 15:24	
Methylene Bromide	<0.000130	0.0500	0.0524	105	0.0521	104	69-127	1	25	mg/L	02.26.2021 15:24	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0499	100	0.0520	104	75-125	4	25	mg/L	02.26.2021 15:24	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0491	98	0.0519	104	75-125	6	25	mg/L	02.26.2021 15:24	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0487	97	0.0509	102	75-125	4	25	mg/L	02.26.2021 15:24	
Dichlorodifluoromethane	<0.000316	0.0500	0.0521	104	0.0516	103	60-140	1	25	mg/L	02.26.2021 15:24	
1,1-Dichloroethane	<0.000244	0.0500	0.0533	107	0.0559	112	72-125	5	25	mg/L	02.26.2021 15:24	
1,2-Dichloroethane	<0.000285	0.0500	0.0516	103	0.0516	103	68-127	0	25	mg/L	02.26.2021 15:24	
1,1-Dichloroethene	<0.000216	0.0500	0.0383	77	0.0526	105	59-172	31	25	mg/L	02.26.2021 15:24	F
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0483	97	0.0503	101	75-125	4	25	mg/L	02.26.2021 15:24	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0460	92	0.0503	101	75-125	9	25	mg/L	02.26.2021 15:24	
1,2-Dichloropropane	<0.000396	0.0500	0.0519	104	0.0526	105	74-125	1	25	mg/L	02.26.2021 15:24	
1,3-Dichloropropane	<0.000439	0.0500	0.0540	108	0.0540	108	75-125	0	25	mg/L	02.26.2021 15:24	
2,2-Dichloropropane	<0.000360	0.0500	0.0505	101	0.0527	105	75-125	4	25	mg/L	02.26.2021 15:24	
1,1-Dichloropropene	<0.000481	0.0500	0.0463	93	0.0480	96	75-125	4	25	mg/L	02.26.2021 15:24	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0543	109	0.0540	108	74-125	1	25	mg/L	02.26.2021 15:24	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0534	107	0.0535	107	66-125	0	25	mg/L	02.26.2021 15:24	
Ethylbenzene	<0.000146	0.0500	0.0507	101	0.0510	102	75-125	1	25	mg/L	02.26.2021 15:24	
Hexachlorobutadiene	<0.00200	0.0500	0.0470	94	0.0516	103	75-125	9	25	mg/L	02.26.2021 15:24	
Isopropylbenzene	<0.000161	0.0500	0.0497	99	0.0504	101	75-125	1	25	mg/L	02.26.2021 15:24	
Methylene Chloride	<0.00191	0.0500	0.0475	95	0.0501	100	75-125	5	25	mg/L	02.26.2021 15:24	
MTBE	<0.000571	0.0500	0.0514	103	0.0529	106	65-135	3	25	mg/L	02.26.2021 15:24	
Naphthalene	<0.00200	0.0500	0.0500	100	0.0550	110	70-130	10	25	mg/L	02.26.2021 15:24	
n-Propylbenzene	<0.000179	0.0500	0.0519	104	0.0551	110	75-125	6	25	mg/L	02.26.2021 15:24	
Styrene	<0.000162	0.0500	0.0528	106	0.0533	107	75-125	1	25	mg/L	02.26.2021 15:24	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0516	103	0.0517	103	72-125	0	25	mg/L	02.26.2021 15:24	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0532	106	0.0554	111	74-125	4	25	mg/L	02.26.2021 15:24	
Tetrachloroethylene	<0.000500	0.0500	0.0483	97	0.0507	101	71-125	5	25	mg/L	02.26.2021 15:24	
Toluene	<0.000500	0.0500	0.0503	101	0.0523	105	59-139	4	25	mg/L	02.26.2021 15:24	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0450	90	0.0512	102	75-137	13	25	mg/L	02.26.2021 15:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

MB Sample Id: 7722090-1-BLK

Matrix: Water

LCS Sample Id: 7722090-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.2021

LCSD Sample Id: 7722090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0482	96	0.0528	106	75-135	9	25	mg/L	02.26.2021 15:24	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0519	104	0.0527	105	75-125	2	25	mg/L	02.26.2021 15:24	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0537	107	0.0533	107	75-127	1	25	mg/L	02.26.2021 15:24	
Trichloroethylene	<0.000424	0.0500	0.0488	98	0.0511	102	62-137	5	25	mg/L	02.26.2021 15:24	
Trichlorofluoromethane	<0.000245	0.0500	0.0517	103	0.0503	101	60-140	3	25	mg/L	02.26.2021 15:24	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0537	107	0.0567	113	75-125	5	25	mg/L	02.26.2021 15:24	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0522	104	0.0555	111	75-125	6	25	mg/L	02.26.2021 15:24	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0521	104	0.0553	111	70-125	6	25	mg/L	02.26.2021 15:24	
o-Xylene	<0.000192	0.0500	0.0524	105	0.0536	107	75-125	2	25	mg/L	02.26.2021 15:24	
m,p-Xylenes	<0.000330	0.100	0.104	104	0.105	105	75-125	1	25	mg/L	02.26.2021 15:24	
Vinyl Chloride	<0.000234	0.0500	0.0536	107	0.0531	106	60-140	1	25	mg/L	02.26.2021 15:24	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	101		103		99		75-131			%	02.26.2021 15:24	
1,2-Dichloroethane-D4	101		100		100		63-144			%	02.26.2021 15:24	
Toluene-D8	100		99		102		80-117			%	02.26.2021 15:24	
4-Bromofluorobenzene	101		100		104		74-124			%	02.26.2021 15:24	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

Matrix: Waste Water

Prep Method: SW5030B

Parent Sample Id: 689420-001

MS Sample Id: 689420-001 S

Date Prep: 02.26.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0493	99	66-142	mg/L	02.26.2021 10:09	
Bromobenzene	<0.000300	0.0500	0.0506	101	75-125	mg/L	02.26.2021 10:09	
Bromochloromethane	<0.000209	0.0500	0.0522	104	60-140	mg/L	02.26.2021 10:09	
Bromodichloromethane	0.00901	0.0500	0.0592	100	75-125	mg/L	02.26.2021 10:09	
Bromoform	0.0141	0.0500	0.0668	105	75-125	mg/L	02.26.2021 10:09	
Methyl bromide	<0.00105	0.0500	0.0529	106	60-140	mg/L	02.26.2021 10:09	
2-Butanone	<0.00575	0.250	0.326	130	60-140	mg/L	02.26.2021 10:09	
n-Butylbenzene	<0.000286	0.0500	0.0550	110	75-125	mg/L	02.26.2021 10:09	
Sec-Butylbenzene	<0.000199	0.0500	0.0506	101	75-125	mg/L	02.26.2021 10:09	
tert-Butylbenzene	<0.000195	0.0500	0.0533	107	75-125	mg/L	02.26.2021 10:09	
Carbon Tetrachloride	<0.000423	0.0500	0.0516	103	62-125	mg/L	02.26.2021 10:09	
Chlorobenzene	<0.000159	0.0500	0.0492	98	60-133	mg/L	02.26.2021 10:09	
Chloroethane	<0.000433	0.0500	0.0521	104	60-140	mg/L	02.26.2021 10:09	
Chloroform	0.00500	0.0500	0.0572	104	70-130	mg/L	02.26.2021 10:09	
Methyl Chloride	<0.000318	0.0500	0.0504	101	60-140	mg/L	02.26.2021 10:09	
2-Chlorotoluene	<0.000214	0.0500	0.0532	106	73-125	mg/L	02.26.2021 10:09	
4-Chlorotoluene	<0.000183	0.0500	0.0527	105	74-125	mg/L	02.26.2021 10:09	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0489	98	75-125	mg/L	02.26.2021 10:09	
Dibromochloromethane	0.0181	0.0500	0.0701	104	73-125	mg/L	02.26.2021 10:09	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0448	90	59-125	mg/L	02.26.2021 10:09	
1,2-Dibromoethane	<0.000337	0.0500	0.0484	97	73-125	mg/L	02.26.2021 10:09	
Methylene Bromide	0.000160	0.0500	0.0499	99	69-127	mg/L	02.26.2021 10:09	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0500	100	75-125	mg/L	02.26.2021 10:09	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0503	101	75-125	mg/L	02.26.2021 10:09	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0498	100	75-125	mg/L	02.26.2021 10:09	
Dichlorodifluoromethane	<0.000316	0.0500	0.0527	105	60-140	mg/L	02.26.2021 10:09	
1,1-Dichloroethane	<0.000244	0.0500	0.0555	111	72-125	mg/L	02.26.2021 10:09	
1,2-Dichloroethane	<0.000285	0.0500	0.0496	99	68-127	mg/L	02.26.2021 10:09	
1,1-Dichloroethene	<0.000216	0.0500	0.0537	107	59-172	mg/L	02.26.2021 10:09	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0499	100	75-125	mg/L	02.26.2021 10:09	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0517	103	75-125	mg/L	02.26.2021 10:09	
1,2-Dichloropropane	<0.000396	0.0500	0.0518	104	74-125	mg/L	02.26.2021 10:09	
1,3-Dichloropropane	<0.000439	0.0500	0.0507	101	75-125	mg/L	02.26.2021 10:09	
2,2-Dichloropropane	<0.000360	0.0500	0.0529	106	75-125	mg/L	02.26.2021 10:09	
1,1-Dichloropropene	<0.000481	0.0500	0.0476	95	75-125	mg/L	02.26.2021 10:09	
cis-1,3-Dichloropropene	RPD = 200* (C-E) / (C+E)	0.0500	0.0523	105	74-125	mg/L	02.26.2021 10:09	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0512	102	66-125	mg/L	02.26.2021 10:09	
Ethylbenzene	<0.000146	0.0500	0.0490	98	75-125	mg/L	02.26.2021 10:09	
Hexachlorobutadiene	<0.00200	0.0500	0.0515	103	75-125	mg/L	02.26.2021 10:09	
Isopropylbenzene	<0.000161	0.0500	0.0484	97	75-125	mg/L	02.26.2021 10:09	
Methylene Chloride	<0.00191	0.0500	0.0503	101	75-125	mg/L	02.26.2021 10:09	
MTBE	<0.000571	0.0500	0.0508	102	65-135	mg/L	02.26.2021 10:09	
Naphthalene	<0.00200	0.0500	0.0537	107	70-130	mg/L	02.26.2021 10:09	
n-Propylbenzene	<0.000179	0.0500	0.0534	107	75-125	mg/L	02.26.2021 10:09	
Styrene	<0.000162	0.0500	0.0511	102	75-125	mg/L	02.26.2021 10:09	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0500	100	72-125	mg/L	02.26.2021 10:09	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0512	102	74-125	mg/L	02.26.2021 10:09	
Tetrachloroethylene	<0.000500	0.0500	0.0494	99	71-125	mg/L	02.26.2021 10:09	
Toluene	<0.000500	0.0500	0.0500	100	59-139	mg/L	02.26.2021 10:09	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0510	102	75-137	mg/L	02.26.2021 10:09	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3151928

