ENSOLUM

June 23, 2025

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

Re: Closure Request
Northeast Drinkard Unit (NEDU) 164 Flowline
NMOCD Incident Number NAPP2503455200
Lea County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum) on behalf of Hilcorp Energy Company (Hilcorp), has prepared this *Closure Request* to document site assessment, excavation, and soil sampling activities performed at the Northeast Drinkard Unit (NEDU) 164 (Site). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water at the Site. Based on excavation activities and laboratory analytical results, Hilcorp is submitting this *Closure Request,* describing remediation activities that have occurred and requesting no further action and closure for Incident Number NAPP2503455200.

SITE BACKGROUND

The Site is located in in Unit A, Section 3, Township 21 South, Range 37 East, in Lea County, New Mexico (32.51800°, -103.144889°) and is associated with oil and gas exploration and production operations on private land.

On January 24, 2025, a Hilcorp operator observed approximately 0.25 barrels (bbls) of skim oil and 6.75 bbls of produced water in a field adjacent to the Site well pad. The release was the result of a compromised transition on the flowline associated with the production well due to overnight freezing temperatures. Upon discovery, the well was immediately shut-in, and a vacuum truck was immediately dispatched to the Site to recover the free-standing fluids. Approximately 5 bbls of released produced water and skim oil mix were recovered. Hilcorp reported the release to the New Mexico Oil Conservation Division (NMOCD) via a *Notification of Release* (NOR) and subsequently on a *Release Notification Form C-141* (Form C-141) on February 3, 2025. The release was assigned Incident Number NAPP2503455200.

SITE CHARACTERIZATION

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section.

According to the findings presented in a Rice Environmental Consulting & Safety *NEDU Pilot Project Battery #1 Closure Report,* dated September 12, 2011, it was determined that during the groundwater study, depth to water in the area is approximately 56 feet below ground surface (bgs). The report and groundwater study is provided in Appendix A. The *NEDU Pilot Project Battery #1 Closure Report* was approved by the NMOCD on November 9, 2012, for Order Number 1RP-3083 / pSAD1416733466. Hilcorp is asking for a depth to water variance for the site, based on the previously approved *NEDU Pilot Project Battery #1 Closure Report,* dated September 12, 2011.

Depth to groundwater at the Site is is estimated to be greater than 50 feet bgs based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) permitted groundwater well with depth to groundwater data is well L-13546, located approximately 3,281 feet northeast of the Site. The groundwater well has a reported depth to groundwater of 75.88 feet bgs and a total depth of 88 feet bgs. Ground surface elevation at the groundwater well location is 3,521 feet above mean sea level (amsl), which is approximately 25 feet lower in elevation than the Site. There is an additional water well located 0.6 miles northeast of the Site (USGS well 323126103080701) with depth to groundwater data at 78.34 feet bgs. There are no regional or Site-specific hydrological conditions, such as surface water, karst features, wetlands, or vegetation that suggest the Site is conducive to shallow groundwater. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a seasonal wetland, located approximately 4,693 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

Because the release was outside of the production area of the well pad, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was also applied to the top 4 feet of the Site, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

INITIAL SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On February 4, 2025, Ensolum initially evaluated the release based on visual observations and information provided by Hilcorp. Three preliminary assessment soil samples (SS01 through SS03) were collected within the release extent from depths ranging from 0.5 to 1.5 feet below ground surface (bgs) to assess for the presence or absence of impacted soil. The assessment soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and assessment soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on

Figure 2. Photographic documentation was conducted during the Site visit. A photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Environment Testing (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for assessment soil samples SS01 through SS03, collected within the release extent, indicated that BTEX and/or TPH concentrations exceeded the Site Closure Criteria. In addition, assessment soil samples SS01 through SS03 exceeded the reclamation requirement of 600 milligrams per kilogram (mg/kg) for chloride in the top 4 feet. Based on visible staining in the release area and laboratory analytical results for the assessment soil samples, further remediation activities were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND LABORATORY ANLAYTICAL RESULTS

Between March 7 through April 17, 2025, Ensolum personnel were at the Site to oversee excavation activities based on visible staining and laboratory analytical results. Excavation activities were performed via back-hoe. To direct excavation activities, soil was field screened for VOCs and chloride as previously described. The excavation was completed to an approximate depth of 9 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite floor samples FS01 through FS09 were collected from the floor of the excavation from depth ranging from 4 feet to 9 feet bgs. Composite sidewall samples SW01 through SW09 were collected from the sidewalls of the excavation at ground surface to 9 feet bgs, respectively. The excavation soil samples were handled and analyzed as previously described. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 3.

Laboratory analytical results for excavation floor samples FS01 through FS09, and excavation sidewall samples SW01 through SW09 indicated all COC concentrations were compliant with the Site Closure Criteria. In addition, excavation samples are compliant with the reclamation requirement in the top 4 feet, where applicable. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation area measured approximately 1,800 square feet in areal size. A total of 400 cubic yards of impacted soil was removed, transported, and properly disposed of at Sundance Services Facility in Eunice, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the January 24, 2025, release of produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria. In addition, excavation samples are compliant with the reclamation requirement in the top 4 feet, where applicable.

Based on the laboratory analytical results, no further remediation appears warranted. Hilcorp will backfill the excavation with material purchased locally, recontour the Site to match pre-existing site conditions and re-seed the disturbed area with the appropriate BLM seed mixture during the next possible growing season for optimal growth.

Excavation of impacted soil has mitigated impacts at this Site. Hilcorp believes these remedial actions are protective of human health, the environment, and groundwater. Depth to groundwater has been estimated to be greater than 50 feet bgs and no other sensitive receptors were identified near the release extent. Hilcorp is asking for a depth to water variance for the site, based on the previously approved *NEDU Pilot Project Battery #1 Closure Report,* dated September 12, 2011. As such, Hilcorp respectfully requests closure for Incident Number NAPP2503455200.

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

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Managing Scientist

Daniel R. Moir, PG (Licensed in WY & TX)
Senior Managing Geologist

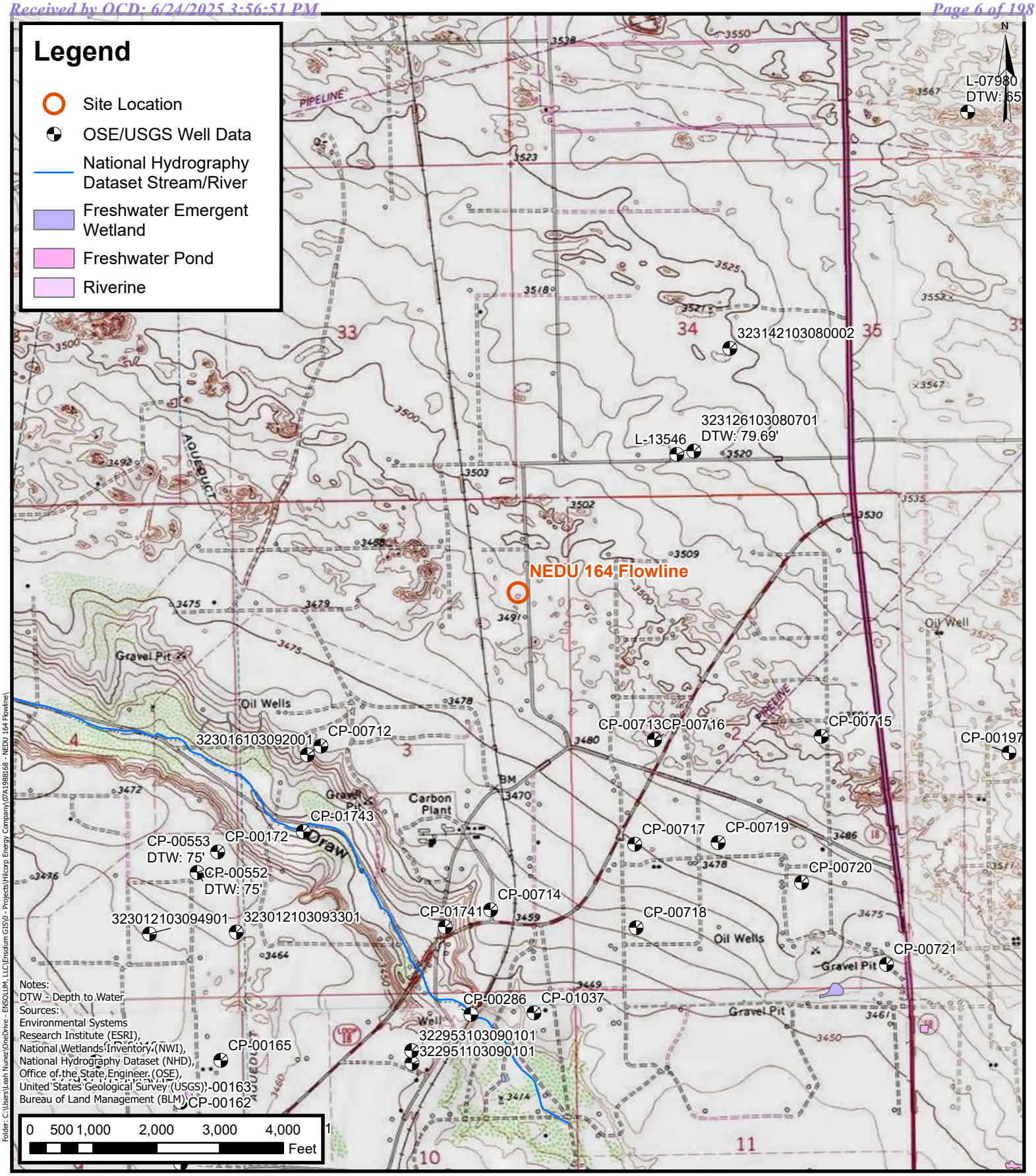
cc: Billy Ginn, Hilcorp Energy Company

Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	*NEDU Pilot Project Battery #1 Closure Report*
Appendix B	Referenced Well Records
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Sample Notification

ENSOLUM

FIGURES



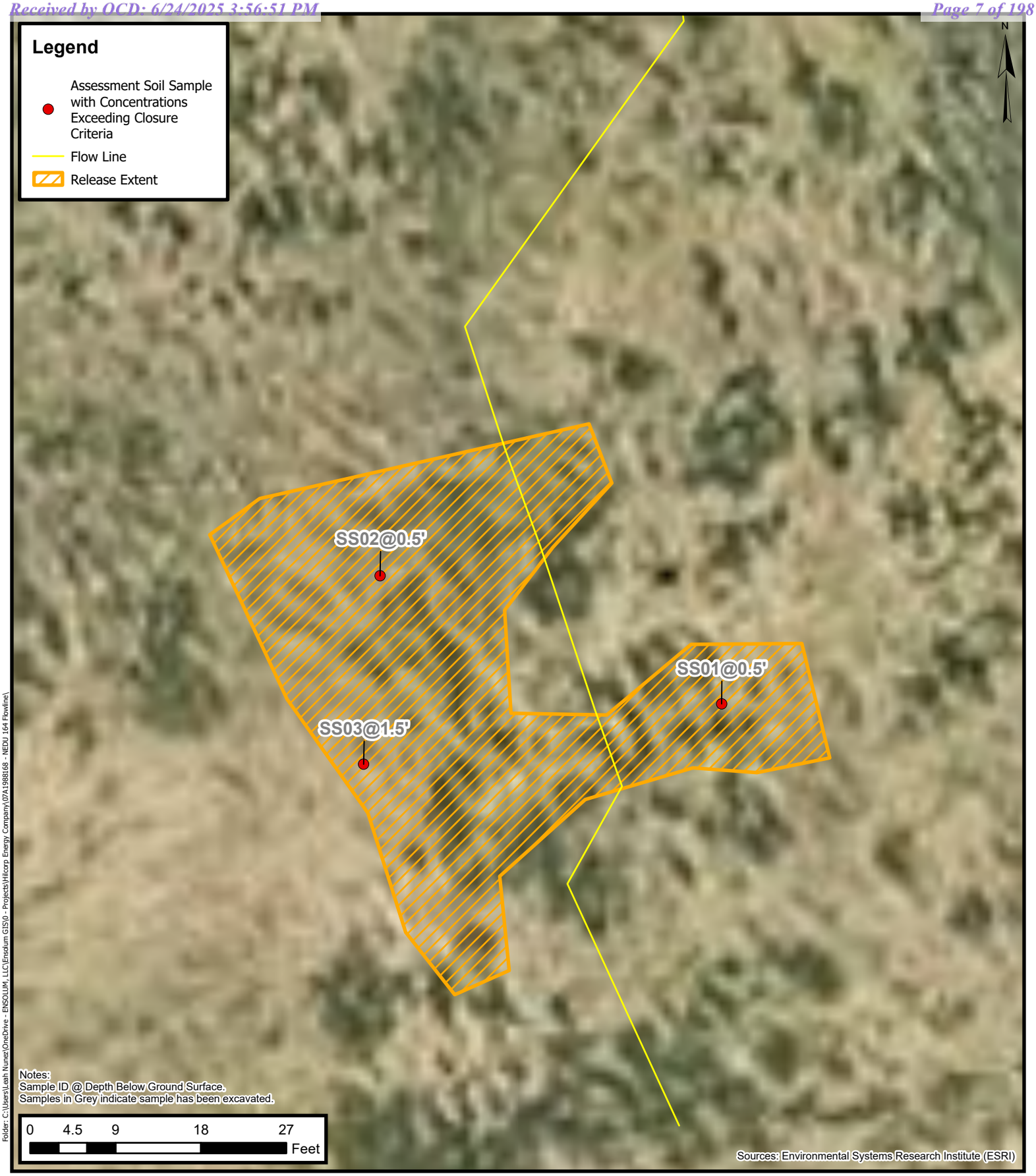
Folder: C:\Users\Leah Nunez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\Hilcorp Energy Company\07A1988168 - NEDU 164 Flowline\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Hilcorp Energy Company
NEDU 164 Flowline
Incident Number: NAPP2503455200
Unit A, Section 03, Township 21 South, Range 37 East
Lea County, New Mexico

