



## VARIANCE REQUEST & CLOSURE REPORT

Property:

**Harroun 15 #008**

**Unit F, Section 15, Township 24S, Range 29E  
Eddy County, New Mexico  
32.321947° N, 103.97515° W  
NMOCD Incident ID: nMAP1826380135**

December 8, 2023

Ensolum Project No. 03B1417046

Prepared for:

**Oxy USA Inc.  
P.O. Box 4294  
Houston, TX 77210  
Attn: Mr. Wade Dittrich**

Prepared by:

  
Beaux Jennings  
Senior Project Manager

  
Heather Holthaus  
Senior Project Manager



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# ENSOLUM

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### 1.0 INTRODUCTION

#### 1.1 Executive Summary

- On August 29, 2018, a release of crude oil and produced water was reported from a water transfer line due to a failure in the line at the Harroun 15 #008, hereinafter referred to as the "Site". Approximately 10 barrels (bbls) of crude oil were released onto the ground surface with approximately 5 bbls recovered. Additionally, 20 barrels bbls of produced water were released onto the ground surface with approximately 15 bbls recovered. The release impacted an area approximately 150 feet long by 150 feet wide. The line was shut down and repaired and initial response actions were conducted at the Site.
- Initial soil delineation activities were conducted between September 17 and October 10, 2018 by BBC International Incorporated (BBC) on behalf of Oxy USA Inc. (Oxy). Based on soil delineation sample results, the vertical release extent in the vicinity of sample points SP-5 and SP-6 reached the initial groundwater-bearing unit (GWBU).
- In addition, BBC installed a soil boring (SB-1) to investigate the initial GWBU. Based on the groundwater sampling results, the chloride concentration was identified at 41,000 milligrams per liter (mg/L).
- Excavation activities were conducted based on visual evidence of impairment and laboratory analytical results. Between February 22 and June 13, 2023, Ensolum arrived on-Site and collected a total of 111 composite soil samples from 55 locations on the excavation floor (FS-1 through FS-55), and 42 composite soil samples from 23 locations on the excavation sidewalls (SW-1 through SW-23). The composite floor samples were collected from depths ranging from 8 to 16 feet below ground surface (bgs), and the composite sidewall samples were collected from depths ranging from 0 to 12 feet bgs.
- Based on the laboratory analytical results of the final soil samples, additional excavation is warranted. However, due to the location of the Site, additional excavation is not feasible. The Site is situated between overhead electric lines, multiple subsurface pipelines, and multiple above-ground high-pressure fiberglass flowlines. Expansion of the excavation would require it to be properly sloped and benched, prior to additional vertical excavation activities. Due to the elevated chloride concentrations in soils left in place, a liner was placed at approximately 12 feet bgs throughout the horizontal extent of the excavation prior to backfill activities.
- On October 3, 2023, Ensolum and Envirotech Drilling & Environmental Services (Envirotech) installed two background monitoring wells (BMW-1 and BMW-2) to gather background data for the initial GWBU. Background monitoring well BMW-1 had a chloride concentration of 5,510 mg/L and a total dissolve solids (TDS) concentration of 18,700 mg/L. Background monitoring well BMW-2 had a chloride concentration of 6,160 mg/L and a TDS concentration of 16,300 mg/L.

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- The primary objective of the closure activities was to identify and reduce chemical of concern (COC) concentrations in the on-Site soils to below the applicable New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) Closure Criteria for Soils Impacted by a Release using the New Mexico Administrative Code (NMAC) 19.15.29 Releases as guidance.
- Subsequent to the results of the confirmation soil sampling, the excavated soils were removed and taken off-Site for proper disposal. A liner was placed in the bottom of the excavation and the area was backfilled with clean fill material, and then contoured to the original surrounding grade.

**Based on the identified siting criteria, cleanup goals for soil remaining in place at the Site should be excluded from the NMOCD Closure Criteria. Based on the identified background TDS concentrations at the Site, the groundwater should be excluded from the NMWQCC Standards.**

Based on the Site assessment activities, laboratory analytical results and existing Site conditions, Oxy is requesting a variance to leave chloride impacted soil in place from approximately 12 feet bgs to 25 feet bgs. Although chloride impacts remain in place at the Site, the groundwater sample results for the two background monitoring wells (BMW-1 and BMW-2) show chloride and TDS concentrations above the applicable NMWQCC Standards. In addition, the background TDS concentrations exceed the 10,000 mg/L limit as defined by NMAC 20.6.2.5301(D) ("ground water of the state of New Mexico" means, consistent with 20.6.2.5001 NMAC, an aquifer that contains ground water having a TDS concentration of 10,000 mg/l or less"); therefore, the NMWQCC Standards should not apply to the Site.

## 1.2 Site Description & Background

<b>Operator:</b>	Oxy USA Inc. (Oxy)
<b>Site Name:</b>	Harroun 15 #008
<b>Location:</b>	32. 21947 N, 103.97515 W Eddy County, New Mexico
<b>Property:</b>	Oxy USA Inc. (Private)
<b>Regulatory:</b>	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

The Topographic Map depicting the location of the Site is included as **Figure 1**, the Site Vicinity Map is included as **Figure 2**, the Site Map indicating the locations of composite soil samples is included as **Figure 3A/Figure 3B**, and the Closure Criteria Map is included as **Figure 4** in **Appendix A**.

## 1.3 Project Objective

The primary objective of the closure activities was to identify and reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria concentrations.



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## 2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. In order to address activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references NMAC 19.15.29 *Releases*, which establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action. Ensolum utilized information provided by Oxy, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD Imaging database to determine the appropriate closure criteria for the Site.

- The Site is not located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or any other significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.
- The Site is not located within 300 feet from an occupied permanent residence, school, hospital, institution, or church.
- According to the OSE WRSS database there are no private, domestic freshwater wells used by less than five (5) households for domestic or stock water purposes identified within 500 feet of the Site.
- According to the OSE WRSS database there are no freshwater wells identified within 1,000 feet of the Site as declared in the previous bullet.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- Based on the Karst Occurrence Potential (.kmz) provided by the Bureau of Land Management (BLM), the Site is not located within an unstable area.
- The Site is noted to be located within a 100-year flood plain.
- Due to the lack of depth to groundwater information and water quality data available, two background monitoring wells (BMW-1 and BMW-2) were installed in the vicinity of the Site on October 3, 2023 by Ensolum and Envirotech. Each of the background monitoring wells were subsequently developed by Envirotech. Background monitoring well BMW-1 was installed 1,050 feet west of the Site and background monitoring well BMW-2 was installed 560 feet northwest of the Site. The depth to groundwater in the background monitoring wells was identified to be from 21.5 to 23.5 feet bgs. Ensolum returned on November 8, 2023 to conduct groundwater sampling. Background monitoring well BMW-1 had a chloride concentration of 5,510 mg/L and a TDS concentration of 18,700 mg/L. Background monitoring well BMW-2 had a chloride concentration of 6,160 mg/L and a TDS concentration of 16,300 mg/L.

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**Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site should be excluded from the table below:**

Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Method	Limit
≤ 50 feet	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

**Based on the Site assessment activities, laboratory analytical results and existing Site conditions, Oxy is requesting a variance to leave chloride impacted soil in place from approximately 12 feet bgs to 25 feet bgs. Although chloride impacts remain in place at the Site, the groundwater sample results for the two background monitoring wells (BMW-1 and BMW-2) show chloride and TDS concentrations above the applicable NMWQCC Standards. In addition, the background TDS concentrations exceed the 10,000 mg/L limit as defined by NMAC 20.6.2.5301(D) ("ground water of the state of New Mexico" means, consistent with 20.6.2.5001 NMAC, an aquifer that contains ground water having a TDS concentration of 10,000 mg/l or less"); therefore, the NMWQCC Standards should not apply to the Site.**

### 3.0 SOIL REMEDIATION ACTIVITIES

On August 29, 2018, a release of crude oil and produced water was reported from a water transfer line due to a failure in the line at the Harroun 15 #008. Approximately 10 bbls of crude oil were released onto the ground surface with approximately 5 bbls recovered. Additionally, 20 barrels bbls of produced water were released onto the ground surface with approximately 15 bbls recovered. The release impacted an area approximately 150 feet long by 150 feet wide. The line was shut down and repaired and initial response actions were conducted at the Site.

Initial soil delineation activities were conducted between September 17 and October 10, 2018 by BBC on behalf of Oxy. Based on soil delineation sample results, the vertical release extent in the vicinity of sample points SP-5 and SP-6 reached the initial GWBU.

In addition, BBC installed a soil boring (SB-1) to investigate the initial GWBU. Based on the groundwater sampling results, the chloride concentration was identified at 41,000 mg/L.

Excavation activities were conducted based on visual and laboratory evidence of impairment. Between February 22 and June 13, 2023, Ensolum arrived on-Site and collected a total of 111 composite soil samples from 55 locations on the excavation floor (FS-1 through FS-55), and 42 composite soil samples from 23 locations on the excavation sidewalls (SW-1 through SW-23). The composite floor samples were collected from depths ranging from 8 to 16 bgs, and the composite sidewall samples were collected from depths ranging from one to 0 to 12 feet bgs.

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Due to the location of the Site, additional excavation is not feasible. The Site is situated between overhead electric lines, multiple subsurface pipelines, and multiple above-ground high-pressure fiberglass flowlines. Expansion of the excavation would require it to be properly sloped and benched, prior to additional vertical excavation activities. The final excavation area measured approximately 240 feet long by 130 feet wide at the maximum extent, with a depth of 12 feet bgs.

The lithology encountered during the completion of sampling activities consisted primarily of pink and yellow silty sand.

**Figure 3A** identifies approximate delineation soil sample locations and approximate dimensions of the impacted area with respect to the Site. **Figure 3B** identifies floor and sidewall soil sample locations and approximate dimensions of the impacted area with respect to the Site (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

#### 4.0 LABORATORY ANALYTICAL METHODS

The delineation and composite soil samples were analyzed for BTEX utilizing Environmental Protection Agency (EPA) SW-846 Method 8021B, TPH GRO/DRO/MRO utilizing EPA SW-846 Method 8015M, and chloride utilizing EPA Method 4500-Cl B.

The groundwater samples were analyzed for chloride utilizing EPA Method 4500-Cl B/300.0 and/or TDS utilizing EPA Standard Method 2540C.

The samples were collected and placed in laboratory prepared glassware, labeled/sealed using laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were relinquished to Cardinal Laboratories in Hobbs, New Mexico and/or Eurofins Midland laboratory in Midland, TX for standard laboratory analysis.

Laboratory analytical results are summarized in **Table 1** and **Table 2** in **Appendix D**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix E**.

#### 5.0 SOIL DATA EVALUATION

Ensolum compared the benzene, total BTEX, TPH GRO/DRO/MRO, and chloride concentrations associated with the soil samples collected from the delineation activities (SP 1 through SP 7 and SB 1), excavation floor (FS-1 through FS-55), excavation sidewalls (SW-1 through SW-23), and delineation area (NORTH, EAST, WEST and SOUTH) to the applicable New Mexico EMNRD OCD closure criteria.

- Final laboratory analytical results indicate benzene concentrations for the soil samples are below the laboratory sample detection limits (SDLs), which are below the applicable New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- Final laboratory analytical results indicate that total BTEX concentrations for the soil samples below the laboratory SDLs, which are below the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- Final laboratory analytical results indicate combined TPH GRO/DRO/MRO concentrations for the soil samples are below the laboratory SDLs, which are below the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg for groundwater from  $\leq 50$  feet, with one exception. Delineation soil sample SP 6 at 18 feet had a TPH GRO/DRO/MRO concentration of 156 mg/kg, which exceeds the NMOCD Closure Criteria of 100 mg/kg.

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- Laboratory analytical results indicate chloride concentrations for the final composite soil samples are below the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg for groundwater from  $\leq 50$  feet, with exceptions. Delineation soil sample SP 5 (at 12 feet, 15 feet, and 18 feet bgs), delineation soil sample SP 6 (at 12 feet, 15 feet, and 18 feet bgs), delineation soil sample SB 1 (at 20 feet and 25 feet), sidewall (SW-4), and floor samples FS-2 through FS-13, FS-15 through FS-53 had chloride concentrations ranging from 656 mg/kg to 13,300 mg/kg, which exceed the NMOCD Closure Criteria of 600 mg/kg.

**Based on the identified siting criteria, cleanup goals for soil remaining in place at the Site should be excluded from the NMOCD Closure Criteria.**

## 6.0 GROUNDWATER DATA EVALUATION

Initial soil delineation activities were conducted between September 17 and October 10, 2018 by BBC on behalf of Oxy. Based on soil delineation sample results, the vertical release extent in the vicinity of sample points SP-5 and SP-6 reached the initial GWBU.

In addition, BBC installed a soil boring (SB-1) to investigate the initial GWBU. Based on the groundwater sampling results, the chloride concentration was identified at 41,000 mg/L.

Due to the lack of depth to groundwater information and water quality data available, two background monitoring wells (BMW-1 and BMW-2) were installed in the vicinity of the Site on October 3, 2023 by Ensolum and Envirotech. Each of the background monitoring wells were subsequently developed by Envirotech. Background monitoring well BMW-1 was installed 1,050 feet west of the Site and background monitoring well BMW-2 was installed 560 feet northwest of the Site. The depth to groundwater in the background monitoring wells was identified to be from 21.5 to 23.5 feet bgs. Ensolum returned on November 8, 2023 to conduct groundwater sampling. Background monitoring well BMW-1 had a chloride concentration of 5,510 mg/L and a TDS concentration of 18,700 mg/L. Background monitoring well BMW-2 had a chloride concentration of 6,160 mg/L and a TDS concentration of 16,300 mg/L.

Based on the Site assessment activities, laboratory analytical results and existing Site conditions, Oxy is requesting a variance to leave chloride impacted soil in place from approximately 12 feet bgs to 25 feet bgs. Although chloride impacts remain in place at the Site, the groundwater sample results for the two background monitoring wells (BMW-1 and BMW-2) show chloride and TDS concentrations above the applicable NMWQCC Standards. In addition, the background TDS concentrations exceed the 10,000 mg/L limit as defined by NMAC 20.6.2.5301(D) ("ground water of the state of New Mexico" means, consistent with 20.6.2.5001 NMAC, an aquifer that contains ground water having a TDS concentration of 10,000 mg/l or less"); therefore, the NMWQCC Standards should not apply to the Site.

## 7.0 RECLAMATION AND RE-VEGETATION

Subsequent to the results of the final confirmation soil sampling, the identified impacted soils were removed and taken off-Site for proper disposal. A liner was placed in the bottom of the excavation and the area was backfilled with clean fill material, and then contoured to the original surrounding grade.

## 8.0 FINDINGS AND RECOMMENDATION

- On August 29, 2018, a release of crude oil and produced water was reported from a water transfer line due to a failure in the line at the Harroun 15 #008. Approximately 10 bbls of crude oil were released onto the ground surface with approximately 5 bbls recovered. Additionally, 20 barrels bbls of produced water were released onto the ground surface with approximately 15 bbls recovered. The release impacted an area approximately 150 feet long by 150 feet wide. The line was shut down and repaired and initial response actions were conducted at the Site.

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- Based on the laboratory analytical results of the final soil samples, additional excavation is warranted. However, due to the location of the Site, additional excavation is not feasible. The Site is situated between overhead electric lines, multiple subsurface pipelines, and multiple above-ground high-pressure fiberglass flowlines. Expansion of the excavation would require it to be properly sloped and benched, prior to additional vertical excavation activities. Due to the elevated chloride concentrations in soils left in place, a liner was placed at approximately 12 feet bgs throughout the horizontal extent of the excavation prior to backfill activities.
- On October 3, 2023, Ensolum and Envirotech installed two background monitoring wells (BMW-1 and BMW-2) to gather background data for the initial GWBU. Background monitoring well BMW-1 had a chloride concentration of 5,510 mg/L and a TDS concentration of 18,700 mg/L. Background monitoring well BMW-2 had a chloride concentration of 6,160 mg/L and a TDS concentration of 16,300 mg/L.
- The primary objective of the closure activities was to identify and reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD Closure Criteria for Soils Impacted by a Release using the NMAC 19.15.29 Releases as guidance.
- Subsequent to the results of the confirmation soil sampling, the excavated soils were removed and taken off-Site for proper disposal. A liner was placed in the bottom of the excavation and the area was backfilled with clean fill material, and then contoured to the original surrounding grade.

**Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site should be excluded from the NMOCD Closure Criteria. Based on the identified background TDS concentrations at the Site, the groundwater should be excluded from the NMWQCC Standards.**

**Based on the Site assessment activities, laboratory analytical results and existing Site conditions, Oxy is requesting a variance to leave chloride impacted soil in place from approximately 12 feet bgs to 25 feet bgs. Although chloride impacts remain in place at the Site, the groundwater sample results for the two background monitoring wells (BMW-1 and BMW-2) show chloride and TDS concentrations above the applicable NMWQCC Standards. In addition, the background TDS concentrations exceed the 10,000 mg/L limit as defined by NMAC 20.6.2.5301(D) ("ground water of the state of New Mexico" means, consistent with 20.6.2.5001 NMAC, an aquifer that contains ground water having a TDS concentration of 10,000 mg/l or less"); therefore, the NMWQCC Standards should not apply to the Site.**

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## **9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE**

### **9.1 Standard of Care**

Ensolum's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information used in the report (e.g., laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client, as detailed in our proposal.

### **9.2 Limitations**

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings and recommendations are based solely upon data available to Ensolum at the time of these services.

### **9.3 Reliance**

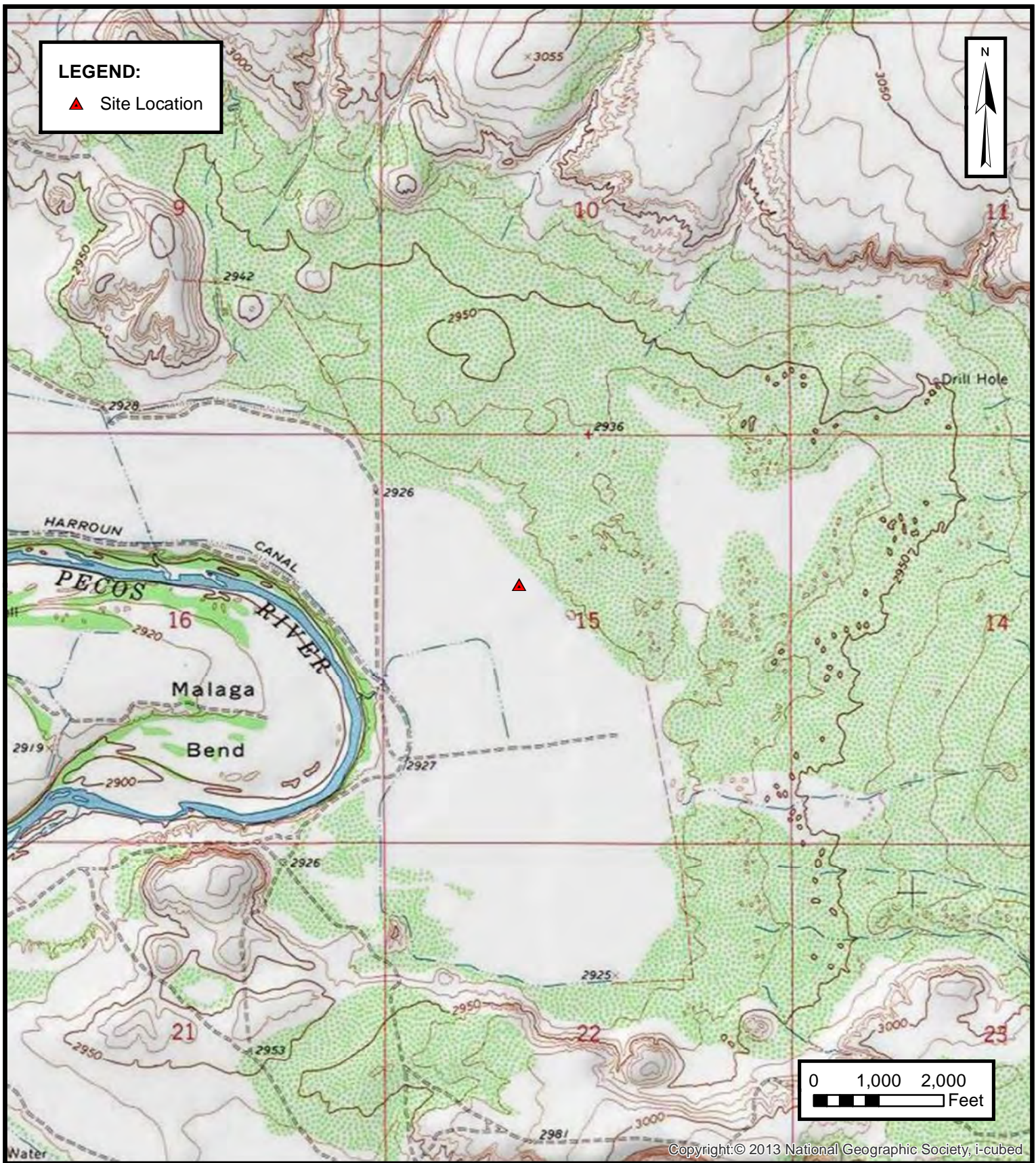
This report has been prepared for the exclusive use of Oxy USA, Inc., and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Oxy USA, Inc. and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.