Matrix: Waste Water

Prep Method: SW5030B

Parent Sample Id: 689420-001

MS Sample Id: 689420-001 S

Date Prep: 02.26.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0501	100	75-135	mg/L	02.26.2021 10:09	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0529	106	75-125	mg/L	02.26.2021 10:09	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0502	100	75-127	mg/L	02.26.2021 10:09	
Trichloroethylene	<0.000424	0.0500	0.0498	100	62-137	mg/L	02.26.2021 10:09	
Trichlorofluoromethane	<0.000245	0.0500	0.0515	103	60-140	mg/L	02.26.2021 10:09	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0521	104	75-125	mg/L	02.26.2021 10:09	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0536	107	75-125	mg/L	02.26.2021 10:09	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0542	108	70-125	mg/L	02.26.2021 10:09	
o-Xylene	<0.000192	0.0500	0.0508	102	75-125	mg/L	02.26.2021 10:09	
m,p-Xylenes	<0.000330	0.100	0.101	101	75-125	mg/L	02.26.2021 10:09	
Vinyl Chloride	<0.000234	0.0500	0.0545	109	60-140	mg/L	02.26.2021 10:09	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		75-131	%	02.26.2021 10:09
1,2-Dichloroethane-D4	95		63-144	%	02.26.2021 10:09
Toluene-D8	99		80-117	%	02.26.2021 10:09
4-Bromofluorobenzene	105		74-124	%	02.26.2021 10:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Environment Testing Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: 1089185

www.xenco.com Page 1 of 1

Project Manager:	<u>Beau Jennings</u>	Bill to: (if different)	
Company Name:	<u>Ensco LLC</u>	Company Name:	
Address:	<u>705 W. Wadley</u>	Address:	
City, State ZIP:	<u>MIDLAND TX 79705</u>	City, State ZIP:	
Phone:	<u>432.030.3344</u>	Email:	<u>bjenings@ensco.com</u>

Work Order Comments	
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:	<u>South Hobbs</u>	Turn Around		Pres. Code		ANALYSIS REQUEST												Preservative Codes	
Project Number:	<u>0381417002</u>	☐ Routine ☒ Rush	<u>24</u>			None: NO	DI Water: H ₂ O												
Project Location:	<u>HOBBES NM</u>	Due Date:				Cool: Cool	MeOH: Me												
Sampler's Name:	<u>SHANE DICKER</u>	TAT starts the day received by the lab, if received by 4:30pm				HCL: HC	HNO ₃ : HN												
PO #:	<u>0381417002</u>					H ₂ SO ₄ : H ₂	NaOH: Na												
SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:		H ₃ PO ₄ : HP													
Samples Received Intact:	☒ Yes ☐ No	Thermometer ID:				NaHSO ₄ : NABIS													
Cooler Custody Seals:	☒ Yes ☐ No	Correction Factor:				Na ₂ S ₂ O ₅ : NASO ₃													
Sample Custody Seals:	☒ Yes ☐ No	Temperature Reading:				Zn Acetate+NaOH: Zn													
Total Containers:		Corrected Temperature:				NaOH+Ascorbic Acid: SACP													

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont													Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
MW-1	GW	7-24-21	1110		G		X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

Total 200.7 / 6010 2008 / 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 Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins 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
<u>[Signature]</u>	<u>[Signature]</u>	<u>7/24/21</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>7/24/21</u>

Inter-Office Shipment

IOS Number : **78454**

Date/Time: 02.25.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: SW Cargo

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
689185-001	W	MW-1	02.24.2021 11:40	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.26.2021	02.25.2021 11:40	JKR		
689185-001	W	MW-1	02.24.2021 11:40	SM4500-H	pH by SM4500-H	02.26.2021	02.24.2021 11:40	JKR		
689185-001	W	MW-1	02.24.2021 11:40	SM2320B	Alkalinity by SM2320B	02.26.2021	03.10.2021	JKR	ALK ALKB ALKC	
689185-001	W	MW-1	02.24.2021 11:40	SW8260C	VOCs by SW-846 8260C	02.26.2021	03.10.2021	JKR	BDCME BRBZ BRCLME	
689185-001	W	MW-1	02.24.2021 11:40	SM4500SF00	Sulfide by SM4500-S-F	02.26.2021	03.03.2021 11:40	JKR	S	
689185-001	W	MW-1	02.24.2021 11:40	E300	Inorganic Anions by EPA 300	02.26.2021	03.24.2021	JKR	CL	
689185-002	W	MW-2	02.24.2021 12:45	SM2320B	Alkalinity by SM2320B	02.26.2021	03.10.2021	JKR	ALK ALKB ALKC	
689185-002	W	MW-2	02.24.2021 12:45	SM4500SF00	Sulfide by SM4500-S-F	02.26.2021	03.03.2021 12:45	JKR	S	
689185-002	W	MW-2	02.24.2021 12:45	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	02.26.2021	02.25.2021 12:45	JKR		
689185-002	W	MW-2	02.24.2021 12:45	E300	Inorganic Anions by EPA 300	02.26.2021	03.24.2021	JKR	CL	
689185-002	W	MW-2	02.24.2021 12:45	SW8260C	VOCs by SW-846 8260C	02.26.2021	03.10.2021	JKR	BDCME BRBZ BRCLME	
689185-002	W	MW-2	02.24.2021 12:45	SM4500-H	pH by SM4500-H	02.26.2021	02.24.2021 12:45	JKR		

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer
 Jessica Kramer

Date Relinquished: 02.25.2021

Received By: Jose Londono
 Jose Londono

Date Received: 02.26.2021

Cooler Temperature: 2.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 78454

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-188

Sent By: Brianna Teel

Date Sent: 02.25.2021 08.00 AM

Received By: Jose Londono

Date Received: 02.26.2021 09.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 02.26.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 02.24.2021 04.00.00 PM

Work Order #: 689185

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 02.24.2021

Checklist reviewed by:



Jessica Kramer

Date: 02.25.2021

Certificate of Analysis Summary 690485



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
 Contact: Beaux Jennings
 Project Location:

Date Received in Lab: Thu 03.04.2021 16:54
 Report Date: 03.08.2021 17:41
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	690485-001	690485-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	03.04.2021 11:05	03.04.2021 12:25				
Alkalinity by SM2320B SUB: T104704215-20-39	Extracted:	03.08.2021 11:36	03.08.2021 11:36				
	Analyzed:	03.08.2021 12:41	03.08.2021 12:56				
	Units/RL:	mg/L RL	mg/L RL				
Alkalinity, Total (as CaCO3)		1070 4.00	1380 4.00				
Alkalinity, Bicarbonate (as CaCO3)		1070 4.00	1380 4.00				
Alkalinity, Carbonate (as CaCO3)		<4.00 4.00	<4.00 4.00				
Free (Dissolved) Carbon Dioxide by SM 4500-CO2 D SUB: T104704215-20-39	Extracted:	03.08.2021 12:41	03.08.2021 12:56				
	Analyzed:	03.08.2021 12:41	03.08.2021 12:56				
	Units/RL:	mg/L RL	mg/L RL				
Carbon Dioxide, (Free)		515 0.370	1030 0.370				
Inorganic Anions by EPA 300 SUB: T104704215-20-39	Extracted:	03.07.2021 11:22	03.07.2021 11:22				
	Analyzed:	03.07.2021 11:47	03.07.2021 11:59				
	Units/RL:	mg/L RL	mg/L RL				
Chloride		339 5.00	166 5.00				
Sulfide by SM4500-S-F SUB: T104704215-20-39	Extracted:	03.08.2021 12:45	03.08.2021 12:45				
	Analyzed:	03.08.2021 12:45	03.08.2021 12:45				
	Units/RL:	mg/L RL	mg/L RL				
Sulfide, total		<0.495 2.00	<0.495 2.00				
TPH by SW8015 Mod	Extracted:	03.06.2021 12:00	03.06.2021 12:00				
	Analyzed:	03.07.2021 17:35	03.07.2021 18:38				
	Units/RL:	mg/L RL	mg/L RL				
Gasoline Range Hydrocarbons (GRO)		3.04 HF 2.32	1.74 JHF 2.24				
Diesel Range Organics (DRO)		1.03 JHF 2.32	<0.819 2.24				
Motor Oil Range Hydrocarbons (MRO)		<0.846 2.32	<0.819 2.24				
Total TPH		4.07 2.32	1.74 J 2.24				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 690485



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:41
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	690485-001	690485-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	03.04.2021 11:05	03.04.2021 12:25				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	03.06.2021 15:00	03.06.2021 15:00				
	Analyzed:	03.06.2021 16:27	03.06.2021 16:47				
	Units/RL:	mg/L	RL	mg/L	RL		
Benzene		0.00139	0.00100	0.0264	0.00100		
Bromobenzene		<0.000300	0.00100	<0.000300	0.00100		
Bromochloromethane		<0.000209	0.00100	<0.000209	0.00100		
Bromodichloromethane		<0.000231	0.00100	<0.000231	0.00100		
Bromoform		<0.000630	0.00500	<0.000630	0.00500		
Methyl bromide		<0.00105	0.00500	<0.00105	0.00500		
2-Butanone		<0.00575	0.0500	<0.00575	0.0500		
n-Butylbenzene		<0.000286	0.00100	0.000430 J	0.00100		
Sec-Butylbenzene		0.000240 J	0.00100	0.00131	0.00100		
tert-Butylbenzene		<0.000195	0.00100	<0.000195	0.00100		
Carbon Tetrachloride		<0.000423	0.00500	<0.000423	0.00500		
Chlorobenzene		<0.000159	0.00100	<0.000159	0.00100		
Chloroethane		<0.000433	0.0100	<0.000433	0.0100		
Chloroform		<0.000259	0.00100	<0.000259	0.00100		
Methyl Chloride		<0.000318	0.0100	<0.000318	0.0100		
2-Chlorotoluene		<0.000214	0.00100	<0.000214	0.00100		
4-Chlorotoluene		<0.000183	0.00100	<0.000183	0.00100		
p-Cymene (p-Isopropyltoluene)		<0.000233	0.00100	0.000930 J	0.00100		
Dibromochloromethane		<0.000739	0.00500	<0.000739	0.00500		
1,2-Dibromo-3-Chloropropane		<0.000319	0.00100	<0.000319	0.00100		
1,2-Dibromoethane		<0.000337	0.00500	<0.000337	0.00500		
Methylene Bromide		<0.000130	0.00100	<0.000130	0.00100		
1,2-Dichlorobenzene		<0.000236	0.00100	<0.000236	0.00100		
1,3-Dichlorobenzene		<0.000197	0.00100	<0.000197	0.00100		

BRL - Below Reporting Limit

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Certificate of Analysis Summary 690485



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:41
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	690485-001	690485-002				
	Field Id:	MW-1	MW-2				
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER				
	Sampled:	03.04.2021 11:05	03.04.2021 12:25				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted:	03.06.2021 15:00	03.06.2021 15:00				
	Analyzed:	03.06.2021 16:27	03.06.2021 16:47				
	Units/RL:	mg/L RL	mg/L RL				
1,4-Dichlorobenzene		<0.000199 0.00100	<0.000199 0.00100				
Dichlorodifluoromethane		<0.000316 0.00100	<0.000316 0.00100				
1,1-Dichloroethane		<0.000244 0.00100	<0.000244 0.00100				
1,2-Dichloroethane		<0.000285 0.00100	<0.000285 0.00100				
1,1-Dichloroethene		<0.000216 0.00100	<0.000216 0.00100				
cis-1,2-Dichloroethylene		<0.000174 0.00100	<0.000174 0.00100				
trans-1,2-dichloroethylene		<0.000256 0.00100	<0.000256 0.00100				
1,2-Dichloropropane		<0.000396 0.00500	<0.000396 0.00500				
1,3-Dichloropropane		<0.000439 0.00500	<0.000439 0.00500				
2,2-Dichloropropane		<0.000360 0.00500	<0.000360 0.00500				
1,1-Dichloropropene		<0.000481 0.00500	<0.000481 0.00500				
cis-1,3-Dichloropropene		<0.000690 0.00500	<0.000690 0.00500				
trans-1,3-dichloropropene		<0.000752 0.00500	<0.000752 0.00500				
Ethylbenzene		0.00102 0.00100	0.0320 0.00100				
Hexachlorobutadiene		<0.00200 0.00500	<0.00200 0.00500				
Isopropylbenzene		0.000440 J 0.00100	0.0115 0.00100				
Methylene Chloride		<0.00191 0.00500	<0.00191 0.00500				
MTBE		<0.000571 0.00500	<0.000571 0.00500				
Naphthalene		<0.00200 0.0100	<0.00200 0.0100				
n-Propylbenzene		0.000240 J 0.00100	0.00390 0.00100				
Styrene		<0.000162 0.00100	<0.000162 0.00100				
1,1,1,2-Tetrachloroethane		<0.000327 0.00100	<0.000327 0.00100				
1,1,2,2-Tetrachloroethane		<0.000284 0.00100	<0.000284 0.00100				
Tetrachloroethylene		<0.000500 0.00100	<0.000500 0.00100				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 690485



Ensolum, Dallas, TX

Project Name: South Hobbs

Project Id: 03B1417002
Contact: Beaux Jennings
Project Location:

Date Received in Lab: Thu 03.04.2021 16:54
Report Date: 03.08.2021 17:41
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 690485-001 Field Id: MW-1 Depth: Matrix: GROUND WATER Sampled: 03.04.2021 11:05	Lab Id: 690485-002 Field Id: MW-2 Depth: Matrix: GROUND WATER Sampled: 03.04.2021 12:25				
VOCs by SW-846 8260C SUB: T104704215-20-39	Extracted: 03.06.2021 15:00 Analyzed: 03.06.2021 16:27 Units/RL: mg/L RL	Extracted: 03.06.2021 15:00 Analyzed: 03.06.2021 16:47 Units/RL: mg/L RL				
Toluene	<0.000500 0.00100	0.0232 0.00100				
1,2,3-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
1,2,4-Trichlorobenzene	<0.00200 0.00500	<0.00200 0.00500				
1,1,1-Trichloroethane	<0.000504 0.00500	<0.000504 0.00500				
1,1,2-Trichloroethane	<0.000228 0.00100	<0.000228 0.00100				
Trichloroethylene	<0.000424 0.00500	<0.000424 0.00500				
Trichlorofluoromethane	<0.000245 0.00100	<0.000245 0.00100				
1,2,3-Trichloropropane	<0.000283 0.00100	<0.000283 0.00100				
1,2,4-Trimethylbenzene	0.00131 0.00100	0.0403 0.00100				
1,3,5-Trimethylbenzene	0.000680 J 0.00100	0.0100 0.00100				
o-Xylene	<0.000192 0.00100	0.0212 0.00100				
m,p-Xylenes	0.00211 J 0.0100	0.142 0.0100				
Vinyl Chloride	<0.000234 0.00200	<0.000234 0.00200				
Total Xylenes	0.00211 0.00100	0.163 0.00100				
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 03.08.2021 08:53 Units/RL: Deg C RL	Extracted: Analyzed: 03.08.2021 08:53 Units/RL: Deg C RL				
Temperature	18.8 K	18.2 K				
pH by SM4500-H SUB: T104704215-20-39	Extracted: Analyzed: 03.08.2021 08:53 Units/RL: SU RL	Extracted: Analyzed: 03.08.2021 08:53 Units/RL: SU RL				
pH	6.38 K	6.07 K				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 690485

for

Ensolum

Project Manager: Beaux Jennings

South Hobbs

03B1417002

03.08.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.08.2021

Project Manager: **Beaux Jennings****Ensolum**

2351 W Northwest Highway

Suite 1203

Dallas, TX 75220

Reference: Eurofins Xenco, LLC Report No(s): **690485****South Hobbs**

Project Address:

Beaux Jennings:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 690485. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 690485 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 690485

Ensolum, Dallas, TX
South Hobbs

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	03.04.2021 11:05		690485-001
MW-2	W	03.04.2021 12:25		690485-002

**CASE NARRATIVE****Client Name: Ensolum****Project Name: South Hobbs**Project ID: 03B1417002
Work Order Number(s): 690485Report Date: 03.08.2021
Date Received: 03.04.2021

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. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3152855 TPH by SW8015 Mod

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) recovered above QC limits in the Blank Spike Duplicate. Samples in the analytical batch are: 690485-001, -002.