FIGURE 1



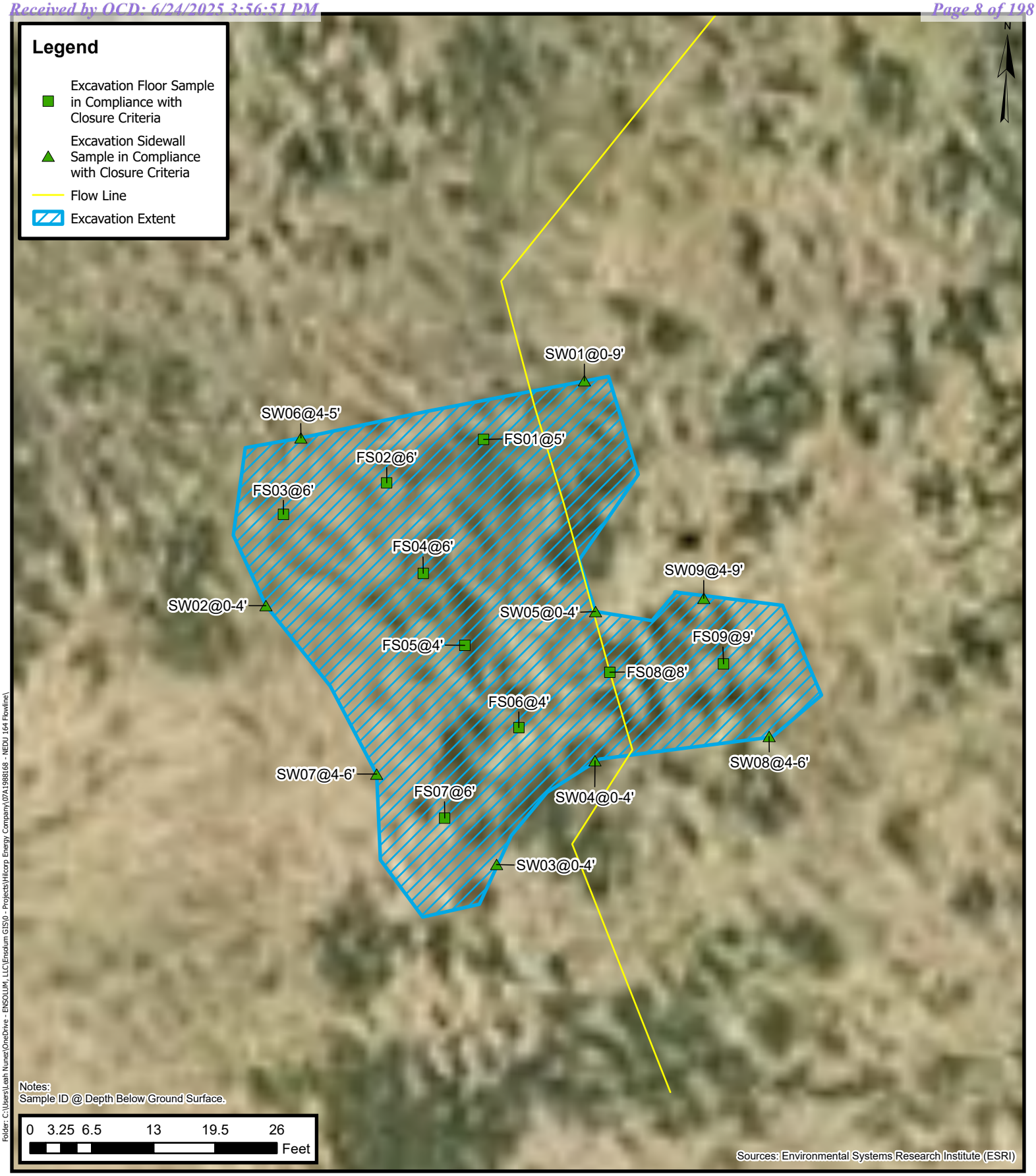
Folder: C:\Users\Leah Nunez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\Hilcorp Energy Company\07A1988168 - NEDU 164 Flowline\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Assessment Soil Sample Locations

Hilcorp Energy Company
NEDU 164 Flowline
Incident Number: NAPP2503455200
Unit A, Section 03, Township 21 South, Range 37 East
Lea County, New Mexico

FIGURE 2



Folder: C:\Users\Leah Nunez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\Hilcorp Energy Company\07A1988168 - NEDU 164 Flowline\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

Hilcorp Energy Company
NEDU 164 Flowline
Incident Number: NAPP2503455200
Unit A, Section 03, Township 21 South, Range 37 East
Lea County, New Mexico

FIGURE 3

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
NEDU 164 Flowline
Hilcorp Energy Company
Lea County, New Mexico

Sample Identification	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	NE	NE	NE	**50**	NE	NE	NE	**2,500**	**10,000**
Assessment Soil Samples												
SS01	02/04/2025	0.5	**25.1**	173	135	271	**604**	3,970	6,730	<49.9	**10,700**	769
SS02	02/04/2025	0.5	8.52	94.6	79.1	179	**361**	3,800	5,980	<49.8	**9,780**	703
SS03	02/04/2025	1.5	<1.00	2.76	2.32	5.18	10.3	<49.7	296	<49.7	296	425
Excavation Floor Soil Samples												
FS01	03/13/2025	5	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.7	<49.7	<49.7	<49.7	1,090
FS02	03/13/2025	6	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<50.0	<50.0	<50.0	<50.0	2,220
FS03	03/13/2025	6	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<49.8	<49.8	<49.8	<49.8	2,170
FS04	03/13/2025	6	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<49.7	<49.7	<49.7	<49.7	2,040
FS05	03/07/2025	4	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<50.0	<50.0	<50.0	<50.0	<10.1
FS06	03/07/2025	4	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<49.8	<49.8	<49.8	<49.8	95.8
FS07	03/13/2025	6	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.7	<49.7	<49.7	<49.7	664
FS08	03/13/2025	8	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.6	<49.6	<49.6	<49.6	296
FS09	03/13/2025	9	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.6	<49.6	<49.6	<49.6	801
Excavation Sidewall Soil Samples												
SW01	03/13/2025	0 - 9	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.9	<49.9	<49.9	<49.9	206
SW01	04/14/2025	0 - 4	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<50.1	<50.1	<50.1	<50.1	161
SW02	04/14/2025	0 - 4	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<50.5	<50.5	<50.5	<50.5	110
SW03	04/14/2025	0 - 4	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.9	<49.9	<49.9	<49.9	152
SW04	04/14/2025	0 - 4	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	<49.7	<49.7	<49.7	<49.7	122
SW05	04/14/2025	0 - 4	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<49.6	<49.6	<49.6	<49.6	109
SW06	04/14/2025	4 -5	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.8	<49.8	<49.8	<49.8	101
SW07	04/14/2025	4 - 6	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<49.9	<49.9	<49.9	<49.9	104
SW08	04/14/2025	4 - 6	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.8	<49.8	<49.8	<49.8	128
SW09	04/14/2025	4 - 9	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	<50.1	<50.1	<50.1	<50.1	674

Notes:

bgs: Below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: Milligrams per kilogram
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
<: Indicates result less than the stated laboratory reporting limit (RL)
TPH: Total Petroleum Hydrocarbon
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil/Lube Oil Range Organics
*Concentrations in **bold** exceed the New Mexico Oil Conservation Division Table I Closure Criteria for Soils Impacted by a Release or the Reclamation Requirement where applicable*

Text in grey indicates soil has been excavated

ENSOLUM

APPENDIX A

NEDU Pilot Project Battery #1 Closure Report

District I
625 N. French Dr., Hobbs, NM 88240
District II
301 W. Grand Avenue, Artesia, NM 88210
District III
000 Rio Brazos Road, Aztec, NM 87410
District IV
220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Apache Corp.	Contact Natalie Gladden
Address P.O. Box 1849, Eunice, NM, 88231	Telephone No. (575) 390-4186
Facility Name NEDU Pilot Project Battery #1 (NEDU #165)	Facility Type Production Facility

Surface Owner McCasland	Mineral Owner State of NM	Lease No. 30-025-39915

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	2	21S	37E	1800	FNL	125	FWL	Lea

Latitude_____ Longitude_____

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 387 bbl	Volume Recovered 0 bbl
Source of Release Injection line/junction box	Date and Hour of Occurrence 9/12/11	Date and Hour of Discovery 9/12/11
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking	
By Whom? Natalie Gladden	Date and Hour 9/12/11 343 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

DTW = 56'

Describe Cause of Problem and Remedial Action Taken.*
Injection line busted loose from the tee inside the junction box. Line was repaired.

Describe Area Affected and Cleanup Action Taken.*
The leak affected the pipeline right-of-way and an area of pasture land totaling 8,527 sq. ft. Impacted soils were removed to a NMOCD approved disposal facility. The excavation was completed from 6 ft. to 9 ft. deep. The west wall of the excavation extended to just within the affected area due to the proximity of an Apache pipeline. Representative soil samples were collected from the excavations and sent to a commercial laboratory for chloride analysis. The excavation was backfilled with clean soil and contoured to the surrounding area.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Natalie Gladden	OIL CONSERVATION DIVISION
Printed Name: Natalie Gladden	Approved by District Supervisor: Geoffrey Leking Environmental Specialist
Title: EH&S Environmental Tech	Approval Date: 11/9/12 Expiration Date: —
E-mail Address: Natalie.gladden@apachecorp.com	Conditions of Approval: - Attached ☐ IRP-6-14-3083
Date: 11/9/12 Phone: (575) 390-4186	

Attach Additional Sheets If Necessary

JUN 17 2014

NSAD1416456132

Apache

EXPLORING WHAT'S POSSIBLE

APACHE CORPORATION
P.O.Box 1849
Eunice, NM 88231
Phone 575.394.3159

NEDU Pilot Project Battery #1

Closure Report

API 30-025-39915

Release Date: September 12, 2011

Unit Letter D, Section 2, Township 21S, Range 37E

Rice Environmental Consulting & Safety
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

May 16, 2012

Geoffrey Leking
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 1
1625 N. French Dr.
Hobbs, NM 88240-9273

RE: **TERMINATION REQUEST**
Apache – NEDU Pilot Project Battery #1 AD
UL/D sec. 2 T21S R37E
API No. 30-025-39915

Mr. Leking:

Apache Corporation has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the site referenced above.

Background and Previous Work

The site is an accidental discharge of produced water associated with the NEDU Pilot Project Battery #1. The injection line disconnected from a T joint within a junction box and released fluids into the Apache pipeline right-of-way and an area of pasture land located southeast of the junction. The line connection was repaired and NMOCD was immediately notified. An initial form C-141 was submitted by Apache Corporation on September 18, 2011 (Appendix A). The site is located north of Eunice, in unit letter 'D' of section 2, T21S, R37E in Lea County, New Mexico.

On September 9, 2011, RECS personnel initiated work on the NEDU Pilot Project Battery #1 (Figure 1). Surface soil samples were collected and field tested for chloride. Headspace measurements were also taken in the field using a Photo Ionization Detector (PID). The samples were submitted to a commercial laboratory for chloride and TPH analyses (Appendix C). Chloride ranged from 880 ppm (parts per million or mg/kg) to 2,120 ppm. TPH ranged from 49.8 ppm to 701 ppm.

The pasture area to the southeast was excavated to 9' below ground surface (bgs). On September 20, 2011, RECS personnel collected and field tested final samples from the excavation (Figure 2). The junction area and right-of-way to the south were excavated to 6' bgs. On September 21-22, 2011, RECS personnel similarly collected and field tested final samples from the excavation (Figure 3). Representative grab samples from the floor and walls of both excavations were submitted to a laboratory for chloride analysis. The floor samples did not exceed 176 ppm. The west wall of the excavations remained narrowly inside the affected area in order to maintain a

safe working distance from the Apache pipeline running to the south. Consequently, the west wall samples exceeded 48.0 ppm at four (4) sample points. In these 4 west wall samples, chloride ranged from 608 ppm to 3,920 ppm (Appendix C).

Impacted soils were removed from the excavation and transported to a NMOCD approved disposal facility. The excavation was backfilled with clean soil (<16.0 ppm chloride, Appendix C) and contoured to the surrounding area. See Appendix B for photographs of field activities.

Conclusion

According to the New Mexico Office of the State Engineer and the United States Geological Survey (USGS), depth to groundwater in the area approximated 56 ft bgs (Appendix D). Due to Apache's removal of all impacted soils possible while safely working in proximity to a pipeline, Apache submits the final C-141 (Appendix E) and respectfully requests the closure of the regulatory file for this site.

Apache Corporation appreciates the opportunity to work with you on this project. Please call Natalie Gladden (575) 390-4186 if you have any questions or comments.

