



# ENSOLUM

January 21, 2026

## **New Mexico Oil Conservation Division**

New Mexico Energy, Minerals, and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Remediation Work Plan  
State Z Production Facility  
Incident Number NAPP2502719434  
Hilcorp Energy Company  
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), has prepared this *Remediation Work Plan* (Work Plan) to document excavation and soil sampling activities performed at the State Z Production Facility (Site). The purpose of the excavation and soil sampling activities was to address impacts to soil resulting from a release of crude oil at the Site. Hilcorp is submitting this *Work Plan* to document the excavation activities completed to date and request approval to backfill the northern portion of the release area, allowing remediation efforts to continue on the southern portion associated with Incident Number NAPP2502719434.

## **SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit A, Section 13, Township 20 South, Range 36 East, Lea County, New Mexico (32.576983°, -103.301690°) and is associated with oil and gas exploration and production operations on State Trust Land (STL) managed by the New Mexico State Land Office (NMSLO).

On January 26, 2025, Hilcorp personnel arrived on location and observed approximately 35 barrels (bbls) of crude oil overflowing out of the aboveground storage tank (AST). The overflow was caused by an automation issue and all released fluids remained inside the unlined secondary containment. A vacuum truck was dispatched to the Site to recover free standing fluids; approximately 31 bbls of crude oil were recovered. Hilcorp reported the release to the New Mexico Oil Conservation Division (NMOCD) via *Notification of Release* (NOR) on January 27, 2025. The release was assigned Incident Number NAPP2502719434.

## **SITE CHARACTERIZATION**

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented below and potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well L-13752-POD4, located approximately 1,667 feet northwest of the Site. The groundwater well has a reported depth to groundwater of 31 feet bgs and a total depth of 42 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well record is included in Appendix A.

The closest continuously flowing or significant water course to the Site is a draw located approximately 4,556 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100- year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area).

Based on the results of the Site characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

## SUMMARY AND TIMELINE OF ACTIONS

Excavation activities have been ongoing since February 2025 and include removal of all operating equipment on site, removal of 3,840 cubic yards of impacted soil, benching and shoring to access impacted soil as deep as 28 feet bgs, and surgical removal of soil around subsurface infrastructure. Hilcorp has been excavating historical impacts at this location that significantly extend beyond the original release discovered on January 26, 2025. The size of the location and the extent of impacts requiring excavation have posed challenges with having enough room to safely dig, stockpile impacted material, and truck offsite for disposal. There is a need to backfill the north portion of the excavation that no longer contains impacted soil exceeding Table I Closure Criteria in order to safely access the remaining impacted soil on site. The following timeline summarizes the key actions completed to date and illustrates the progression of remediation activities at the Site.

- **January 26, 2025** – Incident discovered, 35 bbl crude release, 31 bbl recovered.
- **February 2025** – Initial excavation activities began to address the release, with crews working around existing onsite infrastructure to remove 136 cubic yards of impacted soil. During this initial excavation effort, historical impacts were encountered that were unrelated to the original release. Excavation continued as far as feasible within the limits imposed by current site infrastructure, after which further investigation was required to determine the extent of these historical impacts beyond the initial release area.
- **March 2025** – Sampling and delineation activities were conducted to define the vertical extent of historical impacts and to evaluate potential remediation options. To safely

navigate onsite infrastructure, a hand auger was used to investigate subsurface conditions. Historical impacts were identified to a depth of approximately 12 bgs, at which point refusal was encountered. Given the depth and extent of these impacts, several remediation approaches and associated costs were evaluated. However, any alternative to excavation would require additional delineation using a drill rig to support development of a detailed remediation work plan. Existing onsite infrastructure presented access limitations that would need to be addressed, along with the extended scheduling timeline associated with mobilizing a drill rig.

- **April 22, 2025** – First 90-day extension approved.
- **May 2025** - During preparation for drill rig delineation, it became clear that accessing all required locations would necessitate removing a significant portion of the existing site infrastructure. Given the extent of demolition that would be required, Hilcorp elected to move forward with excavation and offsite disposal instead.
- **June 2025** - Site deconstruction was undertaken to prepare the area for full-scale excavation. During this process, crews encountered elevated concentrations of H<sub>2</sub>S within flow lines and storage tanks. These conditions required immediate implementation of enhanced safety protocols, atmospheric monitoring, and controlled ventilation measures. The additional mitigation steps significantly slowed the pace of deconstruction, but they were necessary to ensure safe working conditions and to prevent exposure risks to onsite personnel.
- **July 08, 2025** – Excavation resumed with supplemental hand-auger delineation to support detailed site planning. Approximately 1,600 cubic yards of impacted soil were removed, and the excavation advanced to a depth of 19 feet bgs. Despite this progress, soil exceeding the most stringent NMOCD Table 1 Closure Criteria was still present.
- **July 25, 2025** – Extension request submitted to continue excavation.
- **July 29, 2025** – Second 90-day extension approved.
- **August/September/October 2025** – Excavation advanced beyond 20 feet below ground surface (bgs), which required the excavation to be formally engineered by a licensed professional and supported with extensive benching and shoring to safely access deeper impacts. By October 28, 2025, more than 3,840 cubic yards of impacted soil had been removed and disposed, and an additional volume—approximately twice that amount—had been excavated and stockpiled onsite to construct the necessary

benches and shoring for safe entry to depths reaching 28 feet bgs. Despite these efforts, confirmation sampling showed that impacted soil remained, prompting a request for a third extension to continue excavation.

- **October 28, 2025** – Third 90-day extension approved.
- **November 2025** - To safely access the impacted soil in the southern portion of the excavation while avoiding disturbance to adjacent state-owned land, Hilcorp requested approval on November 12, 2025, to backfill the northern section of the excavation. Analytical results from November 11, 2025, confirmed that soil samples collected from the northern area met the NMOCD Table 1 Closure Criteria. Hilcorp collaborated with the NMOCD to review the sampling data and pursue authorization to backfill select portions of the excavation, enabling continued excavation of the remaining impacts in the southern area.
  - The backfill request was denied, Hilcorp subsequently planned to collect additional samples in accordance with the NMOCD's request.
- **December 2025** – Hilcorp submitted a sample notification; however, a shift in construction schedules created an opportunity to collect the additional confirmation samples earlier than originally planned. A variance request to adjust the sampling notification timeline was submitted but ultimately denied by the NMOCD. On December 10, 2025, the NMOCD requested additional information regarding work completed for Incident Number NAPP2502719434, and Hilcorp provided a formal response on December 15, 2025.
- **January 2026** – Additional sampling efforts were conducted to further confirm the absence of impacts at the Site. Supporting documentation was submitted to NMOCD on January 6, 2026, no response has been received to date.

The most recent communication between Hilcorp and the NMOCD occurred on December 18, 2026, when the NMOCD requested an updated figure and the latest laboratory analytical results. Hilcorp submitted the requested documentation on January 6, 2026. Although the NMOCD provided limited follow-up regarding sampling notifications, no additional response has been received since January 7, 2026. Given the elapsed time and absence of further direction, Hilcorp proceeded with collecting supplemental soil samples from the portion of the excavation requiring backfill. These additional sampling activities were completed on January 14, 2026, and the results are summarized below.

## CONCLUSION

Ensolum personnel were at the Site to oversee excavation activities to define the vertical and lateral extent of impacted soil. Excavation activities were performed by use of heavy equipment.

Photographic documentation is included in Appendix B. To direct excavation activities, soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Following removal of the impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS25 were collected from the floor of the excavation at depths ranging from 4 feet to 28 feet bgs. Composite soil samples SW01 through SW32 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 28 feet bgs. The excavation extent and excavation soil sample locations are presented on Figure 3.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the Site location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico or Eurofins Carlsbad (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

Laboratory analytical results for confirmation floor soil samples FS01 through FS15, and FS19 through FS25 and confirmation sidewall soil samples SW01 through SW32, collected from the final excavation extent, indicated that all COC concentrations were compliant with the Site Closure Criteria. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix C. As shown in the accompanying analytical table and figure, two confirmation floor samples exceed applicable criteria (FS17 and FS18) and will require additional remediation in the southern portion. These areas cannot be further assessed at this time due to safety constraints.

A total of approximately 3,840 cubic yards of impacted soil has been removed to date. The impacted soil was transported and disposed of at the Sundance Services, Inc. in Hobbs, New Mexico. The excavation was fenced off pending backfill approval.

## REMEDIATION WORK PLAN

Based on the laboratory analytical results described above, impacted soil is not present at the Site between the ground surface to a depth of approximately 28 feet bgs in the northern portion of the release area. Sufficient floor and sidewall samples have been collected and analyzed. Therefore, Hilcorp is formally requesting approval to backfill the northern portion of the release area.

Upon receiving this approval, Hilcorp will proceed with excavating impacted soil in the southern portion of the Site to achieve NMOCD Closure Criteria. Excavated soil will be transported off-Site to an NMOCD-approved disposal facility. Once field screening confirms that impacted soil has been removed, 5-point composite soil samples will be collected from the excavation floor and sidewalls at a minimum frequency of one sample per 200 square feet. Each composite sample will be prepared by combining five equal aliquots of soil into a 1-gallon resealable plastic bag and homogenizing the material through thorough mixing. After confirming that all impacted soil has been removed, Hilcorp will submit a work plan summarizing completed activities and providing the associated laboratory analytical results.

Hilcorp Energy Company  
Remediation Work Plan  
State Z Production Facility

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If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or [kjennings@ensolum.com](mailto:kjennings@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Kara Naegeli  
Staff Geologist



Kalei Jennings  
Senior Managing Scientist

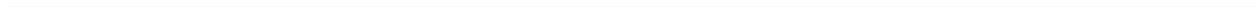
cc: Billy Ginn, Hilcorp Energy Company  
NMSLO

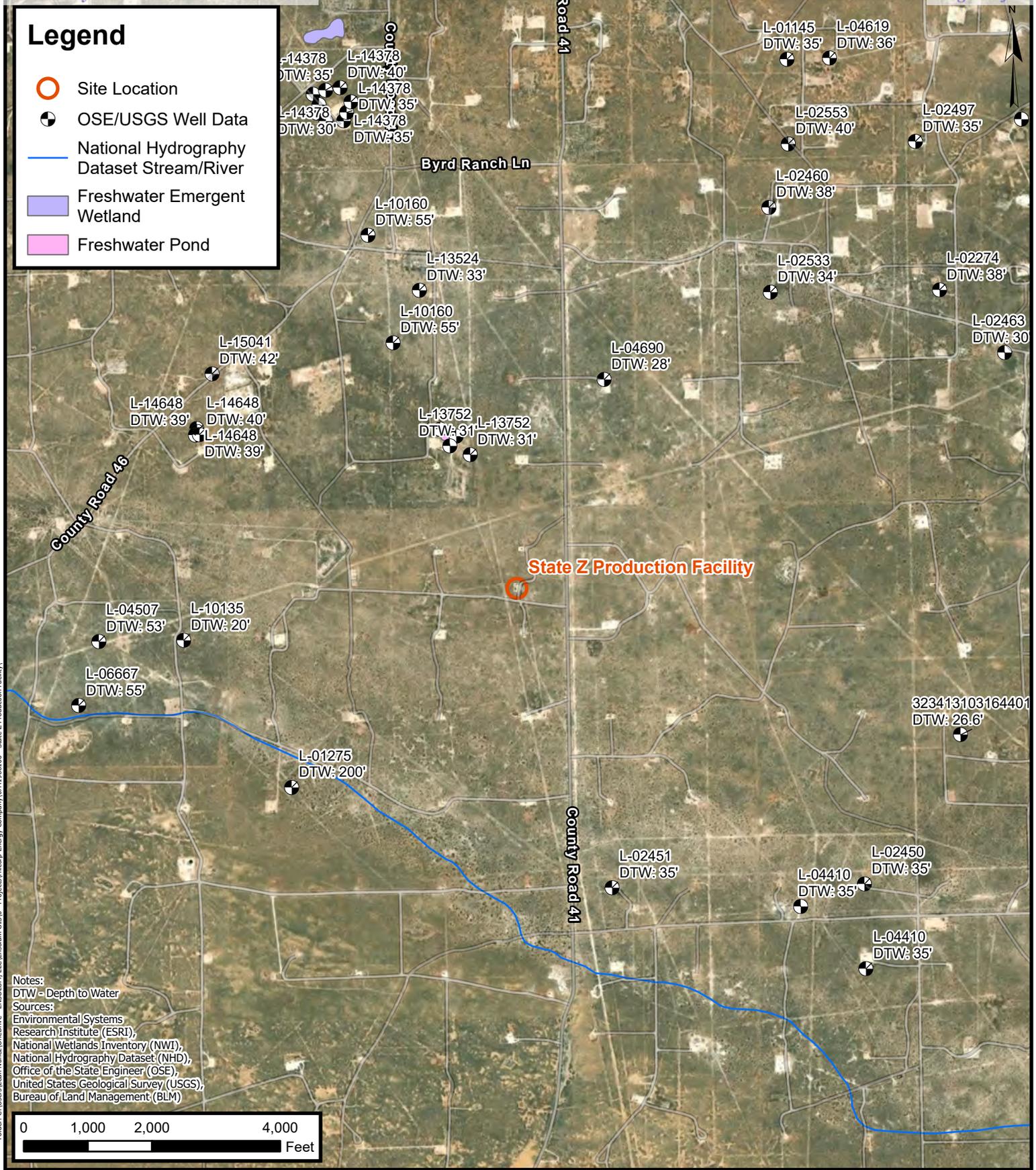
Appendices:

Figure 1	Site Receptor Map
Figure 2	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Record
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports
Appendix D	NMOCD Correspondence



## FIGURES





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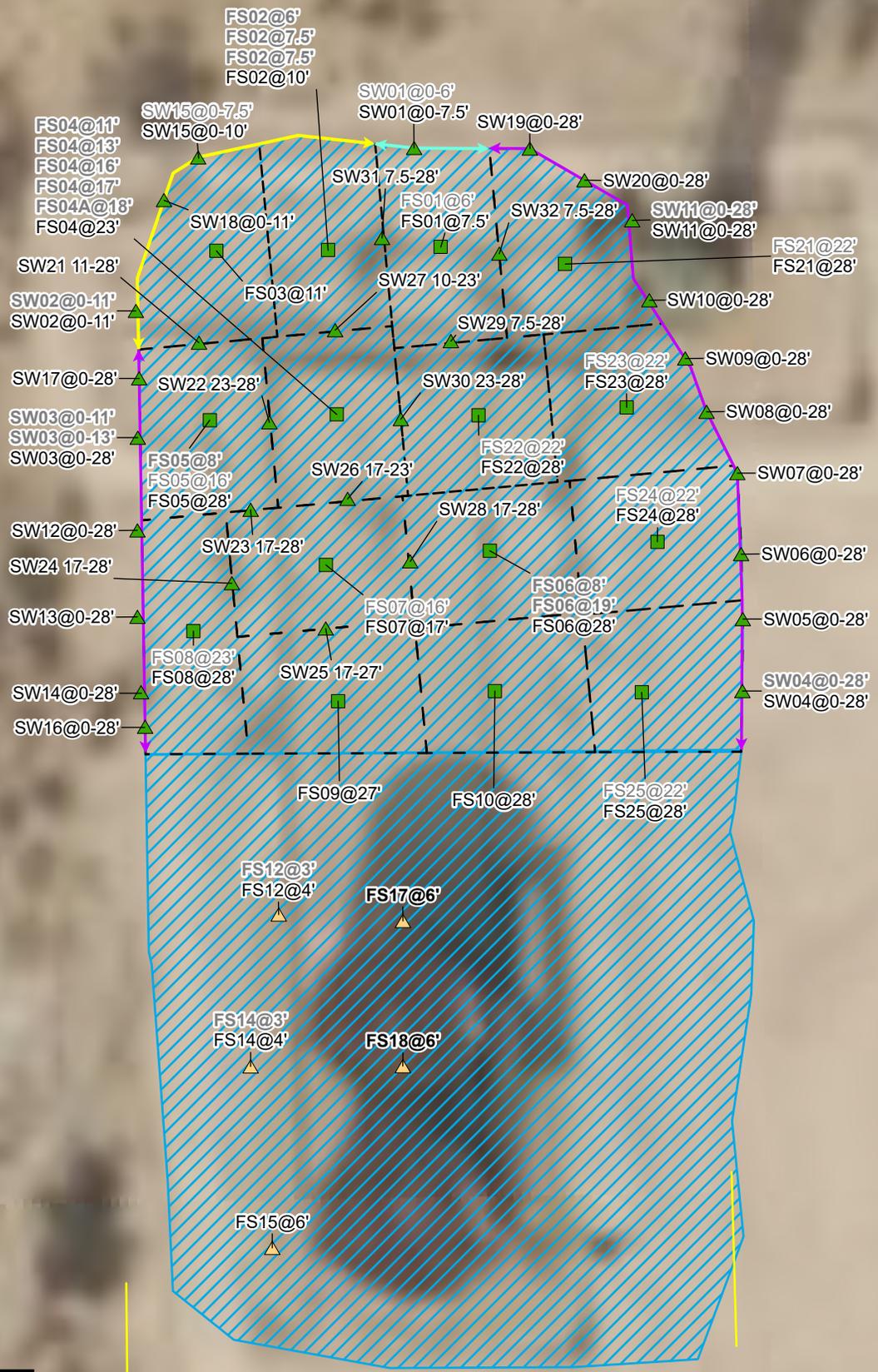


**Site Receptor Map**  
 Hilcorp Energy Company  
 State Z Production Facility  
 Unit A, Section 13, Township 20 South, Range 36 East  
 Lea County, New Mexico

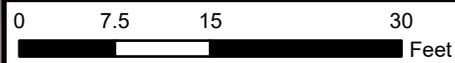
**FIGURE**  
**1**

### Legend

- Composite Floor Soil Sample in Compliance with Closure Criteria
  - ▲ Composite Sidewall Soil Sample in Compliance with Closure Criteria
  - ▲ Composite Floor Soil Sample - Pending Additional Remediation Efforts
  - Oil and Gas Utility Line
  - ▨ Excavation Extent
  - - - 200 sq. ft. Composite Soil Sample Grid Boundary
- Excavation Sidewall Depths:**
- ↔ 0-11'
  - ↔ 0-28'
  - ↔ 0-7.5'



**Notes:**  
 Sample ID @ Depth Below Ground Surface.  
 Samples in **bold** indicate sample exceeded applicable closure criteria.  
 Grey text indicate soil sample that have been excavated.