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) RPD was outside laboratory control limits.

Samples in the analytical batch are: 690485-001, -002

MS/MSD is acceptable, making the data acceptable.



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 690485-001

Matrix: Ground Water
Date Collected: 03.04.2021 11:05

Date Received: 03.04.2021 16:54

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 03.08.2021 11:36

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152834

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1070	4.00	4.00	mg/L	03.08.2021 12:41		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1070	4.00	4.00	mg/L	03.08.2021 12:41		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	03.08.2021 12:41	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 03.07.2021 11:22

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152776

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	339	5.00	0.738	mg/L	03.07.2021 11:47		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152780

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.38			SU	03.08.2021 08:53	K	1
Temperature	TEMP	18.8			Deg C	03.08.2021 08:53	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152874

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	515	0.370	0.100	mg/L	03.08.2021 12:41		1



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 690485-001

Matrix: Ground Water
Date Collected: 03.04.2021 11:05

Date Received: 03.04.2021 16:54

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3152828

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	2.00	0.495	mg/L	03.08.2021 12:45	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3152855

Date Prep: 03.06.2021 12:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3.04	2.32	0.916	mg/L	03.07.2021 17:35	HF	1
Diesel Range Organics (DRO)	C10C28DRO	1.03	2.32	0.846	mg/L	03.07.2021 17:35	JHF	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.846	2.32	0.846	mg/L	03.07.2021 17:35	U	1
Total TPH	PHC635	4.07	2.32	0.846	mg/L	03.07.2021 17:35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.07.2021 17:35	
o-Terphenyl	84-15-1	89	%	70-135	03.07.2021 17:35	



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 690485-001

Matrix: Ground Water
Date Collected: 03.04.2021 11:05

Date Received: 03.04.2021 16:54

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: NGA

Analyst: NGA

Date Prep: 03.06.2021 15:00

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152820

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00139	0.00100	0.000214	mg/L	03.06.2021 16:27		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	03.06.2021 16:27	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	03.06.2021 16:27	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	03.06.2021 16:27	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	03.06.2021 16:27	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	03.06.2021 16:27	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	03.06.2021 16:27	U	1
n-Butylbenzene	104-51-8	<0.000286	0.00100	0.000286	mg/L	03.06.2021 16:27	U	1
Sec-Butylbenzene	135-98-8	0.000240	0.00100	0.000199	mg/L	03.06.2021 16:27	J	1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	03.06.2021 16:27	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	03.06.2021 16:27	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	03.06.2021 16:27	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	03.06.2021 16:27	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	03.06.2021 16:27	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	03.06.2021 16:27	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	03.06.2021 16:27	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	03.06.2021 16:27	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000233	0.00100	0.000233	mg/L	03.06.2021 16:27	U	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	03.06.2021 16:27	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	03.06.2021 16:27	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	03.06.2021 16:27	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	03.06.2021 16:27	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	03.06.2021 16:27	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	03.06.2021 16:27	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	03.06.2021 16:27	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	03.06.2021 16:27	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	03.06.2021 16:27	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	03.06.2021 16:27	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	03.06.2021 16:27	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	03.06.2021 16:27	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	03.06.2021 16:27	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	03.06.2021 16:27	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	03.06.2021 16:27	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	03.06.2021 16:27	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	03.06.2021 16:27	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	03.06.2021 16:27	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	03.06.2021 16:27	U	1
Ethylbenzene	100-41-4	0.00102	0.00100	0.000146	mg/L	03.06.2021 16:27		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	03.06.2021 16:27	U	1
Isopropylbenzene	98-82-8	0.000440	0.00100	0.000161	mg/L	03.06.2021 16:27	J	1



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-1**
Lab Sample Id: 690485-001

Matrix: Ground Water
Date Collected: 03.04.2021 11:05

Date Received: 03.04.2021 16:54

Analytical Method: VOCs by SW-846 8260C

Tech: NGA

Analyst: NGA

Date Prep: 03.06.2021 15:00

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	03.06.2021 16:27	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	03.06.2021 16:27	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	03.06.2021 16:27	U	1
n-Propylbenzene	103-65-1	0.000240	0.00100	0.000179	mg/L	03.06.2021 16:27	J	1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	03.06.2021 16:27	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	03.06.2021 16:27	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	03.06.2021 16:27	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	03.06.2021 16:27	U	1
Toluene	108-88-3	<0.000500	0.00100	0.000500	mg/L	03.06.2021 16:27	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	03.06.2021 16:27	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	03.06.2021 16:27	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	03.06.2021 16:27	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	03.06.2021 16:27	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	03.06.2021 16:27	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	03.06.2021 16:27	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	03.06.2021 16:27	U	1
1,2,4-Trimethylbenzene	95-63-6	0.00131	0.00100	0.000252	mg/L	03.06.2021 16:27		1
1,3,5-Trimethylbenzene	108-67-8	0.000680	0.00100	0.000279	mg/L	03.06.2021 16:27	J	1
o-Xylene	95-47-6	<0.000192	0.00100	0.000192	mg/L	03.06.2021 16:27	U	1
m,p-Xylenes	179601-23-1	0.00211	0.0100	0.000330	mg/L	03.06.2021 16:27	J	1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	03.06.2021 16:27	U	1
Total Xylenes	1330-20-7	0.00211	0.00100	0.000192	mg/L	03.06.2021 16:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	75-131	03.06.2021 16:27	
1,2-Dichloroethane-D4	17060-07-0	102	%	63-144	03.06.2021 16:27	
Toluene-D8	2037-26-5	105	%	80-117	03.06.2021 16:27	
4-Bromofluorobenzene	460-00-4	104	%	74-124	03.06.2021 16:27	



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 690485-002

Matrix: Ground Water
Date Collected: 03.04.2021 12:25

Date Received: 03.04.2021 16:54

Analytical Method: Alkalinity by SM2320B

Prep Method: SM2320P

Tech: ALZ

Analyst: ALZ

Date Prep: 03.08.2021 11:36

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152834

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Alkalinity, Total (as CaCO ₃)	1640192	1380	4.00	4.00	mg/L	03.08.2021 12:56		1
Alkalinity, Bicarbonate (as CaCO ₃)	471-34-1	1380	4.00	4.00	mg/L	03.08.2021 12:56		1
Alkalinity, Carbonate (as CaCO ₃)	3812-32-6	<4.00	4.00	4.00	mg/L	03.08.2021 12:56	U	1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: JYM

Analyst: JYM

Date Prep: 03.07.2021 11:22

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152776

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	166	5.00	0.738	mg/L	03.07.2021 11:59		10

Analytical Method: pH by SM4500-H

Tech: ANP

Analyst: ANP

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152780

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
pH	12408-02-5	6.07			SU	03.08.2021 08:53	K	1
Temperature	TEMP	18.2			Deg C	03.08.2021 08:53	K	1

Analytical Method: Free (Dissolved) Carbon Dioxide by SM 4500-CO₂ D

Tech: ALZ

Analyst: ALZ

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152874

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Carbon Dioxide, (Free)	124-38-9	1030	0.370	0.100	mg/L	03.08.2021 12:56		1



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 690485-002

Matrix: Ground Water
Date Collected: 03.04.2021 12:25

Date Received: 03.04.2021 16:54

Analytical Method: Sulfide by SM4500-S-F

Tech: ALZ

Analyst: ALZ

Seq Number: 3152828

% Moisture:
SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Sulfide, total	18496-25-8	<0.495	2.00	0.495	mg/L	03.08.2021 12:45	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3152855