Sincerely,

Bruce Baker

Bruce Baker
Head Foreman
RECS
(575) 631-5157

Attachments:

Figure 1:	Site Plat with Initial Sampling Lab Data
Figure 2:	Site Plat with Southeast Excavation Lab Data
Figure 3:	Site Plat with ROW Excavation Lab Data
Appendix A:	Initial Form C-141
Appendix B:	Site Photographs
Appendix C:	Laboratory Results
Appendix D:	Groundwater Study
Appendix E:	Final Form C-141

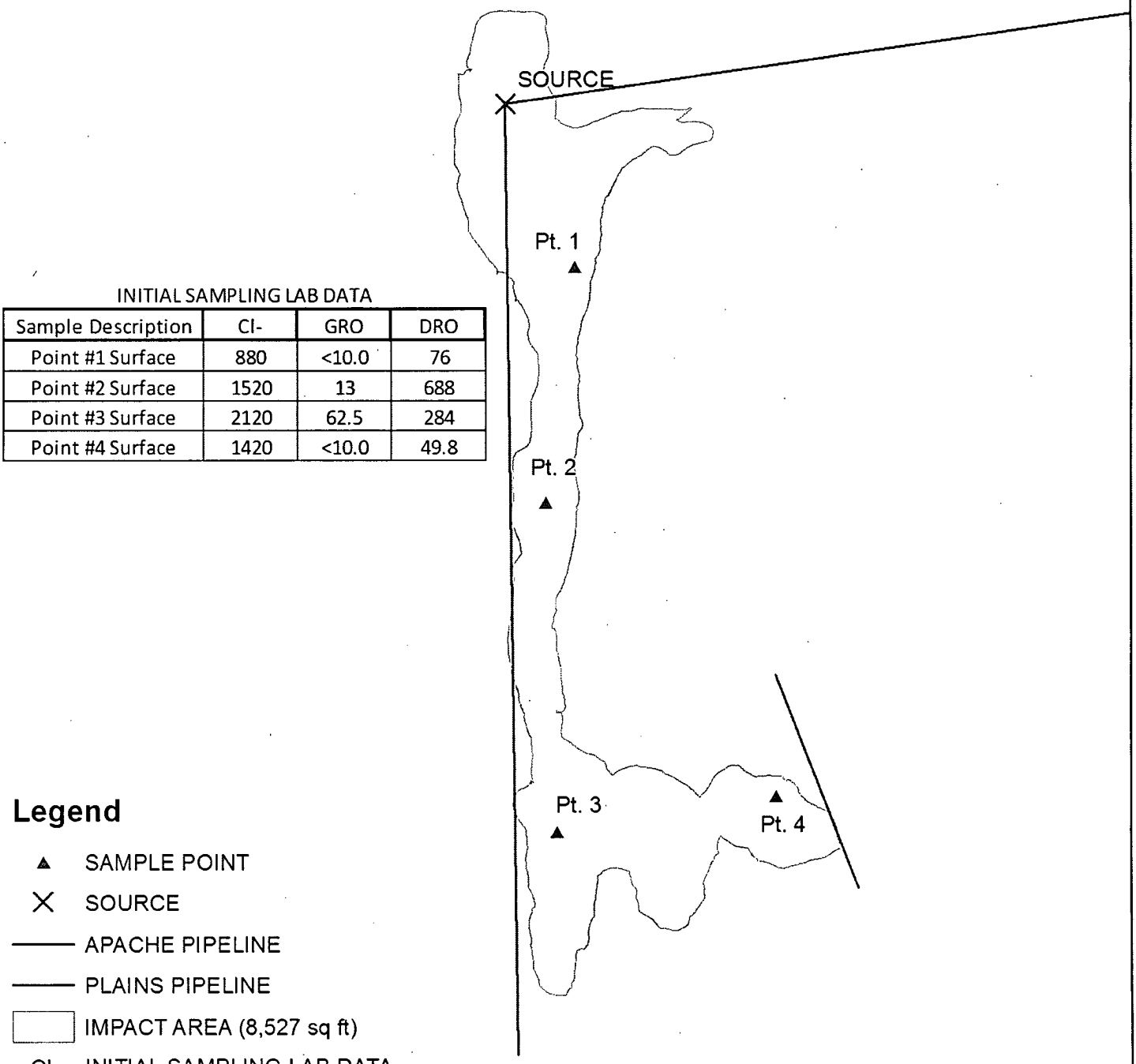
Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Site Plat

INITIAL SAMPLING LAB DATA

Sample Description	Cl-	GRO	DRO
Point #1 Surface	880	<10.0	76
Point #2 Surface	1520	13	688
Point #3 Surface	2120	62.5	284
Point #4 Surface	1420	<10.0	49.8



Legend

- ▲ SAMPLE POINT
- X SOURCE
- APACHE PIPELINE
- PLAINS PIPELINE
- IMPACT AREA (8,527 sq ft)
- Cl- INITIAL SAMPLING LAB DATA

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

APACHE NEDU PILOT PROJECT BATTERY 1 AD

UL/H SECTION 3
T-21-S R-37-E

Figure 1

N W E S

0 25 50 Feet

GPS date: 9/12/11 KN
Drawing date: 9/26/11
Drafted by: T. Grieco, L. Weinheimer

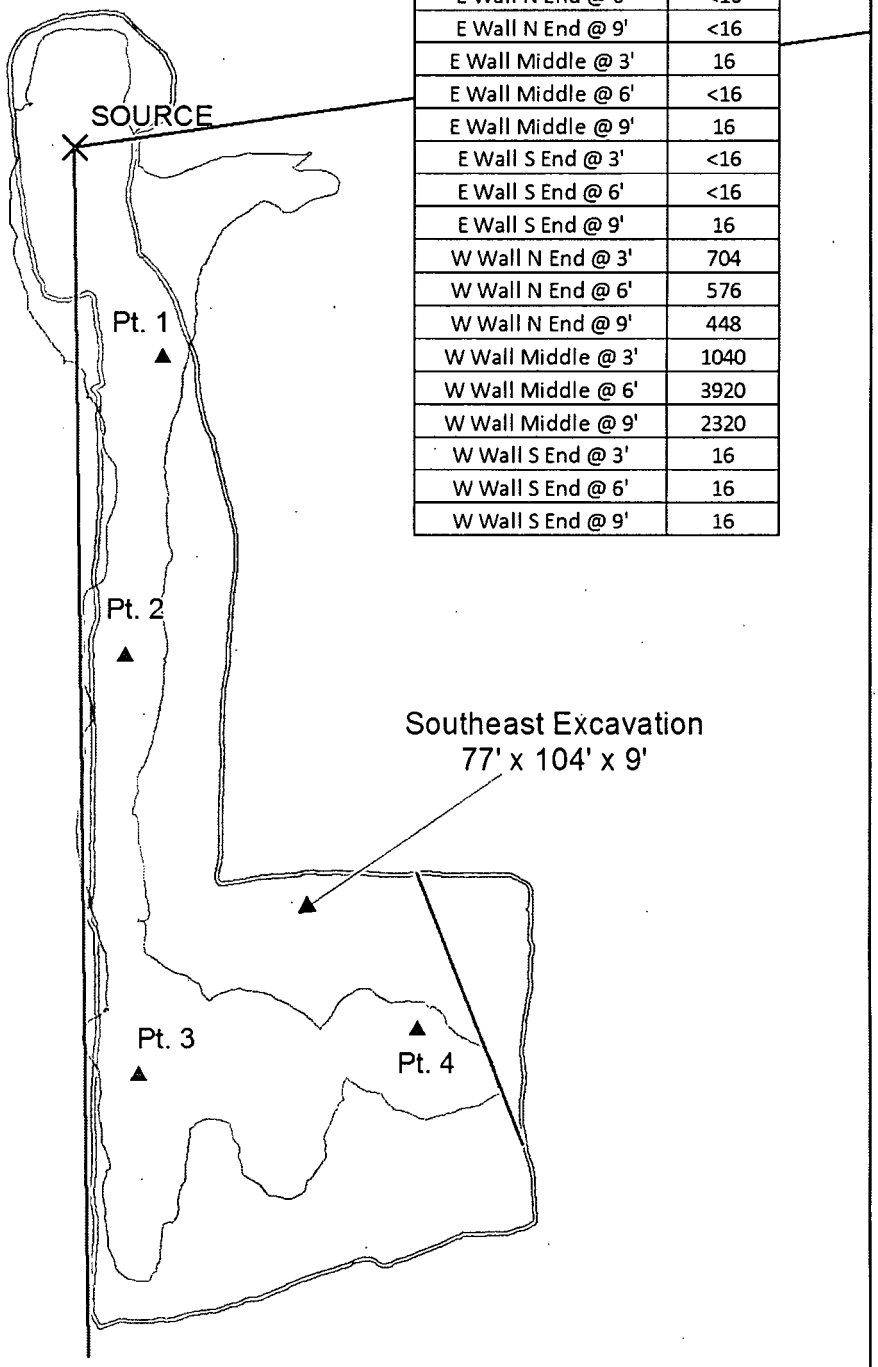
Site Plat

SOUTHEAST EXCAVATION LAB DATA

Sample Description	Cl-
NE Bottom	16
NW Bottom	<16
SE Bottom	16
SW Bottom	16
Middle Bottom	176
N Wall E. End @ 3'	<16
N Wall E. End @ 6'	<16
N Wall E. End @ 9'	48
N Wall Middle @ 3'	<16
N Wall Middle @ 6'	<16
N Wall Middle @ 9'	<16
N Wall West End @ 3'	<16
N Wall West End @ 6'	<16
N Wall West End @ 9'	<16
S Wall E End @ 3'	<16
S Wall E End @ 6'	<16
S Wall E End @ 9'	16
S Wall Middle @ 3'	<16
S Wall Middle @ 6'	<16
S Wall Middle @ 9'	<16
S Wall W End @ 3'	<16
S Wall W End @ 6'	<16
S Wall W End @ 9'	<16

SOUTHEAST EXCAVATION LAB DATA

Sample Description	Cl-
E Wall N End @ 3'	<16
E Wall N End @ 6'	<16
E Wall N End @ 9'	<16
E Wall Middle @ 3'	16
E Wall Middle @ 6'	<16
E Wall Middle @ 9'	16
E Wall S End @ 3'	<16
E Wall S End @ 6'	<16
E Wall S End @ 9'	16
W Wall N End @ 3'	704
W Wall N End @ 6'	576
W Wall N End @ 9'	448
W Wall Middle @ 3'	1040
W Wall Middle @ 6'	3920
W Wall Middle @ 9'	2320
W Wall S End @ 3'	16
W Wall S End @ 6'	16
W Wall S End @ 9'	16



Legend

- ▲ SAMPLE POINT
- X SOURCE
- APACHE PIPELINE
- PLAINS PIPELINE
- EXCAVATION
- IMPACT AREA (8,527 sq ft)
- Cl- INITIAL SAMPLING LAB DATA

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

APACHE NEDU PILOT PROJECT BATTERY 1 AD

UL/H SECTION 3
T-21-S R-37-E

Figure 2

N W E S

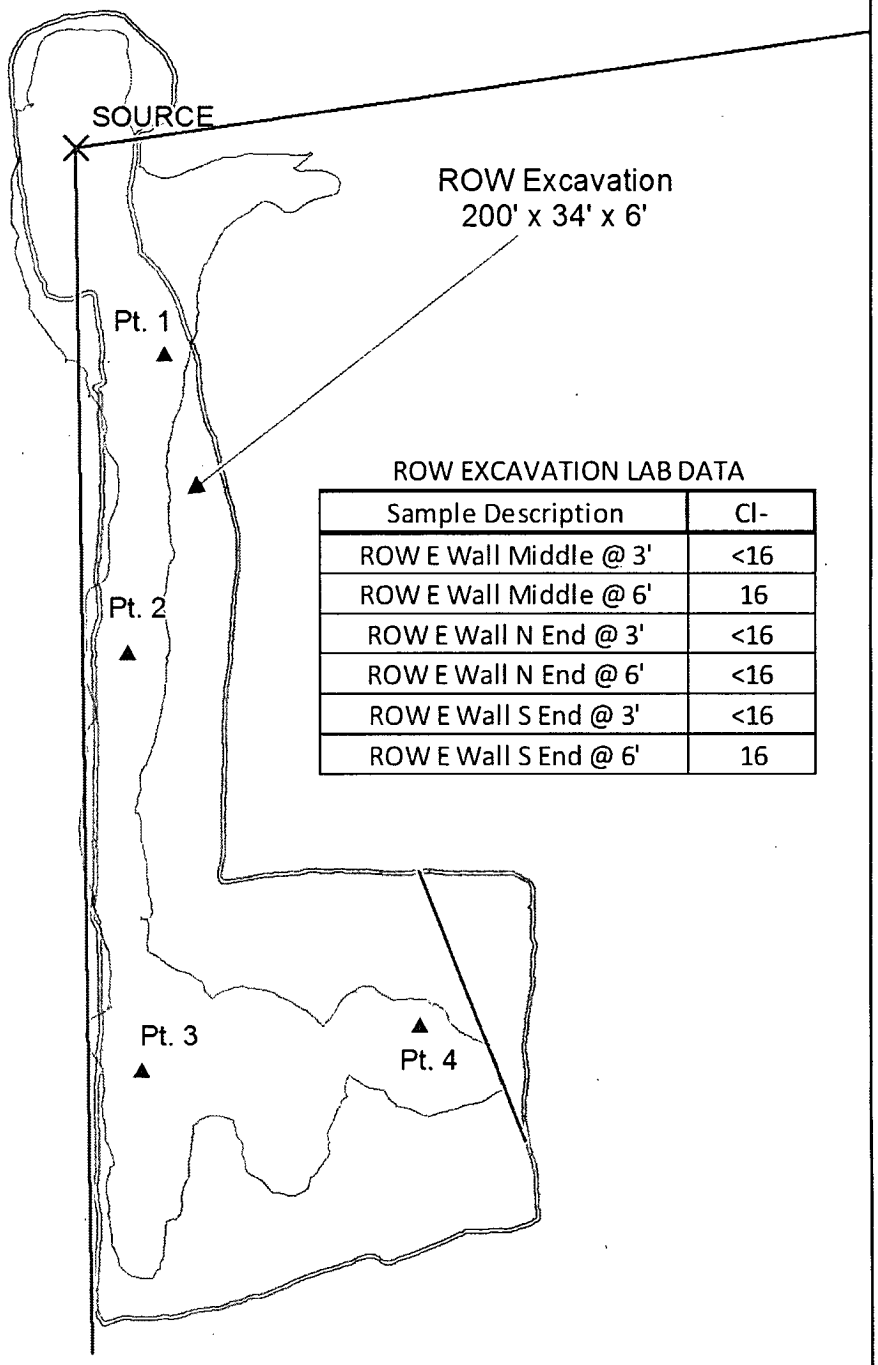
0 25 50 Feet

GPS date: 9/12/11 KN
Drawing date: 9/26/11
Drafted by: T. Grieco, L. Weinheimer

Site Plat

ROW EXCAVATION LAB DATA

Sample Description	Cl-
ROW N Wall Middle 3'	<16
ROW N Wall Middle 6'	<16
ROW N Bottom	<16
ROW S Bottom	16
ROW Middle Bottom	16
ROW W Wall S End 3'	992
ROW W Wall S End 6'	896
ROW W Wall Middle 3'	608
ROW W Wall Middle 6'	1170
ROW W Wall N End 3'	<16
ROW W Wall N End 6'	64



ROW EXCAVATION LAB DATA

Sample Description	Cl-
ROW E Wall Middle @ 3'	<16
ROW E Wall Middle @ 6'	16
ROW E Wall N End @ 3'	<16
ROW E Wall N End @ 6'	<16
ROW E Wall S End @ 3'	<16
ROW E Wall S End @ 6'	16

Legend

- ▲ SAMPLE POINT
- X SOURCE
- APACHE PIPELINE
- PLAINS PIPELINE
- EXCAVATION
- IMPACT AREA (8,527 sq ft)
- Cl- INITIAL SAMPLING LAB DATA

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

APACHE NEDU PILOT PROJECT BATTERY 1 AD

UL/H SECTION 3
T-21-S R-37-E

Figure 3

N W E S

0 25 50 Feet

GPS date: 9/12/11 KN
Drawing date: 9/26/11
Drafted by: T. Grieco, L. Weinheimer

Appendix A

Initial Form C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Apache Corporation	Contact Natalie Gladden
Address PO Box 1849 Eunice, NM 88231	Telephone No. 575-390-4186
Facility Name NEDU Pilot Project Bty #1(NEDU #165)	Facility Type Production Facility

Surface Owner McCasland	Mineral Owner NM	API No. 30-025-39915

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	2	21S	37E	1800'	FNL	125'	FWL	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 387	Volume Recovered 0
Source of Release Injection line/junction box	Date and Hour of Occurrence 9/12/11	Date and Hour of Discovery 09/12/11
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking	
By Whom? Natalie Gladden	Date and Hour 9/12/11 343pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Injection line busted loose from the tee inside the junction box. Line was repaired.