Sources: Environmental Systems Research Institute (ESRI)

## Excavation Soil Sample Location

Hilcorp Energy Company  
 State Z Production Facility  
 Unit A, Section 13, Township 20 South, Range 36 East  
 Lea County, New Mexico

# FIGURE 2





# TABLES



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS State Z Production Facility Incident Number NAPP2502719434 Lea County, New Mexico									
Sample Identification	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOC Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)</b>									
<b>COMPOSITE SIDEWALL SOIL SAMPLE RESULTS</b>									
SW01	07/09/2025	0 - 6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
<b>SW01</b>	<b>07/10/2025</b>	<b>0 - 7.5</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>10.3</b>	<b>16.9</b>	<b>30.0</b>	<b>&lt;16.0</b>
SW02	07/09/2025	0 - 11	<0.050	<0.300	<10.0	103	66.9	170	<16.0
<b>SW02</b>	<b>07/10/2025</b>	<b>0 - 11</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
SW03	07/09/2025	0 - 11	<0.050	<0.300	<10.0	535	735	130	<16.0
SW03	07/10/2025	0 - 13	<0.050	<0.300	<10.0	411	387	800	<16.0
<b>SW03</b>	<b>09/03/2025</b>	<b>0 - 28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
SW04	08/29/2025	0 - 28	<0.050	<0.300	<10.0	140	70.4	210	<16.0
<b>SW04</b>	<b>09/04/2025</b>	<b>0 - 28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>15.7</b>	<b>&lt;10.0</b>	<b>15.7</b>	<b>16.0</b>
SW05	08/29/2025	0 - 28	<0.050	<0.300	<10.0	48.4	29.8	78.2	<16.0
SW06	08/29/2025	0 - 28	<0.050	<0.300	<10.0	46.5	28.5	75.0	<16.0
SW07	08/29/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
SW08	08/29/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
SW09	08/29/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>SW10</b>	<b>08/29/2025</b>	<b>0 - 28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>48.0</b>
SW11	08/29/2025	0 - 28	<0.050	<0.300	<10.0	106	80.7	189	32.0
<b>SW11</b>	<b>09/04/2025</b>	<b>0 - 28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>16.0</b>
SW12	09/03/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW13	09/03/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>SW14</b>	<b>09/10/2025</b>	<b>0 - 28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>16.0</b>
SW15	09/10/2025	0 - 7.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>SW15</b>	<b>10/15/2025</b>	<b>0 - 10</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
SW16	11/11/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
SW17	11/11/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW18	11/11/2025	0 - 11	<0.050	<0.300	<10.0	21.7	<10.0	21.7	<16.0
SW19	11/11/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW20	11/11/2025	0 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW21	01/14/2026	11 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
SW22	01/14/2026	23 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW23	01/14/2026	17 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
SW24	01/14/2026	17 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW25	01/14/2026	17 - 27	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
SW26	01/14/2026	17 - 23	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW27	01/14/2026	10 - 23	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW28	01/14/2026	17 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SW29	01/14/2026	7.5 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
SW30	01/14/2026	23 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
SW31	01/14/2026	7.5 - 28	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
<b>SW32</b>	<b>01/14/2026</b>	<b>7.5 - 28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>32.0</b>
<b>COMPOSITE FLOOR SOIL SAMPLE RESULTS</b>									
FS01	07/09/2025	6	<0.050	<0.300	<10.0	24.7	25.7	50.0	<16.0
<b>FS01</b>	<b>10/15/2025</b>	<b>7.5</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>32.0</b>
FS02	07/09/2025	6	<0.050	<0.300	<10.0	51.7	59.4	111	<16.0
FS02	07/10/2025	7.5	<0.050	<0.300	<10.0	911	683	1,594	<16.0
FS02	07/14/2025	7.5	<0.050	<0.300	<10.0	338	271	609	<16.0
<b>FS02</b>	<b>07/16/2025</b>	<b>10</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
<b>FS03</b>	<b>07/09/2025</b>	<b>11</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>40.9</b>	<b>15.0</b>	<b>60.0</b>	<b>&lt;16.0</b>
FS04	07/09/2025	11	<0.050	1.48	183	1,730	737	2,650	<16.0
FS04	07/10/2025	13	<0.050	<0.300	<10.0	182	195	377	<16.0
FS04	07/14/2025	16	<0.050	<0.300	<10.0	139	147	286	<16.0
FS04	07/17/2025	17	<0.050	<0.300	<10.0	205	103	308	32.0
FS04 A	07/21/2025	18	<0.050	<0.300	<10.0	197	89.2	286	64.0
<b>FS04</b>	<b>08/22/2025</b>	<b>23</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
FS05	07/14/2025	8	<0.050	4.36	899	2,840	594	4,333	<16.0
FS05	07/17/2025	16	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>FS05</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
FS06	07/14/2025	8	<0.050	<0.300	26.1	415	203	644	32.0
FS06	07/28/2025	19	<0.050	0.519	<50.0	947	396	1,343	<16.0
<b>FS06</b>	<b>08/22/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
FS07	07/17/2025	16	<0.050	<0.300	<10.0	250	197	447	<16.0
<b>FS07</b>	<b>07/21/2025</b>	<b>17</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>48.0</b>
FS08	08/22/2025	23	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>FS08</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
<b>FS09</b>	<b>08/22/2025</b>	<b>27</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>32.0</b>
<b>FS10</b>	<b>08/22/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;16.0</b>
FS12	07/16/2025	3	<0.050	<0.300	<10.0	67.9	37.7	106	32.0
<b>FS12</b>	<b>07/21/2025</b>	<b>4</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>23.7</b>	<b>25.3</b>	<b>49.0</b>	<b>32.0</b>
FS14	07/16/2025	3	<0.050	<0.300	<10.0	405	250	655	<16.0
<b>FS14</b>	<b>07/21/2025</b>	<b>4</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>14.1</b>	<b>19.5</b>	<b>33.6</b>	<b>32.0</b>
FS15	07/22/2025	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
<b>FS17</b>	<b>07/22/2025</b>	<b>6</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>204</b>	<b>177</b>	<b>381</b>	<b>&lt;16.0*</b>
<b>FS18</b>	<b>07/22/2025</b>	<b>6</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>961</b>	<b>445</b>	<b>1,496</b>	<b>&lt;16.0*</b>
FS21	08/29/2025	22	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>FS21</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>32.0</b>
FS22	08/29/2025	22	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>FS22</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>48.0</b>
FS23	08/29/2025	22	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>FS23</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>32.0</b>
FS24	08/29/2025	22	<0.050	<0.300	<10.0	37.6	<10.0	37.6	<16.0
<b>FS24</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>37.6</b>	<b>&lt;10.0</b>	<b>37.6</b>	<b>&lt;16.0</b>
FS25	08/29/2025	22	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
<b>FS25</b>	<b>10/15/2025</b>	<b>28</b>	<b>&lt;0.050</b>	<b>&lt;0.300</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>&lt;10.0</b>	<b>32.0</b>

Notes:

bgs: Below ground surface  
 BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes \* indicates additional remediation efforts pending  
 mg/kg: Milligrams per kilogram Grey text represents samples that have been excavated  
 NE: Not Established DRO: Diesel Range Organics  
 NMOC: New Mexico Oil Conservation Division ORO: Oil Range Organics  
 TPH: Total Petroleum Hydrocarbon  
 NMAC: New Mexico Administrative Code  
 Concentrations in bold exceed the NMOC Table I Closure Criteria or reclamation standard where applicable.  
 GRO: Gasoline Range Organics



## APPENDIX A

### Referenced Well Record

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# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) L-13752-POD4				OSE FILE NUMBER(S) L-13752			
	WELL OWNER NAME(S) BP Products North America				PHONE (OPTIONAL) (657) 529-4506			
	WELL OWNER MAILING ADDRESS 4 Centerpointe Drive, Suite 200				CITY La Palma	STATE CA	ZIP 90623	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 103	MINUTES 18	SECONDS 14.2	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 32	34	57.9	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW 1/4 of NE 1/4 of SW 1/4 of SE 1/4 of Section 12, Township 20S, Range 36E								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 1670	NAME OF LICENSED DRILLER Kenny Cooper				NAME OF WELL DRILLING COMPANY Harrison & Cooper, INC.		
	DRILLING STARTED 01/12/2016	DRILLING ENDED 01/12/2016	DEPTH OF COMPLETED WELL (FT) 42'	BORE HOLE DEPTH (FT) 42'	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 31			
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	32	42	6.125	Screen - Sch 40 PVC	Screw End	4	Sch 40	.020
	0	32	6.125	Riser - Sch 40 PVC	Screw End	4	Sch 40	
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	2	6.125	Concrete	1	Poured		
	2	30	6.125	Bentonite	1	Poured		
	30	42	6.125	Sand - 8/16	1	Poured		

FOR OSE INTERNAL USE

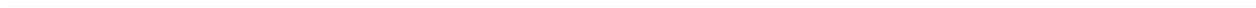
FILE NUMBER	L-13752	POD NUMBER	4	WR-20 WELL RECORD & LOG (Version 10/29/15)	TRN NUMBER	557346
LOCATION	20S, 36E, 12	4-3-2	Exploratory	PAGE 1 OF 2		





## APPENDIX B

### Photographic Log





**Photographic Log**  
Hilcorp Energy Company  
State Z Production Facility  
Lea County, New Mexico



Photograph: 1 Date: 2/4/2025  
Description: Staining within release extent  
View: North

Photograph: 2 Date: 2/4/2025  
Description: Staining within release extent  
View: West



Photograph: 3 Date: 2/4/2025  
Description: Staining within release extent  
View: East

Photograph: 4 Date: 2/4/2025  
Description: Staining within release extent  
View: West



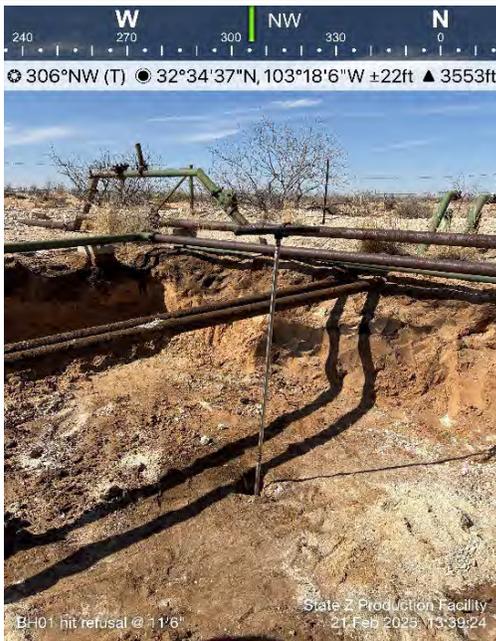
**Photographic Log**  
Hilcorp Energy Company  
State Z Production Facility  
Lea County, New Mexico



Photograph: 5 Date: 2/21/2025  
Description: Staining within release extent  
View: West



Photograph: 6 Date: 2/21/2025  
Description: Delineation activities  
View: West



Photograph: 7 Date: 2/21/2025  
Description: Delineation activities  
View: Northwest



Photograph: 8 Date: 2/21/2025  
Description: Delineation activities  
View: Northwest



**Photographic Log**  
Hilcorp Energy Company  
State Z Production Facility  
Lea County, New Mexico

**South East Elevation**

☉ 309°NW (T) ● 32°34'36"N, 103°18'6"W ±6ft ▲ 3550ft



**North East Elevation**

☉ 217°SW (T) ● 32°34'37"N, 103°18'5"W ±26ft ▲ 3541ft



Photograph: 9 Date: 7/8/2025  
Description: Excavation activities  
View: Northwest

Photograph: 10 Date: 7/10/2025  
Description: Excavation activities  
View: Southwest

**South Elevation**

☉ 354°N (T) ● 32°34'36"N, 103°18'5"W ±16ft ▲ 3539ft



**East Elevation**

☉ 267°W (T) ● 32°34'37"N, 103°18'6"W ±6ft ▲ 3550ft



Photograph: 11 Date: 7/14/2025  
Description: Excavation activities  
View: North

Photograph: 12 Date: 7/18/2025  
Description: Excavation activities  
View: West



**Photographic Log**  
Hilcorp Energy Company  
State Z Production Facility  
Lea County, New Mexico

☉ 241°SW (T) LAT: 32.576921 LON: -103.301723 ±6ft ▲ 3552ft



State Z Production Facility  
21 Jul 2025, 09:29:24 MDT  
Ensolum, LLC

☉ 31°NE (T) LAT: 32.576849 LON: -103.301874 ±9ft ▲ 3548ft



State Z Production Facility  
21 Jul 2025, 09:38:07 MDT  
Ensolum, LLC

Photograph: 13 Date: 7/21/2025  
Description: Excavation activities  
View: Southwest

Photograph: 14 Date: 7/21/2025  
Description: Excavation activities  
View: Northeast

☉ 189°S (T) LAT: 32.577205 LON: -103.301739 ±6ft ▲ 3552ft



State Z Production Facility  
21 Jul 2025, 17:17:08 MDT  
Ensolum, LLC



Photograph: 16 Date: 7/22/2025  
Description: Excavation activities  
View: Northwest

Photograph: 15 Date: 7/21/2025  
Description: Excavation activities  
View: South





**Photographic Log**  
Hilcorp Energy Company  
State Z Production Facility  
Lea County, New Mexico



Photograph: 21                      Date: 8/6/2025  
Description: Excavation activities  
View: North

Photograph: 22                      Date: 8/6/2025  
Description: Excavation activities  
View: South



Photograph: 23                      Date: 8/28/2025  
Description: Excavation activities  
View: East

Photograph: 24                      Date: 9/2/2025  
Description: Excavation activities  
View: Northeast









**Photographic Log**  
Hilcorp Energy Company  
State Z Production Facility  
Lea County, New Mexico

**North**

15°N (T) • 32.576785, -103.30168 ±9ft ▲ 3464ft



State Z Production Facility  
11/11/2025 10:14:53 AM

**South**

206°S (T) • 32.577154, -103.301692 ±9ft ▲ 3458ft



State Z Production Facility  
11/11/2025 10:53:41 AM

Photograph: 37  
Description: Sampling activities  
View: North

Date: 11/11/2025

Photograph: 38  
Description: Sampling activities  
View: South

Date: 11/11/2025

W 270 NW N 0  
306°NW (T) • 32.576789, -103.301687 ±9ft ▲ 3471ft



State Z Production Facility  
14 Jan 2026 12:17:32 PM

E 90 SE S 180  
140°SE (T) • 32.577129, -103.301948 ±9ft ▲ 3477ft



State Z Production Facility  
14 Jan 2026 12:13:57 PM

Photograph: 39  
Description: Sampling activities  
View: Northwest

Date: 11/14/2025

Photograph: 40  
Description: Sampling activities  
View: Southeast

Date: 11/14/2025



## APPENDIX D

# Laboratory Analytical Reports

---



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

July 10, 2025

KALEI JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: STATE PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/09/25 15:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: SW 01 0-6' (H254091-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61	
Toluene*	<0.050	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20	
Ethylbenzene*	<0.050	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72	
Total Xylenes*	<0.150	0.150	07/09/2025	ND	6.11	102	6.00	2.52	
Total BTEX	<0.300	0.300	07/09/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/10/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/09/2025	ND	191	95.4	200	1.43	
DRO >C10-C28*	<10.0	10.0	07/09/2025	ND	212	106	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	07/09/2025	ND					

Surrogate: 1-Chlorooctane 85.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 80.4 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: SW 02 0-11' (H254091-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61	
Toluene*	<0.050	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20	
Ethylbenzene*	<0.050	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72	
Total Xylenes*	<0.150	0.150	07/09/2025	ND	6.11	102	6.00	2.52	
Total BTEX	<0.300	0.300	07/09/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/10/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/09/2025	ND	191	95.4	200	1.43	
<b>DRO &gt;C10-C28*</b>	<b>103</b>	10.0	07/09/2025	ND	212	106	200	1.37	
<b>EXT DRO &gt;C28-C36</b>	<b>66.9</b>	10.0	07/09/2025	ND					

Surrogate: 1-Chlorooctane 89.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 84.8 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: SW 03 0-11' (H254091-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61	
Toluene*	<0.050	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20	
Ethylbenzene*	<0.050	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72	
Total Xylenes*	<0.150	0.150	07/09/2025	ND	6.11	102	6.00	2.52	
Total BTEX	<0.300	0.300	07/09/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/10/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/09/2025	ND	191	95.4	200	1.43	
<b>DRO &gt;C10-C28*</b>	<b>53.5</b>	10.0	07/09/2025	ND	212	106	200	1.37	
<b>EXT DRO &gt;C28-C36</b>	<b>73.5</b>	10.0	07/09/2025	ND					

Surrogate: 1-Chlorooctane 87.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.4 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: FS 01 6' (H254091-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61		
Toluene*	<0.050	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20		
Ethylbenzene*	<0.050	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72		
Total Xylenes*	<0.150	0.150	07/09/2025	ND	6.11	102	6.00	2.52		
Total BTEX	<0.300	0.300	07/09/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/10/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/09/2025	ND	191	95.4	200	1.43		
<b>DRO &gt;C10-C28*</b>	<b>24.7</b>	10.0	07/09/2025	ND	212	106	200	1.37		
<b>EXT DRO &gt;C28-C36</b>	<b>25.7</b>	10.0	07/09/2025	ND						

Surrogate: 1-Chlorooctane 86.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.7 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: FS 02 6' (H254091-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61		
Toluene*	<0.050	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20		
Ethylbenzene*	<0.050	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72		
Total Xylenes*	<0.150	0.150	07/09/2025	ND	6.11	102	6.00	2.52		
Total BTEX	<0.300	0.300	07/09/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/10/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/09/2025	ND	191	95.4	200	1.43		
<b>DRO &gt;C10-C28*</b>	<b>51.7</b>	10.0	07/09/2025	ND	212	106	200	1.37		
<b>EXT DRO &gt;C28-C36</b>	<b>59.4</b>	10.0	07/09/2025	ND						

Surrogate: 1-Chlorooctane 87.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.0 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: FS 03 11' (H254091-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61		
Toluene*	<0.050	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20		
Ethylbenzene*	<0.050	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72		
Total Xylenes*	<0.150	0.150	07/09/2025	ND	6.11	102	6.00	2.52		
Total BTEX	<0.300	0.300	07/09/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/10/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/09/2025	ND	191	95.4	200	1.43		
<b>DRO &gt;C10-C28*</b>	<b>40.9</b>	10.0	07/09/2025	ND	212	106	200	1.37		
<b>EXT DRO &gt;C28-C36</b>	<b>15.0</b>	10.0	07/09/2025	ND						

Surrogate: 1-Chlorooctane 87.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 82.9 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/09/2025	Sampling Date:	07/09/2025
Reported:	07/10/2025	Sampling Type:	Soil
Project Name:	STATE PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	LEA COUNTY, NM		