## APPENDIX A

### Figures





**ENSOLUM**  
Environmental, Engineering and  
Hydrogeologic Consultants

# TOPOGRAPHIC MAP

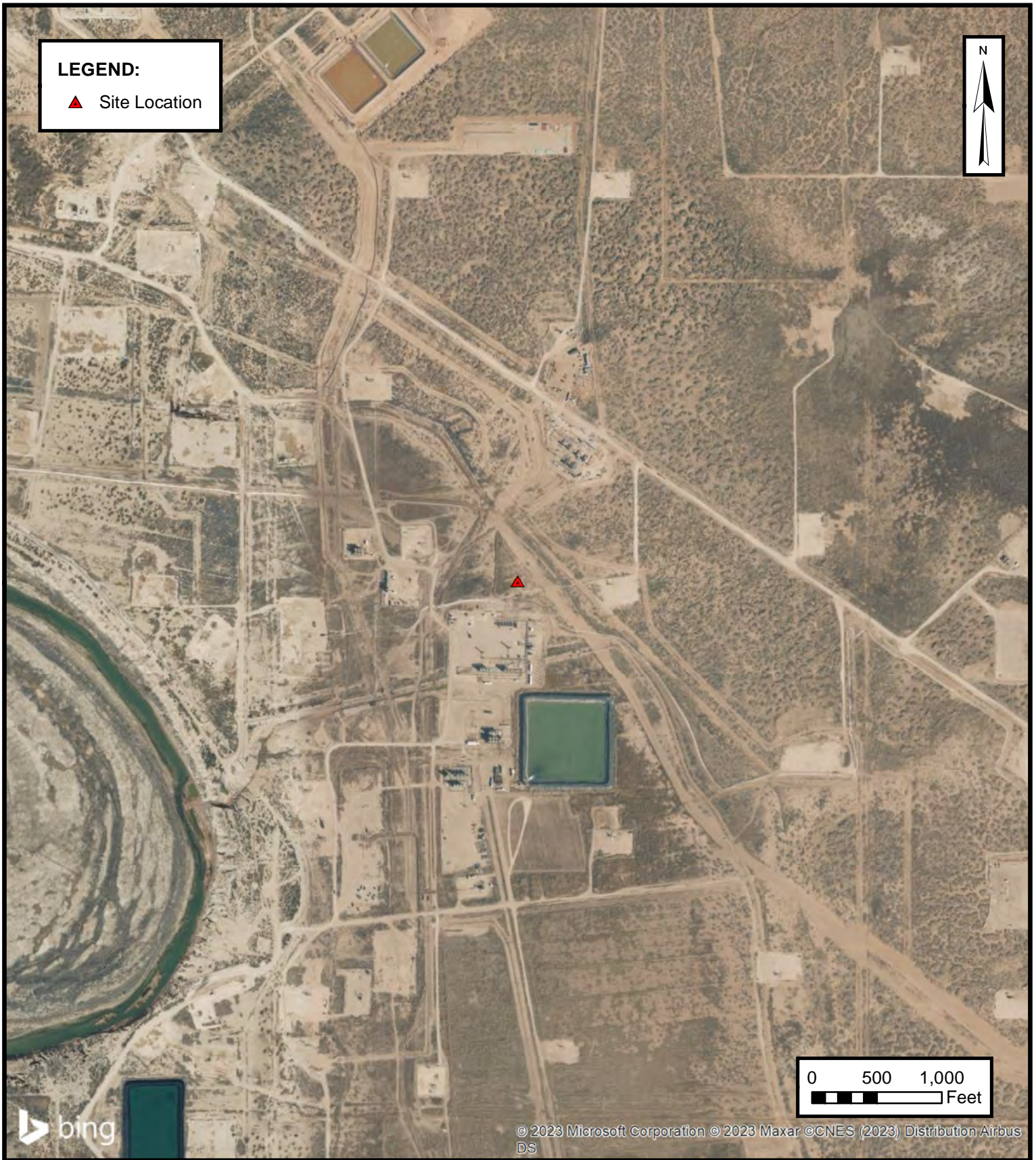
OXY USA INC.  
HARROUN 15 #008  
Unit F, S15, T24S, R29E, Eddy County, New Mexico  
32.21947° N, 103.97515° W

PROJECT NUMBER: 03B1417046

FIGURE

1





**SITE VICINITY MAP**

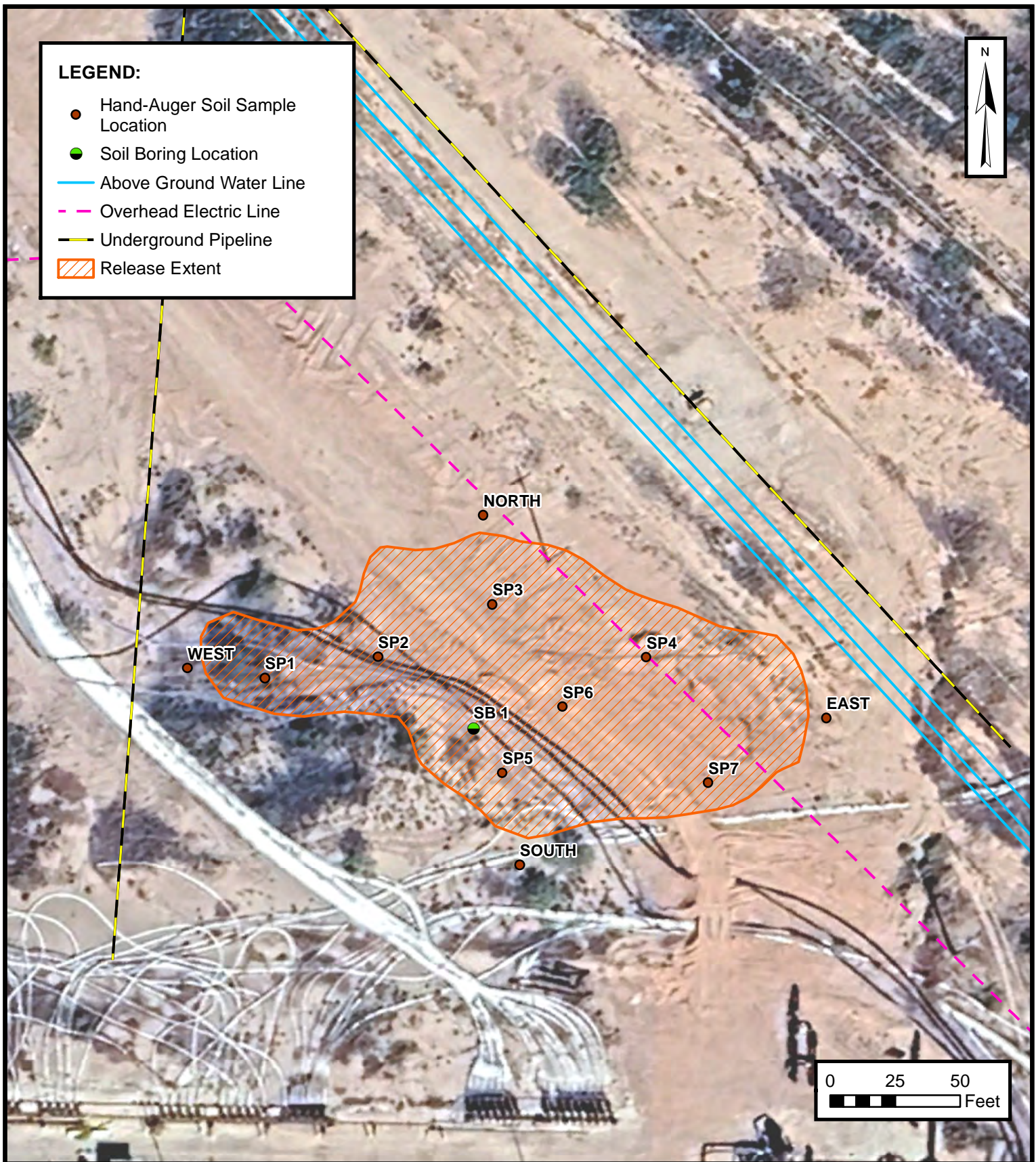
OXY USA INC.  
HARROUN 15 #008  
Unit F, S15, T24S, R29E, Eddy County, New Mexico  
32.21947° N, 103.97515° W

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**FIGURE**

**2**



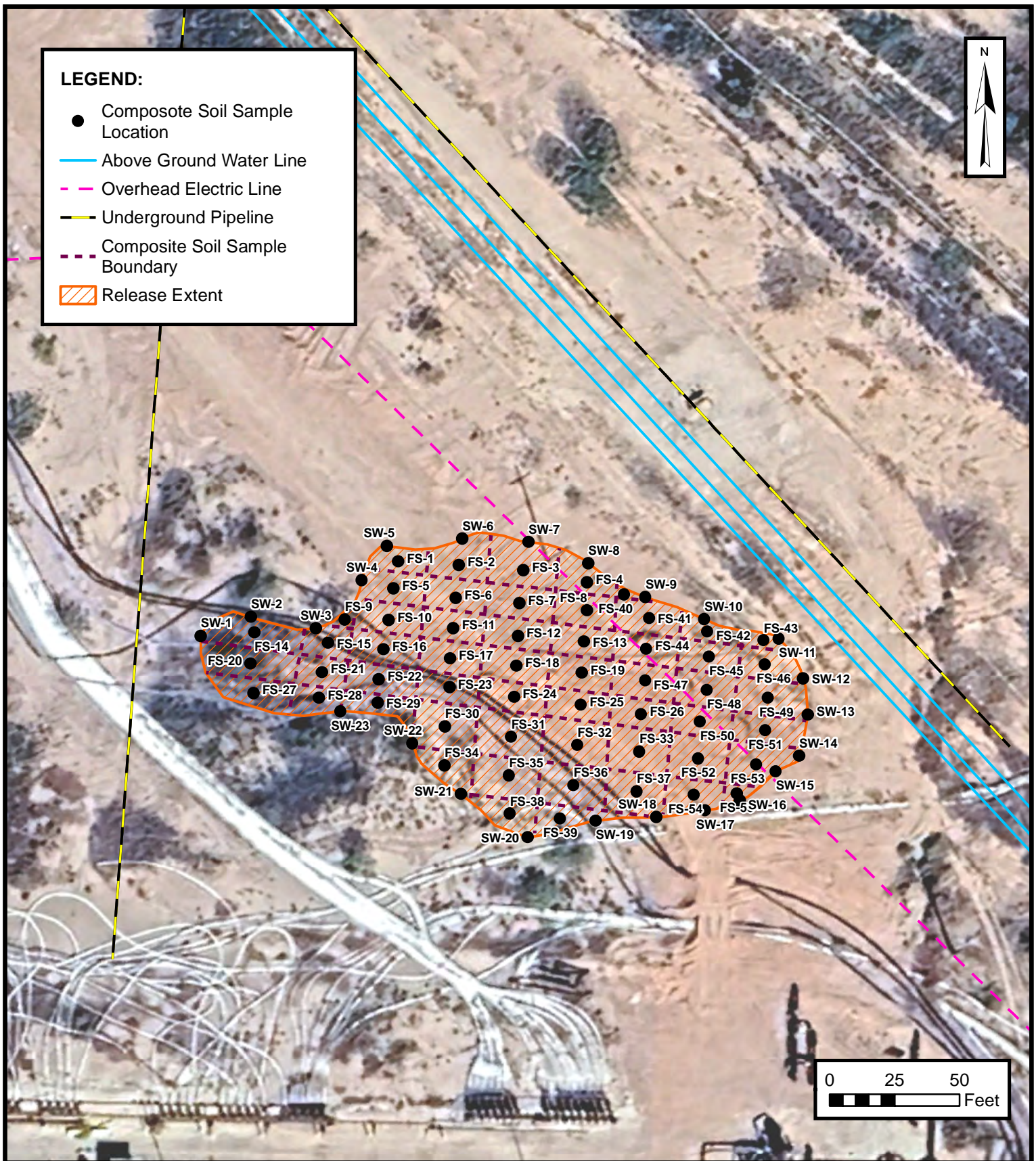
**DELINEATION MAP**

OXY USA INC.  
HARROUN 15 #008  
Unit F, S15, T24S, R29E, Eddy County, New Mexico  
32.21947° N, 103.97515° W

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**FIGURE**  
**3A**





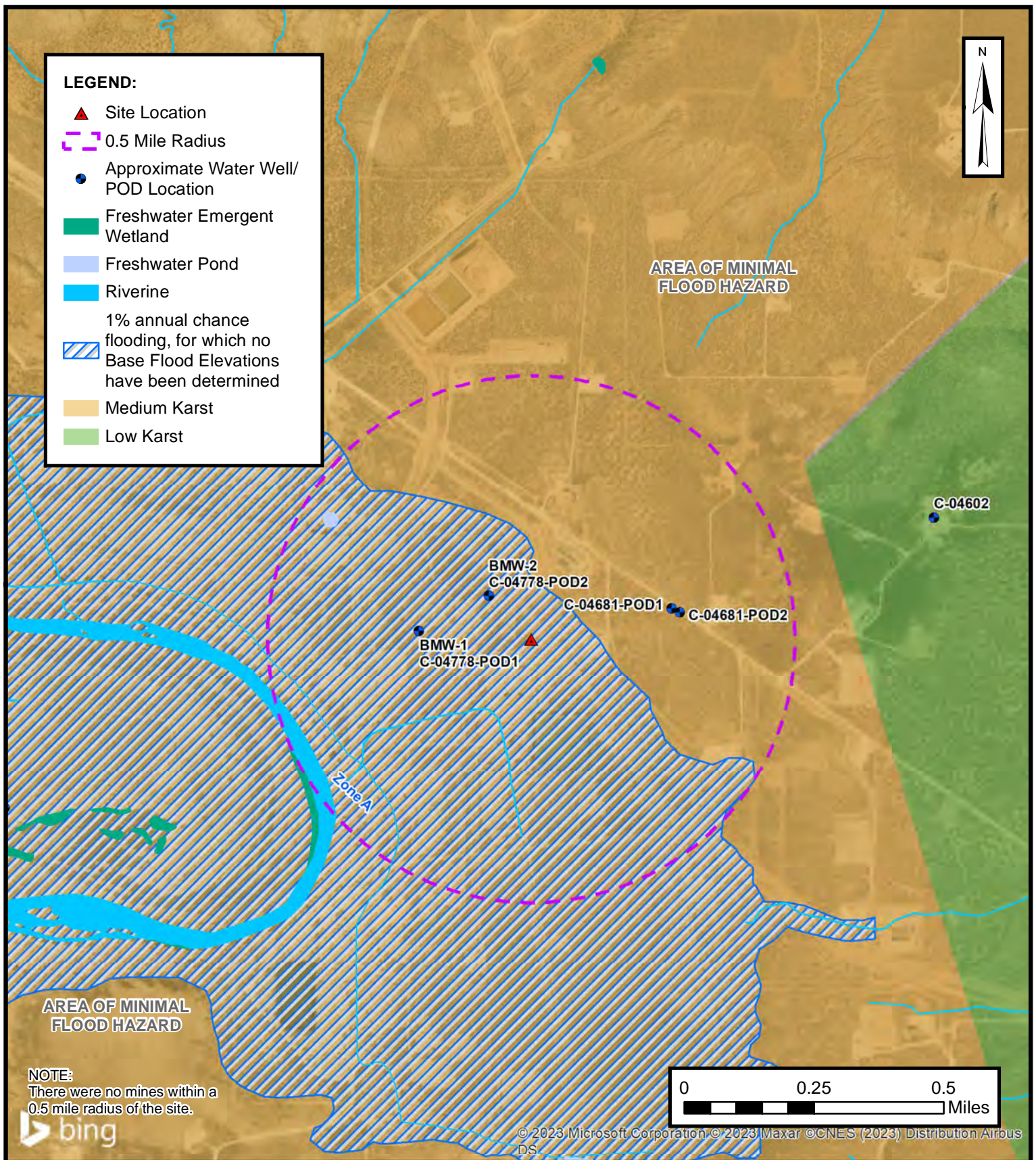
### SITE MAP

OXY USA INC.  
HARROUN 15 #008  
Unit F, S15, T24S, R29E, Eddy County, New Mexico  
32.21947° N, 103.97515° W

PROJECT NUMBER: 03B1417046

FIGURE  
**3B**



**CLOSURE CRITERIA MAP**

OXY USA INC.  
 HARROUN 15 #008  
 Unit F, S15, T24S, R29E, Eddy County, New Mexico  
 32.21947° N, 103.97515° W

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**FIGURE****4**

**ENSOLUM**  
 Environmental, Engineering and  
 Hydrogeologic Consultants



## APPENDIX B

### Supporting Documentation

**From:** Dittrich, John W  
**To:** [Bratcher, Mike, EMNRD](#); [Pruett, Maria, EMNRD](#)  
**Cc:** ["Cliff Brunson"](#); [kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com); [Kathy Purvis](#); [Jennifer Gilkey](#); [Moore, Rebecca A](#)  
**Subject:** Harroun 15 0008  
**Date:** Tuesday, September 4, 2018 6:59:40 AM

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All,

This is to inform you that Oxy Permian had a **Reportable** release in **Eddy County** at the **Harroun 15 0008** on 8/29/2018.

- **Release Location:** Legal -15-24S-29E, API: 30-015-30253
- **Release Volume:** 10 bbls of Oil and 20 bbls of Produced Water.
- **Recovered:** 20 bbls recovered
- **Cause of Release:** 3 inch poly flow line
- **Approximate Area impacted by release:** 150ft x 150ft (measurements are subject to change with GPS tracking)
- **GPS Coordinates and Driving Direction: 32.2195, -103.9753-(Leak GPS)** CB NM ON 285 SOUTH GO TO MALAGA, TURN LEFT DUARTE ROAD GO 2 MILES, TURN RIGHT ON MCDONALD ROAD GO 3 MILES TO PECOS RIVER, CROSS RIVER, GO 1 MILE , AT 2ND CG GO LEFT AT Y, GO .25 MILE, SOUTH OF COMPRESSOR STA 350 FT SOUTH OF WELLHEAD  
Please let me know if you have any questions.