Describe Area Affected and Cleanup Action Taken.*
NMOCD Guidelines will be followed to closure.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Natalie Gladden

Printed Name: Natalie Gladden

Title: EHS Environmental Tech

E-mail Address: natalie.gladden@apachecorp.com

Date: 9/18/11 Phone: 575-390-4186

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: Expiration Date:

Conditions of Approval: Attached ☐

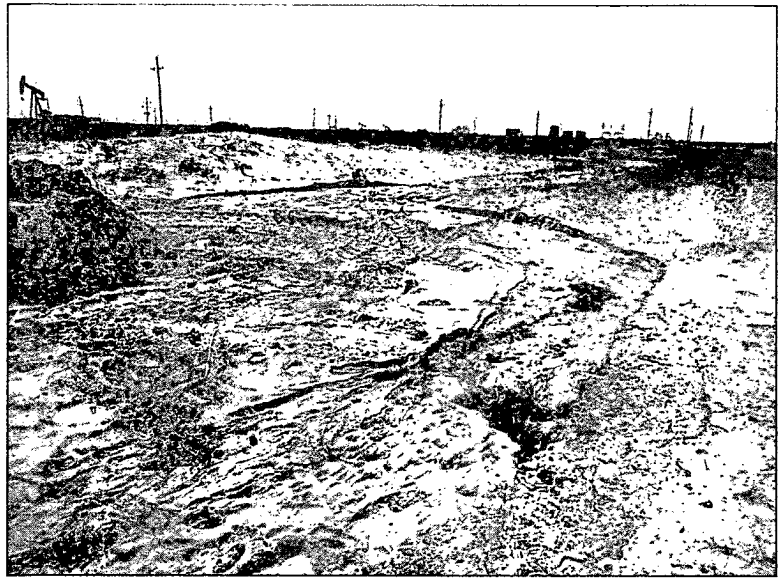
* Attach Additional Sheets If Necessary

Appendix B
Site Photographs

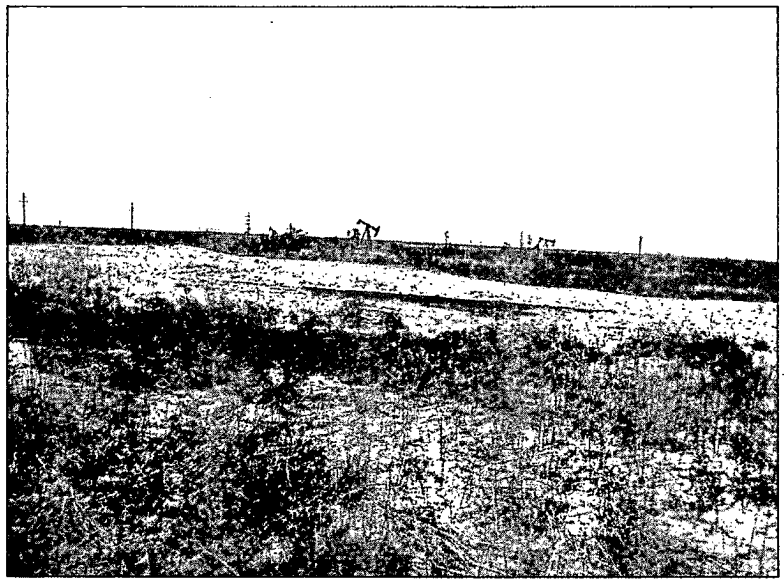
RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

NEDU Pilot Project Battery #1

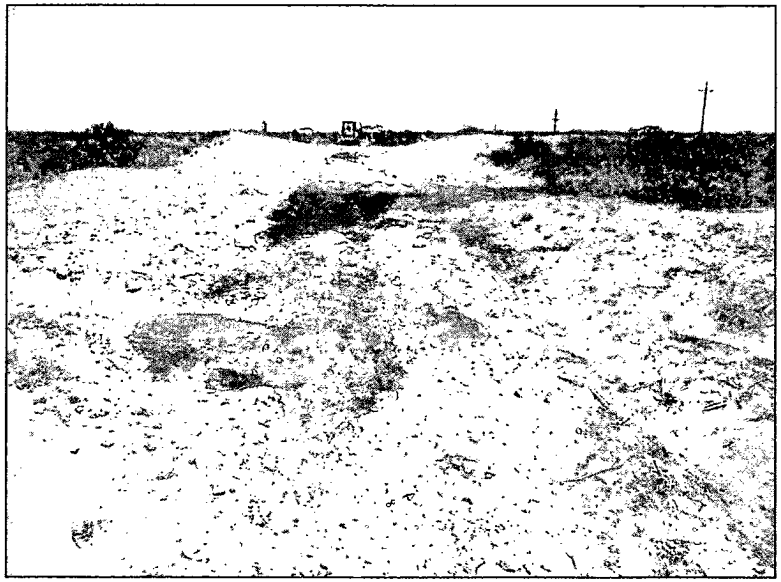
Unit Letter D, Section 2, T21S R37E



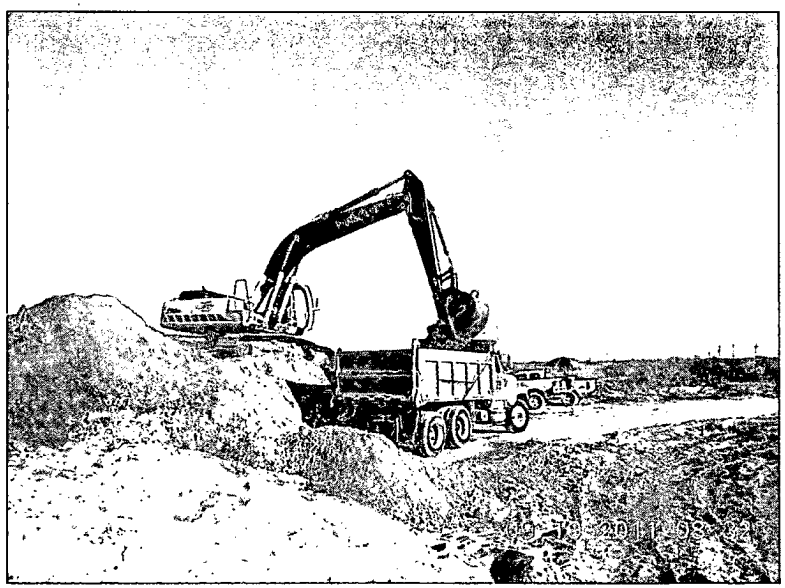
Initial release, facing south 9/12/2011



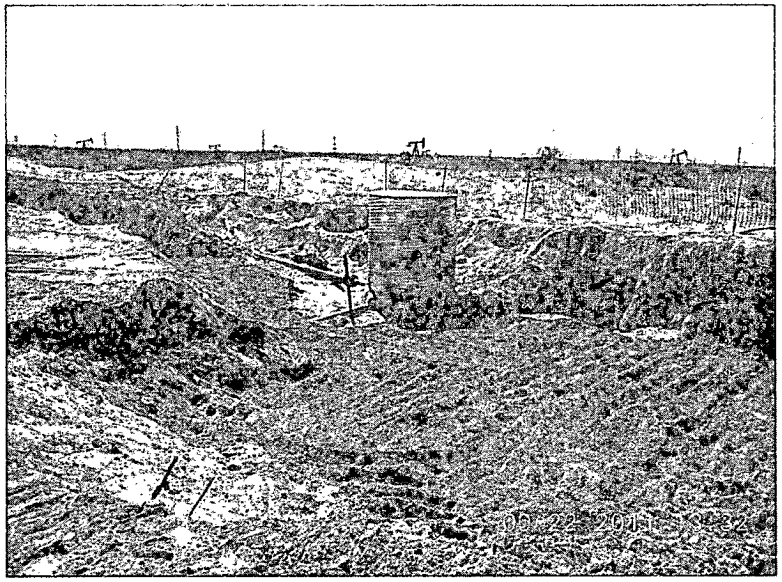
Initial release, south end, facing west 9/12/2011



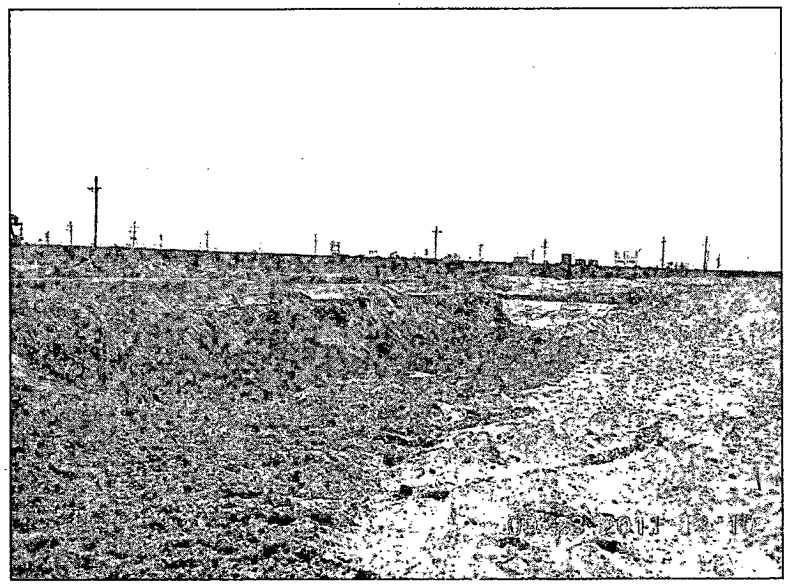
Initial release, facing north 9/12/2011



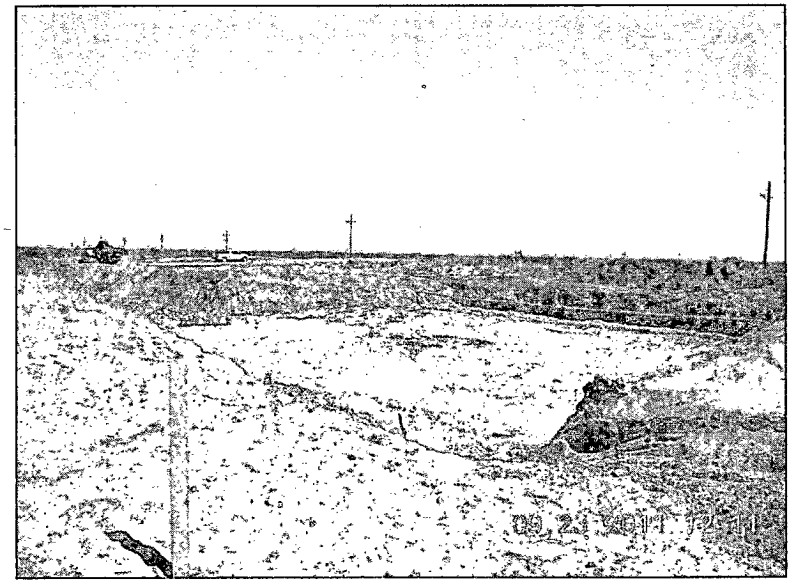
Exporting soil, facing north 9/19/2011



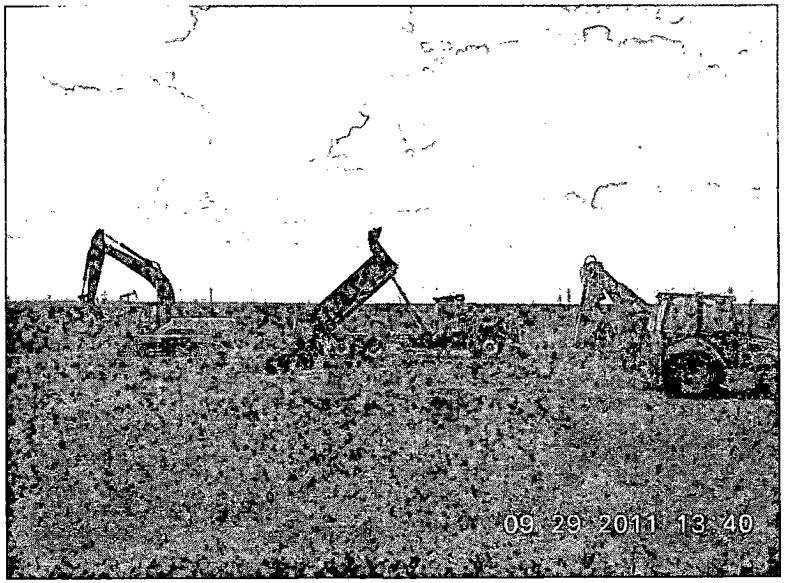
Final excavation at source, facing west 9/22/2011