**Sample ID: FS 04 11' (H254091-07)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/09/2025	ND	1.87	93.5	2.00	1.61	GC-NC	
<b>Toluene*</b>	<b>0.893</b>	0.050	07/09/2025	ND	1.95	97.5	2.00	2.20	GC-NC1	
<b>Ethylbenzene*</b>	<b>0.179</b>	0.050	07/09/2025	ND	1.98	98.8	2.00	2.72		
<b>Total Xylenes*</b>	<b>0.404</b>	0.150	07/09/2025	ND	6.11	102	6.00	2.52	GC-NC1	
<b>Total BTEX</b>	<b>1.48</b>	0.300	07/09/2025	ND					GC-NC1	

Surrogate: 4-Bromofluorobenzene (PID) 138 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/10/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>183</b>	50.0	07/09/2025	ND	191	95.4	200	1.43		
<b>DRO &gt;C10-C28*</b>	<b>1730</b>	50.0	07/09/2025	ND	212	106	200	1.37		
<b>EXT DRO &gt;C28-C36</b>	<b>737</b>	50.0	07/09/2025	ND						

Surrogate: 1-Chlorooctane 120 % 44.4-145

Surrogate: 1-Chlorooctadecane 123 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Enbridge</u> Project Manager: <u>Carol Semphas</u> Address: <u>601 N. Main Street, STE 400</u> City: <u>Midland</u> State: <u>TX</u> Zip: <u>79701</u> Phone #: <u>817-683-2503</u> Fax #: _____ Project #: <u>07A198816</u> Project Owner: <u>Alco Corp</u> Project Name: <u>State Production Facility</u> Project Location: <u>Lee County NM</u> Sampler Name: <u>Nicolaus Cervantes</u>		P.O. #: _____ Company: <u>Enbridge</u> Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Lab I.D. <u>HASU001</u> Sample I.D. <u>SW01</u> <u>SW02</u> <u>SW03</u> <u>FS01</u> <u>FS02</u> <u>FS03</u> <u>FS04</u>		(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	
Date: _____ Time: _____ Date: _____ Time: _____		DATE TIME <u>07/05 0822</u> <u>10/05 1045</u> <u>12/31 0919</u> <u>08/17 1015</u> <u>10/18 1018</u>	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____ Observed Temp. °C: _____ Corrected Temp. °C: _____		CHECKED BY: _____ (Initials)	
Relinquished By: _____ Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____	
Turnaround Time: _____ Standard <input checked="" type="checkbox"/> <u>Rush</u> Bacteria (only) <input type="checkbox"/> <u>Sample Condition</u> Cool Intact <input type="checkbox"/> <u>Observed Temp. °C</u> Yes <input type="checkbox"/> No <input type="checkbox"/> <u>Corrected Temp. °C</u>		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>Add'l Phone #:</u> All Results are emailed. Please provide Email address: _____ REMARKS: <u>See Enbridge.com</u>	

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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July 11, 2025

KALEI JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/10/25 15:43.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/10/2025	Sampling Date:	07/10/2025
Reported:	07/11/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 02 7.5' (H254131-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/10/2025	ND	1.97	98.5	2.00	0.131	QM-07	
Toluene*	<0.050	0.050	07/10/2025	ND	1.98	99.1	2.00	1.20		
Ethylbenzene*	<0.050	0.050	07/10/2025	ND	2.05	102	2.00	2.84		
Total Xylenes*	<0.150	0.150	07/10/2025	ND	6.48	108	6.00	3.17		
Total BTEX	<0.300	0.300	07/10/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/11/2025	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/10/2025	ND	211	106	200	1.54		
<b>DRO &gt;C10-C28*</b>	<b>911</b>	10.0	07/10/2025	ND	234	117	200	1.52		
<b>EXT DRO &gt;C28-C36</b>	<b>683</b>	10.0	07/10/2025	ND						

Surrogate: 1-Chlorooctane 109 % 44.4-145

Surrogate: 1-Chlorooctadecane 133 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/10/2025	Sampling Date:	07/10/2025
Reported:	07/11/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 04 13' (H254131-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/10/2025	ND	1.97	98.5	2.00	0.131	
Toluene*	<0.050	0.050	07/10/2025	ND	1.98	99.1	2.00	1.20	
Ethylbenzene*	<0.050	0.050	07/10/2025	ND	2.05	102	2.00	2.84	
Total Xylenes*	<0.150	0.150	07/10/2025	ND	6.48	108	6.00	3.17	
Total BTEX	<0.300	0.300	07/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/11/2025	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/10/2025	ND	211	106	200	1.54	
<b>DRO &gt;C10-C28*</b>	<b>182</b>	10.0	07/10/2025	ND	234	117	200	1.52	
<b>EXT DRO &gt;C28-C36</b>	<b>195</b>	10.0	07/10/2025	ND					

Surrogate: 1-Chlorooctane 115 % 44.4-145

Surrogate: 1-Chlorooctadecane 119 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/10/2025	Sampling Date:	07/10/2025
Reported:	07/11/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: SW 01 0-7.5' (H254131-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/10/2025	ND	1.97	98.5	2.00	0.131		
Toluene*	<0.050	0.050	07/10/2025	ND	1.98	99.1	2.00	1.20		
Ethylbenzene*	<0.050	0.050	07/10/2025	ND	2.05	102	2.00	2.84		
Total Xylenes*	<0.150	0.150	07/10/2025	ND	6.48	108	6.00	3.17		
Total BTEX	<0.300	0.300	07/10/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/11/2025	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/10/2025	ND	211	106	200	1.54		
<b>DRO &gt;C10-C28*</b>	<b>10.3</b>	10.0	07/10/2025	ND	234	117	200	1.52		
<b>EXT DRO &gt;C28-C36</b>	<b>16.9</b>	10.0	07/10/2025	ND						

Surrogate: 1-Chlorooctane 100 % 44.4-145

Surrogate: 1-Chlorooctadecane 97.3 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/10/2025	Sampling Date:	07/10/2025
Reported:	07/11/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: SW 02 0-11' (H254131-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/10/2025	ND	1.97	98.5	2.00	0.131		
Toluene*	<0.050	0.050	07/10/2025	ND	1.98	99.1	2.00	1.20		
Ethylbenzene*	<0.050	0.050	07/10/2025	ND	2.05	102	2.00	2.84		
Total Xylenes*	<0.150	0.150	07/10/2025	ND	6.48	108	6.00	3.17		
Total BTEX	<0.300	0.300	07/10/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/11/2025	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/10/2025	ND	211	106	200	1.54		
DRO >C10-C28*	<10.0	10.0	07/10/2025	ND	234	117	200	1.52		
EXT DRO >C28-C36	<10.0	10.0	07/10/2025	ND						

Surrogate: 1-Chlorooctane 102 % 44.4-145

Surrogate: 1-Chlorooctadecane 99.3 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/10/2025	Sampling Date:	07/10/2025
Reported:	07/11/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: SW 03 0-13' (H254131-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/10/2025	ND	1.97	98.5	2.00	0.131		
Toluene*	<0.050	0.050	07/10/2025	ND	1.98	99.1	2.00	1.20		
Ethylbenzene*	<0.050	0.050	07/10/2025	ND	2.05	102	2.00	2.84		
Total Xylenes*	<0.150	0.150	07/10/2025	ND	6.48	108	6.00	3.17		
Total BTEX	<0.300	0.300	07/10/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/11/2025	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/10/2025	ND	211	106	200	1.54		
<b>DRO &gt;C10-C28*</b>	<b>411</b>	10.0	07/10/2025	ND	234	117	200	1.52		
<b>EXT DRO &gt;C28-C36</b>	<b>387</b>	10.0	07/10/2025	ND						

Surrogate: 1-Chlorooctane 122 % 44.4-145

Surrogate: 1-Chlorooctadecane 145 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**Company Name:** ENSOLVUM  
**Project Manager:** Katei Semings  
**Address:** 601 N. Marland St STE 400  
**City:** Midland State TX Zip: 79701  
**Phone #:** 917-683-2503 Fax #:  
**Project #:** 07A1988166 Project Owner: Hilcorp  
**Project Name:** STATE Z Production Facility  
**Project Location:** Lee County NM  
**Sampler Name:** Nevada Districtal  
**FOR LAB USE ONLY**

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
H824131	F502	C	1						07/10/25	1049	TPH 8015	
	F504	C	1						07/10/25	1236	BTEX 8021	
	SW01	C	1						07/10/25	1313	Chloride 4500	
	SW02	C	1						07/10/25	1412		
	SW03	C	1						07/10/25	1255		

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**Relinquished By:** Nevada Districtal  
**Date:** 7-10-25  
**Time:** 1543  
**Received By:** [Signature]  
**Date:** [Signature]  
**Time:** [Signature]

**Delivered By:** (Circle One) Observed Temp. °C: 38 Corrected Temp. °C: 41  
**Sampler:** UPS - Bus - Other: Sample Condition: Cool Intact  Yes  No  
**Checked By:** [Signature] Initials: [Signature]

**Turnaround Time:** Standard.  Rush 24 hr  
**Thermometer ID #140** Correction Factor +0.3°C  
**Bacteria (only) Sample Condition:** Cool Intact  Yes  No  
**Observed Temp. °C** Corrected Temp. °C  
**Remarks:** kseanhs@ensolvum.com  
**Verbal Result:**  Yes  No Add'l Phone #:  
**All Results are emailed. Please provide Email address:**  
 Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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July 15, 2025

KALEI JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/14/25 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/14/2025	Sampling Date:	07/14/2025
Reported:	07/15/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 02 (H254179-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/14/2025	ND	1.76	88.1	2.00	7.29	
Toluene*	<0.050	0.050	07/14/2025	ND	1.87	93.7	2.00	3.92	
Ethylbenzene*	<0.050	0.050	07/14/2025	ND	1.98	99.0	2.00	1.07	
Total Xylenes*	<0.150	0.150	07/14/2025	ND	6.15	102	6.00	1.28	
Total BTEX	<0.300	0.300	07/14/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/15/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2025	ND	213	107	200	3.72	
<b>DRO &gt;C10-C28*</b>	<b>338</b>	10.0	07/15/2025	ND	196	98.0	200	0.419	
<b>EXT DRO &gt;C28-C36</b>	<b>271</b>	10.0	07/15/2025	ND					

Surrogate: 1-Chlorooctane 106 % 44.4-145

Surrogate: 1-Chlorooctadecane 125 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/14/2025	Sampling Date:	07/14/2025
Reported:	07/15/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 04 (H254179-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/14/2025	ND	1.76	88.1	2.00	7.29	
Toluene*	<0.050	0.050	07/14/2025	ND	1.87	93.7	2.00	3.92	
Ethylbenzene*	<0.050	0.050	07/14/2025	ND	1.98	99.0	2.00	1.07	
Total Xylenes*	<0.150	0.150	07/14/2025	ND	6.15	102	6.00	1.28	
Total BTEX	<0.300	0.300	07/14/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/15/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2025	ND	213	107	200	3.72	
<b>DRO &gt;C10-C28*</b>	<b>139</b>	10.0	07/15/2025	ND	196	98.0	200	0.419	
<b>EXT DRO &gt;C28-C36</b>	<b>147</b>	10.0	07/15/2025	ND					

Surrogate: 1-Chlorooctane 111 % 44.4-145

Surrogate: 1-Chlorooctadecane 120 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/14/2025	Sampling Date:	07/14/2025
Reported:	07/15/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 05 (H254179-03)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2025	ND	1.76	88.1	2.00	7.29	
<b>Toluene*</b>	<b>2.07</b>	0.050	07/15/2025	ND	1.87	93.7	2.00	3.92	GC-NC1
<b>Ethylbenzene*</b>	<b>0.441</b>	0.050	07/15/2025	ND	1.98	99.0	2.00	1.07	
<b>Total Xylenes*</b>	<b>1.84</b>	0.150	07/15/2025	ND	6.15	102	6.00	1.28	
<b>Total BTEX</b>	<b>4.36</b>	0.300	07/15/2025	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 141 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/15/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>899</b>	50.0	07/15/2025	ND	213	107	200	3.72	
<b>DRO &gt;C10-C28*</b>	<b>2840</b>	50.0	07/15/2025	ND	196	98.0	200	0.419	
<b>EXT DRO &gt;C28-C36</b>	<b>594</b>	50.0	07/15/2025	ND					

Surrogate: 1-Chlorooctane 157 % 44.4-145

Surrogate: 1-Chlorooctadecane 166 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/14/2025	Sampling Date:	07/14/2025
Reported:	07/15/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 06 (H254179-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2025	ND	1.76	88.1	2.00	7.29	
<b>Toluene*</b>	<b>0.057</b>	0.050	07/15/2025	ND	1.87	93.7	2.00	3.92	GC-NC1
Ethylbenzene*	<0.050	0.050	07/15/2025	ND	1.98	99.0	2.00	1.07	
Total Xylenes*	<0.150	0.150	07/15/2025	ND	6.15	102	6.00	1.28	
Total BTEX	<0.300	0.300	07/15/2025	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	07/15/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>26.1</b>	10.0	07/15/2025	ND	213	107	200	3.72	
<b>DRO &gt;C10-C28*</b>	<b>415</b>	10.0	07/15/2025	ND	196	98.0	200	0.419	
<b>EXT DRO &gt;C28-C36</b>	<b>203</b>	10.0	07/15/2025	ND					

Surrogate: 1-Chlorooctane 116 % 44.4-145

Surrogate: 1-Chlorooctadecane 120 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Enshlwin</b> Project Manager: <b>Kelci Semhal</b> Address: <b>601 N. Navinfield St, STE 400</b> City: <b>Milford</b> State: <b>NM</b> Zip: <b>79701</b> Phone #: <b>817-683-2503</b> Fax #: _____ Project #: <b>07A1988166</b> Project Owner: <b>Hilcorp</b> Project Name: <b>State 2 Production Facility</b> Project Location: <b>Lea County NM</b> Sampler Name: <b>Nickolas Chittales</b>		P.O. #: _____ Company: <b>Enshlwin</b> Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____ Observed Temp. °C: <b>5.10</b> Corrected Temp. °C: <b>5.97</b>		Sample Condition Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Sample Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished By: <b>Nickolas Chittales</b> Date: <b>07/14/25</b> Time: <b>1535</b>		Received By: <b>Sheldrick Murray</b> Date: _____ Time: _____	
Relinquished By: _____ Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____	
Turnaround Time: _____ Thermometer ID #140: _____ Correction Factor +0.3°C: _____		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: _____ All Results are emailed. Please provide Email address: <b>ksenning@enshwin.com</b> REMARKS: <b>Nickolas@enshwin.com</b>	
Bacteria (only) Sample Condition Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C: _____ Corrected Temp. °C: _____		Standard <input checked="" type="checkbox"/> <b>RUSH</b> Add'l Phone #: _____ Bacteria (only) Sample Condition Cool Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C: _____ Corrected Temp. °C: _____	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	ANALYSIS REQUEST
#354179	F502	C	1	SOIL	/		07/14/25	0840	TPH 8015
	F504	C	1	SOIL	/				Brew 8021
	F505	C	1	SOIL	/				choirce 4500
	F506	C	1	SOIL	/				
<del>07/14/25</del>									



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

July 17, 2025

KALEI JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/16/25 15:41.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/16/2025	Sampling Date:	07/16/2025
Reported:	07/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 02 10' (H254255-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2025	ND	2.12	106	2.00	1.04	
Toluene*	<0.050	0.050	07/17/2025	ND	2.23	112	2.00	0.0720	
Ethylbenzene*	<0.050	0.050	07/17/2025	ND	2.04	102	2.00	0.673	
Total Xylenes*	<0.150	0.150	07/17/2025	ND	6.04	101	6.00	0.639	
Total BTEX	<0.300	0.300	07/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/17/2025	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2025	ND	191	95.3	200	4.79	
DRO >C10-C28*	<10.0	10.0	07/16/2025	ND	181	90.3	200	6.20	
EXT DRO >C28-C36	<10.0	10.0	07/16/2025	ND					

Surrogate: 1-Chlorooctane 106 % 44.4-145

Surrogate: 1-Chlorooctadecane 110 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/16/2025	Sampling Date:	07/16/2025
Reported:	07/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 12 3' (H254255-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2025	ND	2.12	106	2.00	1.04	
Toluene*	<0.050	0.050	07/17/2025	ND	2.23	112	2.00	0.0720	
Ethylbenzene*	<0.050	0.050	07/17/2025	ND	2.04	102	2.00	0.673	
Total Xylenes*	<0.150	0.150	07/17/2025	ND	6.04	101	6.00	0.639	
Total BTEX	<0.300	0.300	07/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	07/17/2025	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2025	ND	191	95.3	200	4.79	
<b>DRO &gt;C10-C28*</b>	<b>67.9</b>	10.0	07/16/2025	ND	181	90.3	200	6.20	
<b>EXT DRO &gt;C28-C36</b>	<b>37.7</b>	10.0	07/16/2025	ND					

Surrogate: 1-Chlorooctane 107 % 44.4-145

Surrogate: 1-Chlorooctadecane 111 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/16/2025	Sampling Date:	07/16/2025
Reported:	07/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 14 3' (H254255-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2025	ND	2.12	106	2.00	1.04	
Toluene*	<0.050	0.050	07/17/2025	ND	2.23	112	2.00	0.0720	
Ethylbenzene*	<0.050	0.050	07/17/2025	ND	2.04	102	2.00	0.673	
Total Xylenes*	<0.150	0.150	07/17/2025	ND	6.04	101	6.00	0.639	
Total BTEX	<0.300	0.300	07/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/17/2025	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2025	ND	191	95.3	200	4.79	
<b>DRO &gt;C10-C28*</b>	<b>405</b>	10.0	07/16/2025	ND	181	90.3	200	6.20	
<b>EXT DRO &gt;C28-C36</b>	<b>250</b>	10.0	07/16/2025	ND					

Surrogate: 1-Chlorooctane 107 % 44.4-145

Surrogate: 1-Chlorooctadecane 121 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Ensolium P.O. #: \_\_\_\_\_  
 Project Manager: Kelley Semmens Company: Ensolium  
 Address: 601 Mainfield St, STE 400 Attn: \_\_\_\_\_  
 City: Mesa State: TX Zip: 79701 Address: \_\_\_\_\_  
 Phone #: 817-683-2503 Fax #: \_\_\_\_\_ City: \_\_\_\_\_  
 Project #: DTA1988166 Project Owner: Hilltop State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Project Name: State Z Production Facility Phone #: \_\_\_\_\_  
 Project Location: Lee County, NM Fax #: \_\_\_\_\_  
 Sampler Name: Nickus on Ropes MATRIX: \_\_\_\_\_ PRESERV: \_\_\_\_\_ SAMPLING: \_\_\_\_\_  
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	ANALYSIS
<u>H95455</u>	<u>F502</u>	<u>C</u>	<u>1</u>										<u>07/16/25</u>	<u>0931</u>	<u>TPH 8015</u>
	<u>F512</u>	<u>C</u>	<u>1</u>										<u>07/16/25</u>	<u>1222</u>	<u>BTEX: 8021</u>
	<u>F514</u>	<u>C</u>	<u>1</u>										<u>07/16/25</u>	<u>1231</u>	<u>Chloride 4500</u>
															<u>WFC</u>