Wade Dittrich  
Environmental Specialist  
**Oxy Permian-New Mexico**  
575-390-2828 cell  
575-397-8214 office  
**Wade\_Dittrich@Oxy.com**



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
**District II**  
811 S. First St., Artesia, NM 88210  
**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural  
Resources Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

## Release Notification

### Responsible Party

Responsible Party	Oxy USA Inc.	OGRID	16696
Contact Name	Wade Dittrich	Contact Telephone	(575) 390-2828
Contact email	Wade_Dittrich@oxy.com	Incident # (assigned by OCD)	
Contact mailing address	PO Box 4294; Houston, TX 77210		

### Location of Release Source

Latitude N 32.21947 Longitude W-103.97515  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	HARROUN 15 #008	Site Type	FLOW LINE LEAK
Date Release Discovered	8/29/2018	API# (if applicable)	30-015-30253

Unit Letter	Section	Township	Range	County
F	15	24S	29E	EDDY COUNTY, NM

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: MCDONALD/BRANTLEY)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 10 BBLS	Volume Recovered (bbls) 5 BBLS
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 20 BBLS	Volume Recovered (bbls) 15 BBLS
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

COMPROMISED 3 INCH POLY FLOW LINE

Form C-141

Page 2

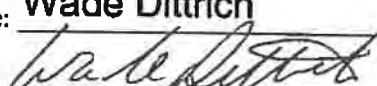

State of New Mexico  
Oil Conservation Division

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <b>RELEASE IS GREATER THAN 25 BBLS</b>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? <b>YES, BY WADE DITTRICH OF OXY VIA EMAIL ON 9/4/18 @ 7:00 AM TO MIKE BRATCHER, MARIA PRUETT-NMOCD</b>	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:  	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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.	
Printed Name: <u>Wade Dittrich</u> Signature: <u></u> email: <u>wade_dittrich@oxy.com</u>	Title: <u>Environmental Specialist</u> Date: <u>9-17-18</u> Telephone: <u>(575) 390-2828</u>
<b>OCD Only</b> Received by: <u></u> Date: <u>09/20/18</u>	



**Beaux Jennings**

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**From:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Sent:** Monday, March 27, 2023 5:36 PM  
**To:** Beaux Jennings  
**Cc:** Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD  
**Subject:** RE: [EXTERNAL] Harroun 15 #008 (Incident ID: NMAP1826380135)

[ \*\*EXTERNAL EMAIL\*\* ]

Beaux,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

**Jocelyn Harimon** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@emnrd.nm.gov](mailto:Jocelyn.Harimon@emnrd.nm.gov)  
<http://www.emnrd.nm.gov>



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**From:** Beaux Jennings <bjennings@ensolum.com>  
**Sent:** Monday, March 27, 2023 2:04 PM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Subject:** [EXTERNAL] Harroun 15 #008 (Incident ID: NMAP1826380135)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Afternoon,

On behalf of Oxy USA Inc, Ensolum, LLC would like to provide notification for sampling activities that will be conducted at the Harroun 15 #008 (Incident ID: NMAP1826380135) on Wednesday, March 29<sup>th</sup>. The samples may be used for closure, provided that they meet applicable closure limits.

Thank you,



**Beaux Jennings**  
Senior Project Manager  
210-219-8858  
**Ensolum, LLC**  
in f



# New Mexico Office of the State Engineer

## Transaction Summary

### EXPL Permit To Explore

**Transaction Number:** 751694 **Transaction Desc:** C 04778 POD1-2 **File Date:** 09/13/2023

**Primary Status:** PMT Permit  
**Secondary Status:** APR Approved  
**Person Assigned:** \*\*\*\*\*  
**Applicant:** OXY USA INC.  
**Contact:** WADE DITTRICH  
**Applicant:** ENSOLUM, LLC  
**Contact:** BEAUX JENNINGS

### Events

Date	Type	Description	Comment	Processed By
09/13/2023	APP	Application Received	*	*****
09/13/2023	TEC	Technical Report	*PLG PLN OPS C-	*****
10/03/2023	FTN	Finalize non-published Trans.		*****

### Water Right Information

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 04778	0	0		MON MONITORING WELL
<b>**Point of Diversion</b>				
C 04778 POD1		596200	3565246	
C 04778 POD2		596415	3565355	

### Conditions

- 1A Depth of the well shall not exceed the thickness of the valley fill.
- 4 No water shall be appropriated and beneficially used under this permit.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.
- C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record. The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.
- 6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable

Client: Oxy USA, Inc.  
 Project Name: Harroun 15 #008  
 Project Location: Eddy County, New Mexico  
 Project Manager: Beaux Jennings

## SOIL BORING / WELL LOG

### DRILLING & SAMPLING INFORMATION

Date Started: 10/03/2023  
 Date Completed: 10/03/2023  
 Drilling Company: Envirotech Drilling & Environmental Services  
 Driller: Pete Perez

Soil Boring / Well Number: BMW-1  
 Project #: 03B1417046  
 Drawn By: Beaux Jennings  
 Approved By: Kelly Lowery

Geologist: Shane Diller Sampler: Shane Diller  
 Boring Method: Auger Logged By: Shane Diller  
 Sampler Type: Auger  
 Bore Hole Diameter: 6" Screen: 15' - 40'  
 Casing Diameter: 2" Total Depth: 40'  
 Well Materials: PVC  
 Surface Completion: Above Ground Vault

**BORING METHOD**      **SAMPLER TYPE**      **GROUNDWATER DEPTH**  
 HSA - HOLLOW STEM AUGERS      CB - FIVE FOOT CORE BARREL      ▼ AT COMPLETION  
 CFA - CONTINUOUS FLIGHT AUGERS      SS - DRIVEN SPLIT SPOON      ▼ AT WELL STABILIZATION  
 GP - GEOPROBE      ST - PRESSED SHELBY TUBE  
 AR - AIR ROTARY

### BORING AND SAMPLING NOTES

SOIL CLASSIFICATION		Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)
Above Ground Vault								
Bentonite	5' - Silty sand, fine-grained, brown, dry, no odor		5					
	10' - Silty sandy clay, brown, slightly moist, no odor.		10					
	12.5' - Silty clay, dark brown, slightly moist, no odor.		15					
Sand	18' - Silty clay, brown, wet, no odor.		20					
	20' - Silty sandy clay, light brown, very wet, no odor.		25					
Sand	30' - Sandy silty clay, light brown, very wet, no odor.		30					
			35					

NA - Not Available

Client: Oxy USA, Inc.  
 Project Name: Harroun 15 #008  
 Project Location: Eddy County, New Mexico  
 Project Manager: Beaux Jennings

## SOIL BORING / WELL LOG

### DRILLING & SAMPLING INFORMATION

Date Started: 10/03/2023  
 Date Completed: 10/03/2023  
 Drilling Company: Envirotech Drilling & Environmental Services  
 Driller: Pete Perez

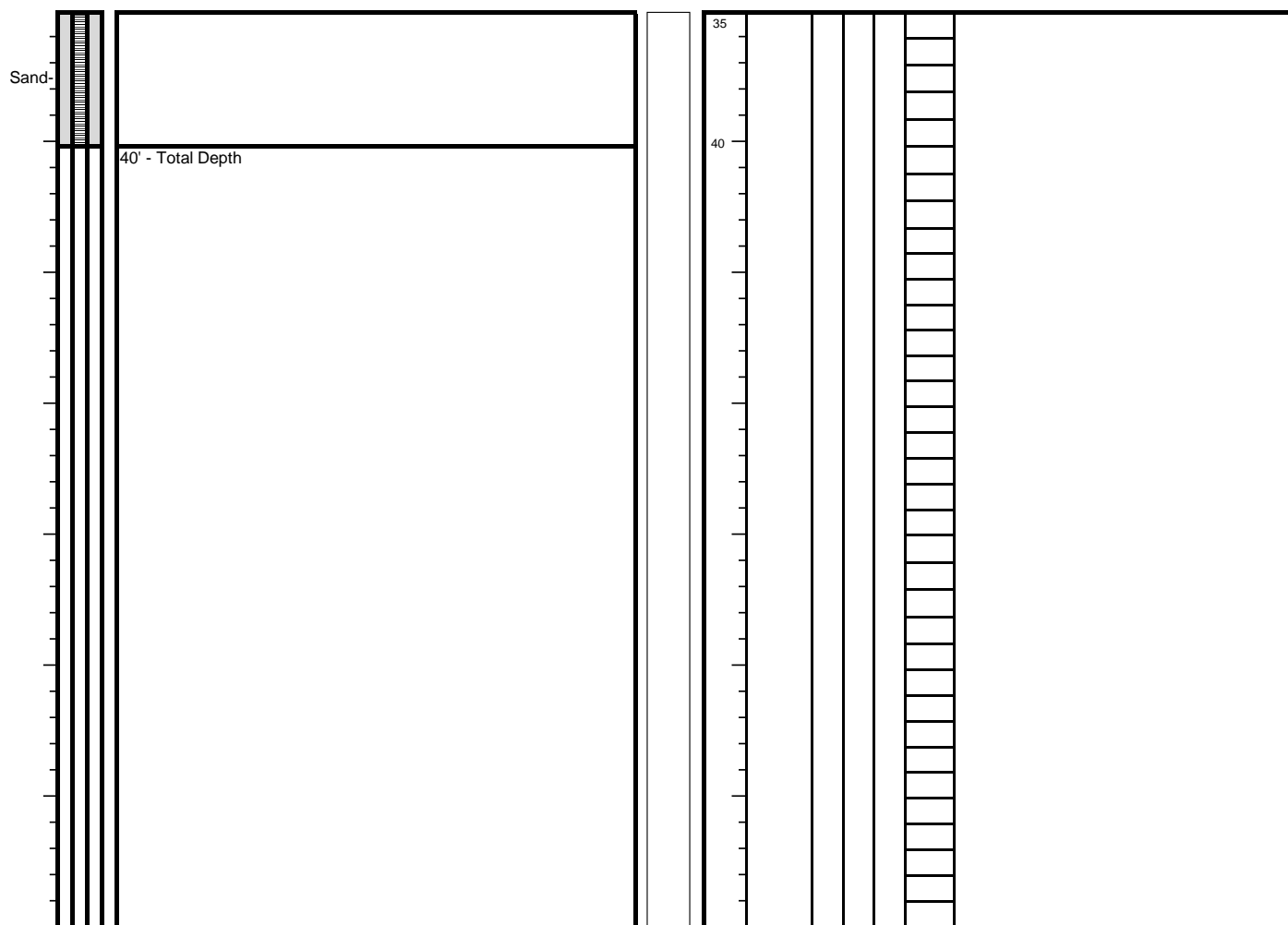
Soil Boring / Well Number: BMW-1  
 Project #: 03B1417046  
 Drawn By: Beaux Jennings  
 Approved By: Kelly Lowery

Geologist: Shane Diller Sampler: Shane Diller  
 Boring Method: Auger Logged By: Shane Diller  
 Sampler Type: Auger  
 Bore Hole Diameter: 6" Screen: 15' - 40'  
 Casing Diameter: 2" Total Depth: 40'  
 Well Materials: PVC  
 Surface Completion: Above Ground Vault

**BORING METHOD**      **SAMPLER TYPE**      **GROUNDWATER DEPTH**  
 HSA - HOLLOW STEM AUGERS      CB - FIVE FOOT CORE BARREL      ▼ AT COMPLETION  
 CFA - CONTINUOUS FLIGHT AUGERS      SS - DRIVEN SPLIT SPOON      ▼ AT WELL STABILIZATION  
 GP - GEOPROBE      ST - PRESSED SHELBY TUBE  
 AR - AIR ROTARY

### BORING AND SAMPLING NOTES

Monitor Well Detail	SOIL CLASSIFICATION		Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings	Notes



NA - Not Available



Client: Oxy USA, Inc.  
 Project Name: Harroun 15 #008  
 Project Location: Eddy County, New Mexico  
 Project Manager: Beaux Jennings

## SOIL BORING / WELL LOG

### DRILLING & SAMPLING INFORMATION

Date Started: 10/03/2023  
 Date Completed: 10/03/2023  
 Drilling Company: Envirotech Drilling & Environmental Services  
 Driller: Pete Perez

Soil Boring / Well Number: BMW-2  
 Project #: 03B1417046  
 Drawn By: Beaux Jennings  
 Approved By: Kelly Lowery

Geologist: Shane Diller Sampler: Shane Diller  
 Boring Method: Auger Logged By: Shane Diller  
 Sampler Type: Auger  
 Bore Hole Diameter: 6" Screen: 15' - 40'  
 Casing Diameter: 2" Total Depth: 40'  
 Well Materials: PVC  
 Surface Completion: Above Ground Vault

**BORING METHOD**      **SAMPLER TYPE**      **GROUNDWATER DEPTH**  
 HSA - HOLLOW STEM AUGERS      CB - FIVE FOOT CORE BARREL      ▽ AT COMPLETION  
 CFA - CONTINUOUS FLIGHT AUGERS      SS - DRIVEN SPLIT SPOON      ▽ AT WELL STABILIZATION  
 GP - GEOPROBE      ST - PRESSED SHELBY TUBE  
 AR - AIR ROTARY

### BORING AND SAMPLING NOTES

SOIL CLASSIFICATION		Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)
Above Ground Vault								
Bentonite	5' - Silty sand, fine-grained, brown, dry, no odor.		5					
	10.5' - Silty sand, very fine-grained, clay nodules, pinkish gray, dry, no odor.		10					
	14' - Silty sandy clay, gray, slightly moist, no odor.		15					
Sand	18' - Sand, fine-grained, reddish brown, slightly moist, no odor.		20					
	20.5' - Sandy clay, reddish brown, wet, no odor.		25					
Sand			30					
	30' - Clayey sand, reddish brown, wet, no odor.		35					

NA - Not Available

Client: Oxy USA, Inc.  
 Project Name: Harroun 15 #008  
 Project Location: Eddy County, New Mexico  
 Project Manager: Beaux Jennings

## SOIL BORING / WELL LOG

### DRILLING & SAMPLING INFORMATION

Date Started: 10/03/2023  
 Date Completed: 10/03/2023  
 Drilling Company: Envirotech Drilling & Environmental Services  
 Driller: Pete Perez

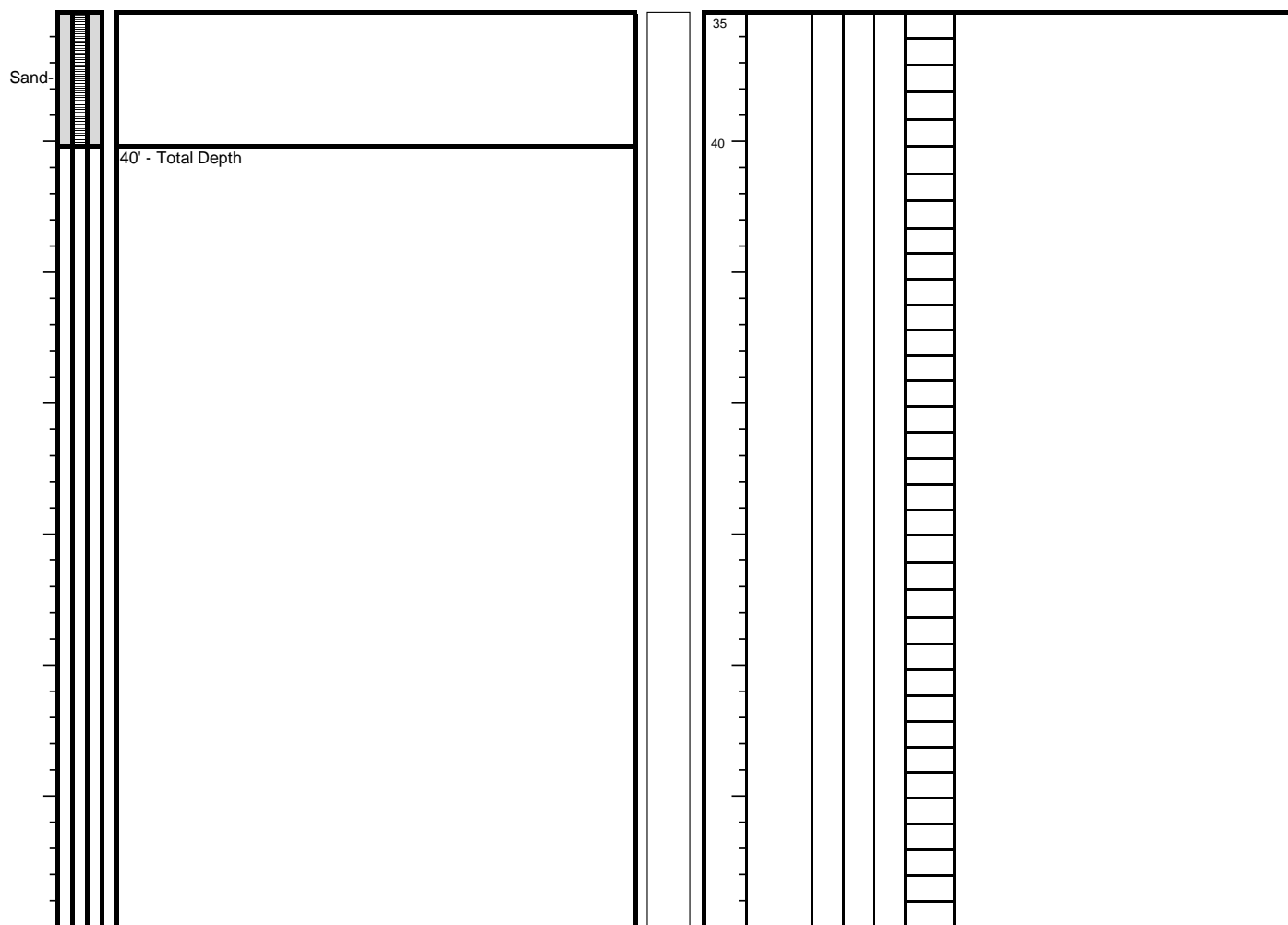
Soil Boring / Well Number: BMW-2  
 Project #: 03B1417046  
 Drawn By: Beaux Jennings  
 Approved By: Kelly Lowery

Geologist: Shane Diller Sampler: Shane Diller  
 Boring Method: Auger Logged By: Shane Diller  
 Sampler Type: Auger  
 Bore Hole Diameter: 6" Screen: 15' - 40'  
 Casing Diameter: 2" Total Depth: 40'  
 Well Materials: PVC  
 Surface Completion: Above Ground Vault

**BORING METHOD**      **SAMPLER TYPE**      **GROUNDWATER DEPTH**  
 HSA - HOLLOW STEM AUGERS      CB - FIVE FOOT CORE BARREL      ▼ AT COMPLETION  
 CFA - CONTINUOUS FLIGHT AUGERS      SS - DRIVEN SPLIT SPOON      ▼ AT WELL STABILIZATION  
 GP - GEOPROBE      ST - PRESSED SHELBY TUBE  
 AR - AIR ROTARY

### BORING AND SAMPLING NOTES

Well Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/FID Readings (ppm)
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## APPENDIX C

### Photographic Documentation





View of excavation area, facing southwest.



View of excavation area, facing southeast.



Date & Time: Tue, May 23, 2023 at 10:06:18 MDT  
Position: +032.219551° / -103.975751° (±19.2ft)  
Altitude: 2922ft (±9.8ft)  
Datum: WGS-84  
Azimuth/Bearing: 103° S77E 1831mils True (±12")  
Elevation Angle: -13.4°  
Horizon Angle: -00.1°  
Zoom: 0.5X



View of excavation area, facing southeast.



View of excavation area, facing southwest.





View of liner placed in excavation area prior to backfill, facing southeast.



View of excavation area subsequent to backfill, facing south.