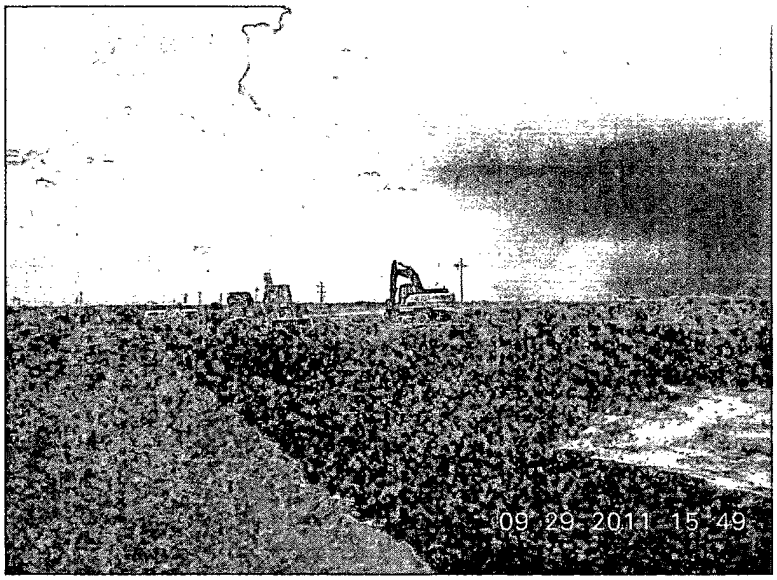
Final excavation, facing south 9/23/2011



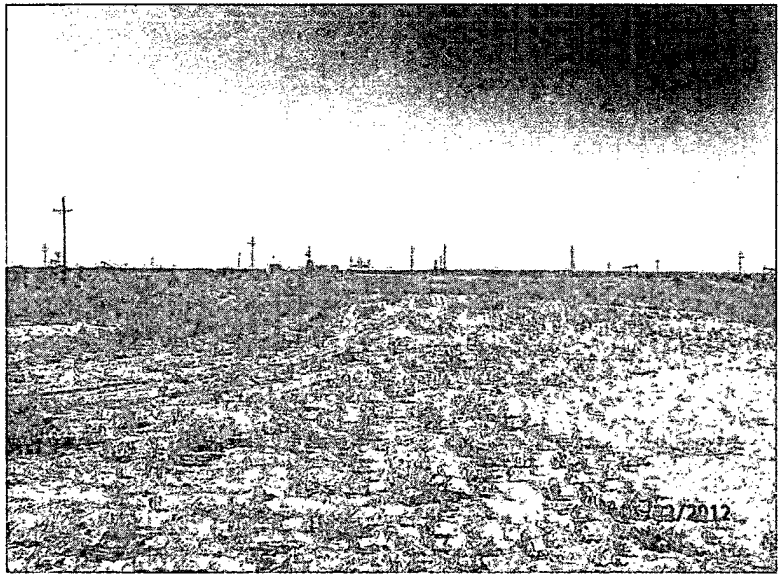
Final excavation, facing north 9/23/2011



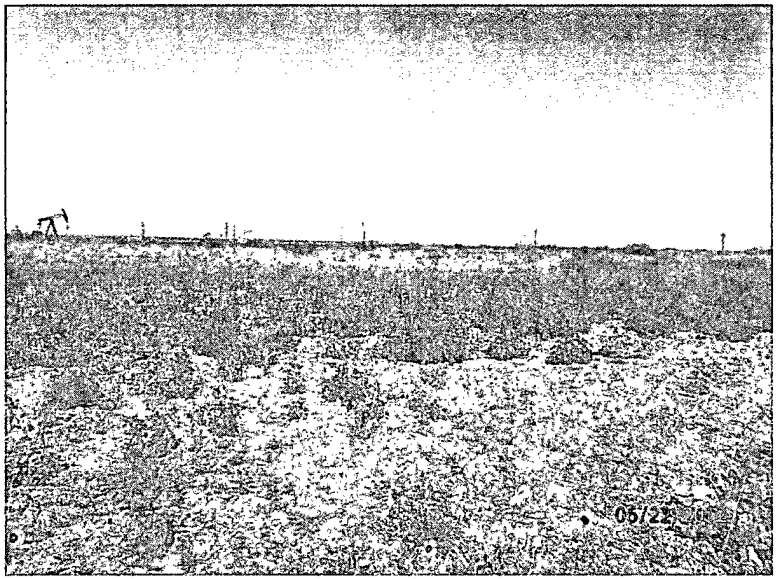
Importing backfill, facing west 9/29/2011



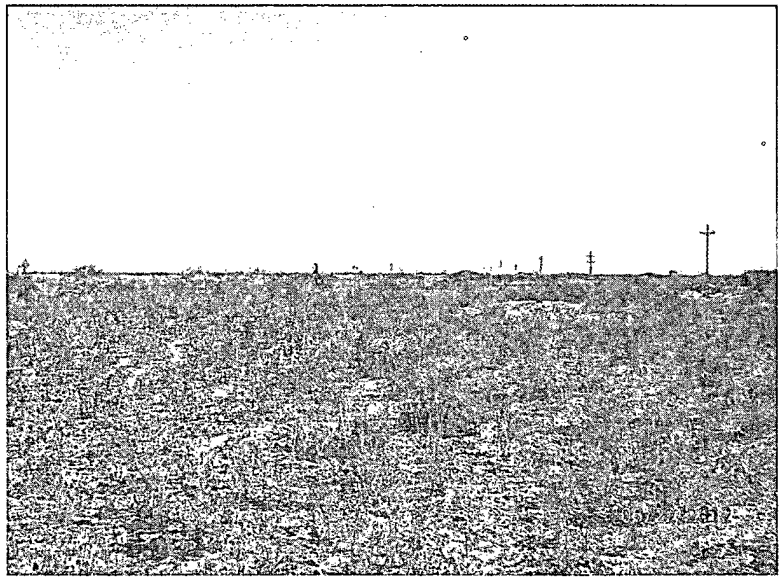
Backfilling excavation, facing north 9/29/2011



Site complete, facing south 6/22/2012



Site complete, facing east 6/22/2012



Site complete, facing north 6/22/2012

Appendix C

Laboratory Results

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/12/2011	Sampling Date:	09/12/2011
Reported:	09/19/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT #1 SURFACE (H101936-01)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**880**	16.0	09/13/2011	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: ab

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2011	ND	182	90.8	200	0.533	
DRO >C10-C28	**76.0**	10.0	09/17/2011	ND	183	91.7	200	1.13	

Surrogate: 1-Chlorooctane	*122 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*116 %*	*57.6-158*

Sample ID: POINT #2 SURFACE (H101936-02)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1520**	16.0	09/13/2011	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: ab

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**13.0**	10.0	09/17/2011	ND	182	90.8	200	0.533	
DRO >C10-C28	**688**	10.0	09/17/2011	ND	183	91.7	200	1.13	

Surrogate: 1-Chlorooctane	*116 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*104 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/12/2011	Sampling Date:	09/12/2011
Reported:	09/19/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT #3 SURFACE (H101936-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2120**	16.0	09/13/2011	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: ab**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**62.5**	10.0	09/17/2011	ND	182	90.8	200	0.533	
DRO >C10-C28	**284**	10.0	09/17/2011	ND	183	91.7	200	1.13	

Surrogate: 1-Chlorooctane	*125 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*118 %*	*57.6-158*

Sample ID: POINT #4 SURFACE (H101936-04)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1420**	16.0	09/13/2011	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: ab**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2011	ND	182	90.8	200	0.533	
DRO >C10-C28	**49.8**	10.0	09/17/2011	ND	183	91.7	200	1.13	

Surrogate: 1-Chlorooctane	*116 %*	*55.5-154*
Surrogate: 1-Chlorooctadecane	*114 %*	*57.6-158*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache	BILL TO	
Project Manager:	Natalie Gladden	P.O. #:	
Address:		Company:	
City:	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NEDU Pilot Project Battery #1	Phone #:	
Sampler Name:	Kyle Norman	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H1D1936																				
1	Point #1 Surface	G	1			✓					✓		9-12-11	12:50	✓	✓				
2	Point #2 Surface	G	1			✓					✓		9-12-11	1:00	✓	✓				
3	Point #3 Surface	G	1			✓					✓		9-12-11	1:10	✓	✓				
4	Point #4 Surface	G	1			✓					✓		9-12-11	1:20	✓	✓				

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 or otherwise.

Relinquished By: Kyle Norman	Date: 9-12-11 Time: 4:15	Received By: Jodi Henson	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	

Phone Result: ☐ Yes ☑ No Add'l Phone #:
Fax Result: ☐ Yes ☑ No Add'l Fax #:
REMARKS:

email results
Natalie.Gladden@usa.apachecorp.com;
Zconder@rice-ecs.com; Bbaker@rice-ecs.com;
hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

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

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: NE BOTTOM (H102023-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: NW BOTTOM (H102023-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: SE BOTTOM (H102023-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: SW BOTTOM (H102023-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: MIDDLE BOTTOM (H102023-05)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: N WALL E. END @ 3' (H102023-06)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL E END @ 6' (H102023-07)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL E END @ 9' (H102023-08)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL MIDDLE @ 3' (H102023-09)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: N WALL MIDDLE @6' (H102023-10)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL MIDDLE @ 9' (H102023-11)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL W END @ 3' (H102023-12)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL W END @ 6' (H102023-13)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: N WALL W END @ 9' (H102023-14)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S WALL E END @ 3' (H102023-15)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL E END @ 6' (H102023-16)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL E END @ 9' (H102023-17)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL MIDDLE @ 3' (H102023-18)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL MIDDLE @ 6' (H102023-19)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S WALL MIDDLE @ 9' (H102023-20)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL W END @ 3' (H102023-21)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL W END @ 6' (H102023-22)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: S WALL W END @ 9' (H102023-23)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL N END @ 3' (H102023-24)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: E WALL N END @ 6' (H102023-25)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL N END @ 9' (H102023-26)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL MIDDLE @ 3' (H102023-27)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL MIDDLE @ 6' (H102023-28)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL MIDDLE @ 9' (H102023-29)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: E WALL S END @ 3' (H102023-30)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL S END @ 6' (H102023-31)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: E WALL S END @ 9' (H102023-32)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL N END @ 3' (H102023-33)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**704**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL N END @ 6' (H102023-34)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**576**	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: W WALL N END @ 9' (H102023-35)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**448**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL MIDDLE @ 3' (H102023-36)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1040**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL MIDDLE @ 6' (H102023-37)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3920**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL MIDDLE @ 9' (H102023-38)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2320**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL S END @ 3' (H102023-39)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/20/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	SE EXCAVATION	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: W WALL S END @ 6' (H102023-40)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Sample ID: W WALL S END @ 9' (H102023-41)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Apache	BILL TO	P.O. #:	
Project Manager: Natalie Gladden		Company:	
Address:		Attn:	
City: State: NM Zip:		Address:	
Phone #: Fax #:		City:	
Project #: Project Owner:		State: Zip:	
Project Name: SE Excavation		Phone #:	
Project Location: NEDU Pilot Project Bty #1		Fax #:	
Sampler Name: Kyle Norman			

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H102023																				
1	NE Bottom	G	1			✓							9-20-11	9:00	✓					
2	NW Bottom	G	1			✓							9-20-11	9:05	✓					
3	SE Bottom	G	1			✓							9-20-11	9:10	✓					
4	SW Bottom	G	1			✓							9-20-11	9:15	✓					
5	Middle Bottom	G	1			✓							9-20-11	9:20	✓					
6	N wall E end @3'	G	1			✓							9-20-11	9:25	✓					
7	N wall E end @6'	G	1			✓							9-20-11	9:30	✓					
8	N wall E end @9'	G	1			✓							9-20-11	9:35	✓					
9	N wall Middle @3'	G	1			✓							9-20-11	9:40	✓					
10	N wall Middle @6'	G	1			✓							9-20-11	9:45	✓					

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 or otherwise.

Relinquished By:	Date: 9-21-11	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 8:40	Addi Henson	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4°c	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	kmccann@rice-ecs.com

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

#26

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Apache		BILL TO	
Project Manager: Natalie Gladden		P.O. #:	
Address:		Company:	
City:	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: SE Excavation		State:	Zip:
Project Location: NEPU Pilot Project Bay #1		Phone #:	
Sampler Name: Kyle Norman		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H102023																				
11	N wall Middle @ 9'	G	1			✓							9-20-11	9:50	✓					
12	N wall W end @ 3'	G	1			✓							9-20-11	9:55	✓					
13	N wall W end @ 6'	G	1			✓							9-20-11	10:00	✓					
14	N wall W end @ 9'	G	1			✓							9-20-11	10:05	✓					
15	S wall E end @ 3'	G	1			✓							9-20-11	10:10	✓					
16	S wall E end @ 6'	G	1			✓							9-20-11	10:15	✓					
17	S wall E end @ 9'	G	1			✓							9-20-11	10:20	✓					
18	S wall Middle @ 3'	G	1			✓							9-20-11	10:25	✓					
19	S wall Middle @ 6'	G	1			✓							9-20-11	10:30	✓					
20	S wall Middle @ 9'	G	1			✓							9-20-11	10:35	✓					

Relinquished By:	Date: 9-21-11	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 8:40		Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

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

#26

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Apache	BILL TO	P.O. #:	
Project Manager: Natalie Gladden		Company:	
Address:		Attn:	
City: State: NM Zip:		Address:	
Phone #: Fax #:		City:	
Project #: Project Owner:		State: Zip:	
Project Name: SE Excavation		Phone #:	
Project Location: MEDU Pilot Project-Bay#1		Fax #:	
Sampler Name: Kyle Norman			

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H102023																				
21	S wall West @3'	G	1			✓							9-20-1	10:40	✓					
22	S wall West @6'	G	1			✓							9-20-1	10:45	✓					
23	S Wall West @9'	G	1			✓							9-20-1	10:50	✓					
24	E wall Med @3'	G	1			✓							9-20-1	10:55	✓					
25	E wall Med @6'	G	1			✓							9-20-1	11:00	✓					
26	E wall Med @9'	G	1			✓							9-20-1	11:05	✓					
27	E wall Middle @3'	G	1			✓							9-20-1	11:10	✓					
28	E Wall Middle @6'	G	1			✓							9-20-1	11:15	✓					
29	E wall Middle @9'	G	1			✓							9-20-1	11:20	✓					
30	E wall Sand @3'	G	1			✓							9-20-1	11:25	✓					

Relinquished By: Kyle N	Date: 9-21-1 Time: 8:40	Received By: Jodi Henson	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	

Phone Result: ☐ Yes ☑ No Add'l Phone #:
Fax Result: ☐ Yes ☑ No Add'l Fax #:
REMARKS:

email results
Natalie.Gladden@usa.apachecorp.com;
Zconder@rice-ecs.com; Bbaker@rice-ecs.com;
hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

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

#26

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Apache		BILL TO	
Project Manager: Natalie Gladden		P.O. #:	
Address:		Company:	
City:	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: SE Excavation		State:	Zip:
Project Location: NEDU Pilot Project Bay #1		Phone #:	
Sampler Name: Kyle Norman		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H102023																				
31	E wall Sand @ 6'	G	1			✓							9-20-11	11:15	✓					
32	E wall Sand @ 9'	G	1			✓							9-20-11	11:26	✓					
33	W wall Sand @ 3'	G	1			✓							9-20-11	11:25	✓					
34	W wall Sand @ 6'	G	1			✓							9-20-11	11:30	✓					
35	W wall Sand @ 9'	G	1			✓							9-20-11	11:35	✓					
36	W wall Middle @ 3'	G	1			✓							9-20-11	11:40	✓					
37	W wall Middle @ 6'	G	1			✓							9-20-11	11:45	✓					
38	W wall Middle @ 9'	G	1			✓							9-20-11	11:56	✓					
39	W wall Sand @ 3'	G	1			✓							9-20-11	11:55	✓					
40	W wall Sand @ 1'	G	1			✓							9-20-11	12:00	✓					

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 or otherwise.