Relinquished By: Nickus Semmens Date: 7-16-25 Received By: WFE Date: 7-16-25  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_

Delivered By: (Circle One) UPS Observed Temp. °C: 14.1 Sample Condition: Intact CHECKED BY: AS  
 Corrected Temp. °C: 5.8 Cool  Intact  Yes  No  No

Turnaround Time: \_\_\_\_\_ Standard Rush  Add'l Phone #: \_\_\_\_\_  
 Thermometer ID #140 Correction Factor +0.3°C 24 hr Bacteria (only) Sample Condition: Intact Observed Temp. °C: \_\_\_\_\_  
 Cool  Intact  Yes  No  No Corrected Temp. °C: \_\_\_\_\_

REMARKS: Keene@ensolium.com WFE



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

July 18, 2025

KALEI JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/17/25 15:18.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/17/2025	Sampling Date:	07/17/2025
Reported:	07/18/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 04 17' (H254302-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2025	ND	1.94	96.9	2.00	1.08	
Toluene*	<0.050	0.050	07/17/2025	ND	1.99	99.3	2.00	0.701	
Ethylbenzene*	<0.050	0.050	07/17/2025	ND	1.98	98.8	2.00	1.69	
Total Xylenes*	<0.150	0.150	07/17/2025	ND	5.81	96.8	6.00	1.85	
Total BTEX	<0.300	0.300	07/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	07/18/2025	ND	464	116	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/18/2025	ND	200	99.9	200	0.131	
<b>DRO &gt;C10-C28*</b>	<b>205</b>	10.0	07/18/2025	ND	191	95.5	200	0.112	
<b>EXT DRO &gt;C28-C36</b>	<b>103</b>	10.0	07/18/2025	ND					

Surrogate: 1-Chlorooctane 84.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.9 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/17/2025	Sampling Date:	07/17/2025
Reported:	07/18/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 05 16' (H254302-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/17/2025	ND	1.94	96.9	2.00	1.08		
Toluene*	<0.050	0.050	07/17/2025	ND	1.99	99.3	2.00	0.701		
Ethylbenzene*	<0.050	0.050	07/17/2025	ND	1.98	98.8	2.00	1.69		
Total Xylenes*	<0.150	0.150	07/17/2025	ND	5.81	96.8	6.00	1.85		
Total BTEX	<0.300	0.300	07/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/18/2025	ND	464	116	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/17/2025	ND	200	99.9	200	0.131		
DRO >C10-C28*	<10.0	10.0	07/17/2025	ND	191	95.5	200	0.112		
EXT DRO >C28-C36	<10.0	10.0	07/17/2025	ND						

Surrogate: 1-Chlorooctane 99.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.7 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/17/2025	Sampling Date:	07/17/2025
Reported:	07/18/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 07 16' (H254302-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/17/2025	ND	1.94	96.9	2.00	1.08		
Toluene*	<0.050	0.050	07/17/2025	ND	1.99	99.3	2.00	0.701		
Ethylbenzene*	<0.050	0.050	07/17/2025	ND	1.98	98.8	2.00	1.69		
Total Xylenes*	<0.150	0.150	07/17/2025	ND	5.81	96.8	6.00	1.85		
Total BTEX	<0.300	0.300	07/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/18/2025	ND	464	116	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/18/2025	ND	200	99.9	200	0.131		
<b>DRO &gt;C10-C28*</b>	<b>250</b>	10.0	07/18/2025	ND	191	95.5	200	0.112		
<b>EXT DRO &gt;C28-C36</b>	<b>197</b>	10.0	07/18/2025	ND						

Surrogate: 1-Chlorooctane 91.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 91.9 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager





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---

July 28, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/22/25 13:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/22/2025	Sampling Date:	07/21/2025
Reported:	07/28/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988220	Sample Received By:	Tamara Oldaker
Project Location:	32.577194, -103.301616		

**Sample ID: FS 04 A 18' (H254406-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/24/2025	ND	1.91	95.5	2.00	2.96	
Toluene*	<0.050	0.050	07/24/2025	ND	1.95	97.6	2.00	3.93	
Ethylbenzene*	<0.050	0.050	07/24/2025	ND	2.00	99.8	2.00	4.14	
Total Xylenes*	<0.150	0.150	07/24/2025	ND	6.04	101	6.00	3.96	
Total BTEX	<0.300	0.300	07/24/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	07/24/2025	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/24/2025	ND	187	93.4	200	0.217	
DRO >C10-C28*	197	10.0	07/24/2025	ND	194	96.9	200	3.07	
EXT DRO >C28-C36	89.2	10.0	07/24/2025	ND					

Surrogate: 1-Chlorooctane 81.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/22/2025	Sampling Date:	07/21/2025
Reported:	07/28/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988220	Sample Received By:	Tamara Oldaker
Project Location:	32.577194, -103.301616		

**Sample ID: FS 07 A 17' (H254406-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/24/2025	ND	1.91	95.5	2.00	2.96		
Toluene*	<0.050	0.050	07/24/2025	ND	1.95	97.6	2.00	3.93		
Ethylbenzene*	<0.050	0.050	07/24/2025	ND	2.00	99.8	2.00	4.14		
Total Xylenes*	<0.150	0.150	07/24/2025	ND	6.04	101	6.00	3.96		
Total BTEX	<0.300	0.300	07/24/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/24/2025	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/24/2025	ND	195	97.3	200	1.11		
DRO >C10-C28*	<10.0	10.0	07/24/2025	ND	212	106	200	1.13		
EXT DRO >C28-C36	<10.0	10.0	07/24/2025	ND						

Surrogate: 1-Chlorooctane 81.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 74.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/22/2025	Sampling Date:	07/21/2025
Reported:	07/28/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988220	Sample Received By:	Tamara Oldaker
Project Location:	32.577194, -103.301616		

**Sample ID: FS 12 4' (H254406-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/24/2025	ND	1.91	95.5	2.00	2.96		
Toluene*	<0.050	0.050	07/24/2025	ND	1.95	97.6	2.00	3.93		
Ethylbenzene*	<0.050	0.050	07/24/2025	ND	2.00	99.8	2.00	4.14		
Total Xylenes*	<0.150	0.150	07/24/2025	ND	6.04	101	6.00	3.96		
Total BTEX	<0.300	0.300	07/24/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	07/24/2025	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/24/2025	ND	195	97.3	200	1.11		
DRO >C10-C28*	23.7	10.0	07/24/2025	ND	212	106	200	1.13		
EXT DRO >C28-C36	25.3	10.0	07/24/2025	ND						

Surrogate: 1-Chlorooctane 88.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.5 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/22/2025	Sampling Date:	07/21/2025
Reported:	07/28/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988220	Sample Received By:	Tamara Oldaker
Project Location:	32.577194, -103.301616		

**Sample ID: FS 14 4' (H254406-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/24/2025	ND	1.91	95.5	2.00	2.96		
Toluene*	<0.050	0.050	07/24/2025	ND	1.95	97.6	2.00	3.93		
Ethylbenzene*	<0.050	0.050	07/24/2025	ND	2.00	99.8	2.00	4.14		
Total Xylenes*	<0.150	0.150	07/24/2025	ND	6.04	101	6.00	3.96		
Total BTEX	<0.300	0.300	07/24/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	07/24/2025	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/24/2025	ND	195	97.3	200	1.11		
<b>DRO &gt;C10-C28*</b>	<b>14.1</b>	10.0	07/24/2025	ND	212	106	200	1.13		
<b>EXT DRO &gt;C28-C36</b>	<b>19.5</b>	10.0	07/24/2025	ND						

Surrogate: 1-Chlorooctane 81.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 80.2 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

<b>Company Name:</b> Ensolum, LLC.	<b>P.O. #:</b> 071988166	<b>ANALYSIS REQUEST</b>
<b>Project Manager:</b> Kalei Jennings	<b>Company:</b> Ensolum, LLC.	
<b>Address:</b> 3122 National Parks Hwy	<b>Attn:</b> Kalei Jennings	
<b>City:</b> Carlsbad	<b>Address:</b> 3122 National Parks Hwy	
<b>State:</b> NM	<b>City:</b> Carlsbad	
<b>Zip:</b> 88220	<b>State:</b> NM	
<b>Phone #:</b> 817-683-2503	<b>Fax #:</b>	<b>Zip:</b> 88220
<b>Project #:</b> 07A1988220	<b>Project Owner:</b> Hillcorp	<b>Phone #:</b>
<b>Project Name:</b> State Z Production Facility	<b>State:</b> NM	<b>Fax #:</b>
<b>Project Location:</b> 32.5777194, -103.301616	<b>Phone #:</b>	
<b>Sampler Name:</b> Alex Ferrell		

Lab I.D.	Sample Depth	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							PRESERV.	DATE	TIME	Chloride 4500	TPH 8015	BTEX 8021
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:						
4254406	1		1	X							7/21/2025	1333	X	X	X	
	2		1	X							7/21/2025	1428	X	X	X	
	3		1	X							7/21/2025	1602	X	X	X	
	4		1	X							7/21/2025	1606	X	X	X	

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**Relinquished By:** *[Signature]* **Date:** 7-23-25

**Received By:** *[Signature]* **Date:** 7-30-25

**Relinquished By:** *[Signature]* **Date:** 7-30-25

**Received By:** *[Signature]* **Date:** 7-30-25

**Delivered By:** (Circle One)  UPS - Bus - Other: FORM-006 R 3.6 02/12/25

**Observed Temp. °C:** 1.8 **Corrected Temp. °C:** 8.1

**Sample Condition:** Cool  Intact  Yes  No  Yes  No

**Checked By:** *[Signature]* (Initials)

**Turnaround Time:** Standard  Rush  **5-DAY**

**Bacteria (only) Sample Condition:** Cool  Intact  Yes  No  Yes  No

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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July 29, 2025

KALEI JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/23/25 16:21.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/23/2025	Sampling Date:	07/22/2025
Reported:	07/29/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 15 6' (H254462-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2025	ND	1.87	93.6	2.00	10.3	
Toluene*	<0.050	0.050	07/25/2025	ND	1.99	99.7	2.00	10.0	
Ethylbenzene*	<0.050	0.050	07/25/2025	ND	2.04	102	2.00	7.31	
Total Xylenes*	<0.150	0.150	07/25/2025	ND	6.42	107	6.00	6.96	
Total BTEX	<0.300	0.300	07/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/24/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2025	ND	213	107	200	0.356	
DRO >C10-C28*	<10.0	10.0	07/25/2025	ND	203	102	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	07/25/2025	ND					

Surrogate: 1-Chlorooctane 90.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.1 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/23/2025	Sampling Date:	07/22/2025
Reported:	07/29/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 17 6' (H254462-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/25/2025	ND	1.87	93.6	2.00	10.3		
Toluene*	<0.050	0.050	07/25/2025	ND	1.99	99.7	2.00	10.0		
Ethylbenzene*	<0.050	0.050	07/25/2025	ND	2.04	102	2.00	7.31		
Total Xylenes*	<0.150	0.150	07/25/2025	ND	6.42	107	6.00	6.96		
Total BTEX	<0.300	0.300	07/25/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/24/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/26/2025	ND	213	107	200	0.356		
<b>DRO &gt;C10-C28*</b>	<b>204</b>	10.0	07/26/2025	ND	203	102	200	1.09		
<b>EXT DRO &gt;C28-C36</b>	<b>177</b>	10.0	07/26/2025	ND						

Surrogate: 1-Chlorooctane 98.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.3 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KALEI JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	07/23/2025	Sampling Date:	07/22/2025
Reported:	07/29/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP - LEA COUNTY, NM		

**Sample ID: FS 18 6' (H254462-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/25/2025	ND	1.87	93.6	2.00	10.3		
Toluene*	<0.050	0.050	07/25/2025	ND	1.99	99.7	2.00	10.0		
Ethylbenzene*	<0.050	0.050	07/25/2025	ND	2.04	102	2.00	7.31		
Total Xylenes*	<0.150	0.150	07/25/2025	ND	6.42	107	6.00	6.96		
Total BTEX	<0.300	0.300	07/25/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/24/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/26/2025	ND	213	107	200	0.356		
<b>DRO &gt;C10-C28*</b>	<b>961</b>	10.0	07/26/2025	ND	203	102	200	1.09		
<b>EXT DRO &gt;C28-C36</b>	<b>445</b>	10.0	07/26/2025	ND						

Surrogate: 1-Chlorooctane 102 % 44.4-145

Surrogate: 1-Chlorooctadecane 115 % 40.6-153

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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**BILL TO**

Company Name: Ensolium  
 Project Manager: Kalei Jennings #400  
 Address: 601 N. Warrenfeld State: TX Zip: 79701  
 City: Midland  
 Phone #: 817-683-2503 Fax #: \_\_\_\_\_  
 Project #: 07A1988166 Project Owner: Hillcoep  
 Project Name: State Z  
 Project Location: Lea Co, NM  
 Sampler Name: J. Gable  
 P.O. #: \_\_\_\_\_ Company: Ensolium  
 Attn: \_\_\_\_\_ Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

**ANALYSIS REQUEST**

Lab I.D.	Sample I.D.	FOR LAB USE ONLY		MATRIX	PRESERV.	SAMPLING	DATE	TIME	ANALYSIS	REMARKS
		(G)RAB OR (C)OMP.	# CONTAINERS							
H250000	ES15	C	1	GROUNDWATER			7/22/25	1030	X	BTEX 8021
	ES17	C	1	WASTEWATER			7/22/25	1340	X	TPH <del>7100</del> 8015
	ES18	C	1	SOIL			7/22/25	1345	X	Chloride <del>300</del> 4500
				SLUDGE						
				OTHER :						
				ACID/BASE:						
				ICE / COOL						
				OTHER :						

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Relinquished By: [Signature] Date: 7/23/25 Time: 1621  
 Received By: [Signature]  
 Verbal Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 All Results are emailed. Please provide Email address: \_\_\_\_\_

Delivered By: (Circle One) Observed Temp. °C: 5.0 Sample Condition:  Cool  Intact  Yes  No  
 Corrected Temp. °C: 5.3 Checked By: [Signature]  
 Turnaround Time: \_\_\_\_\_ Standard  Rush   
 Thermometer ID #140 Bacteria (only) Sample Condition:  Cool  Intact  Yes  No  
 Correction Factor +0.3°C Corrected Temp. °C: \_\_\_\_\_

FORM-006 R 3.6 02/12/25 Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 29, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 07/28/25 13:24.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: STATE Z PRODUCTION FACILITY Project Number: 07A1988166 Project Manager: KALEI JENNINGS Fax To:	Reported: 29-Jul-25 12:08
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 06 19'	H254566-01	Soil	28-Jul-25 12:04	28-Jul-25 13:24

The sample was received on ice at 6.9C. Sample was taken same day as sampling and did not have enough time to reach temperature of 6C and below.

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: STATE Z PRODUCTION FACILITY Project Number: 07A1988166 Project Manager: KALEI JENNINGS Fax To:	Reported: 29-Jul-25 12:08
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**FS 06 19'**  
**H254566-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	5072917	KH	29-Jul-25	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	5072542	JH	28-Jul-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5072542	JH	28-Jul-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5072542	JH	28-Jul-25	8021B	
<b>Total Xylenes*</b>	<b>0.519</b>		0.150	mg/kg	50	5072542	JH	28-Jul-25	8021B	GC-NC1
<b>Total BTEX</b>	<b>0.519</b>		0.300	mg/kg	50	5072542	JH	28-Jul-25	8021B	GC-NC1
Surrogate: 4-Bromofluorobenzene (PID)			117 %	71.5-134		5072542	JH	28-Jul-25	8021B	

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<50.0		50.0	mg/kg	5	5072536	MS	29-Jul-25	8015B	
<b>DRO &gt;C10-C28*</b>	<b>947</b>		50.0	mg/kg	5	5072536	MS	29-Jul-25	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>396</b>		50.0	mg/kg	5	5072536	MS	29-Jul-25	8015B	
Surrogate: 1-Chlorooctane			97.7 %	44.4-145		5072536	MS	29-Jul-25	8015B	
Surrogate: 1-Chlorooctadecane			117 %	40.6-153		5072536	MS	29-Jul-25	8015B	

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: STATE Z PRODUCTION FACILITY Project Number: 07A1988166 Project Manager: KALEI JENNINGS Fax To:	Reported: 29-Jul-25 12:08
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**Inorganic Compounds - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5072917 - 1:4 DI Water</b>										
<b>Blank (5072917-BLK1)</b>										
Prepared & Analyzed: 29-Jul-25										
Chloride	ND	16.0	mg/kg							
<b>LCS (5072917-BS1)</b>										
Prepared & Analyzed: 29-Jul-25										
Chloride	400	16.0	mg/kg	400		100	80-120			
<b>LCS Dup (5072917-BSD1)</b>										
Prepared & Analyzed: 29-Jul-25										
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: STATE Z PRODUCTION FACILITY Project Number: 07A1988166 Project Manager: KALEI JENNINGS Fax To:	Reported: 29-Jul-25 12:08
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**Volatile Organic Compounds by EPA Method 8021 - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5072542 - Volatiles**

**Blank (5072542-BLK1)**

Prepared: 25-Jul-25 Analyzed: 29-Jul-25

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		94.4	71.5-134			

**LCS (5072542-BS1)**

Prepared: 25-Jul-25 Analyzed: 28-Jul-25

Benzene	1.67	0.050	mg/kg	2.00		83.6	76.3-129			
Toluene	1.77	0.050	mg/kg	2.00		88.5	84.1-129			
Ethylbenzene	1.77	0.050	mg/kg	2.00		88.6	80.1-133			
m,p-Xylene	3.45	0.100	mg/kg	4.00		86.3	81.4-134			
o-Xylene	1.74	0.050	mg/kg	2.00		86.9	81.4-133			
Total Xylenes	5.19	0.150	mg/kg	6.00		86.5	81.5-134			
Surrogate: 4-Bromofluorobenzene (PID)	0.0463		mg/kg	0.0500		92.6	71.5-134			