## APPENDIX D

### Tables

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)	
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600	
Delineation Sample Analytical Results													
SP 1	9/17/2018	Surface	<0.100	1.36	0.423	1.47	3.26	204	19,200	4,910	24,314	7,200	
	9/18/2018	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	8,660	
		2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,440	
		4	NS						NS				32,800
		6	NS						NS				22,400
		8	NS						NS				6,260
		9	NS						NS				384
		10	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	416	
SP 2	9/18/2018	Surface	<0.050	0.288	0.218	0.768	1.27	<100	20,400	5,240	25,640	12,400	
		1	<0.050	<0.050	0.074	0.252	0.326	<100	5,800	1,680	7,480	18,800	
		2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,400	
		4	NS						NS				1,120
		6	NS						NS				800
		8	NS						NS				976
		9	NS						NS				208
		10	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	272	
SP 3	9/18/2018	Surface	<0.050	0.159	0.218	0.675	1.05	<100	14,100	3,530	17,630	21,600	
		1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	125	42.2	167	41,200	
		2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	5,680	
		4	NS						NS				3,600
		6	NS						NS				176
	9/19/2018	7	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	224	
	SP 4	9/19/2018	Surface	<0.050	<0.050	<0.050	<0.150	<0.300	<50.0	3,190	1,790	4,980	5,360
1			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	46.1	14.3	60.4	3,320	
2			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	7,840	
4			NS						NS				2,080
6			NS						NS				288
7			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	320	



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
SP 5	9/19/2018	Surface	0.053	1.21	1.68	5.72	8.66	577	28,000	6,520	35,097	3,400
		1	<0.050	0.067	0.213	0.505	0.785	51.2	2,720	626	3,397	49,200
		2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	34,000
		3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	30,800
		4	NS					NS			24,000	
		7	NS					NS			41,200	
		9	NS					NS			38,400	
		12	NS					NS			7,200	
		15	NS					NS			5,440	
SP 6	9/19/2018	Surface	<0.050	0.203	0.408	2.09	2.70	<100	13,900	4,290	18,190	48,000
		1	<0.050	<0.050	<0.050	0.171	<0.300	<10.0	1,090	240	1,330	18,400
	9/20/2018	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	40.5	11.0	51.5	11,100
		3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	24.3	<10.0	24.3	13,300
		4	NS					NS			14,400	
		7	NS					NS			20,400	
		9	NS					NS			1,760	
		12	NS					NS			8,800	
		15	NS					NS			5,760	
		18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	142	14.4	156	6,960
SP 7	9/20/2018	Surface	<0.050	<0.050	<0.050	0.177	<0.300	<100	6,550	1,930	8,480	3,920
		1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,110	232	1,342	16,500
		2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	20.7	10.2	30.9	6,130
		3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	11,600
		5	NS					NS			12,400	
		8	NS					NS			1,810	
		11	NS					NS			48.0	
NORTH EAST WEST SOUTH	9/20/2018	NA	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	160
	9/20/2018	NA	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	112
	9/20/2018	NA	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	112
	9/20/2018	NA	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	112
SB 1	10/10/2018	20	NS					NS			6,000	
		25	NS					NS			13,300	

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release ( $\leq 50$ feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
Floor Sample Analytical Results												
FS-1	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	240
FS-2	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,200
	4/27/2023	12	NS									5,760
FS-3	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	20,400
	4/27/2023	12	NS									9,200
FS-4	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,480
	4/27/2023	12	NS									10,600
FS-5	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	31.2	<10.0	31.2	3,680
	4/27/2023	12	NS									7,520
FS-6	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	21.1	<10.0	21.1	7,680
	4/27/2023	12	NS									11,200
FS-7	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	39.8	<10.0	39.8	13,300
	4/27/2023	12	NS									10,400
FS-8	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	8,000
	4/27/2023	12	NS									736
FS-9	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,800
	4/27/2023	12	NS									2,800
FS-10	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	11,100
	4/27/2023	12	NS									4,040
FS-11	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	27.2	<10.0	27.2	11,200
	4/27/2023	12	NS									3,680
FS-12	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	42.5	<10.0	42.5	23,800
	4/27/2023	12	NS									10,600
FS-13	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,920
	4/27/2023	12	NS									6,480
FS-14	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	592
FS-15	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	10,000
	4/27/2023	12	NS									4,400

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
FS-16	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	605	186	791	11,900
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	976
FS-17	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	44.6	<10.0	44.6	9,200
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	7,680
FS-18	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	153	46.1	199	20,200
	4/27/2023	12	NS					<50.0	2,970	571	3,541	9,800
	5/23/2023	12	NS					<10.0	671	182	853	3,680
	6/13/2023	16	NS					<10.0	<10.0	<10.0	<10.0	1,920
FS-19	3/31/2023	8	<0.050	0.092	0.323	1.63	2.04	70.6	4,200	1,070	5,341	8,400
	4/27/2023	12	NS					<10.0	51.2	<10.0	51.2	8,200
FS-20	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	960
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	4,560
FS-21	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	960
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	6,320
FS-22	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	155	37.6	193	17,400
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	960
FS-23	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	225	75.9	301	47,200
	4/27/2023	12	NS					<10.0	691	127	818	6,480
	5/23/2023	12	NS					<10.0	<10.0	<10.0	<10.0	46,400
	6/13/2023	16	NS					<10.0	<10.0	<10.0	<10.0	3,520
FS-24	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,130	320	1,450	23,600
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	8,400
FS-25	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	308	94.1	402	19,200
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	7,680
FS-26	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	291	110	401	22,000
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	11,600
FS-27	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,360
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	6,880
FS-28	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,160
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	976
FS-29	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	6,800
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	1,020
FS-30	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	17,800
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	2,120

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
FS-31	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	7,600
	4/27/2023	12	NS									6,000
FS-32	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	276	110	386	7,460
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	5,200
FS-33	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	107	36.6	144	4,640
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	1,360
FS-34	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	6,880
	4/27/2023	12	NS									1,470
FS-35	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	14,900
	4/27/2023	12	NS									4,560
FS-36	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	403	148	551	3,760
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	3,360
FS-37	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	85.0	30.0	115	6,480
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	832
FS-38	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,250
	4/27/2023	12	NS									1,070
FS-39	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,560
	4/27/2023	12	NS									656
FS-40	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	119	28.1	147	10,300
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	9,000
FS-41	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	34.6	<10.0	34.6	7,600
	4/27/2023	12	NS									6,240
FS-42	3/31/2023	8	<0.050	<0.050	<0.050	0.237	<0.300	35.7	6,820	1,600	8,456	6,130
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	2,760
FS-43	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	12.8	2,590	820	3,423	3,800
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	3,360
FS-44	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	184	60.0	244	8,800
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	2,720
FS-45	3/31/2023	8	<0.050	0.066	0.157	0.969	1.19	79.8	8,640	2,030	10,750	14,600
	4/27/2023	12	NS					<10.0	329	58.3	387	5,280
	5/23/2023	12	NS					<10.0	<10.0	<10.0	<10.0	1,070



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
FS-46	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	15.5	1,440	400	1,856	4,960
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	5,200
FS-47	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	77.1	29.8	107	9,460
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	3,680
FS-48	3/31/2023	8	<0.050	<0.050	<0.050	0.327	0.327	56.5	5,880	1,370	7,307	5,760
	4/27/2023	12	NS					<10.0	41.7	<10.0	41.7	9,000
FS-49	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	20.3	<10.0	20.3	2,200
	4/27/2023	12	NS									2,520
FS-50	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	110	39.4	149	7,600
	4/27/2023	12	NS					<10.0	21.5	<10.0	21.5	11,000
FS-51	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	974	239	1,213	4,480
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	4,800
FS-52	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	136	56.8	193	4,800
	4/27/2023	12	NS					<10.0	<10.0	<10.0	<10.0	4,640
FS-53	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	239	67.8	307	3,240
	4/27/2023	12	NS									3,520
	5/23/2023	12	NS					<10.0	<10.0	<10.0	<10.0	848
FS-54	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	352
FS-55	3/31/2023	8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	64.0

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

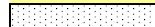
Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
Sidewall Sample Analytical Results												
SW-1	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	896
	4/27/2023	0 - 12	NS									5,120
	5/23/2023	0 - 12	NS									304
SW-2	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	864
	4/27/2023	0 - 12	NS									6,720
	5/23/2023	0 - 12	NS									288
SW-3	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	448
SW-4	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	6,600
	4/27/2023	0 - 12	NS									9,330
	5/23/2023	0 - 12	NS									4,640
	6/13/2023	0 - 12	NS									752
SW-5	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	544
SW-6	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,720
	4/27/2023	0 - 12	NS									26,000
	5/23/2023	0 - 12	NS									192
SW-7	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,360
	4/27/2023	0 - 12	NS									24,000
	5/23/2023	0 - 12	NS									144
SW-8	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,310
	4/27/2023	0 - 12	NS									19,600
	5/23/2023	0 - 12	NS									128
SW-9	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	396	148	544	9,730
	4/27/2023	0 - 12	NS					<10.0	<10.0	<10.0	<10.0	8,000
	5/23/2023	0 - 12	NS									144
SW-10	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	47.4	11.9	59.3	1,230
	4/27/2023	0 - 12	NS									3,520
	5/23/2023	0 - 12	NS									208
SW-11	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	14.8	<10.0	14.8	3,600
	4/27/2023	0 - 12	NS									336
SW-12	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	876	246	1,122	5,600
	4/27/2023	0 - 12	NS					<10.0	155	14.3	169	1,200
	5/23/2023	0 - 12	NS					<10.0	<10.0	<10.0	<10.0	32.0

# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release ( $\leq 50$ feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
SW-13	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	64.0
SW-14	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	96.0
SW-15	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	144
SW-16	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	64.0
SW-17	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	80.0
SW-18	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
SW-19	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	384
SW-20	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	576
SW-21	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	256
SW-22	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	112
SW-23	3/31/2023	0 - 8	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	272

Concentrations in **bold** and yellow exceed the New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release ( $\leq 50$  feet)

 Additional Excavation and/or Re-Sample

bgs: below ground surface

mg/kg: milligrams per kilogram

NA: Not Applicable

NE: Not Established

NS: Not Sampled

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon



**TABLE 2**  
**GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Harroun 15 #008  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417046

Sample Designation	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TPH MRO (mg/L)	Total TPH (GRO+DRO+MRO) (mg/L)	Chloride (mg/L)	TDS (mg/L)
New Mexico Water Quality Control Commission Groundwater Quality Standards		0.005	1	0.7	0.62		NE	NE	NE	NE	250.0	10,000
Grab Water Sample Analytical Results												
*Water 1	11/8/2023			NS					NS		41,000	NS
Background Water Sample Analytical Results												
BMW-1	11/8/2023			NS					NS		5,510	18,700
BMW-2	11/8/2023			NS					NS		6,160	16,300

Concentrations in **bold** and yellow exceed the applicable New Mexico Water Quality Control Commission Groundwater Quality Standards

\* Grab sample taken from soil boring SB 1

mg/L: milligrams per Liter

NA: Not Applicable

NE: Not Established

NS: Not Sampled

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon

TDS: Total Dissolve Solids



## APPENDIX E

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





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

---

October 04, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: HARROUN 15-8

Enclosed are the results of analyses for samples received by the laboratory on 09/28/18 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/17/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ SURFACE (H802759-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	09/29/2018	ND	2.04	102	2.00	0.0515	
<b>Toluene*</b>	<b>1.36</b>	0.100	09/29/2018	ND	2.21	110	2.00	0.00298	
<b>Ethylbenzene*</b>	<b>0.423</b>	0.100	09/29/2018	ND	2.33	117	2.00	0.0137	
<b>Total Xylenes*</b>	<b>1.47</b>	0.300	09/29/2018	ND	6.90	115	6.00	0.0534	
<b>Total BTEX</b>	<b>3.26</b>	0.600	09/29/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 69.8-142

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>7200</b>	16.0	09/29/2018	ND	432	108	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>204</b>	100	09/29/2018	ND	198	98.8	200	1.98		
<b>DRO &gt;C10-C28*</b>	<b>19200</b>	100	09/29/2018	ND	189	94.5	200	17.9		
<b>EXT DRO &gt;C28-C36</b>	<b>4910</b>	100	09/29/2018	ND						

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 741 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 1' (H802759-02)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8660	16.0	10/02/2018	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	10/01/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/01/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/01/2018	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 2' (H802759-03)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2440	16.0	10/02/2018	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	10/01/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/01/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/01/2018	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 4' (H802759-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32800	16.0	10/02/2018	ND	416	104	400	3.77		

**Sample ID: SP 1 @ 6' (H802759-05)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	22400	16.0	10/02/2018	ND	416	104	400	3.77		

**Sample ID: SP 1 @ 8' (H802759-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6260	16.0	10/02/2018	ND	416	104	400	3.77	

**Sample ID: SP 1 @ 9' (H802759-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	10/02/2018	ND	416	104	400	3.77		

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Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 1 @ 10' (H802759-08)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	10/02/2018	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	10/01/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/01/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/01/2018	ND					

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ SURFACE (H802759-09)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	0.288	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	0.218	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	0.768	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEx	1.27	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12400	16.0	10/02/2018	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: MS						S-06

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 844 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 1' (H802759-10)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	0.074	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	0.252	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEx	0.326	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18800	16.0	10/02/2018	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: MS						S-06

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 328 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 2' (H802759-11)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4400	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	09/28/2018	Sampling Date:	09/18/2018
Reported:	10/04/2018	Sampling Type:	Soil
Project Name:	HARROUN 15-8	Sampling Condition:	Cool & Intact
Project Number:	8-29-18	Sample Received By:	Tamara Oldaker
Project Location:	MALAGA, NM		

**Sample ID: SP 2 @ 4' (H802759-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	10/02/2018	ND	416	104	400	3.77		

**Sample ID: SP 2 @ 6' (H802759-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	10/02/2018	ND	416	104	400	3.77	

**Sample ID: SP 2 @ 8' (H802759-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	10/02/2018	ND	416	104	400	3.77	

**Sample ID: SP 2 @ 9' (H802759-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	10/02/2018	ND	416	104	400	3.77	

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**Analytical Results For:**

BBC International, Inc.  
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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 10' (H802759-16)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 95.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ SURFACE (H802759-17)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	0.159	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	0.218	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	0.675	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEx	1.05	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	21600	16.0	10/02/2018	ND	416	104	400	3.77	
TPH 8015M		mg/kg		Analyzed By: MS					
				S-06					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 569 % 37.6-147

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 1' (H802759-18)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	41200	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	125	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	42.2	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 96.5 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 805  
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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/18/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 2' (H802759-19)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.8 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	09/28/2018	Sampling Date:	09/18/2018
Reported:	10/04/2018	Sampling Type:	Soil
Project Name:	HARROUN 15-8	Sampling Condition:	Cool & Intact
Project Number:	8-29-18	Sample Received By:	Tamara Oldaker
Project Location:	MALAGA, NM		

**Sample ID: SP 3 @ 4' (H802759-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3600	16.0	10/02/2018	ND	432	108	400	0.00		

**Sample ID: SP 3 @ 6' (H802759-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/02/2018	ND	432	108	400	0.00	

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 7' (H802759-22)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 92.9 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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**Analytical Results For:**

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 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 4 @ SURFACE (H802759-23)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5360	16.0	10/02/2018	ND	432	108	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
GRO C6-C10*	<50.0	50.0	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	3190	50.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	1790	50.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 99.0 % 41-142

Surrogate: 1-Chlorooctadecane 227 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 805  
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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 4 @ 1' (H802759-24)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3320	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	46.1	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	14.3	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 76.9 % 41-142

Surrogate: 1-Chlorooctadecane 79.3 % 37.6-147

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BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 4 @ 2' (H802759-25)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7840	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	09/28/2018	Sampling Date:	09/19/2018
Reported:	10/04/2018	Sampling Type:	Soil
Project Name:	HARROUN 15-8	Sampling Condition:	Cool & Intact
Project Number:	8-29-18	Sample Received By:	Tamara Oldaker
Project Location:	MALAGA, NM		

**Sample ID: SP 4 @ 4' (H802759-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	10/02/2018	ND	432	108	400	0.00		

**Sample ID: SP 4 @ 6' (H802759-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	10/02/2018	ND	432	108	400	0.00		

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 4 @ 7' (H802759-28)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91		
Toluene*	<0.050	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	2.04	102	2.00	1.75		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	10/02/2018	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	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 97.4 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 5 @ SURFACE (H802759-29)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.053	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	1.21	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	1.68	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	5.72	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEx	8.66	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3400	16.0	10/02/2018	ND	432	108	400	0.00		
TPH 8015M	mg/kg		Analyzed By: MS						S-06	

TPH 8015M	mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	577	100	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	28000	100	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	6520	100	10/02/2018	ND					

Surrogate: 1-Chlorooctane 161 % 41-142

Surrogate: 1-Chlorooctadecane 1070 % 37.6-147

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**Analytical Results For:**

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Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 5 @ 1' (H802759-30)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	87.2	2.00	1.91	
Toluene*	0.067	0.050	10/02/2018	ND	1.92	95.9	2.00	1.57	
Ethylbenzene*	0.213	0.050	10/02/2018	ND	2.04	102	2.00	1.75	
Total Xylenes*	0.505	0.150	10/02/2018	ND	5.89	98.2	6.00	1.84	
Total BTEX	0.785	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 131 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	49200	16.0	10/02/2018	ND	432	108	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
GRO C6-C10*	51.2	50.0	10/02/2018	ND	195	97.6	200	2.68	
DRO >C10-C28*	2720	50.0	10/02/2018	ND	179	89.7	200	7.09	
EXT DRO >C28-C36	626	50.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 193 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 5 @ 2' (H802759-31)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.6 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	34000	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 75.5 % 41-142

Surrogate: 1-Chlorooctadecane 76.2 % 37.6-147

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Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 5 @ 3' (H802759-32)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 82.4 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	30800	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 85.5 % 41-142

Surrogate: 1-Chlorooctadecane 84.9 % 37.6-147

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 Fax To: (575) 397-0397

Received:	09/28/2018	Sampling Date:	09/19/2018
Reported:	10/04/2018	Sampling Type:	Soil
Project Name:	HARROUN 15-8	Sampling Condition:	Cool & Intact
Project Number:	8-29-18	Sample Received By:	Tamara Oldaker
Project Location:	MALAGA, NM		

**Sample ID: SP 5 @ 4' (H802759-33)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	24000	16.0	10/02/2018	ND	432	108	400	0.00		

**Sample ID: SP 5 @ 7' (H802759-34)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	41200	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 5 @ 9' (H802759-35)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	38400	16.0	10/02/2018	ND	432	108	400	0.00		

**Sample ID: SP 5 @ 12' (H802759-36)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7200	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 5 @ 15' (H802759-37)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5440	16.0	10/02/2018	ND	432	108	400	0.00	

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Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 5 @ 18' (H802759-38)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 83.5 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3400	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 88.8 % 37.6-147

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

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 6 @ SURFACE (H802759-39)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	0.203	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	0.408	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	2.09	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	2.70	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.2 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48000	16.0	10/02/2018	ND	432	108	400	0.00	QM-07	
TPH 8015M		mg/kg		Analyzed By: MS						S-06

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 729 % 37.6-147

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/19/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 6 @ 1' (H802759-40)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	0.171	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18400	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	1090	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	240	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 118 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 805  
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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 6 @ 2' (H802759-41)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804		
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 79.7 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11100	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	40.5	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	11.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 81.3 % 41-142

Surrogate: 1-Chlorooctadecane 83.2 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 6 @ 3' (H802759-42)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 80.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13300	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	24.3	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 90.8 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 6 @ 4' (H802759-43)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14400	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 6 @ 7' (H802759-44)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20400	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 6 @ 9' (H802759-45)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 6 @ 12' (H802759-46)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 6 @ 15' (H802759-47)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5760	16.0	10/02/2018	ND	432	108	400	0.00		