Relinquished By: Kyle	Date: 9-21-11 Time: 8:40	Received By: Jodi Henson	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials)	

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

REMARKS:

email results
Natalie.Gladden@usa.apachecorp.com;
Zconder@rice-ecs.com; Bbaker@rice-ecs.com;
hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

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

#426

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		BILL TO	
Project Manager: Natalie Gladden		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: SE Excavation		State: Zip:	
Project Location: NEDU Pilot Project Bty #1		Phone #:	
Sampler Name: Kyle Norman		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides
H02023 41	W wall Send eq'	G	1			✓							9-20-24	2:05	✓

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 or otherwise.

Relinquished By: Kyle	Date: 9-21-24	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
	Time: 8:40		Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Relinquished By:	Date:	Received By:	REMARKS: Natalie.Gladden@usa.apachecorp.com Bbaker@rice-eos.com Lweinheimer@rice-eos.com		
	Time:				

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: 4°C	Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	GH

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

#26

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/21/2011
Reported:	09/23/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: ROW N WALL MIDDLE 3' (H102022-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW N WALL MIDDLE 6' (H102022-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW N BOTTOM (H102022-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW SOUTH BOTTOM (H102022-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/22/2011	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/21/2011
Reported:	09/23/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: ROW MIDDLE BOTTOM (H102022-05)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW W WALL S END 3' (H102022-06)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**992**	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW W WALL S END 6' (H102022-07)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**896**	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW W WALL MIDDLE 3' (H102022-08)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW W WALL MIDDLE 6' (H102022-09)

Chloride, SM4500Cl-B mg/kg **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1170**	16.0	09/22/2011	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/21/2011
Reported:	09/23/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: ROW W WALL N END 3' (H102022-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/22/2011	ND	432	108	400	0.00	

Sample ID: ROW W WALL N END 6' (H102022-11)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/22/2011	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Apache	**BILL TO**	
Project Manager:	Natalie Gladden	P.O. #:	
Address:		Company:	
City:	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NEDU Pilot Project Battery #1	Phone #:	
Sampler Name:	Kyle Norman	Fax #:	

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS						
H10222-																										
1	AEW N wall Middle 3'	G	1			✓							9-21-11	9:00	✓											
2	AEW N wall Middle 6'	G	1			✓							9-21-11	9:10	✓											
3	AEW North Bottom	G	1			✓							9-21-11	9:20	✓											
4	AEW South Bottom	G	1			✓							9-21-11	9:50	✓											
5	AEW Middle Bottom	G	1			✓							9-21-11	9:55	✓											
6	AEW W wall Send 3'	G	1			✓							9-21-11	10:00	✓											
7	AEW W wall Send 6'	G	1			✓							9-21-11	10:30	✓											
8	AEW W wall Middle 3'	G	1			✓							9-21-11	10:40	✓											
9	AEW W wall Middle 6'	G	1			✓							9-21-11	10:50	✓											
10	AEW W wall Need 3'	G	1			✓							9-21-11	11:00	✓											

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 or otherwise.

Relinquished By:	Date: 9-22-11	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
Kyle Norman	Time: 0:40	Jodi Henson	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other: 4°C	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	(Initials)	

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

#26

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Apache	**BILL TO**	
Project Manager:	Natalie Gladden	P.O. #:	
Address:		Company:	
City:	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State:	Zip:
Project Location:	NEDU Pilot Project Battery #1	Phone #:	
Sampler Name:	Kyle Norman	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS					
H102022-11	ROW Wall Nend 6'	G	1			✓							9-22-11	11:30	✓										

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 or otherwise.

Relinquished By:	Date: 9-22-11	Received By:	Phone Result:	☐ Yes	☑ No Add'l Phone #:
Kyle Norman	Time: 5:40	Jodi Henson	Fax Result:	☐ Yes	☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:		
	Time:		email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials)

4°C

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

#26

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/22/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: ROW E WALL MIDDLE @ 3' (H102029-01)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: ROW E WALL MIDDLE @ 6' (H102029-02)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: ROW E WALL N END @ 3' (H102029-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: ROW E WALL N END @ 6' (H102029-04)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/22/2011	Sampling Date:	09/22/2011
Reported:	09/26/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: ROW E WALL S. END @ 3' (H102029-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2011	ND	432	108	400	0.00	

Sample ID: ROW E WALL S END @ 6' (H102029-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/23/2011	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Apache	**BILL TO**	
Project Manager:	Natalie Gladden	P.O. #:	
Address:		Company:	
City:	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NEDU Pilot Project Battery #1	Phone #:	
Sampler Name:	Kyle Norman	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS				
H107029																								
1	BGW Ewell Middle @3'	G	1			✓							9-22-11	10:00	✓									
2	BGW Ewell Middle @6'	G	1			✓							9-22-11	10:10	✓									
3	BGW Ewell N end @3'	G	1			✓							9-22-11	16:30	✓									
4	BGW Ewell N end @6'	G	1			✓							9-22-11	16:50	✓									
5	BGW Ewell S end @3'	G	1			✓							9-22-11	11:30	✓									
6	BGW Ewell S end @6'	G	1			✓							9-22-11	11:45	✓									

Relinquished By:	Date: 9-22-11	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
Kyle Norman	Time: 9:15	Jodi Henson	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 22°C

Sample Condition: Cool ☐ Yes ☑ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) JH

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

#26

CARDINAL Laboratories

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

Analytical Results For:

APACHE - EUNICE
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:	09/29/2011	Sampling Date:	09/29/2011
Reported:	10/03/2011	Sampling Type:	Soil
Project Name:	NEDU PILOT PROJECT BATTERY #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: BACKFILL (H102092-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/30/2011	ND	448	112	400	3.51	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Apache	**BILL TO**
Project Manager: Natalie Gladden	P.O. #:
Address:	Company:
City: State: NM Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: NEDU Pilot Project Bty	Phone #:
Sampler Name: Kyle Norman	Fax #:

FOR LAB USE ONLY				MATRIX							PRESERV			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS						
H102092 -1	Back Fill	G	1			✓							9-29-11	1:50	✓											

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 or otherwise.

Relinquished By: Kyle Norman	Date: 9-29-11 (10-29-11) Time: 4:12	Received By: Jodi Henson	Phone Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 242	Sample Condition Cool ☐ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

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

#26

Appendix D

Groundwater Study

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Apache
Company

NEDU Pilot Project Battery #1
site name

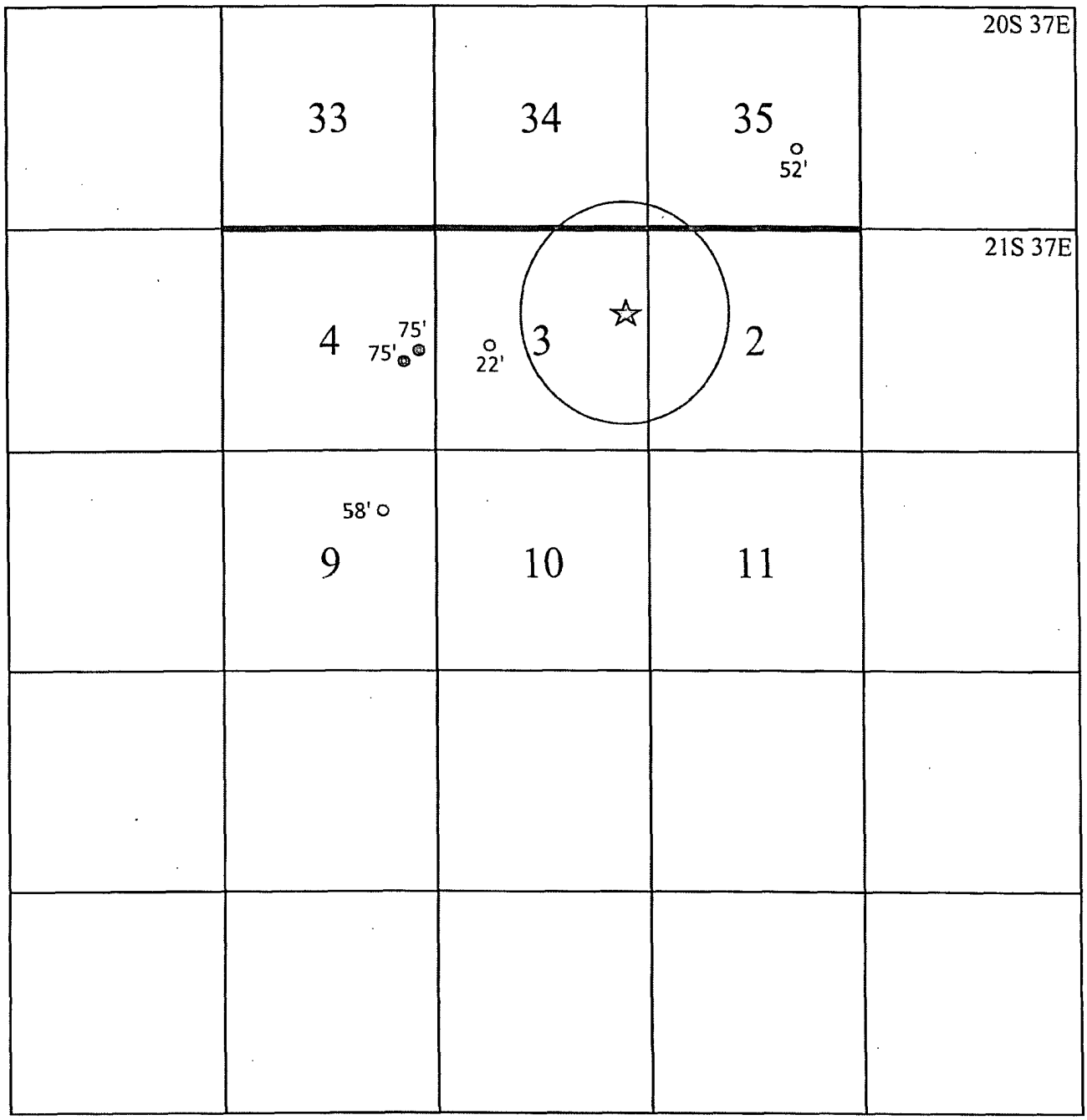
H	3	T21S	R37E
Unit Letter	Section	Township	Range

Groundwater Depth: 56 ft

Compiled by: Lara Weinheimer Date: 9/13/2011

Comments:

= Wells of unknown use (USGS)
= Non-production wells (commercial, sanitation, domestic, stock)
= section (1 sq. mile)
= Subject Site



New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 33, 34, 35 **Township:** 20S **Range:** 37E

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00552		STK	LE	2	4		04	21S	37E	672700	3598022*	90	75	15
CP 00553		STK	LE	2	4		04	21S	37E	672700	3598022*	90	75	15

Average Depth to Water: **75 feet**
Minimum Depth: **75 feet**
Maximum Depth: **75 feet**

Record Count: 2

PLSS Search:

Section(s): 2, 3, 4, 9, 10, 11 **Township:** 21S **Range:** 37E

***UTM location was derived from PLSS - see Help**

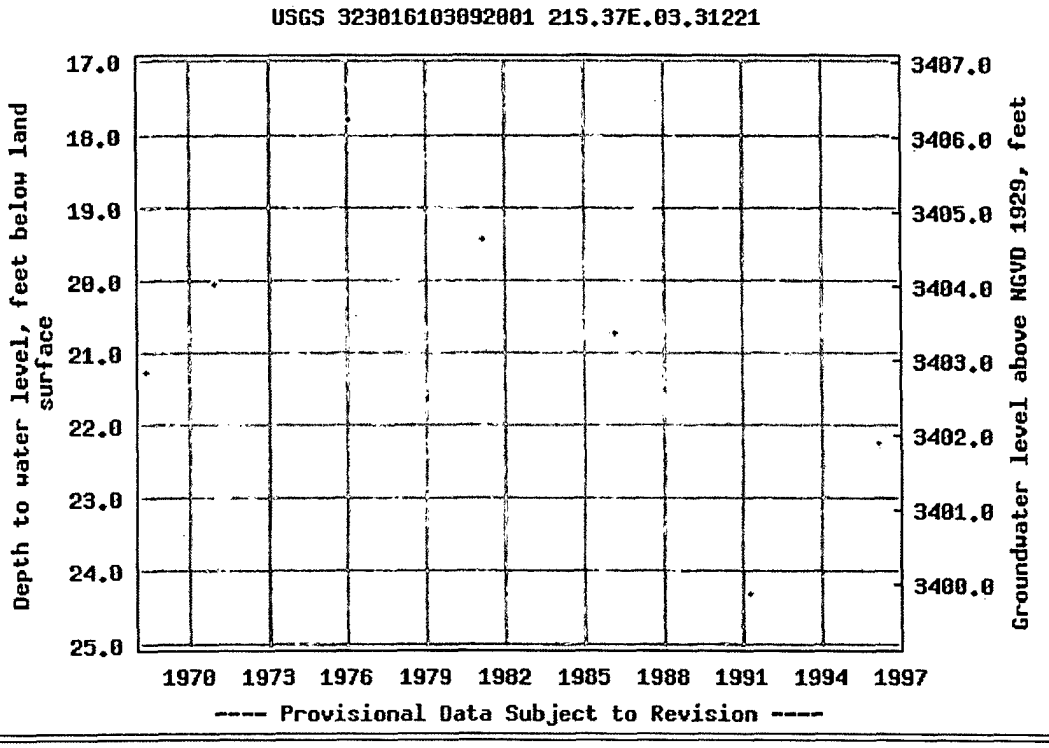
USGS 323016103092001 21S.37E.03.31221

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°30'40", Longitude 103°19'21" NAD27
Land-surface elevation 3,424.10 feet above NGVD29
The depth of the well is 36 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