**LCS Dup (5072542-BSD1)**

Prepared: 25-Jul-25 Analyzed: 28-Jul-25

Benzene	1.84	0.050	mg/kg	2.00		92.0	76.3-129	9.57	15.8	
Toluene	1.93	0.050	mg/kg	2.00		96.7	84.1-129	8.88	15.9	
Ethylbenzene	1.92	0.050	mg/kg	2.00		95.8	80.1-133	7.90	16	
m,p-Xylene	3.75	0.100	mg/kg	4.00		93.7	81.4-134	8.14	16.2	
o-Xylene	1.88	0.050	mg/kg	2.00		94.2	81.4-133	8.06	16.7	
Total Xylenes	5.63	0.150	mg/kg	6.00		93.8	81.5-134	8.11	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0461		mg/kg	0.0500		92.2	71.5-134			

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: STATE Z PRODUCTION FACILITY Project Number: 07A1988166 Project Manager: KALEI JENNINGS Fax To:	Reported: 29-Jul-25 12:08
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**Petroleum Hydrocarbons by GC FID - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5072536 - General Prep - Organics**

**Blank (5072536-BLK1)** Prepared: 25-Jul-25 Analyzed: 28-Jul-25

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	64.6		mg/kg	50.0		129	44.4-145			
Surrogate: 1-Chlorooctadecane	64.4		mg/kg	50.0		129	40.6-153			

**LCS (5072536-BS1)** Prepared: 25-Jul-25 Analyzed: 28-Jul-25

GRO C6-C10	210	10.0	mg/kg	200		105	81.5-123			
DRO >C10-C28	191	10.0	mg/kg	200		95.7	77.7-122			
Total TPH C6-C28	401	10.0	mg/kg	400		100	80.9-121			
Surrogate: 1-Chlorooctane	58.8		mg/kg	50.0		118	44.4-145			
Surrogate: 1-Chlorooctadecane	61.5		mg/kg	50.0		123	40.6-153			

**LCS Dup (5072536-BSD1)** Prepared: 25-Jul-25 Analyzed: 28-Jul-25

GRO C6-C10	214	10.0	mg/kg	200		107	81.5-123	1.87	13	
DRO >C10-C28	194	10.0	mg/kg	200		97.2	77.7-122	1.55	15.6	
Total TPH C6-C28	408	10.0	mg/kg	400		102	80.9-121	1.72	18.5	
Surrogate: 1-Chlorooctane	64.4		mg/kg	50.0		129	44.4-145			
Surrogate: 1-Chlorooctadecane	65.8		mg/kg	50.0		132	40.6-153			

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Ensolum, LLC. Project Manager: Kalei Jennings Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Pl. one #: 817-683-2503 Fax #: _____ Project #: 07A1988166 Project Owner: Hilcorp Project Name: State Z Production Facility Project Location: 32.577194, -103.301616 Sampler Name: Alex Ferrell		<b>BILL TO</b> P.O. #: 07A1988166 Company: Ensolum, LLC. Attn: Kalei Jennings Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Phone #: _____ Fax #: _____		<b>ANALYSIS REQUEST</b>	
Lab I.D. <u>H3506</u> Sample I.D. FS06 Sample Depth 19'	(G)RAB OR (C)OMP. C # CONTAINERS 1 MATRIX GROUNDWATER WASTEWATER SOIL X OIL SLUDGE OTHER : ACID/BASE: ICE / COOL X OTHER :	PRESERV. DATE 7/28/2025 SAMPLING TIME 1204	Chloride X TPH X BTEX X		
PLEASE NOTE: Liability and Damages: Cardinal's liability and client's acceptance remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.					
Relinquished By: <u>M. Keene</u> Relinquished Date: <u>7/28/25</u>	Received By: <u>A. Ferrell</u> Received Date: <u>7/28/25</u>	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____ All Results are emailed. Please provide Email address: Kthomason@ensolum.com K Jennings@ensolum.com Aferrell@ensolum.com REMARKS: <u>3.4 = Standard</u> <u>24 hr</u> Turnaround Time: _____ Thermometer ID #140 Correction Factor +0.3°C			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C <u>44</u> Corrected Temp. °C <u>44</u>	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) <u>AF</u> Corrected Temp. °C	Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Corrected Temp. °C	

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

August 26, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 08/22/25 15:41.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/22/2025	Sampling Date:	08/22/2025
Reported:	08/26/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS04 23' (H255263-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2025	ND	1.59	79.5	2.00	0.407	
Toluene*	<0.050	0.050	08/25/2025	ND	1.97	98.4	2.00	0.910	
Ethylbenzene*	<0.050	0.050	08/25/2025	ND	2.16	108	2.00	2.17	
Total Xylenes*	<0.150	0.150	08/25/2025	ND	6.77	113	6.00	1.82	
Total BTEX	<0.300	0.300	08/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/26/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/25/2025	ND	183	91.5	200	7.13	
DRO >C10-C28*	<10.0	10.0	08/25/2025	ND	194	97.1	200	6.27	
EXT DRO >C28-C36	<10.0	10.0	08/25/2025	ND					

Surrogate: 1-Chlorooctane 91.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 97.1 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/22/2025	Sampling Date:	08/22/2025
Reported:	08/26/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS08 23' (H255263-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2025	ND	1.59	79.5	2.00	0.407	
Toluene*	<0.050	0.050	08/25/2025	ND	1.97	98.4	2.00	0.910	
Ethylbenzene*	<0.050	0.050	08/25/2025	ND	2.16	108	2.00	2.17	
Total Xylenes*	<0.150	0.150	08/25/2025	ND	6.77	113	6.00	1.82	
Total BTEX	<0.300	0.300	08/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/26/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/25/2025	ND	183	91.5	200	7.13	
DRO >C10-C28*	<10.0	10.0	08/25/2025	ND	194	97.1	200	6.27	
EXT DRO >C28-C36	<10.0	10.0	08/25/2025	ND					

Surrogate: 1-Chlorooctane 104 % 44.4-145

Surrogate: 1-Chlorooctadecane 110 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/22/2025	Sampling Date:	08/22/2025
Reported:	08/26/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS09 27' (H255263-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/25/2025	ND	1.81	90.6	2.00	0.663		
Toluene*	<0.050	0.050	08/25/2025	ND	1.88	93.9	2.00	2.00		
Ethylbenzene*	<0.050	0.050	08/25/2025	ND	1.88	94.2	2.00	3.77		
Total Xylenes*	<0.150	0.150	08/25/2025	ND	5.54	92.3	6.00	4.00		
Total BTEX	<0.300	0.300	08/25/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/26/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/25/2025	ND	183	91.5	200	7.13		
DRO >C10-C28*	<10.0	10.0	08/25/2025	ND	194	97.1	200	6.27		
EXT DRO >C28-C36	<10.0	10.0	08/25/2025	ND						

Surrogate: 1-Chlorooctane 96.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 100 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/22/2025	Sampling Date:	08/22/2025
Reported:	08/26/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS06 28' (H255263-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2025	ND	1.81	90.6	2.00	0.663	
Toluene*	<0.050	0.050	08/25/2025	ND	1.88	93.9	2.00	2.00	
Ethylbenzene*	<0.050	0.050	08/25/2025	ND	1.88	94.2	2.00	3.77	
Total Xylenes*	<0.150	0.150	08/25/2025	ND	5.54	92.3	6.00	4.00	
Total BTEX	<0.300	0.300	08/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/26/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/25/2025	ND	183	91.5	200	7.13	
DRO >C10-C28*	<10.0	10.0	08/25/2025	ND	194	97.1	200	6.27	
EXT DRO >C28-C36	<10.0	10.0	08/25/2025	ND					

Surrogate: 1-Chlorooctane 95.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 97.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/22/2025	Sampling Date:	08/22/2025
Reported:	08/26/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS10 28' (H255263-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/25/2025	ND	1.81	90.6	2.00	0.663		
Toluene*	<0.050	0.050	08/25/2025	ND	1.88	93.9	2.00	2.00		
Ethylbenzene*	<0.050	0.050	08/25/2025	ND	1.88	94.2	2.00	3.77		
Total Xylenes*	<0.150	0.150	08/25/2025	ND	5.54	92.3	6.00	4.00		
Total BTEX	<0.300	0.300	08/25/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/26/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/25/2025	ND	183	91.5	200	7.13		
DRO >C10-C28*	<10.0	10.0	08/25/2025	ND	194	97.1	200	6.27		
EXT DRO >C28-C36	<10.0	10.0	08/25/2025	ND						

Surrogate: 1-Chlorooctane 102 % 44.4-145

Surrogate: 1-Chlorooctadecane 106 % 40.6-153

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Ensolum, LLC

Project Manager: *Kaley Jennings*

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: 817-683-2503

Project #: 07A1988166

Project Name: *State 2 Production Facility*

Project Location: *32.577194, -103.30166*

Sampler Name: *Macio Sackis*

**BILL TO**

P.O. #:

Company: *H-Keep*

Attn: *Billy Ginn*

Address:

City:

State: Zip:

Phone #:

Fax #:

**ANALYSIS REQUEST**

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
<i>1</i>	<i>F504</i>	<i>23</i>	<i>C</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>8/22/25</i>	<i>1044</i>	<i>BTEX</i>
<i>2</i>	<i>F508</i>	<i>23</i>	<i>C</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1054</i>	<i>1300</i>	<i>TPH</i>
<i>3</i>	<i>F509</i>	<i>27</i>	<i>C</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1315</i>	<i>1318</i>	<i>Chlorides</i>
<i>4</i>	<i>F506</i>	<i>28</i>	<i>C</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
<i>5</i>	<i>F510</i>	<i>28</i>	<i>C</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal. Inquiries of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]*

Date: *8/22/25*  
 Time: *1541*

Received By: *[Signature]*

Date: *1541*  
 Time: *1541*

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C: *4.8*  
 Corrected Temp. °C: *5.1*

Sample Condition:  Intact  Cool  Yes  No

Checked By: *[Signature]*

Turnaround Time: *48 hr*

Standard  Rush

Bacteria (only)  Cool  Intact  Yes  No

Sample Condition  Observed Temp. °C  Corrected Temp. °C

Verbal Result:  Yes  No  Add'l Phone #:

All Results are emailed. Please provide Email address:

REMARKS:

*[Signature]*

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 04, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 08/29/25 14:42.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 04 0-28 (H255419-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03	QM-07	
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/02/2025	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
<b>DRO &gt;C10-C28*</b>	<b>140</b>	10.0	09/02/2025	ND	209	105	200	3.63		
<b>EXT DRO &gt;C28-C36</b>	<b>70.4</b>	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 110 % 44.4-145

Surrogate: 1-Chlorooctadecane 105 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 05 0-28 (H255419-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/02/2025	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
<b>DRO &gt;C10-C28*</b>	<b>48.4</b>	10.0	09/02/2025	ND	209	105	200	3.63		
<b>EXT DRO &gt;C28-C36</b>	<b>29.8</b>	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 107 % 44.4-145

Surrogate: 1-Chlorooctadecane 104 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 06 0-28 (H255419-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03	
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60	
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32	
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23	
Total BTEX	<0.300	0.300	09/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/02/2025	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537	
<b>DRO &gt;C10-C28*</b>	<b>46.5</b>	10.0	09/02/2025	ND	209	105	200	3.63	
<b>EXT DRO &gt;C28-C36</b>	<b>28.5</b>	10.0	09/02/2025	ND					

Surrogate: 1-Chlorooctane 107 % 44.4-145

Surrogate: 1-Chlorooctadecane 105 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 07 0-28 (H255419-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2025	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 104 % 44.4-145

Surrogate: 1-Chlorooctadecane 108 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 08 0-28 (H255419-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03	
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60	
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32	
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23	
Total BTEX	<0.300	0.300	09/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/02/2025	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537	
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND					

Surrogate: 1-Chlorooctane 108 % 44.4-145

Surrogate: 1-Chlorooctadecane 112 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 09 0-28 (H255419-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/02/2025	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 107 % 44.4-145

Surrogate: 1-Chlorooctadecane 111 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 10 0-28 (H255419-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/02/2025	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 102 % 44.4-145

Surrogate: 1-Chlorooctadecane 105 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 11 0-28 (H255419-08)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/02/2025	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	108	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	80.7	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 111 % 44.4-145

Surrogate: 1-Chlorooctadecane 108 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

September 04, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 08/29/25 14:42.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 21 22 (H255420-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03	
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60	
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32	
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23	
Total BTEX	<0.300	0.300	09/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537	
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND					

Surrogate: 1-Chlorooctane 84.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.2 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 22 22 (H255420-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 90.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.5 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 23 22 (H255420-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 88.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 87.8 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 24 22 (H255420-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
<b>DRO &gt;C10-C28*</b>	<b>37.6</b>	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 88.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.0 % 40.6-153

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/29/2025	Sampling Date:	08/29/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 25 22 (H255420-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/02/2025	ND	1.68	83.9	2.00	5.03		
Toluene*	<0.050	0.050	09/02/2025	ND	1.76	87.9	2.00	4.60		
Ethylbenzene*	<0.050	0.050	09/02/2025	ND	1.74	87.2	2.00	3.32		
Total Xylenes*	<0.150	0.150	09/02/2025	ND	5.35	89.2	6.00	5.23		
Total BTEX	<0.300	0.300	09/02/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	7.69		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/02/2025	ND	228	114	200	0.537		
DRO >C10-C28*	<10.0	10.0	09/02/2025	ND	209	105	200	3.63		
EXT DRO >C28-C36	<10.0	10.0	09/02/2025	ND						

Surrogate: 1-Chlorooctane 84.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.4 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Ensolium, LLC  
 Project Manager: Kalei Jennings  
 Address: 3122 National Parks Hwy State: NM Zip: 88220  
 City: Carlsbad P.O. #: \_\_\_\_\_  
 Phone #: 817-683-2503 Fax #: \_\_\_\_\_ Company: Hickoff  
 Project #: 07A1988166 Project Owner: \_\_\_\_\_ Attn: Billy Ginn  
 Project Name: State 2 Production Facility Address: \_\_\_\_\_  
 Project Location: 32,577194,-103,301616 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 Sampler Name: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	Depth (feet)	PRESERVE		DATE	TIME	ANALYSIS REQUEST		
			(G)RAB OR (C)OMP.	# CONTAINERS			BTEX	TPH	Chlorides
	FS21	22	<input checked="" type="checkbox"/>	1	8/24/15	1248	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	FS22	22	<input checked="" type="checkbox"/>	1		1105	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	FS23	22	<input checked="" type="checkbox"/>	1		0920	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	FS24	22	<input checked="" type="checkbox"/>	1		0923	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	FS25	22	<input checked="" type="checkbox"/>	1		0927	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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Relinquished By: \_\_\_\_\_ Date: 8/24/15 Received By: APower  
 Time: 14:24  
 Date: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Time: \_\_\_\_\_

Delivered By: (Circle One)  UPS  Bus  Other: \_\_\_\_\_  
 Observed Temp.: 4.9 Sample Condition:  Intact  Cool  Intact  Yes  No  Yes  No  
 Corrected Temp.: 5.2 Checked By: AP  
 Turnaround Time: \_\_\_\_\_ Standard  Rush   
 Thermometer ID: 413 410 Bacteria (only)  Cool  Intact  Yes  No  Yes  No  
 Correction Factor: 0.5 0.3 Corrected Temp.: \_\_\_\_\_

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

September 04, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 09/03/25 10:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/03/2025	Sampling Date:	09/03/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW03 0-28' (H255453-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/03/2025	ND	2.14	107	2.00	3.42	
Toluene*	<0.050	0.050	09/03/2025	ND	2.29	114	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/03/2025	ND	2.33	117	2.00	1.83	
Total Xylenes*	<0.150	0.150	09/03/2025	ND	7.26	121	6.00	2.05	
Total BTEX	<0.300	0.300	09/03/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/03/2025	ND	205	102	200	0.833	
DRO >C10-C28*	<10.0	10.0	09/03/2025	ND	210	105	200	0.831	
EXT DRO >C28-C36	<10.0	10.0	09/03/2025	ND					

Surrogate: 1-Chlorooctane 93.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.8 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/03/2025	Sampling Date:	09/03/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW12 0-28' (H255453-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/03/2025	ND	2.14	107	2.00	3.42		
Toluene*	<0.050	0.050	09/03/2025	ND	2.29	114	2.00	1.80		
Ethylbenzene*	<0.050	0.050	09/03/2025	ND	2.33	117	2.00	1.83		
Total Xylenes*	<0.150	0.150	09/03/2025	ND	7.26	121	6.00	2.05		
Total BTEX	<0.300	0.300	09/03/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/03/2025	ND	205	102	200	0.833		
DRO >C10-C28*	<10.0	10.0	09/03/2025	ND	210	105	200	0.831		
EXT DRO >C28-C36	<10.0	10.0	09/03/2025	ND						

Surrogate: 1-Chlorooctane 88.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 85.8 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/03/2025	Sampling Date:	09/03/2025
Reported:	09/04/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW13 0-28' (H255453-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/03/2025	ND	2.14	107	2.00	3.42		
Toluene*	<0.050	0.050	09/03/2025	ND	2.29	114	2.00	1.80		
Ethylbenzene*	<0.050	0.050	09/03/2025	ND	2.33	117	2.00	1.83		
Total Xylenes*	<0.150	0.150	09/03/2025	ND	7.26	121	6.00	2.05		
Total BTEX	<0.300	0.300	09/03/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/03/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/03/2025	ND	205	102	200	0.833		
DRO >C10-C28*	<10.0	10.0	09/03/2025	ND	210	105	200	0.831		
EXT DRO >C28-C36	<10.0	10.0	09/03/2025	ND						

Surrogate: 1-Chlorooctane 96.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.8 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: **EnsoLum, LLC** **BILL TO** ANALYSIS REQUEST

Project Manager: **Kate Jennings** P.O. #: **Hilcorp**

Address: **3122 National Parks Hwy** Address: **Briv Ginn**

City: **Carlsbad** State: **NM** Zip: **88220**

Phone #: **817-683-2503** Fax #: **Project Owner:**

Project #: **071988166** City: **State: Zip:**

Project Name: **State Z Production Facility** Phone #: **Fax #:**

Project Location: **32.577194, -103.301616**

Sampler Name: **Mario Samnis**

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
1	SW03	0-28	C	1								4/3/25	0808	BTEX
2	SW1A	0-28	C	1								0812	0812	TPH
3	SW13	0-28	C	1								0816	0816	Chlorides

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Relinquished By: **[Signature]** Date: **4/3/25** Time: **1000**