Date Prep: 03.06.2021 12:00

Prep Method: SW8015P

% Moisture:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1.74	2.24	0.886	mg/L	03.07.2021 18:38	JHF	1
Diesel Range Organics (DRO)	C10C28DRO	<0.819	2.24	0.819	mg/L	03.07.2021 18:38	UHF	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<0.819	2.24	0.819	mg/L	03.07.2021 18:38	U	1
Total TPH	PHC635	1.74	2.24	0.819	mg/L	03.07.2021 18:38	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.07.2021 18:38	
o-Terphenyl	84-15-1	96	%	70-135	03.07.2021 18:38	



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 690485-002

Matrix: Ground Water
Date Collected: 03.04.2021 12:25

Date Received: 03.04.2021 16:54

Analytical Method: VOCs by SW-846 8260C

Prep Method: SW5030B

Tech: NGA

Analyst: NGA

Date Prep: 03.06.2021 15:00

% Moisture:
SUB: T104704215-20-39

Seq Number: 3152820

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0264	0.00100	0.000214	mg/L	03.06.2021 16:47		1
Bromobenzene	108-86-1	<0.000300	0.00100	0.000300	mg/L	03.06.2021 16:47	U	1
Bromochloromethane	74-97-5	<0.000209	0.00100	0.000209	mg/L	03.06.2021 16:47	U	1
Bromodichloromethane	75-27-4	<0.000231	0.00100	0.000231	mg/L	03.06.2021 16:47	U	1
Bromoform	75-25-2	<0.000630	0.00500	0.000630	mg/L	03.06.2021 16:47	U	1
Methyl bromide	74-83-9	<0.00105	0.00500	0.00105	mg/L	03.06.2021 16:47	U	1
2-Butanone	78-93-3	<0.00575	0.0500	0.00575	mg/L	03.06.2021 16:47	U	1
n-Butylbenzene	104-51-8	0.000430	0.00100	0.000286	mg/L	03.06.2021 16:47	J	1
Sec-Butylbenzene	135-98-8	0.00131	0.00100	0.000199	mg/L	03.06.2021 16:47		1
tert-Butylbenzene	98-06-6	<0.000195	0.00100	0.000195	mg/L	03.06.2021 16:47	U	1
Carbon Tetrachloride	56-23-5	<0.000423	0.00500	0.000423	mg/L	03.06.2021 16:47	U	1
Chlorobenzene	108-90-7	<0.000159	0.00100	0.000159	mg/L	03.06.2021 16:47	U	1
Chloroethane	75-00-3	<0.000433	0.0100	0.000433	mg/L	03.06.2021 16:47	U	1
Chloroform	67-66-3	<0.000259	0.00100	0.000259	mg/L	03.06.2021 16:47	U	1
Methyl Chloride	74-87-3	<0.000318	0.0100	0.000318	mg/L	03.06.2021 16:47	U	1
2-Chlorotoluene	95-49-8	<0.000214	0.00100	0.000214	mg/L	03.06.2021 16:47	U	1
4-Chlorotoluene	106-43-4	<0.000183	0.00100	0.000183	mg/L	03.06.2021 16:47	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	0.000930	0.00100	0.000233	mg/L	03.06.2021 16:47	J	1
Dibromochloromethane	124-48-1	<0.000739	0.00500	0.000739	mg/L	03.06.2021 16:47	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000319	0.00100	0.000319	mg/L	03.06.2021 16:47	U	1
1,2-Dibromoethane	106-93-4	<0.000337	0.00500	0.000337	mg/L	03.06.2021 16:47	U	1
Methylene Bromide	74-95-3	<0.000130	0.00100	0.000130	mg/L	03.06.2021 16:47	U	1
1,2-Dichlorobenzene	95-50-1	<0.000236	0.00100	0.000236	mg/L	03.06.2021 16:47	U	1
1,3-Dichlorobenzene	541-73-1	<0.000197	0.00100	0.000197	mg/L	03.06.2021 16:47	U	1
1,4-Dichlorobenzene	106-46-7	<0.000199	0.00100	0.000199	mg/L	03.06.2021 16:47	U	1
Dichlorodifluoromethane	75-71-8	<0.000316	0.00100	0.000316	mg/L	03.06.2021 16:47	U	1
1,1-Dichloroethane	75-34-3	<0.000244	0.00100	0.000244	mg/L	03.06.2021 16:47	U	1
1,2-Dichloroethane	107-06-2	<0.000285	0.00100	0.000285	mg/L	03.06.2021 16:47	U	1
1,1-Dichloroethene	75-35-4	<0.000216	0.00100	0.000216	mg/L	03.06.2021 16:47	U	1
cis-1,2-Dichloroethylene	156-59-2	<0.000174	0.00100	0.000174	mg/L	03.06.2021 16:47	U	1
trans-1,2-dichloroethylene	156-60-5	<0.000256	0.00100	0.000256	mg/L	03.06.2021 16:47	U	1
1,2-Dichloropropane	78-87-5	<0.000396	0.00500	0.000396	mg/L	03.06.2021 16:47	U	1
1,3-Dichloropropane	142-28-9	<0.000439	0.00500	0.000439	mg/L	03.06.2021 16:47	U	1
2,2-Dichloropropane	594-20-7	<0.000360	0.00500	0.000360	mg/L	03.06.2021 16:47	U	1
1,1-Dichloropropene	563-58-6	<0.000481	0.00500	0.000481	mg/L	03.06.2021 16:47	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000690	0.00500	0.000690	mg/L	03.06.2021 16:47	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000752	0.00500	0.000752	mg/L	03.06.2021 16:47	U	1
Ethylbenzene	100-41-4	0.0320	0.00100	0.000146	mg/L	03.06.2021 16:47		1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	03.06.2021 16:47	U	1
Isopropylbenzene	98-82-8	0.0115	0.00100	0.000161	mg/L	03.06.2021 16:47		1



Certificate of Analytical Results 690485

Ensolum, Dallas, TX South Hobbs

Sample Id: **MW-2**
Lab Sample Id: 690485-002

Matrix: Ground Water
Date Collected: 03.04.2021 12:25

Date Received: 03.04.2021 16:54

Analytical Method: VOCs by SW-846 8260C

Tech: NGA

Analyst: NGA

Date Prep: 03.06.2021 15:00

Prep Method: SW5030B

% Moisture:

SUB: T104704215-20-39

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Methylene Chloride	75-09-2	<0.00191	0.00500	0.00191	mg/L	03.06.2021 16:47	U	1
MTBE	1634-04-4	<0.000571	0.00500	0.000571	mg/L	03.06.2021 16:47	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	03.06.2021 16:47	U	1
n-Propylbenzene	103-65-1	0.00390	0.00100	0.000179	mg/L	03.06.2021 16:47		1
Styrene	100-42-5	<0.000162	0.00100	0.000162	mg/L	03.06.2021 16:47	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000327	0.00100	0.000327	mg/L	03.06.2021 16:47	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000284	0.00100	0.000284	mg/L	03.06.2021 16:47	U	1
Tetrachloroethylene	127-18-4	<0.000500	0.00100	0.000500	mg/L	03.06.2021 16:47	U	1
Toluene	108-88-3	0.0232	0.00100	0.000500	mg/L	03.06.2021 16:47		1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	03.06.2021 16:47	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	03.06.2021 16:47	U	1
1,1,1-Trichloroethane	71-55-6	<0.000504	0.00500	0.000504	mg/L	03.06.2021 16:47	U	1
1,1,2-Trichloroethane	79-00-5	<0.000228	0.00100	0.000228	mg/L	03.06.2021 16:47	U	1
Trichloroethylene	79-01-6	<0.000424	0.00500	0.000424	mg/L	03.06.2021 16:47	U	1
Trichlorofluoromethane	75-69-4	<0.000245	0.00100	0.000245	mg/L	03.06.2021 16:47	U	1
1,2,3-Trichloropropane	96-18-4	<0.000283	0.00100	0.000283	mg/L	03.06.2021 16:47	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0403	0.00100	0.000252	mg/L	03.06.2021 16:47		1
1,3,5-Trimethylbenzene	108-67-8	0.0100	0.00100	0.000279	mg/L	03.06.2021 16:47		1
o-Xylene	95-47-6	0.0212	0.00100	0.000192	mg/L	03.06.2021 16:47		1
m,p-Xylenes	179601-23-1	0.142	0.0100	0.000330	mg/L	03.06.2021 16:47		1
Vinyl Chloride	75-01-4	<0.000234	0.00200	0.000234	mg/L	03.06.2021 16:47	U	1
Total Xylenes	1330-20-7	0.163	0.00100	0.000192	mg/L	03.06.2021 16:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	75-131	03.06.2021 16:47	
1,2-Dichloroethane-D4	17060-07-0	100	%	63-144	03.06.2021 16:47	
Toluene-D8	2037-26-5	103	%	80-117	03.06.2021 16:47	
4-Bromofluorobenzene	460-00-4	103	%	74-124	03.06.2021 16:47	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Ensolum South Hobbs