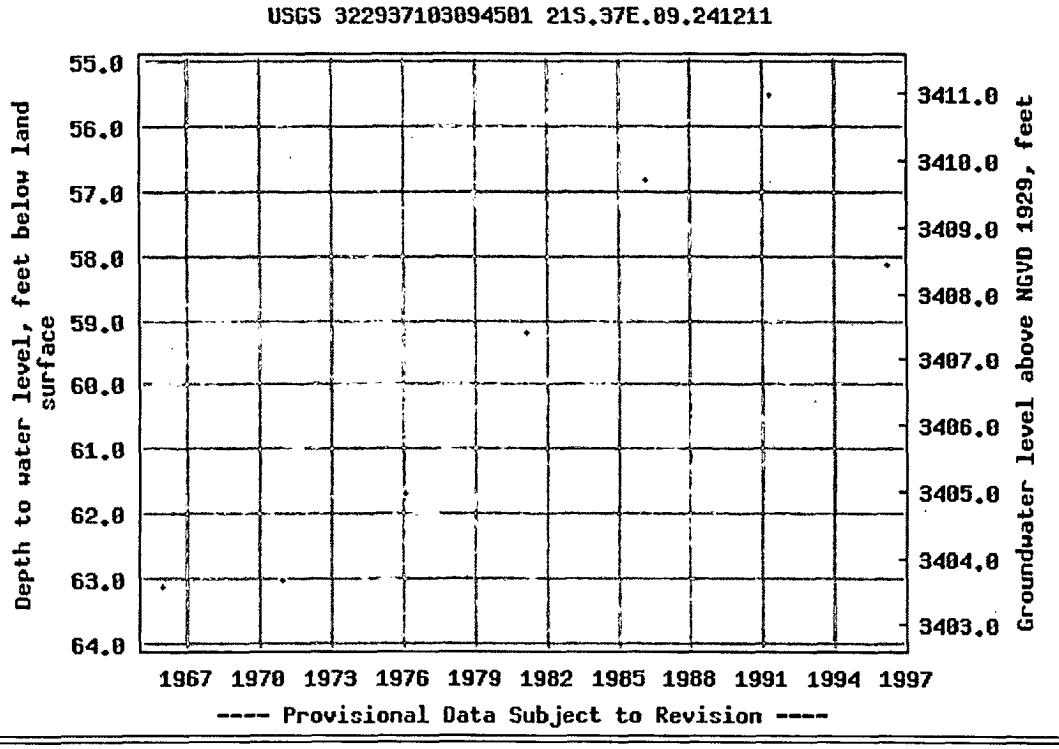
USGS 322937103094501 21S.37E.09.241211

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°29'49", Longitude 103°09'45" NAD27
Land-surface elevation 3,466.60 feet above NGVD29
The depth of the well is 90 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



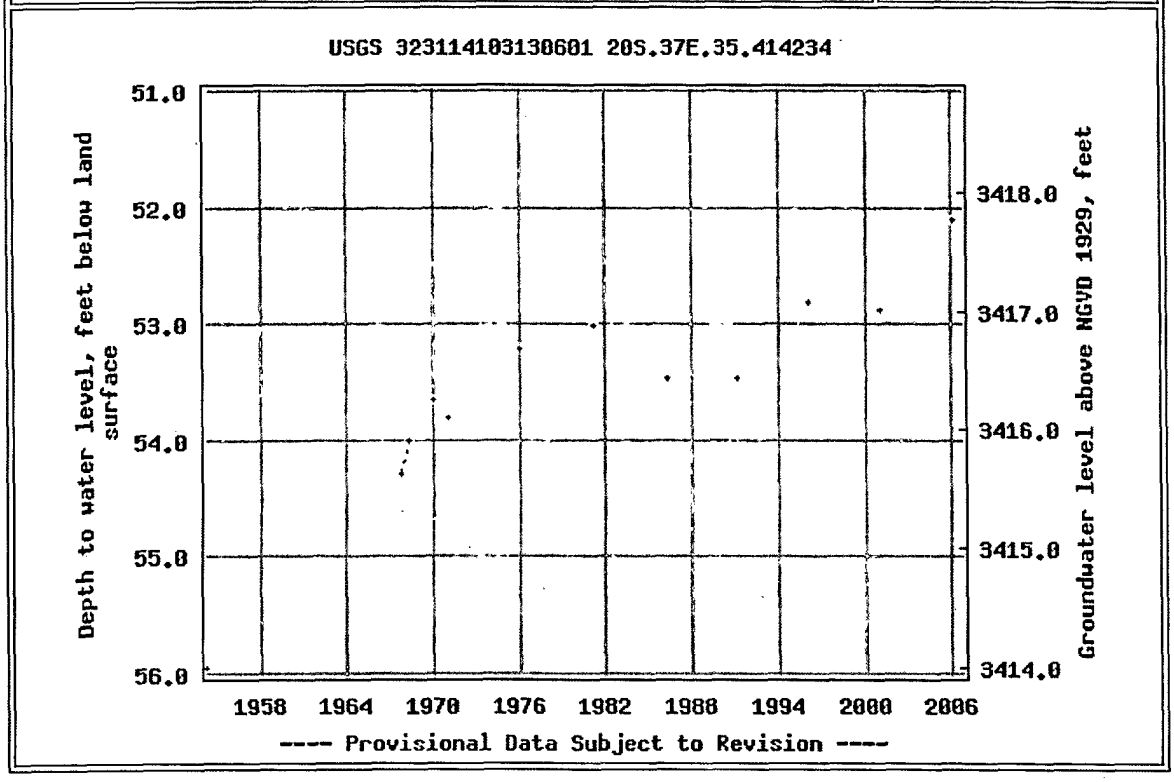
USGS 323114103130601 20S.37E.35.414234

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°31'37", Longitude 103°13'06" NAD27
Land-surface elevation 3,469.90 feet above NGVD29
The depth of the well is 63 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Appendix E

Final Form C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Apache Corp.	Contact Natalie Gladden
Address P.O. Box 1849, Eunice, NM, 88231	Telephone No. (575) 390-4186
Facility Name NEDU Pilot Project Battery #1 (NEDU #165)	Facility Type Production Facility

Surface Owner McCasland	Mineral Owner State of NM	Lease No. 30-025-39915

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	2	21S	37E	1800	FNL	125	FWL	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 387 bbl	Volume Recovered 0 bbl
Source of Release Injection line/junction box	Date and Hour of Occurrence 9/12/11	Date and Hour of Discovery 9/12/11
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking	
By Whom? Natalie Gladden	Date and Hour 9/12/11 343 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

DTW = 56'

Describe Cause of Problem and Remedial Action Taken.*
Injection line busted loose from the tee inside the junction box. Line was repaired.

Describe Area Affected and Cleanup Action Taken.*
The leak affected the pipeline right-of-way and an area of pasture land totaling 8,527 sq. ft. Impacted soils were removed to a NMOCD approved disposal facility. The excavation was completed from 6 ft. to 9 ft. deep. The west wall of the excavation extended to just within the affected area due to the proximity of an Apache pipeline. Representative soil samples were collected from the excavations and sent to a commercial laboratory for chloride analysis. The excavation was backfilled with clean soil and contoured to the surrounding area.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Natalie Gladden

Printed Name: Natalie Gladden

Title: EH&S Environmental Tech

E-mail Address: Natalie.gladden@apachecorp.com

Date: 11/9/12 Phone: (575) 390-4186

OIL CONSERVATION DIVISION

Approved by District Supervisor: Geoffrey Leking
Environmental Specialist

Approval Date: 11/9/12 Expiration Date: —

Conditions of Approval: -

Attached ☐
IRP-6-14-3083

* Attach Additional Sheets If Necessary

ENSOLUM

APPENDIX B

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): MW-1	OSE FILE NUMBER(S): L-13546
WELL OWNER NAME(S): Conoco Phillips	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: HC 60, Box 66	CITY: Lovington STATE: NM ZIP: 88260

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	31	25.98	N
LONGITUDE	103	8	11.85	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE: Warren Unit 13

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1456	John W. White	White Drilling Company, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
6/17/2014	6/17/2014	88.0		72.0

COMPLETED WELL IS: ( ) ARTESIAN ( ) DRY HOLE (•) SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): 75.88

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0.0	56.0	6.0	Sch. 40 PVC	Threads	2.0	1/4"	
56.0	86.0	6.0	Sch. 40 PVC	Threads	2.0	1/4"	.010

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
52.0	88.0	6.0	20/40 Sand	12 Sacks	Hand Mix
52.0	48.0	6.0	Bentonite Chips	6 Sacks	Hand Mix
48.0	8.0	6.0	Type 2 Portland Cement w/5% Bentonite	6.52 Gal.	Pump Mix w/Tremm
8.0	0.0	6.0	Cement	1.5976	Pump Mix w/Tremm

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

543306

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0.0	14.0	14.0	Light Brown Sand	○ Y ◉ N	
14.0	23.0	9.0	Yellowish & whiteish layers of tight packed sand	○ Y ◉ N	
23.0	47.0	24.0	Pinkish brown sand	○ Y ◉ N	
47.0	73.0	26.0	Reddish brown sand/sandstone	○ Y ◉ N	
73.0	88.0	15.0	Reddish sandy shale/clay	◉ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

William B. Atkins

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER / PRINT SIGNEE NAME

7-1-14
DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.

USGS 323142103080002 20S.38E.34.233234A

Available data for this site SUMMARY OF ALL AVAILABLE DATA | GO

Well Site

DESCRIPTION:

Latitude 32°31'42", Longitude 103°08'00" NAD27
Lea County, New Mexico , Hydrologic Unit 13070007
Well depth: not determined.
Land surface altitude: 3,523 feet above NAVD88.
Well completed in "High Plains aquifer" (N100HGHPLN) national aquifer.
Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1986-02-18	1986-02-18	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

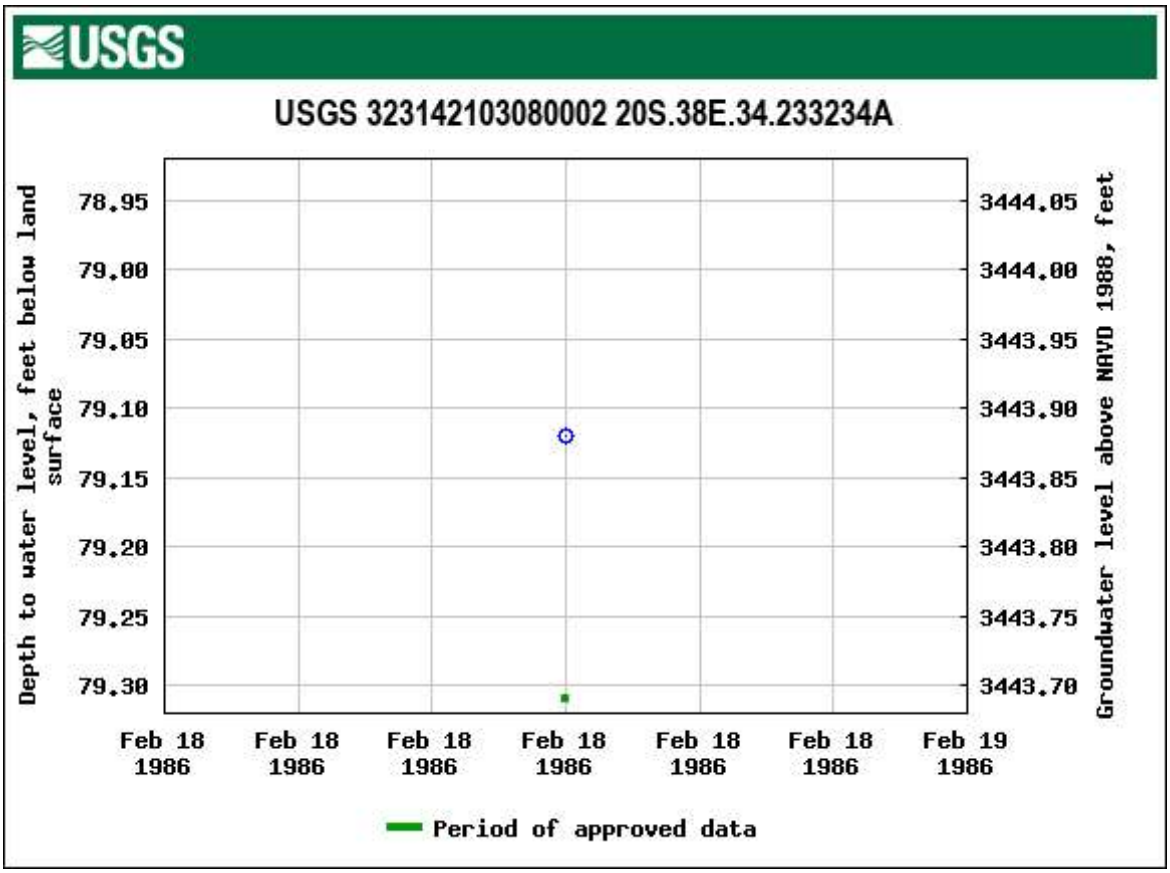
Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

Questions or Comments
Help
Data Tips
Explanation of terms
Subscribe for system changes

U.S. Department of the Interior | U.S. Geological Survey
Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?site_no=323142103080002&agency_cd=USGS

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2025-01-29 13:09:40 EST
0.28 0.27 caww02


USGS
USGS 323142103080002 20S.38E.34.233234A
Depth to water level, feet below land surface
78.95
79.00
79.05
79.10
79.15
79.20
79.25
79.30
Groundwater level above NAVD 1988, feet
3444.05
3444.00
3443.95
3443.90
3443.85
3443.80
3443.75
3443.70
Feb 18 1986
Feb 18 1986
Feb 18 1986
Feb 18 1986
Feb 18 1986
Feb 18 1986
Feb 19 1986
Period of approved data

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
Hilcorp Energy Company
NEDU 164 Flowline

Photograph: 1 Date: 2/4/2025
Description: View of Release Extent
View: Southwest

Photograph: 2 Date: 2/4/2025
Description: View of Release Extent
View: East

Photograph: 3 Date: 2/4/2025
Description: View of Release Extent
View: Northwest

Photograph: 4 Date: 2/4/2025
Description: View of Release Extent
View: Northwest

ENSOLUM

Photographic Log
Hilcorp Energy Company
NEDU 164 Flowline

Photograph: 1 Date: 3/6/2025
Description: Preparation for excavation activities
View: Northeast

Photograph: 2 Date: 3/13/2025
Description: Area of Excavation
View: Northwest

Photograph: 3 Date: 3/7/2025
Description: Excavation activities
View: South

Photograph: 4 Date: 3/13/2025
Description: Sample Collection
View: South

ENSOLUM

APPENDIX D

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devin Hencmann
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/7/2025 10:06:01 AM

JOB DESCRIPTION

NEDU164
07A1988168

JOB NUMBER

890-7632-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

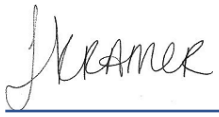
Eurofins Carlsbad

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



Generated
2/7/2025 10:06:01 AM

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

Client: Ensolum
Project/Site: NEDU164

Laboratory Job ID: 890-7632-1
SDG: 07A1988168

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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: NEDU164

Job ID: 890-7632-1

Job ID: 890-7632-1 Eurofins Carlsbad

Job Narrative
890-7632-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/5/2025 8:39 AM. 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 4.0°C.