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**Analytical Results For:**

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Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 6 @ 18' (H802759-48)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 82.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6960	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	142	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	14.4	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
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 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 7 @ SURFACE (H802759-49)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804		
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826		
Total Xylenes*	0.177	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 78.4 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3920	16.0	10/02/2018	ND	432	108	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
GRO C6-C10*	<100	100	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	6550	100	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	1930	100	10/02/2018	ND					

Surrogate: 1-Chlorooctane 66.4 % 41-142

Surrogate: 1-Chlorooctadecane 362 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 7 @ 1' (H802759-50)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804		
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 80.9 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16500	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	1110	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	232	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 129 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 7 @ 2' (H802759-51)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804		
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 80.0 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6130	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	20.7	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	10.2	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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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:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 7 @ 3' (H802759-52)**

BTEx 8021B			mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804		
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810		
Total BTEX	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 80.4 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11600	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 87.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 7 @ 5' (H802759-53)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12400	16.0	10/02/2018	ND	432	108	400	0.00		

**Sample ID: SP 7 @ 8' (H802759-54)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1810	16.0	10/02/2018	ND	432	108	400	0.00	

**Sample ID: SP 7 @ 11' (H802759-55)**

Chloride, SM4500Cl-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	10/02/2018	ND	432	108	400	0.00	

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 7 @ 12' (H802759-56)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 79.6 % 69.8-142

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	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	69.6	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	29.1	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NORTH (H802759-57)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.67	83.3	2.00	0.804	
Toluene*	<0.050	0.050	10/02/2018	ND	1.82	90.9	2.00	0.690	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.91	95.3	2.00	0.826	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.75	95.9	6.00	0.810	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 80.3 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 88.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EAST (H802759-58)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	86.8	2.00	0.736		
Toluene*	<0.050	0.050	10/02/2018	ND	1.86	93.2	2.00	0.845		
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.97	98.5	2.00	1.41		
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.87	97.8	6.00	0.609		
Total BTEx	<0.300	0.300	10/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 83.6 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 88.6 % 41-142

Surrogate: 1-Chlorooctadecane 89.5 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WEST (H802759-59)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	86.8	2.00	0.736	
Toluene*	<0.050	0.050	10/02/2018	ND	1.86	93.2	2.00	0.845	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.97	98.5	2.00	1.41	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.87	97.8	6.00	0.609	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 83.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.7 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 09/28/2018  
 Reported: 10/04/2018  
 Project Name: HARROUN 15-8  
 Project Number: 8-29-18  
 Project Location: MALAGA, NM

Sampling Date: 09/20/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SOUTH (H802759-60)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/02/2018	ND	1.74	86.8	2.00	0.736	
Toluene*	<0.050	0.050	10/02/2018	ND	1.86	93.2	2.00	0.845	
Ethylbenzene*	<0.050	0.050	10/02/2018	ND	1.97	98.5	2.00	1.41	
Total Xylenes*	<0.150	0.150	10/02/2018	ND	5.87	97.8	6.00	0.609	
Total BTEX	<0.300	0.300	10/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/02/2018	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	10/02/2018	ND	193	96.7	200	0.990	
DRO >C10-C28*	<10.0	10.0	10/02/2018	ND	183	91.5	200	0.673	
EXT DRO >C28-C36	<10.0	10.0	10/02/2018	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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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.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



**CARDINAL LABORATORIES**  
101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> BBC International, Inc.		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																	
<b>Project Manager:</b> Cliff Brunson		<b>P.O. #:</b>																			
<b>Address:</b> P.O. Box 805		<b>Company:</b>																			
<b>City:</b> Hobbs		<b>Attn:</b>																			
<b>State:</b> NM <b>Zip:</b> 88241		<b>Address:</b>																			
<b>Phone #:</b> 575-397-6388 <b>Fax #:</b> 575-397-0397		<b>City:</b>																			
<b>Project #:</b>		<b>State:</b>																			
<b>Project Name:</b> Haroon 15-8 8-29-10		<b>Zip:</b>																			
<b>Project Location:</b> M21292		<b>Phone #:</b>																			
<b>Sample Name:</b> V0		<b>Fax #:</b>																			
<b>FOR LAB USE ONLY</b>		<b>(G)RAB OR (C)OMP.</b>		<b># CONTAINERS</b>		<b>MATRIX</b>		<b>PRESERV.</b>		<b>SAMPLING</b>											
						GROUNDWATER															
						WASTEWATER															
						SOIL															
						OIL															
						SLUDGE															
						OTHER :															
						ACID/BASE:															
						ICE / COOL															
						OTHER :															
						DATE		TIME													
<b>Lab I.D.</b>		<b>Sample I.D.</b>																			
H802759		SP10502		C-1		9-17		300				TPH Extended									
1		2		C-1		9-10		949				BTX									
2		3		C-1		10-15		1026				C-1									
3		4		C-1		10-31		1051													
4		5		C-1		11-11		1122													
5		6		C-1		11-33		1143													
6		7		C-1																	
7		8		C-1																	
8		9		C-1																	
9		10		C-1																	
10		SP20502		C-1																	

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 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 of defense.

<b>Relinquished By:</b>	<b>Date:</b> 9-28-18	<b>Received By:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Phone #:</b>
<b>Relinquished By:</b> [Signature]	<b>Date:</b> 11-30	<b>Received By:</b> [Signature]	<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Fax #:</b>
<b>Time:</b>				

<b>Delivered By: (Circle One)</b>	<b>Sample Condition</b>	<b>CHECKED BY: (Initials)</b>
<b>Sampler - UPS - Bus - Other:</b> -5.4c #99	<input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	TP.

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476





ORDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]





## ORDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.										<b>BILL TO</b>										ANALYSIS REQUEST																													
Project Manager: Cliff Brunson										P.O. #:																																							
Address: P.O. Box 805										Company:																																							
City: Hobbs										Attn:																																							
State: NM Zip: 88241																																																	
Phone #: 575-397-6388										Address:																																							
Fax #: 575-397-0397																																																	
Project #:										City:																																							
Project Name: H2100N / S-8 8-29-10										State: Zip:																																							
Project Location: Malya										Phone #:																																							
Sample Name: V6										Fax #:																																							
FOR LAB USE ONLY										MATRIX										PRESERV										SAMPLING																			
Lab I.D. Sample I.D.										(G)RAB OR (C)OMP.																																							
										# CONTAINERS																																							
										GROUNDWATER																																							
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										OTHER :																																							
										ACID/BASE:																																							
										ICE / COOL																																							
										OTHER :																																							
										DATE										TIME																													
H802759																				9/19										952																			
21										SP306										X																													
22										C1										X																													
23										C1										X																													
24										C1										X																													
25										C1										X																													
26										C1										X																													
27										C1										X																													
28										C1										X																													
29										C1										X																													
30										C1										X																													

TPH Extended

BTEX

cl-

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:





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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO										ANALYSIS REQUEST									
Company Name: BBC International, Inc.										P.O. #:									
Project Manager: Cliff Brunson										Company:									
Address: P.O. Box 805										Attn:									
City: Hobbs										Address:									
State: NM Zip: 88241										City:									
Phone #: 575-397-6388 Fax #: 575-397-0397										State: Zip:									
Project #:										Project Owner: OKY									
Project Name: H-100-15-0 6-25-18										Phone #:									
Project Location: M-1292										Fax #:									
Sample Name: 12										PRESERV. SAMPLING									
FOR LAB USE ONLY																			
Lab I.D.										Sample I.D.									
H802759										5P 50 2									
31										3									
32										4									
33										7									
34										9									
35										12									
36										15									
37										18									
38										3P 60 5-2									
39										1									
40																			
(G)RAB OR (C)OMP.										# CONTAINERS									
GROUNDWATER										MATRIX									
WASTEWATER										SOIL									
OIL										SLUDGE									
OTHER :										ACID/BASE:									
ICE / COOL										OTHER :									
DATE										TIME									
9-19										1201									
1212										1249									
131										159									
231										255									
320										321									
322																			
TPH Extended																			
BTX																			
CL-																			

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Relinquished By:	Date: 9-28-18	Time: 11:30	Received By:	Signature: [Signature]
Relinquished By:	Date:	Time:	Received By:	Signature:
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	YES	
	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	YES	YES	

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #: \_\_\_\_\_

Fax Result: ☐ Yes ☐ No Add'l Fax #: \_\_\_\_\_

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.				P.O. #:		BILL TO										ANALYSIS REQUEST									
Project Manager: Cliff Brunson				Company:																					
Address: P.O. Box 805				Attn:																					
City: Hobbs				Address:																					
State: NM Zip: 88241																									
Phone #: 575-397-6388																									
Fax #: 575-397-0397																									
Project #:				City:																					
Project Owner: OKY				State:																					
Project Name: Hazard 15-0 8-25-16				Zip:																					
Project Location: 6021292				Phone #:																					
Fax #:																									
Sampler Name:																									
FOR LAB USE ONLY																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING		DATE		TIME		TPH Extended		BTEX		C1-			
41	SP602	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
42	3	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
43	4	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
44	7	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
45	9	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
46	12	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
47	15	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
48	18	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
49	SP705VR	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
50	1	G	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

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Relinquished By: <i>Cliff Brunson</i>	Date: 9-28-18	Received By: <i>James R. Stutz</i>	Time: 11:30
Relinquished By:	Date:	Received By:	Time:
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
-546 H97	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

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**ARDINAL LABORATORIES**  
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(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> BBC International, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>															
<b>Project Manager:</b> Cliff Brunson				<b>P.O. #:</b>																			
<b>Address:</b> P.O. Box 805				<b>Company:</b>																			
<b>City:</b> Hobbs				<b>Attn:</b>																			
<b>State:</b> NM <b>Zip:</b> 88241				<b>Address:</b>																			
<b>Phone #:</b> 575-397-6388 <b>Fax #:</b> 575-397-0397				<b>City:</b>																			
<b>Project #:</b>				<b>State:</b>																			
<b>Project Name:</b> Hurricane 15-8 825-10				<b>Zip:</b>																			
<b>Project Location:</b> M2/292				<b>Phone #:</b>																			
<b>Sample Name:</b> 12				<b>Fax #:</b>																			
<b>FOR LAB USE ONLY</b>																							
<b>Lab I.D.</b>		<b>Sample I.D.</b>		<b>(G)RAB OR (C)OMP.</b>		<b># CONTAINERS</b>		<b>MATRIX</b>		<b>PRESERV</b>		<b>SAMPLING</b>											
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								<b>DATE</b>		<b>TIME</b>													
51		SP702		✓		1		9.20		17.50		TPH Extended											
52		3		✓		1		13.53		13.53		BTEx											
53		5		✓		1		14.0		14.0		C											
54		11		✓		1		20.9		20.9													
55		12		✓		1		21.4		21.4													
56		12		✓		1		21.5		21.5													
57		North		✓		1		21.2		21.2													
58		West		✓		1		23.0		23.0													
59		South		✓		1		24.0		24.0													
60				✓		1																	
<b>PLEASE NOTE:</b> Liability and Damages-Cardinal's liability and client's exclusive remedy for any claim arising from this 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 remedies or otherwise.																							
<b>Relinquished By:</b> [Signature]				<b>Date:</b> 9-28-18				<b>Received By:</b> [Signature]															
<b>Time:</b> 11:30				<b>Time:</b>																			
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<b>Time:</b>				<b>Time:</b>																			
<b>Delivered By: (Circle One)</b>				<b>Sample Condition</b>				<b>CHECKED BY:</b>															
<b>Sampler - UPS - Bus - Other:</b>				<b>Cool</b> <input checked="" type="checkbox"/> <b>Intact</b> <input checked="" type="checkbox"/>				<b>(Initials)</b>															
				<b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>				<b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>															
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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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October 18, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: HARROUN 15 #008

Enclosed are the results of analyses for samples received by the laboratory on 10/16/18 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 10/16/2018  
 Reported: 10/18/2018  
 Project Name: HARROUN 15 #008  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

Sampling Date: 10/10/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SB 1 @ 20' (H802966-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6000	16.0	10/18/2018	ND	416	104	400	3.77	

**Sample ID: SB 1 @ 25' (H802966-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13300	16.0	10/18/2018	ND	416	104	400	3.77	

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

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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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A handwritten signature in black ink, appearing to read "Celey D. Keene", written over a horizontal line.

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 4



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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**† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476**



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

---

October 18, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: HARROUN 15 #008

Enclosed are the results of analyses for samples received by the laboratory on 10/16/18 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received: 10/16/2018  
 Reported: 10/18/2018  
 Project Name: HARROUN 15 #008  
 Project Number: (8/29/18)  
 Project Location: EDDY COUNTY, NM

Sampling Date: 10/10/2018  
 Sampling Type: Water  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WATER 1 (H802967-01)****Chloride, SM4500Cl-B****mg/L****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride*</b>	<b>41000</b>	4.00	10/17/2018	ND	104	104	100	0.00	

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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



# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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1041



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

April 06, 2023

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

RE: HARROUN 15 # 008

Enclosed are the results of analyses for samples received by the laboratory on 04/03/23 11:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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).

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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". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 1 8' (H231512-01)**

BTEx 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTEx	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/04/2023	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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.0 % 49.1-148

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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 2 8' (H231512-02)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2200	16.0	04/04/2023	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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 84.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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\*=Accredited Analyte

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 3 8' (H231512-03)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20400	16.0	04/04/2023	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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 86.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 4 8' (H231512-04)**

BTEx 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16		
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19		
Total BTEx	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3480	16.0	04/04/2023	ND	448	112	400	3.64	QM-07	

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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 86.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 5 8' (H231512-05)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3680	16.0	04/04/2023	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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	31.2	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 6 8' (H231512-06)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7680	16.0	04/04/2023	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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	21.1	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 86.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.6 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 7 8' (H231512-07)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	13300	16.0	04/04/2023	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	04/03/2023	ND	187	93.3	200	3.84	
DRO >C10-C28*	39.8	10.0	04/03/2023	ND	176	88.0	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 88.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 8 8' (H231512-08)**

BTEx 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16		
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19		
Total BTEX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8000	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 9 8' (H231512-09)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 78.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.3 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 10 8' (H231512-10)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16		
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19		
Total BTX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11100	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 11 8' (H231512-11)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/03/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11200	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	27.2	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 12 8' (H231512-12)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	23800	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	42.5	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 85.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 13 8' (H231512-13)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16		
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4920	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 14 8' (H231512-14)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16		
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	592	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 87.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 15 8' (H231512-15)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10000	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 87.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 16 8' (H231512-16)**

BTEx 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16		
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19		
Total BTEX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11900	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	605	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	186	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 87.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.1 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 17 8' (H231512-17)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9200	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	44.6	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.9 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 18 8' (H231512-18)**

BTEx 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20200	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	153	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	46.1	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 80.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 19 8' (H231512-19)**

BTEx 8021B		mg/L	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	0.092	0.050	04/04/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	0.323	0.050	04/04/2023	ND	2.10	105	2.00	1.89	GC-NC1
Total Xylenes*	1.63	0.150	04/04/2023	ND	6.45	107	6.00	2.19	
Total BTEX	2.04	0.300	04/04/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 155 % 77.5-125

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	04/04/2023	ND	448	112	400	3.64	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	70.6	50.0	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	4200	50.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	1070	50.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 86.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 149 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 20 8' (H231512-20)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.3	2.00	1.16	
Toluene*	<0.050	0.050	04/04/2023	ND	2.02	101	2.00	1.77	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.45	107	6.00	2.19	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	960	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 83.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 21 8' (H231512-21)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	960	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 80.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.5 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 22 8' (H231512-22)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17400	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	155	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	37.6	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 23 8' (H231512-23)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	47200	16.0	04/04/2023	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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	225	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	75.9	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 82.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 24 8' (H231512-24)**

BTX 8021B		mg/L	Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	23600	16.0	04/04/2023	ND	432	108	400	3.77	QM-07	

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	04/03/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	1130	10.0	04/03/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	320	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 83.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.7 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS - 25 8' (H231512-25)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	19200	16.0	04/04/2023	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	04/04/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	308	10.0	04/04/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	94.1	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 81.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 26 8' (H231512-26)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8		
Total BTEX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	22000	16.0	04/04/2023	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	04/04/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	291	10.0	04/04/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	110	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 27 8' (H231512-27)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3360	16.0	04/04/2023	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	04/04/2023	ND	171	85.4	200	1.69	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	207	104	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 76.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 28 8' (H231512-28)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4160	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 91.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.9 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 29 8' (H231512-29)**

BTX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8		
Total BTX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6800	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 78.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 30 8' (H231512-30)**

BTX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8		
Total BTX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17800	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 81.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.7 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 31 8' (H231512-31)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 69.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 32 8' (H231512-32)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7460	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	276	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	110	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 33 8' (H231512-33)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4640	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	107	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	36.6	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 121 % 48.2-134

Surrogate: 1-Chlorooctadecane 147 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 34 8' (H231512-34)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8		
Total BTEX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6880	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 35 8' (H231512-35)**

BTX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/03/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.90	115	6.00	12.8		
Total BTX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14900	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 97.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 36 8' (H231512-36)**

BTX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/04/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.90	115	6.00	12.8		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3760	16.0	04/04/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	403	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	148	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 124 % 48.2-134

Surrogate: 1-Chlorooctadecane 161 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS - 37 8' (H231512-37)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/04/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6480	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	85.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	30.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 38 8' (H231512-38)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/04/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.90	115	6.00	12.8	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1250	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 145 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 39 8' (H231512-39)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	2.12	106	2.00	11.6		
Toluene*	<0.050	0.050	04/04/2023	ND	2.23	112	2.00	11.9		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.22	111	2.00	13.1		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.90	115	6.00	12.8		
Total BTEX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2560	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 40 8' (H231512-40)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.12	106	2.00	11.6	
Toluene*	<0.050	0.050	04/04/2023	ND	2.23	112	2.00	11.9	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.22	111	2.00	13.1	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.90	115	6.00	12.8	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10300	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	119	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	28.1	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 41 8' (H231512-41)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	04/04/2023	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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	34.6	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 42 8' (H231512-42)**

BTEx 8021B		mg/L	Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	0.237	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6130	16.0	04/04/2023	ND	432	108	400	3.77		

TPH 8015M	mg/kg	Analyzed By: MS						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	35.7	10.0	04/04/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	6820	10.0	04/04/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	1600	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 275 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 43 8' (H231512-43)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3800	16.0	04/04/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	12.8	10.0	04/04/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	2590	10.0	04/04/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	820	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 161 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 44 8' (H231512-44)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8800	16.0	04/04/2023	ND	416	104	400	3.77	QM-07	

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	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	184	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	60.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 45 8' (H231512-45)**

BTEx 8021B		mg/L	Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	0.066	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	0.157	0.050	04/03/2023	ND	2.10	105	2.00	3.24	GC-NC1
Total Xylenes*	0.969	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTEX	1.19	0.300	04/03/2023	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14600	16.0	04/04/2023	ND	416	104	400	3.77		

TPH 8015M	mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	79.8	50.0	04/04/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	8640	50.0	04/04/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	2030	50.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 247 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 46 8' (H231512-46)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.32	105	6.00	2.68		
Total BTEX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4960	16.0	04/04/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	15.5	10.0	04/03/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	1440	10.0	04/03/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	400	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 176 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 47 8' (H231512-47)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9460	16.0	04/04/2023	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	04/04/2023	ND	189	94.3	200	7.03	
DRO >C10-C28*	77.1	10.0	04/04/2023	ND	203	101	200	7.04	
EXT DRO >C28-C36	29.8	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 48 8' (H231512-48)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	0.327	0.150	04/03/2023	ND	6.32	105	6.00	2.68	
Total BTEX	0.327	0.300	04/03/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5760	16.0	04/04/2023	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	56.5	50.0	04/04/2023	ND	176	88.1	200	2.59		
DRO >C10-C28*	5880	50.0	04/04/2023	ND	196	97.8	200	3.08	QM-07, QR-03	
EXT DRO >C28-C36	1370	50.0	04/04/2023	ND						