Analytical Method: Alkalinity by SM2320B

Seq Number: 3152834

MB Sample Id: 7722725-1-BLK

Matrix: Water

LCS Sample Id: 7722725-1-BKS

Prep Method: SM2320P

Date Prep: 03.08.2021

LCSD Sample Id: 7722725-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	<4.00	250	252	101	256	102	85-115	2	20	mg/L	03.08.2021 11:57	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3152834

Matrix: Water

MB Sample Id: 7722725-1-BLK

Prep Method: SM2320P

Date Prep: 03.08.2021

Parameter	MB Result	Units	Analysis Date	Flag
Alkalinity, Bicarbonate (as CaCO3)	<4.00	mg/L	03.08.2021 11:50	
Alkalinity, Carbonate (as CaCO3)	<4.00	mg/L	03.08.2021 11:50	

Analytical Method: Alkalinity by SM2320B

Seq Number: 3152834

Matrix: Water

Parent Sample Id: 690484-001

MD Sample Id: 690484-001 D

Prep Method: SM2320P

Date Prep: 03.08.2021

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (as CaCO3)	1050	1040	1	20	mg/L	03.08.2021 12:29	
Alkalinity, Bicarbonate (as CaCO3)	1050	1040	1	20	mg/L	03.08.2021 12:29	
Alkalinity, Carbonate (as CaCO3)	<4.00	<4.00	0	20	mg/L	03.08.2021 12:29	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3152776

Matrix: Water

MB Sample Id: 7722689-1-BLK

LCS Sample Id: 7722689-1-BKS

Prep Method: E300P

Date Prep: 03.07.2021

LCSD Sample Id: 7722689-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.0738	10.0	9.77	98	9.87	99	90-110	1	20	mg/L	03.07.2021 11:22	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3152776

Matrix: Waste Water

Parent Sample Id: 690590-001

MS Sample Id: 690590-001 S

Prep Method: E300P

Date Prep: 03.07.2021

MSD Sample Id: 690590-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	200	361	103	361	103	90-110	0	20	mg/L	03.07.2021 12:59	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: pH by SM4500-H

Seq Number: 3152780

Matrix: Ground Water

Parent Sample Id: 690485-001

MD Sample Id: 690485-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	6.38	6.38	0	20	SU	03.08.2021 08:53	
Temperature	18.8	18.0	4	20	Deg C	03.08.2021 08:53	

Analytical Method: pH by SM4500-H

Seq Number: 3152780

Matrix: Water

Parent Sample Id: 690762-001

MD Sample Id: 690762-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
pH	7.03	7.00	0	20	SU	03.08.2021 08:53	
Temperature	18.6	18.7	1	20	Deg C	03.08.2021 08:53	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3152828

Matrix: Water

MB Sample Id: 3152828-1-BLK

LCS Sample Id: 3152828-1-BKS

LCSD Sample Id: 3152828-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	0.800	50.0	40.6	81	40.6	81	80-120	0	20	mg/L	03.08.2021 12:45	

Analytical Method: Sulfide by SM4500-S-F

Seq Number: 3152828

Matrix: Ground Water

Parent Sample Id: 690485-001

MS Sample Id: 690485-001 S

MSD Sample Id: 690485-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Sulfide, total	<0.495	50.0	42.8	86	42.4	85	80-120	1	20	mg/L	03.08.2021 12:45	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152855

Matrix: Water

MB Sample Id: 7722760-1-BLK

LCS Sample Id: 7722760-1-BKS

Prep Method: SW8015P

Date Prep: 03.06.2021

LCSD Sample Id: 7722760-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<0.897	90.9	108	119	157	173	70-135	37	20	mg/L	03.07.2021 16:53	HF
Diesel Range Organics (DRO)	<0.829	90.9	107	118	163	179	70-135	41	20	mg/L	03.07.2021 16:53	HF

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		130		89		70-135	%	03.07.2021 16:53
o-Terphenyl	91		120		77		70-135	%	03.07.2021 16:53

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152855

Matrix: Water

Prep Method: SW8015P

Date Prep: 03.06.2021

MB Sample Id: 7722760-1-BLK

Parameter**MB
Result****Units****Analysis
Date****Flag**

Motor Oil Range Hydrocarbons (MRO)

<0.830

mg/L

03.07.2021 16:32

Analytical Method: TPH by SW8015 Mod

Seq Number: 3152855

Matrix: Ground Water

Prep Method: SW8015P

Date Prep: 03.06.2021

Parent Sample Id: 690485-001

MS Sample Id: 690485-001 S

MSD Sample Id: 690485-001 SD

Parameter**Parent
Result****Spike
Amount****MS
Result****MS
%Rec****MSD
Result****MSD
%Rec****Limits****%RPD****RPD
Limit****Units****Analysis
Date****Flag**

Gasoline Range Hydrocarbons (GRO)

3.04

91.0

83.0

88

75.8

79

70-135

9

20

mg/L

03.07.2021 17:56

Diesel Range Organics (DRO)

1.03

91.0

79.1

86

74.0

79

70-135

7

20

mg/L

03.07.2021 17:56

Surrogate**MS
%Rec****MS
Flag****MSD
%Rec****MSD
Flag****Limits****Units****Analysis
Date**