Received By: **[Signature]** Date: **4/3/25** Time: **1000**

Relinquished By: **[Signature]** Received By: **[Signature]**

Delivered By: (Circle One) Observed Temp. °C: **1.8** Sample Condition: **Intact** CHECKED BY: **[Signature]**

Sampler - UPS - Bus - Other: Corrected Temp. °C: **1.0** Cool Intact: **Yes** Standard Rush: **Yes** Bacteria (only) Cool Intact: **Yes**

Turnaround Time: **24-Hr** **#13** **#140** **#150** **#153** **#154** **#155** **#156** **#157** **#158** **#159** **#160** **#161** **#162** **#163** **#164** **#165** **#166** **#167** **#168** **#169** **#170** **#171** **#172** **#173** **#174** **#175** **#176** **#177** **#178** **#179** **#180** **#181** **#182** **#183** **#184** **#185** **#186** **#187** **#188** **#189** **#190** **#191** **#192** **#193** **#194** **#195** **#196** **#197** **#198** **#199** **#200**

Verbal Result:  Yes  No Add'l Phone #: **M Samnis@ensolum.com**

REMARKS: **K Jennings@ensolum.com**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

September 08, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 09/04/25 16:34.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/04/2025	Sampling Date:	09/04/2025
Reported:	09/08/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW04 0-28' (H255526-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/05/2025	ND	1.91	95.7	2.00	0.904	
Toluene*	<0.050	0.050	09/05/2025	ND	1.92	95.9	2.00	1.37	
Ethylbenzene*	<0.050	0.050	09/05/2025	ND	1.88	94.0	2.00	0.268	
Total Xylenes*	<0.150	0.150	09/05/2025	ND	5.56	92.7	6.00	0.0281	
Total BTEX	<0.300	0.300	09/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	09/08/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/05/2025	ND	211	106	200	3.19	
<b>DRO &gt;C10-C28*</b>	<b>15.7</b>	10.0	09/05/2025	ND	200	100	200	3.31	
EXT DRO >C28-C36	<10.0	10.0	09/05/2025	ND					

Surrogate: 1-Chlorooctane 90.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.2 % 40.6-153

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/04/2025	Sampling Date:	09/04/2025
Reported:	09/08/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW11 0-28' (H255526-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/05/2025	ND	1.91	95.7	2.00	0.904		
Toluene*	<0.050	0.050	09/05/2025	ND	1.92	95.9	2.00	1.37		
Ethylbenzene*	<0.050	0.050	09/05/2025	ND	1.88	94.0	2.00	0.268		
Total Xylenes*	<0.150	0.150	09/05/2025	ND	5.56	92.7	6.00	0.0281		
Total BTEX	<0.300	0.300	09/05/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/08/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/05/2025	ND	211	106	200	3.19		
DRO >C10-C28*	<10.0	10.0	09/05/2025	ND	200	100	200	3.31		
EXT DRO >C28-C36	<10.0	10.0	09/05/2025	ND						

Surrogate: 1-Chlorooctane 93.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 91.5 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Ensolium, LLC  
 Project Manager: Kalei Scammas  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: 817-683-2503 Fax #:   
 Project #: 07A1988166 Project Owner:   
 Project Name: State 2 Production Facility  
 Project Location: 32.577194, -103.301616  
 Sampler Name: Mario Sackis  
 P.O. #:   
 Company: Hilcorp  
 Attn: Billy Ginn  
 Address:   
 City:   
 State: Zip:   
 Phone #:   
 Fax #:   
 PRESERV:   
 SAMPLING:   
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
<u>H8552a</u>	<u>5W04</u>	<u>0-28</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>					<u>9/4/25</u>	<u>1343</u>	<u>BTEX</u>
	<u>5W11</u>	<u>0-28</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>					<u>9/4/25</u>	<u>1346</u>	<u>TPH</u>
														<u>Chlorides</u>

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Relinquished By: [Signature] Date: 9-4-25 Received By: [Signature]  
 Relinquished By: [Signature] Date: 10/31 Received By: [Signature]  
 Time:   
 Verbal Result:  Yes  No  Add'l Phone #:   
 All Results are emailed. Please provide Email address: MSM@ENSOIUM.COM  
 REMARKS: KJENNINGS@ENSOIUM.COM

Delivered By: (Circle One) Observed Temp.: 28.8 Sample Condition:  Cool  Intact  Yes  No  
 Sampler - UPS - Bus - Other: Corrected Temp.: 3.1  Yes  No  
 CHECKED BY: [Signature]  
 Turnaround Time: 48-HR Standard  Rush   
 Thermometer ID: 413 AMO Bacteria (only) Sample Condition:  Cool  Intact  Yes  No  
 Correction Factor: 0.00 10.3 Corrected Temp.: 3.1

† Cardinal cannot accept verbal changes. Please email changes to celejy.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 10, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 09/09/25 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/09/2025	Sampling Date:	09/08/2025
Reported:	09/10/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	32.577194, -103.301616		

**Sample ID: PH 02 28' (H255630-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/09/2025	ND	1.85	92.6	2.00	1.75		
Toluene*	<0.050	0.050	09/09/2025	ND	1.90	94.8	2.00	1.79		
Ethylbenzene*	<0.050	0.050	09/09/2025	ND	1.87	93.6	2.00	1.73		
Total Xylenes*	<0.150	0.150	09/09/2025	ND	5.52	92.0	6.00	1.79		
Total BTEX	<0.300	0.300	09/09/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	09/09/2025	ND	432	108	400	7.14		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/09/2025	ND	168	84.1	200	1.14		
DRO >C10-C28*	<10.0	10.0	09/09/2025	ND	165	82.7	200	1.77		
EXT DRO >C28-C36	<10.0	10.0	09/09/2025	ND						

Surrogate: 1-Chlorooctane 87.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 85.5 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager





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---

September 12, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 09/10/25 11:53.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/10/2025	Sampling Date:	09/10/2025
Reported:	09/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW14 0-28 (H255670-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2025	ND	1.95	97.6	2.00	0.930	
Toluene*	<0.050	0.050	09/10/2025	ND	1.91	95.7	2.00	1.06	
Ethylbenzene*	<0.050	0.050	09/10/2025	ND	1.92	95.9	2.00	1.55	
Total Xylenes*	<0.150	0.150	09/10/2025	ND	5.85	97.6	6.00	1.69	
Total BTEX	<0.300	0.300	09/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/11/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2025	ND	199	99.4	200	0.693	
DRO >C10-C28*	<10.0	10.0	09/11/2025	ND	200	100	200	0.163	
EXT DRO >C28-C36	<10.0	10.0	09/11/2025	ND					

Surrogate: 1-Chlorooctane 78.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 75.3 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/10/2025	Sampling Date:	09/10/2025
Reported:	09/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW15 0-7.5 (H255670-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2025	ND	1.95	97.6	2.00	0.930		
Toluene*	<0.050	0.050	09/10/2025	ND	1.91	95.7	2.00	1.06		
Ethylbenzene*	<0.050	0.050	09/10/2025	ND	1.92	95.9	2.00	1.55		
Total Xylenes*	<0.150	0.150	09/10/2025	ND	5.85	97.6	6.00	1.69		
Total BTEX	<0.300	0.300	09/10/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	09/11/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/11/2025	ND	199	99.4	200	0.693		
DRO >C10-C28*	<10.0	10.0	09/11/2025	ND	200	100	200	0.163		
EXT DRO >C28-C36	<10.0	10.0	09/11/2025	ND						

Surrogate: 1-Chlorooctane 86.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.0 % 40.6-153

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Ensolium, LLC Project Manager: <u>Kate Jennings</u> Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Phone #: 575-683-2503 Fax #: _____ Project #: 07A1988166 Project Owner: _____ Project Name: <u>State 2 Production Facility</u> Project Location: <u>32,577194, -103,301616</u> Sampler Name: <u>Mario Samis</u>		P.O. #: _____ Company: <u>Hillcorp</u> Attn: <u>Billy Ginn</u> Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Lab I.D. _____ Sample I.D. _____ Depth (feet) _____ (G)RAB OR (C)OMP. _____ # CONTAINERS _____ GROUNDWATER _____ WASTEWATER _____ SOIL _____ OIL _____ SLUDGE _____ OTHER: _____ ACID/BASE: _____ ICE / COOL _____ OTHER: _____		DATE TIME _____ BTEX _____ TPH _____ Chlorides _____ _____ _____ _____	
Relinquished By: _____ Date: <u>9/10/25</u> Time: <u>1:53</u>		Received By: _____ Date: _____ Time: _____	
Delivered By: (Circle One) _____ Sampler - UPS - Bus - Other: _____ Observed Temp. °C: <u>3.10</u> Corrected Temp. °C: <u>3.92</u>		Sample Condition: Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked By: (Initials) <u>AB</u> Turnaround Time: <u>48-hr</u> Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Thermometer ID: #113 #140 Correction Factor: 0.5°C	
Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____ All Results are emailed. Please provide Email address: <u>Kjennings@ensolium.com</u> REMARKS: <u>MSA His@ensolium.com</u>		Bacteria (only) Sample Condition: Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Corrected Temp. °C: _____	

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 17, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 10/15/25 14:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 01 7.5' (H256500-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/16/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 87.6 % 52.4-130

Surrogate: 1-Chlorooctadecane 81.8 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 05 28' (H256500-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/16/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 81.1 % 52.4-130

Surrogate: 1-Chlorooctadecane 75.2 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 08 28' (H256500-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/16/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 79.5 % 52.4-130

Surrogate: 1-Chlorooctadecane 72.4 % 39.9-141

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 21 28' (H256500-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/16/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 81.5 % 52.4-130

Surrogate: 1-Chlorooctadecane 76.4 % 39.9-141

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 22 28' (H256500-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/16/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 88.3 % 52.4-130

Surrogate: 1-Chlorooctadecane 81.9 % 39.9-141

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 23 28' (H256500-06)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/16/2025	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 74.8 % 52.4-130

Surrogate: 1-Chlorooctadecane 69.0 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 24 28' (H256500-07)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	1.88	94.2	2.00	1.64	
Toluene*	<0.050	0.050	10/16/2025	ND	1.93	96.6	2.00	0.390	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	1.92	96.0	2.00	1.05	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	5.95	99.2	6.00	0.795	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/16/2025	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	234	117	200	0.903	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	221	110	200	0.981	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 87.8 % 52.4-130

Surrogate: 1-Chlorooctadecane 82.2 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: FS 25 25' (H256500-08)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.75	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.15	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.16	108	2.00	0.874	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.41	107	6.00	0.816	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: KH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/16/2025	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	230	115	200	2.41	
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	211	106	200	6.75	
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND					

Surrogate: 1-Chlorooctane 81.1 % 52.4-130

Surrogate: 1-Chlorooctadecane 79.9 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	10/15/2025	Sampling Date:	10/15/2025
Reported:	10/17/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	32.577194, -103.301616		

**Sample ID: SW 15 0-10' (H256500-09)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.75		
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.15		
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.16	108	2.00	0.874		
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.41	107	6.00	0.816		
Total BTEX	<0.300	0.300	10/16/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/16/2025	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/16/2025	ND	230	115	200	2.41		
DRO >C10-C28*	<10.0	10.0	10/16/2025	ND	211	106	200	6.75		
EXT DRO >C28-C36	<10.0	10.0	10/16/2025	ND						

Surrogate: 1-Chlorooctane 79.2 % 52.4-130

Surrogate: 1-Chlorooctadecane 74.5 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager





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---

November 12, 2025

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 11/11/25 12:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	11/11/2025	Sampling Date:	11/11/2025
Reported:	11/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW16 0-28' (H257103-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2025	ND	2.11	105	2.00	2.05	
Toluene*	<0.050	0.050	11/11/2025	ND	2.19	109	2.00	0.486	
Ethylbenzene*	<0.050	0.050	11/11/2025	ND	2.07	103	2.00	1.33	
Total Xylenes*	<0.150	0.150	11/11/2025	ND	6.22	104	6.00	0.966	
Total BTEX	<0.300	0.300	11/11/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/12/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/12/2025	ND	219	110	200	2.63	
DRO >C10-C28*	<10.0	10.0	11/12/2025	ND	217	109	200	1.45	
EXT DRO >C28-C36	<10.0	10.0	11/12/2025	ND					

Surrogate: 1-Chlorooctane 92.5 % 52.4-130

Surrogate: 1-Chlorooctadecane 90.6 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	11/11/2025	Sampling Date:	11/11/2025
Reported:	11/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW17 0-28' (H257103-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/11/2025	ND	2.11	105	2.00	2.05		
Toluene*	<0.050	0.050	11/11/2025	ND	2.19	109	2.00	0.486		
Ethylbenzene*	<0.050	0.050	11/11/2025	ND	2.07	103	2.00	1.33		
Total Xylenes*	<0.150	0.150	11/11/2025	ND	6.22	104	6.00	0.966		
Total BTEX	<0.300	0.300	11/11/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/12/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/12/2025	ND	219	110	200	2.63		
DRO >C10-C28*	<10.0	10.0	11/12/2025	ND	217	109	200	1.45		
EXT DRO >C28-C36	<10.0	10.0	11/12/2025	ND						

Surrogate: 1-Chlorooctane 94.1 % 52.4-130

Surrogate: 1-Chlorooctadecane 93.4 % 39.9-141

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	11/11/2025	Sampling Date:	11/11/2025
Reported:	11/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW18 0-11' (H257103-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/11/2025	ND	2.11	105	2.00	2.05		
Toluene*	<0.050	0.050	11/11/2025	ND	2.19	109	2.00	0.486		
Ethylbenzene*	<0.050	0.050	11/11/2025	ND	2.07	103	2.00	1.33		
Total Xylenes*	<0.150	0.150	11/11/2025	ND	6.22	104	6.00	0.966		
Total BTEX	<0.300	0.300	11/11/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/12/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/12/2025	ND	219	110	200	2.63		
<b>DRO &gt;C10-C28*</b>	<b>21.7</b>	10.0	11/12/2025	ND	217	109	200	1.45		
EXT DRO >C28-C36	<10.0	10.0	11/12/2025	ND						

Surrogate: 1-Chlorooctane 111 % 52.4-130

Surrogate: 1-Chlorooctadecane 107 % 39.9-141

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	11/11/2025	Sampling Date:	11/11/2025
Reported:	11/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW19 0-28' (H257103-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/11/2025	ND	2.11	105	2.00	2.05		
Toluene*	<0.050	0.050	11/11/2025	ND	2.19	109	2.00	0.486		
Ethylbenzene*	<0.050	0.050	11/11/2025	ND	2.07	103	2.00	1.33		
Total Xylenes*	<0.150	0.150	11/11/2025	ND	6.22	104	6.00	0.966		
Total BTEX	<0.300	0.300	11/11/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/12/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/12/2025	ND	219	110	200	2.63		
DRO >C10-C28*	<10.0	10.0	11/12/2025	ND	217	109	200	1.45		
EXT DRO >C28-C36	<10.0	10.0	11/12/2025	ND						

Surrogate: 1-Chlorooctane 108 % 52.4-130

Surrogate: 1-Chlorooctadecane 109 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	11/11/2025	Sampling Date:	11/11/2025
Reported:	11/12/2025	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Shalyn Rodriguez
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW20 0-28' (H257103-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/12/2025	ND	2.11	105	2.00	2.05		
Toluene*	<0.050	0.050	11/12/2025	ND	2.19	109	2.00	0.486		
Ethylbenzene*	<0.050	0.050	11/12/2025	ND	2.07	103	2.00	1.33		
Total Xylenes*	<0.150	0.150	11/12/2025	ND	6.22	104	6.00	0.966		
Total BTEX	<0.300	0.300	11/12/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/12/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/12/2025	ND	219	110	200	2.63		
DRO >C10-C28*	<10.0	10.0	11/12/2025	ND	217	109	200	1.45		
EXT DRO >C28-C36	<10.0	10.0	11/12/2025	ND						

Surrogate: 1-Chlorooctane 112 % 52.4-130

Surrogate: 1-Chlorooctadecane 114 % 39.9-141

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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Ensolum, LLC

Project Manager: *Katei Jennings*

Address: 3122 National Parks Hwy

City: Carlsbad

State: NM Zip: 88220

Phone #: 817-683-2503

Fax #:

Project #: 07A1988166

Project Owner:

Project Name: State 2 Production Facility

Project Location: 3A.577194-103.301616

Sampler Name: *Malik Sarkis*

FOR LAB USE ONLY

Fax #:

Phone #:

State: Zip:

City:

Address:

Attn: *Billy Ginn*

Company: *Hickel*

P.O. #:

**BILL TO**

**ANALYSIS REQUEST**

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS			
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:				ICE / COOL	OTHER :	
<i>H057103</i>	<i>SW16</i>	<i>0-28</i>	<i>C 1</i>	<i>1</i>	<input checked="" type="checkbox"/>	<i>11/11/85</i>	<i>0842</i>	<input checked="" type="checkbox"/> BTEX	<input checked="" type="checkbox"/> TPH	<input checked="" type="checkbox"/> Chlorides							
	<i>SW17</i>	<i>0-28</i>	<i>C 1</i>	<i>1</i>	<input checked="" type="checkbox"/>	<i>0848</i>	<i>0848</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
	<i>SW18</i>	<i>0-11</i>	<i>C 1</i>	<i>1</i>	<input checked="" type="checkbox"/>	<i>0821</i>	<i>0821</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
	<i>SW19</i>	<i>0-28</i>	<i>C 1</i>	<i>1</i>	<input checked="" type="checkbox"/>	<i>0830</i>	<i>0830</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
	<i>SW20</i>	<i>0-28</i>	<i>C 1</i>	<i>1</i>	<input checked="" type="checkbox"/>	<i>0834</i>	<i>0834</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							

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Verbal Result:  Yes  No Add'l Phone #:  
 All Results are emailed. Please provide Email address:  
*NO labels*

Relinquished By: *[Signature]*  
 Date: *11/11/85*  
 Time: *8:03*

Received By: *[Signature]*  
 Date: *11/11/85*  
 Time: *8:03*

REMARKS: *KiemNguyen@ensolum.com / Msarkis@ensolum.com*

Delivered By: (Circle One)  
 Sampler - UPS - Bus - Other:

Observed Temp. °C: *4.2*  
 Corrected Temp. °C: *4.5*

Sample Condition  
 Cool Intact  Yes  No  
 Other Intact  Yes  No

Checked By: *[Signature]*  
 Turnaround Time: *4-6 hrs*

Standard  Rush   
 Thermometer ID: *#173* *#190*  
 Correction Factor: *0.5°C* *0.3°C*  
 Bacteria (only)  Cool Intact  Yes  No  
 Sample Condition  Observed Temp. °C  Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to *celey.keene@cardinallabsnm.com*