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 333 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 49 8' (H231512-49)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/03/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/03/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/03/2023	ND	6.32	105	6.00	2.68		
Total BTEX	<0.300	0.300	04/03/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2200	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	20.3	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 94.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.5 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 50 8' (H231512-50)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	110	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	39.4	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 94.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.8 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS - 51 8' (H231512-51)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	974	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	239	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 77.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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**Analytical Results For:**

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 BEAUX JENNINGS  
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 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 52 8' (H231512-52)**

BTX 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	136	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	56.8	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 95.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 53 8' (H231512-53)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3240	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	239	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	67.8	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 92.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS - 54 8' (H231512-54)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68		
Total BTEX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 89.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 55 8' (H231512-55)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68		
Total BTEX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 77.5-125

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	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW - 1 0-8' (H231512-56)**

BTX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	896	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW - 2 0-8' (H231512-57)**

BTX 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	864	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 89.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.7 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 3 0-8' (H231512-58)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	04/04/2023	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	04/03/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/03/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/03/2023	ND					

Surrogate: 1-Chlorooctane 98.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 4 0-8' (H231512-59)**

BTEx 8021B		mg/L		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53		
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68		
Total BTEX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6660	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 5 0-8' (H231512-60)**

BTEx 8021B		mg/L		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.95	97.6	2.00	3.53	
Toluene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	4.01	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.10	105	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.32	105	6.00	2.68	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	544	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 94.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 6 0-8' (H231512-61)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4720	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 7 0-8' (H231512-62)**

BTEx 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTEX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3360	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 93.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.0 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW - 8 0-8' (H231512-63)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1310	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 96.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 9 0-8' (H231512-64)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9730	16.0	04/04/2023	ND	432	108	400	0.00	QM-07	

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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	396	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	148	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 90.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW - 10 0-8' (H231512-65)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1230	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	47.4	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	11.9	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 11 0-8' (H231512-66)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3600	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	14.8	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.0 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 12 0-8' (H231512-67)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46	
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5600	16.0	04/04/2023	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	04/04/2023	ND	176	88.1	200	2.59	
DRO >C10-C28*	876	10.0	04/04/2023	ND	196	97.8	200	3.08	
EXT DRO >C28-C36	246	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 142 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW - 13 0-8' (H231512-68)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46		
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.5-125

Chloride, SM4500CI-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	04/04/2023	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	04/04/2023	ND	175	87.5	200	1.95	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	174	87.0	200	3.24	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 85.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 14 0-8' (H231512-69)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46		
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/04/2023	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	04/04/2023	ND	175	87.5	200	1.95	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	174	87.0	200	3.24	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 84.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.4 % 49.1-148

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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  
BEAUX JENNINGS  
705 W WADLEY AVE.  
MIDLAND TX, 79705  
Fax To:

Received: 04/03/2023  
Reported: 04/06/2023  
Project Name: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SW - 15 0-8' (H231512-70)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	2.01	101	2.00	8.46		
Toluene*	<0.050	0.050	04/04/2023	ND	2.04	102	2.00	8.70		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.07	103	2.00	8.64		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.11	102	6.00	8.55		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 128 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 16 0-8' (H231512-71)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500CI-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	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 17 0-8' (H231512-72)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 83.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 18 0-8' (H231512-73)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

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	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 19 0-8' (H231512-74)**

BTEx 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTEX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 85.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.9 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 20 0-8' (H231512-75)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 21 0-8' (H231512-76)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

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**Analytical Results For:**

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

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 22 0-8' (H231512-77)**

BTX 8021B		mg/L		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66		
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62		
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78		
Total BTX	<0.300	0.300	04/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 77.5-125

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/03/2023  
 Reported: 04/06/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: 32.21947,-103.97515

Sampling Date: 03/31/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 23 0-8' (H231512-78)**

BTX 8021B		mg/L		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2023	ND	1.94	97.2	2.00	5.66	
Toluene*	<0.050	0.050	04/04/2023	ND	2.00	99.9	2.00	5.19	
Ethylbenzene*	<0.050	0.050	04/04/2023	ND	2.05	102	2.00	4.62	
Total Xylenes*	<0.150	0.150	04/04/2023	ND	6.21	104	6.00	3.78	
Total BTX	<0.300	0.300	04/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 77.5-125

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	04/04/2023	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	04/04/2023	ND	170	85.0	200	12.9	
DRO >C10-C28*	<10.0	10.0	04/04/2023	ND	183	91.6	200	12.3	
EXT DRO >C28-C36	<10.0	10.0	04/04/2023	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.4 % 49.1-148

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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.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 8

Company Name: Ensolum, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																							
Project Manager: Beaux Jennings				P.O. #:																											
Address: 601 N Marientfeld Street, Suite 400				Company: Oxy USA Inc.																											
City: Midland				Attn: Wade Dittich																											
Phone #: 210-219-8858				Address:																											
Fax #:				City:																											
Project #: 038444038441446				State: Zip:																											
Project Name: Harrison 15 #002				Phone #: 575-390-2828																											
Project Location: 32.21941, -103.97515				Fax #:																											
Sample Name: Kelleigh																															
FOR LAB USE ONLY																															
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING																								
					GROUNDWATER																										
					WASTEWATER																										
					SOIL																										
					OIL																										
					SLUDGE																										
					OTHER :																										
					ACID/BASE:																										
					ICE / COOL																										
					OTHER :																										
					DATE	TIME																									
H231512	FS-1	8'	C	1	3-31-23	0920	X	Chlorides 4500																							
2	FS-2	8'	C	1	3-31-23	0921	X	BTEX 8021b																							
3	FS-3	8'	C	1	3-31-23	0922	X	TPH 8015m																							
4	FS-4	8'	C	1	3-31-23	0923	X																								
5	FS-5	8'	C	1	3-31-23	0924	X																								
6	FS-6	8'	C	1	3-31-23	0925	X																								
7	FS-7	8'	C	1	3-31-23	0926	X																								
8	FS-8	8'	C	1	3-31-23	0927	X																								
9	FS-9	8'	C	1	3-31-23	0928	X																								
10	FS-10	8'	C	1	3-31-23	0929	X																								
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Relinquished By: [Signature]				Received By: [Signature]				Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:																							
Relinquished Date: 4-3-23				Received Date: 4-3-23				All Results are emailed. Please provide Email address:																							
Relinquished Time: 1:55				Received Time: 1:55				REMARKS:																							
Delivered By: (Circle One)				Observed Temp.: °C				Sample Condition				CHECKED BY: (Initials)				Turnaround Time:				Standard				Bacteria (only)				Sample Condition			
Sampler - UPS - Bus - Other:				Corrected Temp.: °C				<input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact				[Signature]				Thermometer ID #113				Rush				<input type="checkbox"/> Cool <input type="checkbox"/> Intact				Observed Temp.: °C			
				0.9				<input type="checkbox"/> No <input type="checkbox"/> Yes				40				Correction Factor: -0.5°C				-0.6°C				<input type="checkbox"/> Yes <input type="checkbox"/> No				Corrected Temp.: °C			

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 8

Company Name: Ensolum, LLC		Project Manager: Beaux Jennings		BILL TO		ANALYSIS REQUEST	
Address: 601 N Marientfeld Street, Suite 400		City: Midland		State: TX Zip: 79701		P.O. #:	
Phone #: 210-219-8858		Fax #: 210-219-8858		Attn: Wade Dittrich		Company: Oxy USA Inc.	
Project #: 03B1417046		Project Owner: Harran 15 #208		City:		Address:	
Project Location: 32.21447, -103.47515		State: Zip:		Phone #: 575-390-2828		Fax #:	
Sample Name: Kailee Smith: TG		FOR LAB USE ONLY		DATE		TIME	
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX		
					GROUNDWATER		
					WASTEWATER		
					SOIL		
					OIL		
					SLUDGE		
					OTHER:		
					ACID/BASE:		
					ICE / COOL		
					OTHER:		
					DATE		
					TIME		
H231512	FS-11	8'		1	3-31-23	0930	Chlorides 4500
	FS-12	8'		1	3-31-23	0931	BTEX 8021b
	FS-13	8'		1	3-31-23	0932	TPH 8015m
	FS-14	8'		1	3-31-23	0937	
	FS-15	8'		1	3-31-23	0939	
	FS-16	8'		1	3-31-23	0941	
	FS-17	8'		1	3-31-23	0943	
	FS-18	8'		1	3-31-23	0945	
	FS-19	8'		1	3-31-23	0947	
	FS-20	8'		1	3-31-23	0950	
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Relinquished By:		Date: 4-3-23		Received By:		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Time: 1:55		Date: 4-3-23		Received By:		All Results are emailed. Please provide Email address:	
Relinquished By:		Time:		Received By:		REMARKS:	
Delivered By: (Circle One)		Observed Temp. °C		Sample Condition		CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:		Corrected Temp. °C		Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No		Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>	
		1.5		0.9		Thermometer ID #113	
						Correction Factor: -0.5°C	
						Bacteria (only) Sample Condition	
						Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	
						Observed Temp. °C	
						Corrected Temp. °C	

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Page 3 of 8

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 8

Company Name: Ensolum, LLC										<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>									
Project Manager: Beaux Jennings										P.O. #:																			
Address: 601 N Marlenfeld Street, Suite 400										Company: Oxy USA Inc.																			
City: Midland										Attn: Wade Dittrich																			
Phone #: 210-219-8858										Address:																			
Fax #: 210-219-8858										City:																			
Project #: 03B1417046										State:																			
Project Owner:										Zip:																			
Project Name: Harroun 15 #008										Phone #: 575-390-2828																			
Project Location: 32.21947, -103.93515										Fax #:																			
Sample Name: Kaitic Sm 1417 TG																													
FOR LAB USE ONLY																													
Lab I.D.										Sample I.D.										Depth (feet)									
H231512										FS-31										8'									
31										FS-32										8'									
32										FS-33										8'									
33										FS-34										8'									
34										FS-35										8'									
35										FS-36										8'									
36										FS-37										8'									
37										FS-38										8'									
38										FS-39										8'									
39										FS-40										8'									
40																													
										(G)RAB OR (C)OMP.																			
										# CONTAINERS																			
										GROUNDWATER																			
										WASTEWATER																			
										SOIL																			
										OIL																			
										SLUDGE																			
										OTHER :																			
										ACID/BASE:																			
										ICE / COOL																			
										OTHER :																			
										DATE										TIME									
										3-31-23										1046									
										3-31-23										1048									
										3-31-23										1050									
										3-31-23										1116									
										3-31-23										1148									
										3-31-23										1121									
										3-31-23										1123									
										3-31-23										1125									
										3-31-23										1127									
										3-31-23										1170									
										Chlorides 4500																			
										BTEX 8021b																			
										TPH 8015m																			

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Relinquished By:		Date: 4-3-23		Received By:		Date: 4-3-23		Time: 1155		Time: 1155		Received By:		Date:		Time:	
Relinquished By:				Received By:													
Delivered By: (Circle One)		Observed Temp.: °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time:		Standard		Bacteria (only)		Sample Condition		Observed Temp.: °C	
Sampler - UPS - Bus - Other:		Corrected Temp.: °C		Cool Intact				Thermometer ID #113		Rush		Cool Intact				Corrected Temp.: °C	
		0.9		Yes		42						Yes					
				No								No					

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 8

Company Name: Ensolum, LLC

Project Manager: Beaux Jennings

Address: 601 N Marientfeld Street, Suite 400

City: Midland

Phone #: 210-219-8858

Project #: 03B1417046

Project Name: Harman 15 #202

Project Location: 32.21447, -103.41515

Sample Name: Karlake Smith; T6

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Depth (feet)

411

42

43

44

45

46

47

48

49

50

F5-41

F5-42

F5-43

F5-44

F5-45

F5-46

F5-47

F5-48

F5-49

F5-50

41

42

43

44

45

BILL TO

P.O. #:

Company: Oxy USA Inc.

Attn: Wade Dittrich

Address:

City:

State:

Zip:

Phone #: 575-390-2828

Fax #:

ANALYSIS REQUEST

P.O. #:

Company: Oxy USA Inc.

Attn: Wade Dittrich

Address:

City:

State:

Zip:

Phone #: 575-390-2828

Fax #:

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

3-31-23

1132

3-31-23

1134

3-31-23

1136

3-31-23

1138

3-31-23

1200

3-31-23

1205

3-31-23

Chlorides 4500

BTEX 80216

TPH 8015m

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Relinquished By:

Date: 4-3-23

Time: 11:55

Relinquished By:

Date:

Time:

Received By:

Date:

Time:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C

Corrected Temp. °C

Sample Condition

Checked By: (Initials)

Turnaround Time:

Thermometer ID #113

Correction Factor: -0.5°C

Standard

Rush

Bacteria (only)

Cool Intact

Yes

No

Sample Condition

Observed Temp. °C

Corrected Temp. °C

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

Page 6 of 8

Company Name: Ensolum, LLC						<b>BILL TO</b>						<b>ANALYSIS REQUEST</b>					
Project Manager: Beaux Jennings						P.O. #:											
Address: 601 N Marienfield Street, Suite 400						Company: Oxy USA Inc.											
City: Midland						State: TX Zip: 79701						Attn: Wade Dittrich					
Phone #: 210-219-8858 Fax #:						Address:											
Project #: 0331417046 Project Owner:						City:											
Project Name: Hattman 15 #008						State: Zip:											
Project Location: 32.21947-103.91515						Phone #: 575-390-2828											
Sample Name: Marie Smith 1 TG						Fax #:											
FOR LAB USE ONLY																	
Lab I.D.		Sample I.D.		Depth (feet)		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING			
										GROUNDWATER							
										WASTEWATER							
										SOIL							
										OIL							
										SLUDGE							
										OTHER :							
										ACID/BASE:							
										ICE / COOL							
										OTHER :							
										DATE		TIME					
H23152		F5-51		8'		C 1		X		3-3-23		1216		Chlorides 4500			
S2		F5-52		8'		C 1		X		3-3-23		1218		BTEx 8021b			
S3		F5-53		8'		C 1		X		3-3-23		1221		TPH 8015m			
S4		F5-54		8'		C 1		X		3-3-23		1223					
S5		F5-55		8'		C 1		X		3-3-23		1225					
S6		SW-1		0-8'		C 1		X		3-3-23		1256					
S7		SW-2		0-8'		C 1		X		3-3-23		1256					
S8		SW-3		0-8'		C 1		X		3-3-23		1300					
S9		SW-4		0-8'		C 1		X		3-3-23		1302					
60		SW-5		0-8'		C 1		X		3-3-23		1304					
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Relinquished By: [Signature]						Date: 3-3-23 Received By: [Signature]						Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:					
Time: 1155						Received By: [Signature]						All Results are emailed. Please provide Email address:					
Date: [Blank]						Time: [Blank]						REMARKS:					
Delivered By: (Circle One) Sampler - UPS - Bus - Other:						Observed Temp.: °C Corrected Temp.: °C						Sample Condition Cool Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No					
CHECKED BY: [Signature] (Initials)						Turnaround Time: Standard Rush <input checked="" type="checkbox"/>						Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No					
Thermometer ID #113						Corrosion Factor -0.5°C						Corrected Temp. °C					





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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 7 of 8

Company Name: Ensolum, LLC

Project Manager: Beaux Jennings

Address: 601 N Marientfeld Street, Suite 400

City: Midland

Phone #: 210-219-8858

State: TX

Zip: 79701

Attn: Wade Dittrich

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

BILL TO

ANALYSIS REQUEST

P.O. #:

Company:

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

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Project Name:

Project Location:

Sample Name:

Project Manager:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 8 of 8

[illegible]





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

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May 02, 2023

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

RE: HARROUN 15 # 008

Enclosed are the results of analyses for samples received by the laboratory on 04/27/23 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 2 12' (H232085-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5760	16.0	04/28/2023	ND	448	112	400	3.64	

**Sample ID: FS - 3 12' (H232085-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9200	16.0	04/28/2023	ND	448	112	400	3.64	

**Sample ID: FS - 4 12' (H232085-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10600	16.0	04/28/2023	ND	448	112	400	3.64	

**Sample ID: FS - 5 12' (H232085-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7520	16.0	04/28/2023	ND	448	112	400	3.64	

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 6 12' (H232085-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11200	16.0	04/28/2023	ND	448	112	400	3.64		

**Sample ID: FS - 7 12' (H232085-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10400	16.0	04/28/2023	ND	448	112	400	3.64		

**Sample ID: FS - 8 12' (H232085-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	04/28/2023	ND	448	112	400	3.64	

**Sample ID: FS - 9 12' (H232085-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2800	16.0	04/28/2023	ND	448	112	400	3.64		

**Sample ID: FS - 10 12' (H232085-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4040	16.0	04/28/2023	ND	448	112	400	3.64		

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 11 12' (H232085-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3680	16.0	04/28/2023	ND	448	112	400	3.64		

**Sample ID: FS - 12 12' (H232085-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10600	16.0	04/28/2023	ND	448	112	400	3.64		

**Sample ID: FS - 13 12' (H232085-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6480	16.0	04/28/2023	ND	448	112	400	3.64		

**Sample ID: FS - 15 12' (H232085-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4400	16.0	04/28/2023	ND	448	112	400	3.64		

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 16 12' (H232085-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	05/01/2023	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	04/28/2023	ND	216	108	200	21.5	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	204	102	200	20.9	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane		90.0 %	48.2-134						
Surrogate: 1-Chlorooctadecane		94.0 %	49.1-148						

**Sample ID: FS - 17 12' (H232085-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7680	16.0	05/01/2023	ND	432	108	400	7.69	

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**Analytical Results For:**

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 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 18 12' (H232085-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9800	16.0	05/01/2023	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*	<50.0	50.0	04/28/2023	ND	216	108	200	21.5		
DRO >C10-C28*	2970	50.0	04/28/2023	ND	204	102	200	20.9		
EXT DRO >C28-C36	571	50.0	04/28/2023	ND						
Surrogate: 1-Chlorooctane	93.4 %	48.2-134								
Surrogate: 1-Chlorooctadecane	116 %	49.1-148								

**Sample ID: FS - 19 12' (H232085-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8200	16.0	05/01/2023	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	04/28/2023	ND	216	108	200	21.5		
DRO >C10-C28*	51.2	10.0	04/28/2023	ND	204	102	200	20.9		
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND						
Surrogate: 1-Chlorooctane	89.7 %	48.2-134								
Surrogate: 1-Chlorooctadecane	96.6 %	49.1-148								

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 20 12' (H232085-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4560	16.0	05/01/2023	ND	432	108	400	7.69		

**Sample ID: FS - 21 12' (H232085-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6320	16.0	05/01/2023	ND	432	108	400	7.69	

**Sample ID: FS - 22 12' (H232085-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	05/01/2023	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	04/28/2023	ND	216	108	200	21.5	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	204	102	200	20.9	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 23 12' (H232085-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6480	16.0	05/01/2023	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	04/28/2023	ND	216	108	200	21.5	
DRO >C10-C28*	691	10.0	04/28/2023	ND	204	102	200	20.9	
EXT DRO >C28-C36	127	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	92.7 %	48.2-134							
Surrogate: 1-Chlorooctadecane	94.1 %	49.1-148							

**Sample ID: FS - 24 12' (H232085-22)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	83.8 %	48.2-134							
Surrogate: 1-Chlorooctadecane	108 %	49.1-148							