1-Chlorooctane

84

77

70-135

%

03.07.2021 17:56

o-Terphenyl

76

70

70-135

%

03.07.2021 17:56

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

Matrix: Water

Prep Method: E624P

Date Prep: 03.06.2021

MB Sample Id: 7722736-1-BLK

LCS Sample Id: 7722736-1-BKS

LCSD Sample Id: 7722736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0500	100	0.0492	98	66-142	2	25	mg/L	03.06.2021 12:19	
Bromobenzene	<0.000300	0.0500	0.0544	109	0.0534	107	75-125	2	25	mg/L	03.06.2021 12:19	
Bromochloromethane	<0.000209	0.0500	0.0491	98	0.0479	96	60-140	2	25	mg/L	03.06.2021 12:19	
Bromodichloromethane	<0.000231	0.0500	0.0542	108	0.0526	105	75-125	3	25	mg/L	03.06.2021 12:19	
Bromoform	<0.000630	0.0500	0.0540	108	0.0533	107	75-125	1	25	mg/L	03.06.2021 12:19	
Methyl bromide	<0.00105	0.0500	0.0541	108	0.0530	106	60-140	2	25	mg/L	03.06.2021 12:19	
2-Butanone	<0.00575	0.250	0.233	93	0.238	95	60-140	2	25	mg/L	03.06.2021 12:19	
n-Butylbenzene	<0.000286	0.0500	0.0585	117	0.0574	115	75-125	2	25	mg/L	03.06.2021 12:19	
Sec-Butylbenzene	<0.000199	0.0500	0.0585	117	0.0567	113	75-125	3	25	mg/L	03.06.2021 12:19	
tert-Butylbenzene	<0.000195	0.0500	0.0578	116	0.0555	111	75-125	4	25	mg/L	03.06.2021 12:19	
Carbon Tetrachloride	<0.000423	0.0500	0.0516	103	0.0491	98	62-125	5	25	mg/L	03.06.2021 12:19	
Chlorobenzene	<0.000159	0.0500	0.0521	104	0.0508	102	60-133	3	25	mg/L	03.06.2021 12:19	
Chloroethane	<0.000433	0.0500	0.0458	92	0.0460	92	60-140	0	25	mg/L	03.06.2021 12:19	
Chloroform	<0.000259	0.0500	0.0501	100	0.0488	98	70-130	3	25	mg/L	03.06.2021 12:19	
Methyl Chloride	<0.000318	0.0500	0.0435	87	0.0428	86	60-140	2	25	mg/L	03.06.2021 12:19	
2-Chlorotoluene	<0.000214	0.0500	0.0567	113	0.0556	111	73-125	2	25	mg/L	03.06.2021 12:19	
4-Chlorotoluene	<0.000183	0.0500	0.0570	114	0.0551	110	74-125	3	25	mg/L	03.06.2021 12:19	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0582	116	0.0564	113	75-125	3	25	mg/L	03.06.2021 12:19	
Dibromochloromethane	<0.000739	0.0500	0.0566	113	0.0545	109	73-125	4	25	mg/L	03.06.2021 12:19	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0557	111	0.0584	117	59-125	5	25	mg/L	03.06.2021 12:19	
1,2-Dibromoethane	<0.000337	0.0500	0.0528	106	0.0514	103	73-125	3	25	mg/L	03.06.2021 12:19	
Methylene Bromide	<0.000130	0.0500	0.0506	101	0.0498	100	69-127	2	25	mg/L	03.06.2021 12:19	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0550	110	0.0554	111	75-125	1	25	mg/L	03.06.2021 12:19	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0540	108	0.0525	105	75-125	3	25	mg/L	03.06.2021 12:19	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0543	109	0.0534	107	75-125	2	25	mg/L	03.06.2021 12:19	
Dichlorodifluoromethane	<0.000316	0.0500	0.0456	91	0.0434	87	60-140	5	25	mg/L	03.06.2021 12:19	
1,1-Dichloroethane	<0.000244	0.0500	0.0510	102	0.0487	97	72-125	5	25	mg/L	03.06.2021 12:19	
1,2-Dichloroethane	<0.000285	0.0500	0.0523	105	0.0515	103	68-127	2	25	mg/L	03.06.2021 12:19	
1,1-Dichloroethene	<0.000216	0.0500	0.0496	99	0.0465	93	59-172	6	25	mg/L	03.06.2021 12:19	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0507	101	0.0490	98	75-125	3	25	mg/L	03.06.2021 12:19	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0481	96	0.0453	91	75-125	6	25	mg/L	03.06.2021 12:19	
1,2-Dichloropropane	<0.000396	0.0500	0.0523	105	0.0511	102	74-125	2	25	mg/L	03.06.2021 12:19	
1,3-Dichloropropane	<0.000439	0.0500	0.0542	108	0.0530	106	75-125	2	25	mg/L	03.06.2021 12:19	
2,2-Dichloropropane	<0.000360	0.0500	0.0551	110	0.0519	104	75-125	6	25	mg/L	03.06.2021 12:19	
1,1-Dichloropropene	<0.000481	0.0500	0.0513	103	0.0491	98	75-125	4	25	mg/L	03.06.2021 12:19	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0529	106	0.0526	105	74-125	1	25	mg/L	03.06.2021 12:19	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0558	112	0.0537	107	66-125	4	25	mg/L	03.06.2021 12:19	
Ethylbenzene	<0.000146	0.0500	0.0528	106	0.0511	102	75-125	3	25	mg/L	03.06.2021 12:19	
Hexachlorobutadiene	<0.00200	0.0500	0.0473	95	0.0481	96	75-125	2	25	mg/L	03.06.2021 12:19	
Isopropylbenzene	<0.000161	0.0500	0.0552	110	0.0525	105	75-125	5	25	mg/L	03.06.2021 12:19	
Methylene Chloride	<0.00191	0.0500	0.0473	95	0.0451	90	75-125	5	25	mg/L	03.06.2021 12:19	
MTBE	<0.000571	0.0500	0.0513	103	0.0504	101	65-135	2	25	mg/L	03.06.2021 12:19	
Naphthalene	<0.00200	0.0500	0.0533	107	0.0577	115	70-130	8	25	mg/L	03.06.2021 12:19	
n-Propylbenzene	<0.000179	0.0500	0.0579	116	0.0563	113	75-125	3	25	mg/L	03.06.2021 12:19	
Styrene	<0.000162	0.0500	0.0555	111	0.0538	108	75-125	3	25	mg/L	03.06.2021 12:19	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0545	109	0.0532	106	72-125	2	25	mg/L	03.06.2021 12:19	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0563	113	0.0572	114	74-125	2	25	mg/L	03.06.2021 12:19	
Tetrachloroethylene	<0.000500	0.0500	0.0494	99	0.0469	94	71-125	5	25	mg/L	03.06.2021 12:19	
Toluene	<0.000500	0.0500	0.0513	103	0.0490	98	59-139	5	25	mg/L	03.06.2021 12:19	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0523	105	0.0574	115	75-137	9	25	mg/L	03.06.2021 12:19	

MS/MSD Percent Recovery
Relative Percent Difference
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

MB Sample Id: 7722736-1-BLK

Matrix: Water

LCS Sample Id: 7722736-1-BKS

Prep Method: E624P

Date Prep: 03.06.2021

LCSD Sample Id: 7722736-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0498	100	0.0501	100	75-135	1	25	mg/L	03.06.2021 12:19	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0515	103	0.0494	99	75-125	4	25	mg/L	03.06.2021 12:19	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0541	108	0.0537	107	75-127	1	25	mg/L	03.06.2021 12:19	
Trichloroethylene	<0.000424	0.0500	0.0499	100	0.0488	98	62-137	2	25	mg/L	03.06.2021 12:19	
Trichlorofluoromethane	<0.000245	0.0500	0.0487	97	0.0466	93	60-140	4	25	mg/L	03.06.2021 12:19	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0559	112	0.0572	114	75-125	2	25	mg/L	03.06.2021 12:19	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0584	117	0.0568	114	75-125	3	25	mg/L	03.06.2021 12:19	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0578	116	0.0558	112	70-125	4	25	mg/L	03.06.2021 12:19	
o-Xylene	<0.000192	0.0500	0.0545	109	0.0525	105	75-125	4	25	mg/L	03.06.2021 12:19	
m,p-Xylenes	<0.000330	0.100	0.107	107	0.103	103	75-125	4	25	mg/L	03.06.2021 12:19	
Vinyl Chloride	<0.000234	0.0500	0.0463	93	0.0443	89	60-140	4	25	mg/L	03.06.2021 12:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		101		98		75-131	%	03.06.2021 12:19
1,2-Dichloroethane-D4	102		102		100		63-144	%	03.06.2021 12:19
Toluene-D8	104		105		102		80-117	%	03.06.2021 12:19
4-Bromofluorobenzene	105		103		102		74-124	%	03.06.2021 12:19

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

Matrix: Water

Prep Method: E624P

Parent Sample Id: 690708-001

MS Sample Id: 690708-001 S

Date Prep: 03.06.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000214	0.0500	0.0487	97	66-142	mg/L	03.06.2021 13:00	
Bromobenzene	<0.000300	0.0500	0.0517	103	75-125	mg/L	03.06.2021 13:00	
Bromochloromethane	<0.000209	0.0500	0.0483	97	60-140	mg/L	03.06.2021 13:00	
Bromodichloromethane	0.00342	0.0500	0.0555	104	75-125	mg/L	03.06.2021 13:00	
Bromoform	<0.000630	0.0500	0.0534	107	75-125	mg/L	03.06.2021 13:00	
Methyl bromide	<0.00105	0.0500	0.0588	118	60-140	mg/L	03.06.2021 13:00	
2-Butanone	0.00957	0.250	0.231	89	60-140	mg/L	03.06.2021 13:00	
n-Butylbenzene	<0.000286	0.0500	0.0521	104	75-125	mg/L	03.06.2021 13:00	
Sec-Butylbenzene	<0.000199	0.0500	0.0525	105	75-125	mg/L	03.06.2021 13:00	
tert-Butylbenzene	<0.000195	0.0500	0.0521	104	75-125	mg/L	03.06.2021 13:00	
Carbon Tetrachloride	<0.000423	0.0500	0.0482	96	62-125	mg/L	03.06.2021 13:00	
Chlorobenzene	<0.000159	0.0500	0.0503	101	60-133	mg/L	03.06.2021 13:00	
Chloroethane	<0.000433	0.0500	0.0485	97	60-140	mg/L	03.06.2021 13:00	
Chloroform	0.00304	0.0500	0.0510	96	70-130	mg/L	03.06.2021 13:00	
Methyl Chloride	<0.000318	0.0500	0.0441	88	60-140	mg/L	03.06.2021 13:00	
2-Chlorotoluene	<0.000214	0.0500	0.0529	106	73-125	mg/L	03.06.2021 13:00	
4-Chlorotoluene	<0.000183	0.0500	0.0528	106	74-125	mg/L	03.06.2021 13:00	
p-Cymene (p-Isopropyltoluene)	<0.000233	0.0500	0.0525	105	75-125	mg/L	03.06.2021 13:00	
Dibromochloromethane	0.00248	0.0500	0.0565	108	73-125	mg/L	03.06.2021 13:00	
1,2-Dibromo-3-Chloropropane	<0.000319	0.0500	0.0560	112	59-125	mg/L	03.06.2021 13:00	
1,2-Dibromoethane	<0.000337	0.0500	0.0515	103	73-125	mg/L	03.06.2021 13:00	
Methylene Bromide	<0.000130	0.0500	0.0481	96	69-127	mg/L	03.06.2021 13:00	
1,2-Dichlorobenzene	<0.000236	0.0500	0.0534	107	75-125	mg/L	03.06.2021 13:00	
1,3-Dichlorobenzene	<0.000197	0.0500	0.0503	101	75-125	mg/L	03.06.2021 13:00	
1,4-Dichlorobenzene	<0.000199	0.0500	0.0516	103	75-125	mg/L	03.06.2021 13:00	
Dichlorodifluoromethane	<0.000316	0.0500	0.0433	87	60-140	mg/L	03.06.2021 13:00	
1,1-Dichloroethane	<0.000244	0.0500	0.0489	98	72-125	mg/L	03.06.2021 13:00	
1,2-Dichloroethane	<0.000285	0.0500	0.0504	101	68-127	mg/L	03.06.2021 13:00	
1,1-Dichloroethene	<0.000216	0.0500	0.0469	94	59-172	mg/L	03.06.2021 13:00	
cis-1,2-Dichloroethylene	<0.000174	0.0500	0.0493	99	75-125	mg/L	03.06.2021 13:00	
trans-1,2-dichloroethylene	<0.000256	0.0500	0.0456	91	75-125	mg/L	03.06.2021 13:00	
1,2-Dichloropropane	<0.000396	0.0500	0.0506	101	74-125	mg/L	03.06.2021 13:00	
1,3-Dichloropropane	<0.000439	0.0500	0.0535	107	75-125	mg/L	03.06.2021 13:00	
2,2-Dichloropropane	<0.000360	0.0500	0.0509	102	75-125	mg/L	03.06.2021 13:00	
1,1-Dichloropropene	<0.000481	0.0500	0.0483	97	75-125	mg/L	03.06.2021 13:00	
cis-1,3-Dichloropropene	<0.000690	0.0500	0.0516	103	74-125	mg/L	03.06.2021 13:00	
trans-1,3-dichloropropene	<0.000752	0.0500	0.0543	109	66-125	mg/L	03.06.2021 13:00	
Ethylbenzene	<0.000146	0.0500	0.0510	102	75-125	mg/L	03.06.2021 13:00	
Hexachlorobutadiene	<0.00200	0.0500	0.0437	87	75-125	mg/L	03.06.2021 13:00	
Isopropylbenzene	<0.000161	0.0500	0.0522	104	75-125	mg/L	03.06.2021 13:00	
Methylene Chloride	<0.00191	0.0500	0.0453	91	75-125	mg/L	03.06.2021 13:00	
MTBE	<0.000571	0.0500	0.0500	100	65-135	mg/L	03.06.2021 13:00	
Naphthalene	<0.00200	0.0500	0.0631	126	70-130	mg/L	03.06.2021 13:00	
n-Propylbenzene	<0.000179	0.0500	0.0530	106	75-125	mg/L	03.06.2021 13:00	
Styrene	<0.000162	0.0500	0.0541	108	75-125	mg/L	03.06.2021 13:00	
1,1,1,2-Tetrachloroethane	<0.000327	0.0500	0.0530	106	72-125	mg/L	03.06.2021 13:00	
1,1,2,2-Tetrachloroethane	<0.000284	0.0500	0.0568	114	74-125	mg/L	03.06.2021 13:00	
Tetrachloroethylene	<0.000500	0.0500	0.0476	95	71-125	mg/L	03.06.2021 13:00	
Toluene	<0.000500	0.0500	0.0495	99	59-139	mg/L	03.06.2021 13:00	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0589	118	75-137	mg/L	03.06.2021 13:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Ensolum South Hobbs