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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January 15, 2026

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: STATE Z PRODUCTION FACILITY

Enclosed are the results of analyses for samples received by the laboratory on 01/14/26 13:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 21 11-28 (H260221-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/15/2026	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	183	91.5	200	7.29	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	187	93.4	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 95.6 % 52.4-130

Surrogate: 1-Chlorooctadecane 97.8 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 22 23-28 (H260221-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/15/2026	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	183	91.5	200	7.29	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	187	93.4	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 95.5 % 52.4-130

Surrogate: 1-Chlorooctadecane 97.5 % 39.9-141

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 23 17-28 (H260221-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/15/2026	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	183	91.5	200	7.29	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	187	93.4	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 89.0 % 52.4-130

Surrogate: 1-Chlorooctadecane 90.4 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 24 17-28 (H260221-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675		
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70		
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11		
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32		
Total BTEX	<0.300	0.300	01/15/2026	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/15/2026	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: JF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/14/2026	ND	186	93.0	200	1.69		
DRO >C10-C28*	<10.0	10.0	01/14/2026	ND	216	108	200	7.99		
EXT DRO >C28-C36	<10.0	10.0	01/14/2026	ND						

Surrogate: 1-Chlorooctane 73.1 % 52.4-130

Surrogate: 1-Chlorooctadecane 74.0 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 25 17-27 (H260221-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/15/2026	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: JF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 93.3 % 52.4-130

Surrogate: 1-Chlorooctadecane 94.5 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 26 17-23 (H260221-06)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/15/2026	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: JF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 71.5 % 52.4-130

Surrogate: 1-Chlorooctadecane 71.0 % 39.9-141

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 27 10-23 (H260221-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675		
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70		
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11		
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32		
Total BTEX	<0.300	0.300	01/15/2026	ND						

Surrogate: 4-Bromofluorobenzene (PID) 122 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/15/2026	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: JF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69		
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99		
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND						

Surrogate: 1-Chlorooctane 76.5 % 52.4-130

Surrogate: 1-Chlorooctadecane 76.8 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 28 17-28 (H260221-08)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675		
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70		
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11		
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32		
Total BTEX	<0.300	0.300	01/15/2026	ND						

Surrogate: 4-Bromofluorobenzene (PID) 131 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/15/2026	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: JF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69		
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99		
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND						

Surrogate: 1-Chlorooctane 69.7 % 52.4-130

Surrogate: 1-Chlorooctadecane 70.2 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 29 7.5-28 (H260221-09)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675		
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70		
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11		
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32		
Total BTEX	<0.300	0.300	01/15/2026	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	01/15/2026	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: JF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69		
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99		
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND						

Surrogate: 1-Chlorooctane 90.2 % 52.4-130

Surrogate: 1-Chlorooctadecane 88.9 % 39.9-141

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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 30 23-28 (H260221-10)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/15/2026	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: JF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 79.0 % 52.4-130

Surrogate: 1-Chlorooctadecane 78.1 % 39.9-141

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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 31 7.5-10 (H260221-11)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/15/2026	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: JF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 66.7 % 52.4-130

Surrogate: 1-Chlorooctadecane 66.1 % 39.9-141

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**Analytical Results For:**

ENSOLUM  
 KALEI JENNINGS  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	01/14/2026	Sampling Date:	01/14/2026
Reported:	01/15/2026	Sampling Type:	Soil
Project Name:	STATE Z PRODUCTION FACILITY	Sampling Condition:	Cool & Intact
Project Number:	07A1988166	Sample Received By:	Alyssa Parras
Project Location:	HILCORP 32.577194, -103.301616		

**Sample ID: SW 32 7.5-28 (H260221-12)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2026	ND	2.06	103	2.00	0.675	
Toluene*	<0.050	0.050	01/15/2026	ND	1.97	98.3	2.00	6.70	
Ethylbenzene*	<0.050	0.050	01/15/2026	ND	2.05	102	2.00	8.11	
Total Xylenes*	<0.150	0.150	01/15/2026	ND	6.37	106	6.00	8.32	
Total BTEX	<0.300	0.300	01/15/2026	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/15/2026	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: JF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/15/2026	ND	186	93.0	200	1.69	
DRO >C10-C28*	<10.0	10.0	01/15/2026	ND	216	108	200	7.99	
EXT DRO >C28-C36	<10.0	10.0	01/15/2026	ND					

Surrogate: 1-Chlorooctane 77.9 % 52.4-130

Surrogate: 1-Chlorooctadecane 77.1 % 39.9-141

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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC  
 Project Manager: Kalei Jennings  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: 817-683-2503 Fax #:   
 Project #: 07A1988166 Project Owner:   
 Project Name: State 2 Production Facility  
 Project Location: 32, 5771941-103, 30616  
 Sampler Name: Marcio Smith's  
 P.O. #:   
 Company: Hilcorp  
 Attn: Billy Ginn  
 Address:   
 City:   
 State: Zip:   
 Phone #:   
 Fax #:   
 PRESERV:   
 SAMPLING:   
 DATE: 1/14/26  
 TIME: 0824

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			
1	SW21	11-28	C	1							1/14/26	0824	BTEX
2	SW22	23-28	C	1								0828	TPH
3	SW23	17-28	C	1								0830	Chlorides
4	SW24	17-28	C	1								0834	
5	SW25	17-27	C	1								0838	
6	SW26	17-23	C	1								0843	
7	SW27	10-23	C	1								0847	
8	SW28	17-28	C	1								0854	
9	SW29	25-28	C	1								0911	
10	SW30	23-28	C	1								0904	

PLEASE NOTE: Liability and Damages: Cardinal's liability and cover's exclusion remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors taking out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:   
 Date: 1/14/26  
 Time: 1316  
 Received By:   
 Date:   
 Time:   
 CHECKED BY: (Initials)   
 Sample Condition:   
 Cool Intact  Yes  No   
 Corrected Temp. °C: 87.0  
 Corrected Temp. °C: 88.0

REMARKS:   
 Verbal Result:  Yes  No  Add'l Phone #:   
 All Results are emailed. Please provide Email address:   
 MsatKris@ensolum.com / K.Jennings@ensolum.com  
 Turnaround Time: 24-HR   
 Thermometer ID: #113 #1140   
 Correction Factor: 0.00   
 Bacteria (only)   
 Cool Intact  Yes  No   
 Sample Condition   
 Observed Temp. °C:   
 Corrected Temp. °C:   
 Rush

Delivered By: (Circle One)   
 Sampler - UPS - Bus - Other:   
 Observed Temp. °C: 87.0  
 Corrected Temp. °C: 88.0  
 Sample Condition:   
 Cool Intact  Yes  No   
 Corrected Temp. °C:   
 Bacteria (only)   
 Cool Intact  Yes  No   
 Sample Condition   
 Observed Temp. °C:   
 Corrected Temp. °C:   
 Rush

1 of 2



101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**BILL TO** ANALYSIS REQUEST

Company Name: **Ensolurn, LLC**  
 Project Manager: **Kalei Jennings**  
 Address: **3122 National Parks Hwy** State: **NM** Zip: **88220**  
 City: **Carlsbad**  
 Phone #: **817-683-2503** Fax #: \_\_\_\_\_  
 Project #: **0741988166** Project Owner: \_\_\_\_\_  
 Project Name: **State 2 Production Facility**  
 Project Location: **32.577194, -103.301616**  
 Sampler Name: **Mario SARKIS**  
 P.O. #: \_\_\_\_\_ Company: **Hilcorp**  
 Attn: **Billy Ginn**  
 Address: \_\_\_\_\_ City: \_\_\_\_\_  
 State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
<b>401-11-20</b>	<b>SW 31</b>	<b>7.5-10</b>	<b>C</b>	<b>1</b>			<input checked="" type="checkbox"/>					<b>1/14/26</b>	<b>0912</b>	<b>BTEX</b>
	<b>SW 32</b>	<b>7.5-28</b>	<b>C</b>	<b>1</b>			<input checked="" type="checkbox"/>					<b>1/14/26</b>	<b>0914</b>	<b>TPH</b>
														<b>Chlorides</b>

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Relinquished By: \_\_\_\_\_ Date: **1/14/26** Received By: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: **1/31/26** Received By: \_\_\_\_\_

Delivered By: (Circle One)  Observed Temp. °C: **8.7** Sample Condition:  Intact  Cool  Yes  No  Intact  Yes  No  
 Corrected Temp. °C: **8.8** Checked By: **AP**

Sampler - UPS - Bus - Other: \_\_\_\_\_

Turnaround Time: **24-Hr** Standard  Rush  Bacteria (only)  Sample Condition  Cool  Intact  Yes  No  Observed Temp. °C \_\_\_\_\_  
 Corrected Temp. °C \_\_\_\_\_

Remarks: **Mario SARKIS@ensolurn.com / kjennings@ensolurn.com**

2 of 1



## APPENDIX D

### NMOCD Notifications

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**Ashley Holmes**

---

**From:** Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>  
**Sent:** Tuesday, April 22, 2025 10:10 AM  
**To:** Ashley Holmes  
**Cc:** eco@nmslo.gov; Devin Hencmann; Stuart Hyde; Billy Ginn; Fatima Smith; Bratcher, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] nAPP2502719434 - State Z Production Facility Extension Request (API # 30-025-04248)

You don't often get email from shelly.wells@emnrd.nm.gov. [Learn why this is important](#)

[\*\*EXTERNAL EMAIL\*\*]

Good morning Ashley,

The extension request for NAPP2502719434 STATE Z PRODUCTION FACILITY is approved. The new due date to submit your updated remediation plan or closure report to the OCD is July 25, 2025. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Kind regards,

Shelly

Shelly Wells \* Environmental Specialist-Advanced  
Environmental Bureau  
EMNRD-Oil Conservation Division  
1220 S. St. Francis Drive|Santa Fe, NM 87505  
(505)469-7520 [Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Ashley Holmes <aholmes@ensolum.com>  
**Sent:** Monday, April 21, 2025 3:18 PM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Cc:** eco@nmslo.gov; Devin Hencmann <dhencmann@ensolum.com>; Stuart Hyde <shyde@ensolum.com>; Billy Ginn <William.Ginn@hilcorp.com>; Fatima Smith <fsmith@ensolum.com>  
**Subject:** [EXTERNAL] nAPP2502719434 - State Z Production Facility Extension Request (API #30-025-04248)

You don't often get email from aholmes@ensolum.com. [Learn why this is important](#)

**CAUTION:** This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom it May Concern,

On behalf of Hilcorp Energy Company, we are submitting this request for a 90-day extension to the reporting deadline for the State Z Production Facility release located in Lea County (site coordinates 32.576988, -103.301699). On February 4, 2025, Ensolum personnel were at the site to collect composite samples within and around the onsite excavation after the removal of impacted soil. Three (3) composite soil samples (CS01-CS03) were collected within the excavation and one (1) along the flow path (CS04) of the release south of the tank battery at depths ranging from 0.5 feet to 3.5 feet bgs. Upon review of the analytical data, Ensolum personnel returned to the site on February 21, 2025, to delineate impacts vertically within the excavation. Three (3) delineation borings (BH01A/BH01B - BH03A/BH03B) were advanced via hand auger to depths ranging from 6 feet to 12.5 feet bgs. Due to refusal being encountered at 12.5 feet via hand auger, a drill rig will be scheduled to delineate the remaining lateral and vertical extent of impacts. Additionally, approximately 136 cubic yards of impacted soil have already been removed from the site. At this time, a drill rig is being scheduled to continue delineation efforts.

We respectfully request an extension of the reporting deadline from April 26, 2025, to July 25, 2025.

If you have any questions or concerns, please feel free to contact me or Stuart Hyde at [shyde@ensolum.com](mailto:shyde@ensolum.com) or (970) 903-1607.

Thank you,  
Ashley



**Ashley Holmes, PG**

Senior Geologist

713-817-1947

Ensolum, LLC

in f X

**From:** [Wells, Shelly, EMNRD](#)  
**To:** [Ashley Holmes](#)  
**Cc:** [eco@nmslo.gov](#); [Devin Hencmann](#); [Stuart Hyde](#); [Billy Ginn](#); [Fatima Smith](#); [Bratcher, Michael, EMNRD](#)  
**Subject:** RE: [EXTERNAL] nAPP2502719434 - State Z Production Facility Extension Request (API #30-025-04248)  
**Date:** Tuesday, April 22, 2025 9:09:58 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)

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[ \*\*EXTERNAL EMAIL\*\* ]

Good morning Ashley,

The extension request for NAPP2502719434 STATE Z PRODUCTION FACILITY is approved. The new due date to submit your updated remediation plan or closure report to the OCD is July 25, 2025. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Kind regards,

Shelly

**Shelly Wells** \* Environmental Specialist-Advanced  
Environmental Bureau  
EMNRD-Oil Conservation Division  
1220 S. St. Francis Drive|Santa Fe, NM 87505  
(505)469-7520 [Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Ashley Holmes <[aholmes@ensolum.com](mailto:aholmes@ensolum.com)>  
**Sent:** Monday, April 21, 2025 3:18 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** [eco@nmslo.gov](mailto:eco@nmslo.gov); [Devin Hencmann <Devin.Hencmann@ensolum.com>](mailto:Devin.Hencmann@ensolum.com); [Stuart Hyde <Stuart.Hyde@ensolum.com>](mailto:Stuart.Hyde@ensolum.com); [Billy Ginn <William.Ginn@hilcorp.com>](mailto:William.Ginn@hilcorp.com); [Fatima Smith <Fatima.Smith@ensolum.com>](mailto:Fatima.Smith@ensolum.com)  
**Subject:** [EXTERNAL] nAPP2502719434 - State Z Production Facility Extension Request (API #30-025-04248)

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**CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.**

To Whom it May Concern,

On behalf of Hilcorp Energy Company, we are submitting this request for a 90-day extension to the reporting deadline for the State Z Production Facility release located in Lea County (site coordinates 32.576988, -103.301699). On February 4, 2025, Ensolum personnel were at the site to collect composite samples within and around the onsite excavation after the removal of impacted soil. Three (3) composite soil samples (CS01-CS03) were collected within the excavation and one (1) along the flow path (CS04) of the release south of the tank battery at depths ranging from 0.5 feet to 3.5 feet bgs. Upon review of the analytical data, Ensolum personnel returned to the site on February 21, 2025, to delineate impacts vertically within the excavation. Three (3) delineation borings (BH01A/BH01B - BH03A/BH03B) were advanced via hand auger to depths ranging from 6 feet to 12.5 feet bgs. Due to refusal being encountered at 12.5 feet via hand auger, a drill rig will be scheduled to delineate the remaining lateral and vertical extent of impacts. Additionally, approximately 136 cubic yards of impacted soil have already been removed from the site. At this time, a drill rig is being scheduled to continue delineation efforts.

We respectfully request an extension of the reporting deadline from April 26, 2025, to July 25, 2025.

If you have any questions or concerns, please feel free to contact me or Stuart Hyde at [shyde@ensolum.com](mailto:shyde@ensolum.com) or (970) 903-1607.

Thank you,  
Ashley



**Ashley Holmes, PG**

Senior Geologist

713-817-1947

[Ensolum, LLC](#)

in f X

**Kalei Jennings**

---

**From:** Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>  
**Sent:** Wednesday, November 12, 2025 5:28 PM  
**To:** Kalei Jennings  
**Cc:** william.ginn@hilcorp.com; Devin Hencmann; Bratcher, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility Extension Request (API # 30-025-04248)

[\*\*EXTERNAL EMAIL\*\*]

Hi Kalei,

You are welcome for the extension approval. If you have collected sidewall samples measuring no more than 200 square feet you should be able to backfill however I see no interstitial sidewall samples meaning between the varying depths of excavation for instance between FS08 and FS09 which go down to 27/28' and FS07 which is down to 17' or between FS01 which was excavated to 7.5' and FS21 which was excavated to 28,' for instance. In addition, if you are not extending the excavation towards FS12 for instance as it looks like you got clean samples at 4' there, then sidewall samples are required to be collected at the southern boundary of FS08 before you fill it in and the same with FS09, FS10, FS25.

I hope this helps,

Shelly

**Shelly Wells** \* Senior Environmental Scientist  
Environmental Bureau  
EMNRD-Oil Conservation Division  
1220 S. St. Francis Drive|Santa Fe, NM 87505  
(505)469-7520 [Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Kalei Jennings <kjennings@ensolum.com>  
**Sent:** Wednesday, November 12, 2025 1:48 PM  
**To:** Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>  
**Cc:** william.ginn@hilcorp.com; Devin Hencmann <dhencmann@ensolum.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility Extension Request (API #30-025-04248)

Hi Shelly,

Thank you for the extension approval—this is a complex site that requires significant coordination, so the additional time is greatly appreciated.

Based on our recent sampling event, a sufficient number of sidewall samples have been collected to proceed with backfilling the northern excavation area. Please see the attached analytical table and figure for reference.

To maintain progress and ensure safe operations, Hilcorp respectfully requests approval to backfill the northern portion, which is necessary before remediation can proceed in the southern area.

Please let me know if you have any questions.

Thank you,



**Kalei Jennings**

Senior Managing Scientist

817-683-2503

[Ensolum, LLC](http://www.ensolum.com)

in f X

---

**From:** Wells, Shelly, EMNRD <[Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)>

**Sent:** Tuesday, October 28, 2025 12:26 PM

**To:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>

**Cc:** [william.ginn@hilcorp.com](mailto:william.ginn@hilcorp.com); Devin Hencmann <[dhencmann@ensolum.com](mailto:dhencmann@ensolum.com)>; Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>

**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility Extension Request (API #30-025-04248)

[ \*\*EXTERNAL EMAIL\*\* ]

Hi Kalei,

A 90-day extension is approved for nAPP2502719434 STATE Z PRODUCTION FACILITY. A remediation closure report must be submitted to the OCD Permitting website no later than January 21, 2026. Please include a copy of this and all notifications in the report to ensure the notifications are documented in the project file.

Permission to backfill the northern excavation area is not approved until the correct number of sidewall samples have been collected pursuant to 19.15.29.12.D NMAC.