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 25 12' (H232085-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7680	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	86.1 %	48.2-134							
Surrogate: 1-Chlorooctadecane	109 %	49.1-148							

**Sample ID: FS - 26 12' (H232085-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11600	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	94.3 %	48.2-134							
Surrogate: 1-Chlorooctadecane	121 %	49.1-148							

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 27 12' (H232085-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6880	16.0	05/01/2023	ND	432	108	400	7.69		

**Sample ID: FS - 28 12' (H232085-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	05/01/2023	ND	432	108	400	7.69	

**Sample ID: FS - 29 12' (H232085-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1020	16.0	05/01/2023	ND	432	108	400	7.69		

**Sample ID: FS - 30 12' (H232085-28)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2120	16.0	05/01/2023	ND	432	108	400	7.69		

**Sample ID: FS - 31 12' (H232085-29)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6000	16.0	05/01/2023	ND	432	108	400	7.69	

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 32 12' (H232085-30)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	91.4 %	48.2-134							
Surrogate: 1-Chlorooctadecane	118 %	49.1-148							

**Sample ID: FS - 33 12' (H232085-31)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	87.6 %	48.2-134							
Surrogate: 1-Chlorooctadecane	113 %	49.1-148							

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 34 12' (H232085-32)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1470	16.0	05/01/2023	ND	432	108	400	7.69	

**Sample ID: FS - 35 12' (H232085-33)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	05/01/2023	ND	432	108	400	7.69	

**Sample ID: FS - 36 12' (H232085-34)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3360	16.0	04/28/2023	ND	432	108	400	3.77	QM-07	

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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					

Surrogate: 1-Chlorooctane 87.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 37 12' (H232085-35)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	94.6 %	48.2-134							
Surrogate: 1-Chlorooctadecane	123 %	49.1-148							

**Sample ID: FS - 38 12' (H232085-36)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1070	16.0	04/28/2023	ND	432	108	400	3.77		

**Sample ID: FS - 39 12' (H232085-37)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	04/28/2023	ND	432	108	400	3.77		

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 40 12' (H232085-38)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9000	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	93.1 %	48.2-134							
Surrogate: 1-Chlorooctadecane	120 %	49.1-148							

**Sample ID: FS - 41 12' (H232085-39)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6240	16.0	04/28/2023	ND	432	108	400	3.77	

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**Analytical Results For:**

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 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 42 12' (H232085-40)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2760	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	75.4 %	48.2-134							
Surrogate: 1-Chlorooctadecane	100 %	49.1-148							

**Sample ID: FS - 43 12' (H232085-41)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3360	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	88.3 %	48.2-134							
Surrogate: 1-Chlorooctadecane	113 %	49.1-148							

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 44 12' (H232085-42)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2720	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	86.9 %	48.2-134							
Surrogate: 1-Chlorooctadecane	108 %	49.1-148							

**Sample ID: FS - 45 12' (H232085-43)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5280	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	329	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	58.3	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	91.9 %	48.2-134							
Surrogate: 1-Chlorooctadecane	115 %	49.1-148							

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 46 12' (H232085-44)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	91.2 %	48.2-134							
Surrogate: 1-Chlorooctadecane	117 %	49.1-148							

**Sample ID: FS - 47 12' (H232085-45)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	93.7 %	48.2-134							
Surrogate: 1-Chlorooctadecane	120 %	49.1-148							

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 48 12' (H232085-46)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9000	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	41.7	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	88.4 %	48.2-134							
Surrogate: 1-Chlorooctadecane	114 %	49.1-148							

**Sample ID: FS - 49 12' (H232085-47)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2520	16.0	04/28/2023	ND	432	108	400	3.77		

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 50 12' (H232085-48)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11000	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	21.5	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane		93.2 %	48.2-134						
Surrogate: 1-Chlorooctadecane		120 %	49.1-148						

**Sample ID: FS - 51 12' (H232085-49)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane		90.1 %	48.2-134						
Surrogate: 1-Chlorooctadecane		115 %	49.1-148						

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 52 12' (H232085-50)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4640	16.0	04/28/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	90.9 %	48.2-134							
Surrogate: 1-Chlorooctadecane	116 %	49.1-148							

**Sample ID: FS - 53 12' (H232085-51)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3520	16.0	04/28/2023	ND	432	108	400	3.77		

**Sample ID: SW - 1 0-12' (H232085-52)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5120	16.0	04/28/2023	ND	432	108	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 2 0-12' (H232085-53)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6720	16.0	04/28/2023	ND	432	108	400	3.77		

**Sample ID: SW - 4 0-12' (H232085-54)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	05/01/2023	ND	432	108	400	0.00	QM-07

**Sample ID: SW - 6 0-12' (H232085-55)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26000	16.0	05/01/2023	ND	432	108	400	0.00	

**Sample ID: SW - 7 0-12' (H232085-56)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	24000	16.0	05/01/2023	ND	432	108	400	0.00		

**Sample ID: SW - 8 0-12' (H232085-57)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19600	16.0	05/01/2023	ND	432	108	400	0.00	

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 9 0-12' (H232085-58)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8000	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99	
DRO >C10-C28*	<10.0	10.0	04/28/2023	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	04/28/2023	ND					
Surrogate: 1-Chlorooctane	85.2 %	48.2-134							
Surrogate: 1-Chlorooctadecane	110 %	49.1-148							

**Sample ID: SW - 10 0-12' (H232085-59)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3520	16.0	05/01/2023	ND	432	108	400	0.00		

**Sample ID: SW - 11 0-12' (H232085-60)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/01/2023	ND	432	108	400	0.00	

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**Analytical Results For:**

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

Received: 04/27/2023  
 Reported: 05/02/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 04/27/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 12 0-12' (H232085-61)**

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>1200</b>	16.0	05/01/2023	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	04/28/2023	ND	166	83.0	200	1.99		
<b>DRO &gt;C10-C28*</b>	<b>155</b>	10.0	04/28/2023	ND	187	93.7	200	5.96		
<b>EXT DRO &gt;C28-C36</b>	<b>14.3</b>	10.0	04/28/2023	ND						
Surrogate: 1-Chlorooctane	92.4 %	48.2-134								
Surrogate: 1-Chlorooctadecane	120 %	49.1-148								

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---

### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 7 of 7

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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 7

FORN-000 F.S.2.10/0112





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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 3 of 7

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Page 4 of 7

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(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 7

<b>Company Name:</b> Ensolum, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>															
<b>Project Manager:</b> Beaux Jennings		<b>P.O. #:</b>																	
<b>Address:</b> 601 N. Marientfeld St. STE 400		<b>Company:</b> Oxy USA, Inc.																	
<b>City:</b> Midland		<b>Attn:</b> Wade Dittich																	
<b>Phone #:</b> 210-219-8858		<b>Address:</b>																	
<b>State:</b> TX <b>Zip:</b> 79701		<b>City:</b>																	
<b>Fax #:</b>		<b>State:</b>																	
<b>Project #:</b> 0373141746		<b>Zip:</b>																	
<b>Project Name:</b> Harrison 15 H2008		<b>Phone #:</b> 575-390-2828																	
<b>Project Location:</b> 32.21447, -103.97515 Eddy County, NM		<b>Fax #:</b>																	
<b>Sample Name:</b> Waste Stream #5D		<b>PRESERV.</b>		<b>SAMPLING</b>															
<small>FOR LAB USE ONLY</small>																			
<b>Lab I.D.</b>	<b>Sample I.D.</b>	<b>Sample Depth (feet)</b>	<b>(G)RAB OR (C)OMP.</b>	<b># CONTAINERS</b>	<b>MATRIX</b>	<b>OTHER :</b>	<b>ACID/BASE:</b>	<b>ICE / COOL</b>	<b>OTHER :</b>	<b>DATE</b>	<b>TIME</b>	<b>Chlorides</b>	<b>TPH</b>						
403-2085	FS-43	12'	C	1	GROUNDWATER					4-27-23	1105	X	X						
42	FS-41	12'	C	1	WASTEWATER					4-27-23	1104	X	X						
43	FS-45	12'	C	1	SOIL					4-27-23	1107	X	X						
44	FS-46	12'	C	1	OIL					4-27-23	1108	X	X						
45	FS-47	12'	C	1	SLUDGE					4-27-23	1109	X	X						
46	FS-48	12'	C	1	OTHER :					4-27-23	1110	X	X						
47	FS-49	12'	C	1	ACID/BASE:					4-27-23	1111	X	X						
48	FS-50	12'	C	1	ICE / COOL					4-27-23	1112	X	X						
49	FS-51	12'	C	1	OTHER :					4-27-23	1113	X	X						
50	FS-52	12'	C	1						4-27-23	1114	X	X						
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<b>Relinquished By:</b> <i>SLJ</i>		<b>Date:</b> 4-27-23		<b>Received By:</b> <i>Beaux Jennings</i>															
<b>Relinquished By:</b>		<b>Date:</b>		<b>Received By:</b>															
<b>Time:</b>		<b>Time:</b>		<b>Time:</b>															
<b>Delivered By: (Circle One)</b>		<b>Observed Temp.: °C</b>		<b>Sample Condition</b>		<b>CHECKED BY: (Initials)</b>		<b>Turnaround Time:</b>		<b>Standard</b>		<b>Bacteria (only)</b>		<b>Sample Condition</b>					
<b>Sampler - UPS - Bus - Other:</b>		<b>Corrected Temp.: °C</b>		<b>Cool Intact</b>		<b>(Initials)</b>		<b>Thermometer ID #113</b>		<b>Rush</b>		<b>Cool Intact</b>		<b>Observed Temp.: °C</b>					
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							

FORM 000-15-02 10/01/21

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 7-547

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Beaux Jennings

Address: 601 N. Marland St. STE 400

City: Midland State: TX Zip: 79701

Phone #: 210-219-8858 Fax #:

Project #: 03BILF046 Project Owner:

Project Name: Hattian 15 AS08

Project Location: 32,2447, -103,97315 eddy county, NM

Sampler Name: Kaleb Smiths 15D

FOR LAB USE ONLY

P.O. #:

Company: Oxy USA, Inc.

Attn: Wade Dittich

Address:

City:

State: Zip:

Phone #: 575-390-2828

Fax #:

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

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Relinquished By: 4-27-23 Date: 4-27-23 Time: 1500 Received By: Beaux Jennings Date: 4-27-23 Time: 1500

Relinquished By: 4-27-23 Date: 4-27-23 Time: 1500 Received By: Beaux Jennings Date: 4-27-23 Time: 1500

Delivered By: (Circle One) Observed Temp. °C 4.3 Corrected Temp. °C 3.7 Sample Condition Cool Intact Yes Yes Checked BY: (Initials) Y-20 Turnaround Time: Standard Rush Bacteria (only) Cool Intact Yes Yes Sample Condition Observed Temp. °C Corrected Temp. °C

Sampler - UPS - Bus - Other: Corrected Temp. °C 3.7 Sample Condition Cool Intact Yes Yes Checked BY: (Initials) Y-20 Turnaround Time: Standard Rush Bacteria (only) Cool Intact Yes Yes Sample Condition Observed Temp. °C Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)





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

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May 24, 2023

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

RE: HARROUN 15 # 008

Enclosed are the results of analyses for samples received by the laboratory on 05/23/23 13:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 05/23/2023  
 Reported: 05/24/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 05/23/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 18 12' (H232619-01)**

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>3680</b>	16.0	05/23/2023	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	05/24/2023	ND	188	93.9	200	0.894	
<b>DRO &gt;C10-C28*</b>	<b>671</b>	10.0	05/24/2023	ND	150	74.8	200	6.15	
<b>EXT DRO &gt;C28-C36</b>	<b>182</b>	10.0	05/24/2023	ND					
Surrogate: 1-Chlorooctane	103 %	48.2-134							
Surrogate: 1-Chlorooctadecane	111 %	49.1-148							

**Sample ID: FS - 23 12' (H232619-02)**

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>46400</b>	16.0	05/23/2023	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	05/23/2023	ND	188	93.9	200	0.894	
DRO >C10-C28*	<10.0	10.0	05/23/2023	ND	150	74.8	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	05/23/2023	ND					
Surrogate: 1-Chlorooctane	84.4 %	48.2-134							
Surrogate: 1-Chlorooctadecane	85.8 %	49.1-148							

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/23/2023  
 Reported: 05/24/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 05/23/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 45 12' (H232619-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	05/23/2023	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	05/23/2023	ND	188	93.9	200	0.894	
DRO >C10-C28*	<10.0	10.0	05/23/2023	ND	150	74.8	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	05/23/2023	ND					
Surrogate: 1-Chlorooctane	91.0 %	48.2-134							
Surrogate: 1-Chlorooctadecane	91.7 %	49.1-148							

**Sample ID: FS - 53 12' (H232619-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	05/23/2023	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	05/23/2023	ND	188	93.9	200	0.894	
DRO >C10-C28*	<10.0	10.0	05/23/2023	ND	150	74.8	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	05/23/2023	ND					
Surrogate: 1-Chlorooctane	85.7 %	48.2-134							
Surrogate: 1-Chlorooctadecane	86.0 %	49.1-148							

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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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 05/23/2023  
 Reported: 05/24/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 05/23/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 1 0-12' (H232619-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	05/23/2023	ND	416	104	400	0.00	

**Sample ID: SW - 2 0-12' (H232619-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	05/23/2023	ND	416	104	400	0.00	

**Sample ID: SW - 4 0-12' (H232619-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4640	16.0	05/23/2023	ND	416	104	400	0.00		

**Sample ID: SW - 6 0-12' (H232619-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/23/2023	ND	416	104	400	0.00	

**Sample ID: SW - 7 0-12' (H232619-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/23/2023	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 05/23/2023  
 Reported: 05/24/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 05/23/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 8 0-12' (H232619-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	05/23/2023	ND	416	104	400	0.00		

**Sample ID: SW - 9 0-12' (H232619-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	05/23/2023	ND	416	104	400	0.00		

**Sample ID: SW - 10 0-12' (H232619-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	05/23/2023	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 05/23/2023  
 Reported: 05/24/2023  
 Project Name: HARROUN 15 # 008  
 Project Number: 03B1417046  
 Project Location: OXY 32.21947,-103.97515

Sampling Date: 05/23/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 12 0-12' (H232619-13)**

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	05/23/2023	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	05/23/2023	ND	188	93.9	200	0.894		
DRO >C10-C28*	<10.0	10.0	05/23/2023	ND	150	74.8	200	6.15		
EXT DRO >C28-C36	<10.0	10.0	05/23/2023	ND						
Surrogate: 1-Chlorooctane	90.5 %	48.2-134								
Surrogate: 1-Chlorooctadecane	90.8 %	49.1-148								

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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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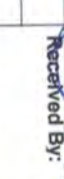


A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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>Project Manager:</b> Beaux Jennings <b>Address:</b> 601 N. Mainfield St. STE 400 <b>City:</b> Midland <b>State:</b> TX <b>Zip:</b> 79701 <b>Phone #:</b> 210-219-8858 <b>Fax #:</b> <b>Project #:</b> 03B1417046 <b>Project Owner:</b> <b>Project Name:</b> Harroun 15 #008 <b>Project Location:</b> 32.21947, -103.97515 Eddy County, NM <b>Sampler Name:</b> Kailee Smith 15M				<b>P.O. #:</b> <b>Company:</b> Oxy USA, Inc. <b>Attn:</b> Wade Dittrich <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> 575-390-2828 <b>Fax #:</b>			
<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>			
<b>FOR LAB USE ONLY</b>  <b>Lab I.D.</b> PA33049		<b>Sample I.D.</b>  FS-18 FS-23 FS-45 FS-53 SW-1 SW-2 SW-4 SW-6 SW-7 SW-8		<b>Sample Depth (feet)</b> 12' 12' 12' 12' 0-12' 0-12' 0-12' 0-12' 0-12' 0-12'		(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	
				<b>DATE</b> 5-23-23 5-23-23 5-23-23 5-23-23 5-23-23 5-23-23 5-23-23 5-23-23 5-23-23		<b>TIME</b> 1006 1008 1610 1612 1005 1014 1008 1008 1020 1620	
				Chlorides 4500 TPH 8015m			
<b>Relinquished By:</b> 		<b>Date:</b> 5-23-23 <b>Time:</b> 1300 <b>Date:</b> <b>Time:</b>		<b>Received By:</b> 		<b>Verbal Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>All Results are emailed. Please provide Email address:</b> Bjennings@ensolum.com	
<b>Relinquished By:</b> 		<b>Date:</b> <b>Time:</b> <b>Date:</b> <b>Time:</b>		<b>Received By:</b> 		<b>REMARKS:</b> Turnaround Time: 48 hr <b>Standard</b> <input type="checkbox"/> <b>Rush</b> <input checked="" type="checkbox"/> Thermometer ID #113 <b>Corrosion Factor:</b> -0.5°C Bacteria (only) <input type="checkbox"/> <b>Sample Condition</b> <input checked="" type="checkbox"/> Cool Intact <input type="checkbox"/> <b>Observed Temp. °C</b> Yes <input type="checkbox"/> No <input type="checkbox"/> <b>Corrected Temp. °C</b>	
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:		<b>Observed Temp. °C</b> 4.5 <b>Corrected Temp. °C</b> 3.9 <b>Sample Condition</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		<b>CHECKED BY:</b> (Initials) AD		<b>Turnaround Time:</b> 48 hr <b>Standard</b> <input type="checkbox"/> <b>Rush</b> <input checked="" type="checkbox"/> Thermometer ID #113 <b>Corrosion Factor:</b> -0.5°C Bacteria (only) <input type="checkbox"/> <b>Sample Condition</b> <input checked="" type="checkbox"/> Cool Intact <input type="checkbox"/> <b>Observed Temp. °C</b> Yes <input type="checkbox"/> No <input type="checkbox"/> <b>Corrected Temp. °C</b>	





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>Project Manager:</b> Beaux Jennings <b>Address:</b> 601 N. Marientfield St. STE 400 <b>City:</b> Midland <b>State:</b> TX <b>Zip:</b> 79701 <b>Phone #:</b> 210-219-8858 <b>Fax #:</b> <b>Project #:</b> 0381417046 <b>Project Owner:</b> <b>Project Name:</b> Harco 15 #008 <b>Project Location:</b> 32,21947, 703,97515 eddy county, NM <b>Sampler Name:</b> Kenice Smith & SM				<b>P.O. #:</b> <b>Company:</b> Oxy USA, Inc. <b>Attn:</b> Wade Dittich <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> 575-390-2828 <b>Fax #:</b>			
<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>			
<b>FOR LAB USE ONLY</b> <b>Lab I.D.</b> 183240P1 <b>Sample I.D.</b> <b>Sample Depth (feet)</b> 11 SW-9 0-12' C 1 13 SW-10 0-12' C 1 13 SW-12 0-12' C 1 NTC VS				<b>(G)RAB OR (C)OMP.</b> <b># CONTAINERS</b> GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : <b>DATE</b> 5-23-23 <b>TIME</b> 10:24 X + + 1629			
<b>Relinquished By:</b> [Signature] <b>Relinquished Date:</b> 5-23-23 <b>Received By:</b> [Signature] <b>Received Date:</b> 5-23-23 <b>Time:</b> 1300 <b>Observed Temp. °C</b> 4.5 <b>Corrected Temp. °C</b> 3.9 <b>Sample Condition</b> Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <b>CHECKED BY:</b> [Signature] <b>Turnaround Time:</b> 48hr <input checked="" type="checkbox"/> Standard <input type="checkbox"/> <b>Thermometer ID #113</b> <b>Rush</b> <input checked="" type="checkbox"/> <b>Correction Factor:</b> -0.5°C <input type="checkbox"/> Bacteria (only) <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> <b>Corrected Temp. °C</b>				<b>Verbal Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: <b>Remarks:</b> All Results are emailed. Please provide Email address: Blennings@ensolum.com			

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

---

June 16, 2023

BEAUX JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: HARROUN 15 # 008

Enclosed are the results of analyses for samples received by the laboratory on 06/14/23 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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



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

**Analytical Results For:**ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND TX, 79705Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:Reported:  
16-Jun-23 11:16

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS - 18 16'	H233061-01	Soil	13-Jun-23 11:46	14-Jun-23 14:00
FS - 23 16'	H233061-02	Soil	13-Jun-23 11:48	14-Jun-23 14:00
SW - 4 0-12'	H233061-03	Soil	13-Jun-23 13:50	14-Jun-23 14:00

06/16/23 - Client added analysis (see COC). This is the revised report and will replace the one sent on 06/15/23.