Analytical Method: VOCs by SW-846 8260C

Seq Number: 3152820

Matrix: Water

Prep Method: E624P

Parent Sample Id: 690708-001

MS Sample Id: 690708-001 S

Date Prep: 03.06.2021

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0489	98	75-135	mg/L	03.06.2021 13:00	
1,1,1-Trichloroethane	<0.000504	0.0500	0.0488	98	75-125	mg/L	03.06.2021 13:00	
1,1,2-Trichloroethane	<0.000228	0.0500	0.0527	105	75-127	mg/L	03.06.2021 13:00	
Trichloroethylene	<0.000424	0.0500	0.0473	95	62-137	mg/L	03.06.2021 13:00	
Trichlorofluoromethane	<0.000245	0.0500	0.0462	92	60-140	mg/L	03.06.2021 13:00	
1,2,3-Trichloropropane	<0.000283	0.0500	0.0553	111	75-125	mg/L	03.06.2021 13:00	
1,2,4-Trimethylbenzene	<0.000252	0.0500	0.0537	107	75-125	mg/L	03.06.2021 13:00	
1,3,5-Trimethylbenzene	<0.000279	0.0500	0.0532	106	70-125	mg/L	03.06.2021 13:00	
o-Xylene	<0.000192	0.0500	0.0526	105	75-125	mg/L	03.06.2021 13:00	
m,p-Xylenes	<0.000330	0.100	0.103	103	75-125	mg/L	03.06.2021 13:00	
Vinyl Chloride	<0.000234	0.0500	0.0453	91	60-140	mg/L	03.06.2021 13:00	

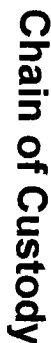
Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		75-131	%	03.06.2021 13:00
1,2-Dichloroethane-D4	101		63-144	%	03.06.2021 13:00
Toluene-D8	104		80-117	%	03.06.2021 13:00
4-Bromofluorobenzene	100		74-124	%	03.06.2021 13:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Work Order No: 690485

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
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 281-2222
Hobbs, NM (575) 392-7550

Page 1 of 1
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Work Order Comments

Program: UST/ST ☐ PPR ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADAPT ☐ Other: ☐

[illegible]

or of Containers ed Carbon Dioxide 45 ed Sulfide SW-846 #376 /-846 #8260 A Method #8015 EPA Method #846 30 SW-846 Method 150.1	TAT starts the day received by the lab, if received by 4:30pm

[illegible][illegible]

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
		3/4/21			
		1054			

Inter-Office Shipment

IOS Number : **79012**

Date/Time: 03.05.2021

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Houston**

Air Bill No.: 773084224033

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
690485-001	W	MW-1	03.04.2021 11:05	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	03.08.2021	03.05.2021 11:05	JKR		
690485-001	W	MW-1	03.04.2021 11:05	SM4500-H	pH by SM4500-H	03.08.2021	03.04.2021 11:20	JKR		
690485-001	W	MW-1	03.04.2021 11:05	SM2320B	Alkalinity by SM2320B	03.08.2021	03.18.2021	JKR	ALK ALKB ALKC	
690485-001	W	MW-1	03.04.2021 11:05	SW8260C	VOCs by SW-846 8260C	03.08.2021	03.18.2021	JKR	BDCME BRBZ BRCLME	
690485-001	W	MW-1	03.04.2021 11:05	SM4500SF00	Sulfide by SM4500-S-F	03.08.2021	03.11.2021 11:05	JKR	S	
690485-001	W	MW-1	03.04.2021 11:05	E300	Inorganic Anions by EPA 300	03.08.2021	04.01.2021	JKR	CL	
690485-002	W	MW-2	03.04.2021 12:25	SM2320B	Alkalinity by SM2320B	03.08.2021	03.18.2021	JKR	ALK ALKB ALKC	
690485-002	W	MW-2	03.04.2021 12:25	SM4500SF00	Sulfide by SM4500-S-F	03.08.2021	03.11.2021 12:25	JKR	S	
690485-002	W	MW-2	03.04.2021 12:25	SM4500-CO2_DISS	Free (Dissolved) Carbon Dioxide by SM	03.08.2021	03.05.2021 12:25	JKR		
690485-002	W	MW-2	03.04.2021 12:25	E300	Inorganic Anions by EPA 300	03.08.2021	04.01.2021	JKR	CL	
690485-002	W	MW-2	03.04.2021 12:25	SW8260C	VOCs by SW-846 8260C	03.08.2021	03.18.2021	JKR	BDCME BRBZ BRCLME	
690485-002	W	MW-2	03.04.2021 12:25	SM4500-H	pH by SM4500-H	03.08.2021	03.04.2021 12:40	JKR		

Inter Office Shipment or Sample Comments:

No NaOH+Zn Acetate preserved containers received in Houston

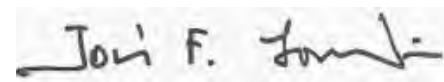
Relinquished By:



Brianna Teel

Date Relinquished: 03.05.2021

Received By:



Jose Londono

Date Received: 03.06.2021

Cooler Temperature: 2.3



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 79012

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-272

Sent By: Brianna Teel

Date Sent: 03.05.2021 08.32 AM

Received By: Jose Londono

Date Received: 03.06.2021 11.59 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

No NaOH+Zn Acetate preserved containers received in Houston

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jose Londono

Date: 03.06.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Ensolum

Date/ Time Received: 03.04.2021 04.54.00 PM

Work Order #: 690485

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR

PH Device/Lot#: 10BDH1991

Checklist completed by:



Brianna Teel

Date: 03.05.2021

Checklist reviewed by:



Jessica Kramer

Date: 03.08.2021

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 284097

CONDITIONS

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID:	157984
	Action Number:	284097
	Action Type:	[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Accepted for the record. SOUTH HOBBS G/SA UNIT GAS MITIGATION WORK PLAN South Hobbs G/SA Unit Operations Unit F Order No. R-4934-F	3/21/2024