Kind regards,

Shelly

**Shelly Wells** \* Senior Environmental Scientist

Environmental Bureau

EMNRD-Oil Conservation Division

1220 S. St. Francis Drive|Santa Fe, NM 87505

(505)469-7520 [Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)

<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>

**Sent:** Thursday, October 23, 2025 3:50 PM

**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>

Cc: Billy Ginn <[william.ginn@hilcorp.com](mailto:william.ginn@hilcorp.com)>; Devin Hencmann <[dhencmann@ensolum.com](mailto:dhencmann@ensolum.com)>

Subject: [EXTERNAL] NAPP2502719434 - State Z Production Facility Extension Request (API #30-025-04248)

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To Whom it May Concern,

On behalf of Hilcorp Energy Company, we are submitting this correspondence to provide a remediation progress update and request a 90-day extension for the State Z Production Facility release (Incident Number NAPP2502719434) located in Lea County, New Mexico (32.576988, -103.301699). A previous extension request was submitted on July 25, 2025, following initial excavation and delineation efforts, Hilcorp shifted its remediation strategy to aggressive excavation and offsite disposal due to historical subsurface impacts. To date, 3,840 cubic yards of impacted soil have been removed, reaching a depth of 28 feet below ground surface. Hilcorp developed an engineered plan to excavate below 20 feet and required additional time to complete this work.

Recent analytical results confirm that NMOCD Table 1 Closure Criteria has been achieved in the northern portion of the excavation. However, due to engineered sloping and safety constraints, Hilcorp cannot proceed with remediation of the southern extent until the northern portion is backfilled. The current excavation has expanded to occupy the entire pad, eliminating space for safe material stockpiling and restricting equipment movement. Attempting to relocate equipment or operate in the southern area without backfilling would pose significant risks to personnel, including potential collapse of excavation walls, equipment instability, and disturbance of off-pad areas that are not permitted for access. To maintain progress and safely continue work, Hilcorp respectfully requests permission to backfill the northern portion and extend the reporting deadline from October 23, 2025, to January 21, 2026.

If you have any questions or concerns, please feel free to contact me or Billy Ginn at [william.ginn@hilcorp.com](mailto:william.ginn@hilcorp.com) or (832) 561-4185.

Thank you,



**Kalei Jennings**  
Senior Managing Scientist  
817-683-2503  
[Ensolum, LLC](https://www.ensolum.com)  
in f X

**Kalei Jennings**

---

**From:** Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>  
**Sent:** Wednesday, January 7, 2026 12:40 PM  
**To:** Kalei Jennings  
**Cc:** Bratcher, Michael, EMNRD; Devin Hencmann; Romero, Rosa, EMNRD; Billy Ginn; mhenderson@hilcorp.com; Wells, Shelly, EMNRD  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility - Variance Sampling Request

[\*\*EXTERNAL EMAIL\*\*]

Kalei,

Thank you for the figure and table. C-141Ns have been submitted for sampling to occur on 1/14-1/16/2025. Are the samples collected on this date going to be from the portion of the excavation that needs to be backfilled in order to gain access the contamination that is still in place?

Thank you,

**Brittany Hall** ● Environmental Field Compliance Supervisor  
Environmental Field Compliance Group  
EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87410  
505.517.5333 | [Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov)  
<http://www.emnrd.nm.gov/ocd/>

Effective 12/1/2024: OCD has updated guidance on karst potential occurrence zones. This notice can be found at: <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> under “2024 OCD ANNOUNCEMENTS AND NOTIFICATIONS”.

The Digital C-141 guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> or <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

---

**From:** Kalei Jennings <kjennings@ensolum.com>  
**Sent:** Tuesday, January 6, 2026 3:24 PM  
**To:** Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>  
**Cc:** Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Devin Hencmann <dhenemann@ensolum.com>; Romero, Rosa, EMNRD <RosaM.Romero@emnrd.nm.gov>; Billy Ginn <william.ginn@hilcorp.com>; mhenderson@hilcorp.com  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility - Variance Sampling Request

Some people who received this message don't often get email from [kjennings@ensolum.com](mailto:kjennings@ensolum.com). [Learn why this is important](#)

Hi Brittany,

Please see referenced attachments. Samples were not collected on 12/16 and 12/17 as originally scheduled due to one call issues.

Please let me know if you have any additional questions.

Thank you,



**Kalei Jennings**

Senior Managing Scientist

817-683-2503

[Ensolum, LLC](mailto:kjennings@ensolum.com)

in f X

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**From:** Hall, Brittany, EMNRD <[Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov)>  
**Sent:** Thursday, December 18, 2025 2:26 PM  
**To:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>  
**Cc:** Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>; Devin Hencmann <[dhencmann@ensolum.com](mailto:dhencmann@ensolum.com)>;  
Romero, Rosa, EMNRD <[RosaM.Romero@emnrd.nm.gov](mailto:RosaM.Romero@emnrd.nm.gov)>; Billy Ginn <[william.ginn@hilcorp.com](mailto:william.ginn@hilcorp.com)>;  
[mhenderson@hilcorp.com](mailto:mhenderson@hilcorp.com)  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility - Variance Sampling Request

[\*\*EXTERNAL EMAIL\*\*]

Kalei,

Thank you for the response. Your response refers to attached tables and figures, but there were no figures or tables attached to the email. Can you please resend the referenced attachments?

Additionally, C-141Ns were submitted on 12/11/2025 for sampling to occur on 12/16 and 12/17/2025. Were samples collected on these days for the northern portion of the excavation?

Thank you,

**Brittany Hall** ● Environmental Field Compliance Supervisor

Environmental Field Compliance Group

EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

505.517.5333 | [Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov)

<http://www.emnrd.nm.gov/oecd/>

**Effective 12/1/2024:** OCD has updated guidance on karst potential occurrence zones. This notice can be found at: <https://www.emnrd.nm.gov/oecd/oecd-announcements-and-notifications/> under "2024 OCD ANNOUNCEMENTS AND NOTIFICATIONS".

The Digital C-141 guidance documents can be found at <https://www.emnrd.nm.gov/oecd/oecd-announcements-and-notifications/> or <https://www.emnrd.nm.gov/oecd/oecd-forms/>.

---

**From:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>  
**Sent:** Monday, December 15, 2025 3:16 PM  
**To:** Romero, Rosa, EMNRD <[RosaM.Romero@emnrd.nm.gov](mailto:RosaM.Romero@emnrd.nm.gov)>; Billy Ginn <[william.ginn@hilcorp.com](mailto:william.ginn@hilcorp.com)>;  
[mhenderson@hilcorp.com](mailto:mhenderson@hilcorp.com)  
**Cc:** Hall, Brittany, EMNRD <[Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov)>; Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>;  
Devin Hencmann <[dhencmann@ensolum.com](mailto:dhencmann@ensolum.com)>  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility - Variance Sampling Request

Good afternoon,

A *Remediation Plan* will be submitted by January 21, 2026, and will include continued excavation of impacted soil which has been ongoing since February 2025 and includes removal of all operating equipment on site, removal of 3,840 of impacted soil, benching and shoring to access impacted soil as deep as 28 feet bgs, and surgical removal of soil around subsurface infrastructure. The latest communication between Hilcorp and NMOCD was to avoid excavating undisturbed material off site (not only more disruptive to the environment but also requiring extended timelines to gain access) and to facilitate quicker sampling and, therefore, next actions to access the residual impacted material. Hilcorp believes both of those actions are more protective of the environment and worthy of another variance that will ultimately finish this remediation.

Hilcorp has been excavating historic impacts at this location that significantly extend beyond the original release discovered on January 26, 2025. The size of the location and the extent of impacts requiring excavation have posed challenges with having enough room to safely dig, stockpile impacted material, and truck offsite for disposal. There is a need to back fill the portion of the excavation that no longer contains impacted soil exceeding Table 1 closure standards in order to safely access the remaining impacted soil on site. Hilcorp engaged the NMOCD to discuss the need to partially backfill the excavation. The variance request for the sampling notification was an attempt to take advantage of an earlier than anticipated sampling opportunity. This sampling was in response to correspondence with NMOCD concerning sample frequency for the closure/backfill of a portion of the excavation. In that correspondence, the NMOCD determined not enough samples had been collected. Hilcorp agreed to collect additional samples from the portion of the excavation that needs to be backfilled.

A summary and timeline of actions are below.

#### Timeline of Actions

- **January 26, 2025** – Incident discovered, 35 bbl crude release, 31 bbl recovered.
- **February 2025** – Initial excavation to address release began, working around onsite infrastructure to remove 136 cubic yards of impacted soil. During this initial excavation effort, historic impacts were encountered that were not associated with the original release. The excavation progressed as far as it possible within the confines of existing site infrastructure, and further investigation was needed to understand the extent of historical impacts outside the extent of the initial release.
- **March 2025** – Sampling and delineation effort to delineate and establish vertical extent of historical impacts and evaluate remediation options. To work around the onsite infrastructure safely, a hand auger was utilized to investigate vertical impacts. Historic impacts were observed to approximately 12 feet below ground surface (bgs), where refusal was encountered. Due to the extent of historic impacts multiple remediation options and costs were assessed; however, any remediation other than excavation would require additional delineation with a drill rig for development of a remediation work plan. Onsite infrastructure created access issues that needed to be considered, as well as an extended timeline to schedule a drill rig.
- **April 22, 2025** – First 90-day extension approved.
- **May 2025** - During preparation for delineation with a drill rig it became apparent that in order to access all delineation locations with a drill rig much of the site infrastructure would need to be removed. Since so much of the location would need to be removed, Hilcorp decided to proceed with excavation and offsite disposal.

- **June 2025** - Site deconstruction occurred in preparation for excavation. High concentrations of H<sub>2</sub>S in flow lines and tanks were encountered and mitigation of those safety risks slowed deconstruction work.
- **July 08, 2025** – Excavation resumed with additional hand auger delineation for site planning. Approximately 1,600 cubic yards of impacted soil were removed, and the excavation progressed to a depth of 19 feet bgs; however, soil exceeding the strictest NMOCD Table 1 Closure Criteria remained.
- **July 25, 2025** – Extension request submitted to continue excavation.
- **July 29, 2025** – Second 90-day extension approved.
- **August/September/October 2025** – Continued excavation to greater than 20 feet bgs, requiring the excavation to be engineered by a licensed engineer and extensive benching and shoring before impacted soil at depth could be accessed. By October 28, 2025, greater than 3,840 cubic yards of impacted soil had been removed and disposed, and double that volume had been excavated and stockpiled on site for benching and shoring of the sidewalls to safely access impacts as deep as 28 feet bgs. Confirmation sampling indicated all impacted soil had still not been removed and a third extension was requested to continue excavation.
- **October 28, 2025** – Third 90-day extension approved.
- **November 2025** - To be able to access impacted soil in the southern portion of the excavation and avoid disturbing state-owned land offsite, Hilcorp requested to backfill the northern portion of the excavation. Analytical results (11/11/25) confirmed that NMOCD Table 1 Closure Criteria were achieved in confirmation soil samples collected from the northern portion of the excavation (see table and figure attached). Hilcorp worked with the NMOCD to review the sample data collected and attempt to obtain approval to backfill portions of the excavation to access the residual impacts in the southern end.
  - The backfill request was denied and Hilcorp planned to collect additional samples (correspondence related to this request is attached)
- **December 2025** – Hilcorp submitted a sample notification, but a shift in construction schedules presented an opportunity to collect the additional confirmation samples sooner than anticipated and a sample notification variance was submitted.

#### Remediation Progress

- Impacts related to the original 35 bbl release were excavated within 10 days of discovery.
- Historic impacts were encountered significantly increasing the volume of soil needing to be removed.
- The location equipment and infrastructure containing H<sub>2</sub>S had to be completely stripped and removed from location.
- To date, 3,840 cubic yards of impacted soil have been removed, reaching a depth of 28 feet below ground surface.
- An engineered plan had to be developed to excavate below 20 feet, requiring additional time to complete.
- Most recent analytical results (11/11/25) confirm that NMOCD Table 1 Closure Criteria has been achieved in the northern portion of the excavation (see table and figure attached).

- Sampling event occurred after the NMOCD denied Hilcorp permission to backfill the northern area, email sent on 10/28/25.

Current Status

- Excavation has expanded to occupy the entire pad, eliminating safe space for stockpiling and restricting equipment movement.
- Remediation of the southern portion cannot proceed until the northern portion is backfilled.
- Attempting to remediate the southern area without backfilling would pose significant safety risks, including potential wall collapse, equipment instability, and disturbance of off-pad areas not permitted for access.
- Hilcorp is seeking concurrence with the NMOCD to backfill the northern portion of the excavation before backfilling and resuming excavation activities.
- A Remediation workplan will be submitted the NMOCD by January 21, 2026.

Please let me know if you have any questions.

Thank you.



**Kalei Jennings**  
 Senior Managing Scientist  
 817-683-2503  
[Ensolum, LLC](mailto:kjennings@ensolum.com)  
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**From:** Romero, Rosa, EMNRD <[RosaM.Romero@emnrd.nm.gov](mailto:RosaM.Romero@emnrd.nm.gov)>  
**Sent:** Wednesday, December 10, 2025 10:40 AM  
**To:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>; [SJRegulatoryNotices@hilcorp.com](mailto:SJRegulatoryNotices@hilcorp.com); Matt Vicenik <[mvicenik@hilcorp.com](mailto:mvicenik@hilcorp.com)>  
**Cc:** Hall, Brittany, EMNRD <[Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov)>; Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>  
**Subject:** RE: [EXTERNAL] NAPP2502719434 - State Z Production Facility - Variance Sampling Request

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**[\*\*EXTERNAL EMAIL\*\*]**

Good afternoon,

The variance request from the 48-hour sampling notification requirement (C-141N) for incident NAPP2502719434 is denied.

Pursuant to 19.15.29.14(A)(1)–(2) NMAC, a variance request must include:

1. a detailed statement explaining the need for the variance; and
2. a detailed written demonstration that the variance will provide equal or greater protection of fresh water, public health, and the environment.

The explanation provided “A sampling notification was submitted for December 11, 2025; however, this

submission did not meet the 48-hour advance notice requirement” does not satisfy these requirements. This statement does not demonstrate a need for a variance, nor does it provide any information showing how the requested variance would offer equal or better environmental protection. Accordingly, OCD will rescind the automatic approval associated with sampling notification application ID 533562 and will reject the application as non-compliant with 19.15.29 NMAC.

In addition, OCD is requesting further information regarding work completed at NAPP2502719434. A remediation plan has not been submitted for this incident, which has a discovery date of January 26, 2025. Three 90 day extension requests were previously approved on April 22, July 29, and October 28, 2025. Please provide a synopsis and timeline of all actions performed to date, including a current status update of the remediation efforts as of today.

No additional extension requests will be approved for this incident. If a complete and accurate C-141 either a remediation plan and/or a remediation closure report is not submitted by January 21, 2026, as required under the final approved extension, Hilcorp may be subject to compliance and enforcement penalties pursuant to 19.15.5 NMAC.

Regards,  
Rosa Romero



**New Mexico Energy Minerals and Natural Resources Department**  
**Oil Conservation Division**  
**Rosa Romero**  
**Environmental Bureau Chief**  
(575) 636-0353  
[RosaM.Romero@emnrd.nm.gov](mailto:RosaM.Romero@emnrd.nm.gov)  
<https://www.emnrd.nm.gov/ocd/>

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**From:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>  
**Sent:** Tuesday, December 9, 2025 4:05 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Subject:** [EXTERNAL] NAPP2502719434 - State Z Production Facility - Variance Sampling Request

**CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.**

All,

Hilcorp respectfully requests a variance from the 48-hour sampling notification requirement (C-141N) related to the spill at the State Z Production Facility (Incident Number NAPP2502719434). A sampling notification was submitted for December 11, 2025; however, this submission did not meet the 48-hour advance notice requirement.

Hilcorp requests approval for the samples collected on December 11, 2025, to be accepted for closure purposes, contingent upon the results meeting applicable closure criteria. Notification for this sampling date has already been submitted (12/9).

Approval of this variance will allow the correspondence to be incorporated into ongoing correspondence with NMOCD. Hilcorp has continued to advance progress at the Site and is working towards approval to proceed with backfilling activities prior to remediation in the southern area.

Thank you,



**Kalei Jennings**

Senior Managing Scientist

817-683-2503

[Ensolum, LLC](#)

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 545230

**QUESTIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 545230
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2502719434
Incident Name	NAPP2502719434 STATE Z PRODUCTION FACILITY @ 30-025-04248
Incident Type	Release Other
Incident Status	Remediation Plan Received
Incident Well	[30-025-04248] STATE Z #001

<b>Location of Release Source</b>	
<i>Please answer all the questions in this group.</i>	
Site Name	STATE Z PRODUCTION FACILITY
Date Release Discovered	01/26/2025
Surface Owner	State

<b>Incident Details</b>	
<i>Please answer all the questions in this group.</i>	
Incident Type	Release Other
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

<b>Nature and Volume of Release</b>	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Cause: Overflow - Tank, Pit, Etc.   Tank (Any)   Crude Oil   Released: 35 BBL   Recovered: 31 BBL   Lost: 4 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 545230

**QUESTIONS (continued)**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 545230
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>Yes</b>
Reasons why this would be considered a submission for a notification of a major release	<b>From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.</b>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.*

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 01/21/2026
--	--

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QUESTIONS, Page 3

Action 545230

**QUESTIONS (continued)**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 545230
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

**Site Characterization**  
*Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between ½ and 1 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

**Remediation Plan**  
*Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	48
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	78.2
GRO+DRO (EPA SW-846 Method 8015M)	48.4
BTEX (EPA SW-846 Method 8021B or 8260B)	0.3
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1

*Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.*

On what estimated date will the remediation commence	02/14/2025
On what date will (or did) the final sampling or liner inspection occur	01/14/2026
On what date will (or was) the remediation complete(d)	01/14/2026
What is the estimated surface area (in square feet) that will be reclaimed	2968
What is the estimated volume (in cubic yards) that will be reclaimed	3840
What is the estimated surface area (in square feet) that will be remediated	2968
What is the estimated volume (in cubic yards) that will be remediated	3840

*These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed. The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.*



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QUESTIONS, Page 5

Action 545230

**QUESTIONS (continued)**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 545230
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Deferral Requests Only</b>	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 545230

**QUESTIONS (continued)**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 545230
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Sampling Event Information</b>	
Last sampling notification (C-141N) recorded	<b>540602</b>
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	<b>01/16/2026</b>
What was the (estimated) number of samples that were to be gathered	<b>25</b>
What was the sampling surface area in square feet	<b>7730</b>

**Remediation Closure Request**

*Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.*

Requesting a remediation closure approval with this submission	<b>No</b>
--	-----------

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CONDITIONS

Action 545230

**CONDITIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 545230
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**CONDITIONS**

Created By	Condition	Condition Date
scwells	Remediation plan approved with the following condition: As OCD does not have verification that the excavation south of FS08, FS09, FS10 and FS25 will need to be excavated to a depth of 28', sidewall samples representing no more than 200 ft <sup>2</sup> must be collected along the southern boundary of the current excavation, prior to backfill to confirm that all impacts have been remediated. Submit a remediation closure report to the OCD by 5/5/2026.	2/4/2026