Cardinal Laboratories

\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:

Reported:  
16-Jun-23 11:16

**FS - 18 16'**  
**H233061-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>1920</b>		16.0	mg/kg	4	3061428	AC	14-Jun-23	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	3061533	MS	15-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3061533	MS	15-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3061533	MS	15-Jun-23	8015B	
Surrogate: 1-Chlorooctane			82.9 %	48.2-134		3061533	MS	15-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			80.9 %	49.1-148		3061533	MS	15-Jun-23	8015B	

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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  
705 W WADLEY AVE.  
MIDLAND TX, 79705

Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:

Reported:  
16-Jun-23 11:16

**FS - 23 16'**  
**H233061-02 (Soil)**

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

<b>Chloride</b>	<b>3520</b>		16.0	mg/kg	4	3061552	AC	15-Jun-23	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	3061424	MS	15-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3061424	MS	15-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3061424	MS	15-Jun-23	8015B	
Surrogate: 1-Chlorooctane			92.4 %	48.2-134		3061424	MS	15-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			98.9 %	49.1-148		3061424	MS	15-Jun-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND TX, 79705Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:Reported:  
16-Jun-23 11:16**SW - 4 0-12'**  
**H233061-03 (Soil)**

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

<b>Chloride</b>	<b>752</b>		16.0	mg/kg	4	3061428	AC	14-Jun-23	4500-Cl-B	
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:

Reported:  
16-Jun-23 11:16

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3061428 - 1:4 DI Water****Blank (3061428-BLK1)**

Prepared &amp; Analyzed: 14-Jun-23

Chloride	ND	16.0	mg/kg						
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**LCS (3061428-BS1)**

Prepared &amp; Analyzed: 14-Jun-23

Chloride	416	16.0	mg/kg	400	104	80-120			
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**LCS Dup (3061428-BSD1)**

Prepared &amp; Analyzed: 14-Jun-23

Chloride	448	16.0	mg/kg	400	112	80-120	7.41	20	
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**Batch 3061552 - 1:4 DI Water****Blank (3061552-BLK1)**

Prepared &amp; Analyzed: 15-Jun-23

Chloride	ND	16.0	mg/kg						
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**LCS (3061552-BS1)**

Prepared &amp; Analyzed: 15-Jun-23

Chloride	416	16.0	mg/kg	400	104	80-120			
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**LCS Dup (3061552-BSD1)**

Prepared &amp; Analyzed: 15-Jun-23

Chloride	432	16.0	mg/kg	400	108	80-120	3.77	20	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:

Reported:  
16-Jun-23 11:16

**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 3061424 - General Prep - Organics****Blank (3061424-BLK1)**

Prepared &amp; Analyzed: 14-Jun-23

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	38.7		mg/kg	49.6		78.0	48.2-134			
Surrogate: 1-Chlorooctadecane	42.2		mg/kg	50.0		84.5	49.1-148			

**LCS (3061424-BS1)**

Prepared: 14-Jun-23 Analyzed: 15-Jun-23

GRO C6-C10	200	10.0	mg/kg	200		100	78.5-124			
DRO >C10-C28	206	10.0	mg/kg	200		103	72.5-126			
Total TPH C6-C28	406	10.0	mg/kg	400		102	77.6-123			
Surrogate: 1-Chlorooctane	54.3		mg/kg	49.6		109	48.2-134			
Surrogate: 1-Chlorooctadecane	55.5		mg/kg	50.0		111	49.1-148			

**LCS Dup (3061424-BS1)**

Prepared: 14-Jun-23 Analyzed: 15-Jun-23

GRO C6-C10	189	10.0	mg/kg	200		94.7	78.5-124	5.53	17.7	
DRO >C10-C28	196	10.0	mg/kg	200		97.8	72.5-126	5.33	21	
Total TPH C6-C28	385	10.0	mg/kg	400		96.3	77.6-123	5.43	18.5	
Surrogate: 1-Chlorooctane	51.6		mg/kg	49.6		104	48.2-134			
Surrogate: 1-Chlorooctadecane	52.4		mg/kg	50.0		105	49.1-148			

**Batch 3061533 - General Prep - Organics****Blank (3061533-BLK1)**

Prepared &amp; Analyzed: 15-Jun-23

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	47.7		mg/kg	49.6		96.3	48.2-134			
Surrogate: 1-Chlorooctadecane	46.0		mg/kg	50.0		92.1	49.1-148			

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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  
705 W WADLEY AVE.  
MIDLAND TX, 79705

Project: HARROUN 15 # 008  
Project Number: 03B1417046  
Project Manager: BEAUX JENNINGS  
Fax To:

Reported:  
16-Jun-23 11:16

**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 3061533 - General Prep - Organics****LCS (3061533-BS1)**

Prepared &amp; Analyzed: 15-Jun-23

GRO C6-C10	226	10.0	mg/kg	200		113	78.5-124			
DRO >C10-C28	208	10.0	mg/kg	200		104	72.5-126			
Total TPH C6-C28	434	10.0	mg/kg	400		109	77.6-123			
Surrogate: 1-Chlorooctane	60.4		mg/kg	49.6		122	48.2-134			
Surrogate: 1-Chlorooctadecane	61.8		mg/kg	50.0		124	49.1-148			

**LCS Dup (3061533-BS1)**

Prepared &amp; Analyzed: 15-Jun-23

GRO C6-C10	215	10.0	mg/kg	200		108	78.5-124	4.96	17.7	
DRO >C10-C28	202	10.0	mg/kg	200		101	72.5-126	3.03	21	
Total TPH C6-C28	417	10.0	mg/kg	400		104	77.6-123	4.03	18.5	
Surrogate: 1-Chlorooctane	54.5		mg/kg	49.6		110	48.2-134			
Surrogate: 1-Chlorooctadecane	55.7		mg/kg	50.0		111	49.1-148			

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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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A handwritten signature in black ink, appearing to read "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

<sup>†</sup> Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)



Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 11/27/2023 1:55:40 PM Revision 1

## JOB DESCRIPTION

HARROUN #15  
Eddy County NM

## JOB NUMBER

890-5593-1

Eurofins Carlsbad  
1089 N Canal St.  
Carlsbad NM 88220

# Eurofins Carlsbad

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

## Authorization



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

Generated  
11/27/2023 1:55:40 PM  
Revision 1



Client: Ensolum  
Project/Site: HARROUN #15

Laboratory Job ID: 890-5593-1  
SDG: Eddy County NM

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## Definitions/Glossary

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

## Qualifiers

## HPLC/IC

Qualifier	Qualifier Description
-----------	-----------------------

U	Indicates the analyte was analyzed for but not detected.
---	--

## General Chemistry

Qualifier	Qualifier Description
-----------	-----------------------

U	Indicates the analyte was analyzed for but not detected.
---	--

## Glossary

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

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

## Case Narrative

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

**Job ID: 890-5593-1**

**Laboratory: Eurofins Carlsbad**

### Narrative

#### Job Narrative 890-5593-1

#### REVISION

The report being provided is a revision of the original report sent on 11/17/2023. The report (revision 1) is being revised due to Per client email, requesting sample ID correction and add updated COC.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 11/8/2023 3:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.6°C

#### HPLC/IC

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

#### General Chemistry

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

## Client Sample Results

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

Client Sample ID: BMW-1

Lab Sample ID: 890-5593-1

Date Collected: 11/08/23 12:10

Matrix: Water

Date Received: 11/08/23 15:10

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5510		50.0	34.6	mg/L			11/14/23 16:24	100

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	18700		100	100	mg/L			11/15/23 20:18	1

Client Sample ID: BMW-2

Lab Sample ID: 890-5593-2

Date Collected: 11/08/23 12:50

Matrix: Water

Date Received: 11/08/23 15:10

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6160		50.0	34.6	mg/L			11/14/23 16:35	100

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	16300		100	100	mg/L			11/15/23 20:18	1

## QC Sample Results

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-66985/3

Matrix: Water

Analysis Batch: 66985

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.346	U	0.500	0.346	mg/L			11/14/23 15:21	1

Lab Sample ID: LCS 880-66985/4

Matrix: Water

Analysis Batch: 66985

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	24.86		mg/L		99	90 - 110

Lab Sample ID: LCSD 880-66985/5

Matrix: Water

Analysis Batch: 66985

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	24.88		mg/L		100	90 - 110	0	20

Lab Sample ID: 880-35729-A-1 MS

Matrix: Water

Analysis Batch: 66985

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	249		250	494.3		mg/L		98	90 - 110

Lab Sample ID: 880-35729-A-1 MSD

Matrix: Water

Analysis Batch: 66985

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	249		250	493.7		mg/L		98	90 - 110	0	20

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

Lab Sample ID: MB 860-131138/1

Matrix: Water

Analysis Batch: 131138

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U	5.00	5.00	mg/L			11/15/23 09:58	1

Lab Sample ID: LCS 860-131138/2

Matrix: Water

Analysis Batch: 131138

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1001		mg/L		100	80 - 120

Eurofins Carlsbad



QC Sample Results

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

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

Lab Sample ID: LCSD 860-131138/3						Client Sample ID: Lab Control Sample Dup					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 131138											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids			1000	1004		mg/L		100	80 - 120	0	10

Lab Sample ID: 830-4467-C-2 DU						Client Sample ID: Duplicate					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 131138											
Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1700			1704		mg/L				0.2	10

## QC Association Summary

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

## HPLC/IC

## Analysis Batch: 66985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5593-1	BMW-1	Total/NA	Water	300.0	
890-5593-2	BMW-2	Total/NA	Water	300.0	
MB 880-66985/3	Method Blank	Total/NA	Water	300.0	
LCS 880-66985/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-66985/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-35729-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-35729-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## General Chemistry

## Analysis Batch: 131138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5593-1	BMW-1	Total/NA	Water	SM 2540C	
890-5593-2	BMW-2	Total/NA	Water	SM 2540C	
MB 860-131138/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-131138/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-131138/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
830-4467-C-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

Client Sample ID: BMW-1  
Date Collected: 11/08/23 12:10  
Date Received: 11/08/23 15:10

Lab Sample ID: 890-5593-1  
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	10 mL	10 mL	66985	11/14/23 16:24	CH	EET MID
Total/NA	Analysis	SM 2540C		1	10 mL	200 mL	131138	11/15/23 20:18	SA	EET HOU

Client Sample ID: BMW-2  
Date Collected: 11/08/23 12:50  
Date Received: 11/08/23 15:10

Lab Sample ID: 890-5593-2  
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	10 mL	10 mL	66985	11/14/23 16:35	CH	EET MID
Total/NA	Analysis	SM 2540C		1	10 mL	200 mL	131138	11/15/23 20:18	SA	EET HOU

Laboratory References:

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

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-03-24
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	NELAP	1306	08-31-24
Oklahoma	State	2023-139	08-31-24
Texas	NELAP	T104704215-23-53	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

Method Summary

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET MID
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU

Protocol References:

EPA = US Environmental Protection Agency  
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200  
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Ensolum  
Project/Site: HARROUN #15

Job ID: 890-5593-1  
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5593-1	BMW-1	Water	11/08/23 12:10	11/08/23 15:10
890-5593-2	BMW-2	Water	11/08/23 12:50	11/08/23 15:10

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## Environment Testing

5545 Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300  
 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334  
 McAllen, TX (361) 392-7350, Fort Worth, TX (817) 796-1750  
 Hobbs, NM (575) 392-7350, Carlsbad, NM (575) 968-3199

Work Order No.

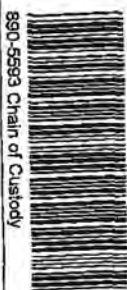
www.xenoco.com Page 1 of 1

Project Manager	Beate Tonnings	Bill to: (if different)	
Company Name	Engelken LLC	Company Name:	
Address	601 Maricopa #400	Address:	
City, State ZIP	MIDLAND TX 79701	City, State ZIP	
Phone	432-230-3344	EMAIL	bteanings@engelen.com

Program	UST/PST <input type="checkbox"/> RFP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other	

Project Name	Herrera #15	Turn Around	
Project Number	0381417046	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	
Project Location	Eddy Co. NM	Due Date:	
Sample's Name	Blank D. 112	TAT starts the day received by the lab, if received by 430pm	
PO #	0381417064		
SAMPLE RECEIPT	Blank	Wet Ice	Yes No
Samples Received In	Yes No	Thermometer ID:	700001
Cooler Custody Seals	Yes No	Correction Factor	0.8
Sample Custody Seals	Yes No	Temperature Reading	6.8
Total Containers		Corrected Temperature	6.8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grb/Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes
BMA-1		6-11-8-23	12:10	-	6	2	TD5	None: NO DI Water: H <sub>2</sub> O Cool: Cool HCL: HCL H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> H <sub>2</sub> PO <sub>4</sub> : HP NaHSO <sub>4</sub> : NABIS Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> : NaSO <sub>3</sub> Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAIC
BMA-2		6-11-8-23	12:50	-	6	2	1/11/2023	



890-5583 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: BRCA 13PPM Texas 17 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO<sub>2</sub> Na Sr Ti Sn U V Zn  
 Circle Method(s) and Metal(s) to be analyzed TCP / SPLP 6010 BRCA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	11/8	<i>[Signature]</i>	<i>[Signature]</i>	11/15

Revised Date: 08/25/2020 Rev. 2020.2

## Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5593-1

SDG Number: Eddy County NM

Login Number: 5593

List Number: 1

Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

## Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5593-1

SDG Number: Eddy County NM

**Login Number: 5593****List Number: 3****Creator: Torrez, Lisandra****List Source: Eurofins Houston****List Creation: 11/10/23 05:34 PM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

## Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5593-1

SDG Number: Eddy County NM

**Login Number: 5593****List Number: 2****Creator: Rodriguez, Leticia****List Source: Eurofins Midland****List Creation: 11/10/23 10:59 AM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	





APPENDIX F

C-141

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

## Release Notification

### Responsible Party

Responsible Party: Oxy USA Inc.	OGRID: 16696
Contact Name: Wade Dittrich	Contact Telephone: 575-390-2828
Contact email: wade_dittrich@oxy.com	Incident # NMAP1826380135
Contact mailing address: PO Box 4294, Houston, TX 77210	

### Location of Release Source

Latitude 32.21947 Longitude -103.97515  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Harroun 15 #008	Site Type: Flowline
Date Release Discovered: 08/29/2018	API# (if applicable)

Unit Letter	Section	Township	Range	County
F	15	24S	29E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Oxy USA Inc.)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls): 10	Volume Recovered (bbls): 5
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 20	Volume Recovered (bbls): 15
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


Cause of Release: Compromised 3" flowline.

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release is greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Wade Dittrich of Oxy via email to Mike Bratcher and Maria Pruett of the NMOCD on 09/04/2018 at 0700.	

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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.	
Printed Name: Wade Dittrich	Title: <u>Environmental Advisor</u>
Signature: 	Date: <u>12/7/23</u>
email: <u>wade_dittrich@oxy.com</u>	Telephone: <u>575-390-2828</u>
<b>OCD Only</b>	
Received by: _____	Date: _____

State of New Mexico  
Oil Conservation Division

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

## Site Assessment/Characterization

*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?	<u>21</u> (ft bgs)
Did this release impact groundwater or surface water?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141

State of New Mexico

Page 4

Oil Conservation Division

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

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.

Printed Name: Wade DittrichTitle: Environmental Advisor

Signature: \_\_\_\_\_

Date: 12-7-23email: wade\_dittrich@oxy.comTelephone: 575-390-2828**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



State of New Mexico  
Oil Conservation Division

Incident ID	NMAP1826380135
District RP	2RP-4974
Facility ID	
Application ID	pMAP1826379886

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Wade, Dittrich

Title: Environmental Advisor

Signature: 

Date: 12-7-23

email: wade\_dittrich@oxy.com

Telephone: 575-390-2828

**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Michael Buchanan

Date: 01/26/24

Printed Name: Mike Buchanan

Title: Environmental Specialist

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS

Action 292731

**QUESTIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696 Action Number: 292731 Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)
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**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nMAP1826380135
Incident Name	NMAP1826380135 HARROUN 15 #008 @ 30-015-30253
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-30253] HARROUN 15 #008

**Location of Release Source**

Please answer all the questions in this group.

Site Name	HARROUN 15 #008
Date Release Discovered	08/29/2018
Surface Owner	Private

**Incident Details**

Please answer all the questions in this group.

Incident Type	Oil Release
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

**Nature and Volume of Release**

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.

Crude Oil Released (bbls) Details	Cause: Equipment Failure   Flow Line - Production   Crude Oil   Released: 10 BBL   Recovered: 5 BBL   Lost: 5 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Flow Line - Production   Produced Water   Released: 20 BBL   Recovered: 15 BBL   Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
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 292731

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 292731
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
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.	

**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: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 12/08/2023
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QUESTIONS, Page 3

Action 292731

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:	16696
	Action Number:	292731
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**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)	Less than or equal 25 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	Yes
<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 1000 (ft.) and ½ (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	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (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	Between ½ and 1 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Zero feet, overlying, or within area
Did the release impact areas not on an exploration, development, production, or storage site	Yes

**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
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.	
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)	49200
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	35097
GRO+DRO	(EPA SW-846 Method 8015M)	28577
BTEX	(EPA SW-846 Method 8021B or 8260B)	8.7
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	09/17/2018
On what date will (or did) the final sampling or liner inspection occur	06/13/2023
On what date will (or was) the remediation complete(d)	06/13/2023
What is the estimated surface area (in square feet) that will be reclaimed	22500
What is the estimated volume (in cubic yards) that will be reclaimed	10000
What is the estimated surface area (in square feet) that will be remediated	22500
What is the estimated volume (in cubic yards) that will be remediated	10000

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 4

Action 292731

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 292731
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS****Remediation Plan (continued)**

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.

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

(Select all answers below that apply.)

(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	LEA LAND LANDFILL [fEEM0112342028]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Yes
OTHER (Non-listed remedial process)	Not answered.

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.

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: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 12/08/2023
--	---

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 292731

QUESTIONS (continued)

Operator:  OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:  16696
	Action Number:  292731
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
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.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 292731

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:	16696
	Action Number:	292731
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Sampling Event Information</b>	
Last sampling notification (C-141N) recorded	290967
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/13/2023
What was the (estimated) number of samples that were to be gathered	78
What was the sampling surface area in square feet	22500

**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	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	22500
What was the total volume (cubic yards) remediated	10000
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	22500
What was the total volume (in cubic yards) reclaimed	10000
Summarize any additional remediation activities not included by answers (above)	None

*The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.*

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 12/08/2023
--	---

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QUESTIONS, Page 7  
  
Action 292731

QUESTIONS (continued)

Operator:  OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:  16696
	Action Number:  292731
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS  
  
Action 292731

CONDITIONS

Operator:  OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:
	16696
	Action Number:
	292731
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	<ul style="list-style-type: none"><li>Remediation Closure approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. The reclamation report will need to address all of the requirements of 19.15.29.13 NMAC including pictures of the reclaimed area, and a proposed revegetation plan. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete". PLEASE BE ADVISED: Liners will NOT be approved for remedial projects in the future</li></ul>	1/26/2024