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-7632-1) and SS02 (890-7632-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-7632-1), SS02 (890-7632-2), SS03 (890-7632-3), (CCV 880-102138/20), (LCS 880-102164/1-A), (880-54102-A-1-F) and (880-54102-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Diesel Range Organics
Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: SS03 (890-7632-3), (880-54131-A-1-E MS) and (880-54131-A-1-F MSD). Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-102119 and analytical batch 880-102154 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-7632-1) and SS02 (890-7632-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-102119 and analytical batch 880-102154 was outside the upper control limits.

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

HPLC/IC
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: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Client Sample ID: SS01

Lab Sample ID: 890-7632-1
Matrix: Solid
Date Collected: 02/04/25 14:02
Date Received: 02/05/25 08:39
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	25.1		0.998		mg/Kg		02/06/25 15:31	02/06/25 19:42	500
Toluene	173		0.998		mg/Kg		02/06/25 15:31	02/06/25 19:42	500
Ethylbenzene	135		0.998		mg/Kg		02/06/25 15:31	02/06/25 19:42	500
m-Xylene & p-Xylene	195		2.00		mg/Kg		02/06/25 15:31	02/06/25 19:42	500
o-Xylene	76.0		0.998		mg/Kg		02/06/25 15:31	02/06/25 19:42	500
Xylenes, Total	271		2.00		mg/Kg		02/06/25 15:31	02/06/25 19:42	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*207*	*S1+*	*70 - 130*	*02/06/25 15:31*	*02/06/25 19:42*	*500*
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*	*02/06/25 15:31*	*02/06/25 19:42*	*500*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	604		2.00		mg/Kg			02/06/25 19:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	10700		49.9		mg/Kg			02/06/25 12:27	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	3970		49.9		mg/Kg		02/05/25 20:22	02/06/25 12:27	1
Diesel Range Organics (Over C10-C28)	6730		49.9		mg/Kg		02/05/25 20:22	02/06/25 12:27	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/05/25 20:22	02/06/25 12:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*170*	*S1+*	*70 - 130*	*02/05/25 20:22*	*02/06/25 12:27*	*1*
o-Terphenyl	*182*	*S1+*	*70 - 130*	*02/05/25 20:22*	*02/06/25 12:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	769		10.1		mg/Kg			02/06/25 20:17	1

Client Sample ID: SS02

Lab Sample ID: 890-7632-2
Matrix: Solid
Date Collected: 02/04/25 13:58
Date Received: 02/05/25 08:39
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	8.52		1.01		mg/Kg		02/06/25 15:31	02/06/25 20:02	500
Toluene	94.6		1.01		mg/Kg		02/06/25 15:31	02/06/25 20:02	500
Ethylbenzene	79.1		1.01		mg/Kg		02/06/25 15:31	02/06/25 20:02	500
m-Xylene & p-Xylene	136		2.01		mg/Kg		02/06/25 15:31	02/06/25 20:02	500
o-Xylene	42.5		1.01		mg/Kg		02/06/25 15:31	02/06/25 20:02	500
Xylenes, Total	179		2.01		mg/Kg		02/06/25 15:31	02/06/25 20:02	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*163*	*S1+*	*70 - 130*	*02/06/25 15:31*	*02/06/25 20:02*	*500*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Client Sample ID: SS02

Lab Sample ID: 890-7632-2
Matrix: Solid
Date Collected: 02/04/25 13:58
Date Received: 02/05/25 08:39
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/06/25 15:31*	*02/06/25 20:02*	*500*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**361**		2.01	mg/Kg			02/06/25 20:02	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**9780**		49.8	mg/Kg			02/06/25 12:43	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**3800**		49.8	mg/Kg		02/05/25 20:22	02/06/25 12:43	1
Diesel Range Organics (Over C10-C28)	**5980**		49.8	mg/Kg		02/05/25 20:22	02/06/25 12:43	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		02/05/25 20:22	02/06/25 12:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*166*	*S1+*	*70 - 130*	*02/05/25 20:22*	*02/06/25 12:43*	*1*
o-Terphenyl	*159*	*S1+*	*70 - 130*	*02/05/25 20:22*	*02/06/25 12:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**703**		10.1	mg/Kg			02/06/25 20:23	1

Client Sample ID: SS03

Lab Sample ID: 890-7632-3
Matrix: Solid
Date Collected: 02/04/25 13:52
Date Received: 02/05/25 08:39
Sample Depth: 1.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.00	U	1.00	mg/Kg		02/06/25 15:31	02/06/25 20:22	500
Toluene	**2.76**		1.00	mg/Kg		02/06/25 15:31	02/06/25 20:22	500
Ethylbenzene	**2.32**		1.00	mg/Kg		02/06/25 15:31	02/06/25 20:22	500
m-Xylene & p-Xylene	**3.51**		2.00	mg/Kg		02/06/25 15:31	02/06/25 20:22	500
o-Xylene	**1.67**		1.00	mg/Kg		02/06/25 15:31	02/06/25 20:22	500
Xylenes, Total	**5.18**		2.00	mg/Kg		02/06/25 15:31	02/06/25 20:22	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/06/25 15:31*	*02/06/25 20:22*	*500*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*02/06/25 15:31*	*02/06/25 20:22*	*500*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**10.3**		2.00	mg/Kg			02/06/25 20:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**296**		49.7	mg/Kg			02/06/25 12:59	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Client Sample ID: SS03

Date Collected: 02/04/25 13:52
Date Received: 02/05/25 08:39
Sample Depth: 1.5

Lab Sample ID: 890-7632-3

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		02/05/25 20:22	02/06/25 12:59	1
Diesel Range Organics (Over C10-C28)	**296**		49.7		mg/Kg		02/05/25 20:22	02/06/25 12:59	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		02/05/25 20:22	02/06/25 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*02/05/25 20:22*	*02/06/25 12:59*	*1*
o-Terphenyl	*63*	*S1-*	*70 - 130*	*02/05/25 20:22*	*02/06/25 12:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**425**		9.96		mg/Kg			02/06/25 20:29	1

Surrogate Summary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-54102-A-1-D MS	Matrix Spike	128	79
880-54102-A-1-E MSD	Matrix Spike Duplicate	140 S1+	79
880-54141-A-1-B MS	Matrix Spike	91	112
880-54141-A-1-C MSD	Matrix Spike Duplicate	98	105
890-7632-1	SS01	207 S1+	125
890-7632-2	SS02	163 S1+	110
890-7632-3	SS03	109	114
LCS 880-102164/1-A	Lab Control Sample	132 S1+	83
LCS 880-102178/1-A	Lab Control Sample	116	129
LCSD 880-102164/2-A	Lab Control Sample Dup	129	83
LCSD 880-102178/2-A	Lab Control Sample Dup	96	115
MB 880-102164/5-A	Method Blank	127	76
MB 880-102178/5-A	Method Blank	96	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-54131-A-1-E MS	Matrix Spike	67 S1-	68 S1-
880-54131-A-1-F MSD	Matrix Spike Duplicate	69 S1-	67 S1-
890-7632-1	SS01	170 S1+	182 S1+
890-7632-2	SS02	166 S1+	159 S1+
890-7632-3	SS03	68 S1-	63 S1-
LCS 880-102119/2-A	Lab Control Sample	74	77
LCSD 880-102119/3-A	Lab Control Sample Dup	74	76
MB 880-102119/1-A	Method Blank	99	92

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-102164/5-A
Matrix: Solid
Analysis Batch: 102138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102164

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/25 09:41	02/06/25 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/25 09:41	02/06/25 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/25 09:41	02/06/25 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/06/25 09:41	02/06/25 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/25 09:41	02/06/25 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/06/25 09:41	02/06/25 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*02/06/25 09:41*	*02/06/25 11:41*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*02/06/25 09:41*	*02/06/25 11:41*	*1*

Lab Sample ID: LCS 880-102164/1-A
Matrix: Solid
Analysis Batch: 102138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102164

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1192		mg/Kg		119	70 - 130		
Toluene			0.100	0.1042		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1076		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2260		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1126		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: LCSD 880-102164/2-A
Matrix: Solid
Analysis Batch: 102138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102164

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1149		mg/Kg		115	70 - 130	4	35
Toluene			0.100	0.1060		mg/Kg		106	70 - 130	2	35
Ethylbenzene			0.100	0.1095		mg/Kg		109	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2274		mg/Kg		114	70 - 130	1	35
o-Xylene			0.100	0.1139		mg/Kg		114	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: 880-54102-A-1-D MS
Matrix: Solid
Analysis Batch: 102138

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 102164

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.09874		mg/Kg		99	70 - 130		
Toluene	<0.00200	U	0.0998	0.09860		mg/Kg		99	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-54102-A-1-D MS
Matrix: Solid
Analysis Batch: 102138

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 102164

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0998	0.1017		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2121		mg/Kg		106	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1070		mg/Kg		107	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 880-54102-A-1-E MSD
Matrix: Solid
Analysis Batch: 102138

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 102164

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.1171		mg/Kg		118	70 - 130	17	35
Toluene	<0.00200	U	0.0996	0.1012		mg/Kg		102	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0996	0.1052		mg/Kg		106	70 - 130	3	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.2207		mg/Kg		111	70 - 130	4	35
o-Xylene	<0.00200	U	0.0996	0.1104		mg/Kg		111	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: MB 880-102178/5-A
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102178

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/25 11:01	02/06/25 12:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/25 11:01	02/06/25 12:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/25 11:01	02/06/25 12:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/06/25 11:01	02/06/25 12:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/25 11:01	02/06/25 12:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/06/25 11:01	02/06/25 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*02/06/25 11:01*	*02/06/25 12:39*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/06/25 11:01*	*02/06/25 12:39*	*1*

Lab Sample ID: LCS 880-102178/1-A
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1214		mg/Kg		121	70 - 130
Toluene	0.100	0.1060		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1174		mg/Kg		117	70 - 130
m-Xylene & p-Xylene	0.200	0.2402		mg/Kg		120	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-102178/1-A
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102178

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1194		mg/Kg		119	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*129*		*70 - 130*

Lab Sample ID: LCSD 880-102178/2-A
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102178

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1010		mg/Kg		101	70 - 130	18	35
Toluene			0.100	0.08827		mg/Kg		88	70 - 130	18	35
Ethylbenzene			0.100	0.09811		mg/Kg		98	70 - 130	18	35
m-Xylene & p-Xylene			0.200	0.2007		mg/Kg		100	70 - 130	18	35
o-Xylene			0.100	0.09958		mg/Kg		100	70 - 130	18	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 880-54141-A-1-B MS
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 102178

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.09771		mg/Kg		98	70 - 130		
Toluene	<0.00200	U	0.0998	0.08452		mg/Kg		85	70 - 130		
Ethylbenzene	<0.00200	U	0.0998	0.09304		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1926		mg/Kg		96	70 - 130		
o-Xylene	<0.00200	U	0.0998	0.09513		mg/Kg		95	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-54141-A-1-C MSD
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 102178

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.09013		mg/Kg		90	70 - 130	8	35
Toluene	<0.00200	U	0.0996	0.07665		mg/Kg		77	70 - 130	10	35
Ethylbenzene	<0.00200	U	0.0996	0.08344		mg/Kg		84	70 - 130	11	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1736		mg/Kg		87	70 - 130	10	35
o-Xylene	<0.00200	U	0.0996	0.08764		mg/Kg		88	70 - 130	8	35

QC Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-54141-A-1-C MSD
Matrix: Solid
Analysis Batch: 101988

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 102178

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-102119/1-A
Matrix: Solid
Analysis Batch: 102154

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102119

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/05/25 20:21	02/06/25 05:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/05/25 20:21	02/06/25 05:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/05/25 20:21	02/06/25 05:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	02/05/25 20:21	02/06/25 05:08	1
o-Terphenyl	92		70 - 130	02/05/25 20:21	02/06/25 05:08	1

Lab Sample ID: LCS 880-102119/2-A
Matrix: Solid
Analysis Batch: 102154

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102119

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	898.4		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	908.2		mg/Kg		91	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: LCSD 880-102119/3-A
Matrix: Solid
Analysis Batch: 102154

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102119

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	752.0		mg/Kg		75	70 - 130	18	20
Diesel Range Organics (Over C10-C28)			1000	764.9		mg/Kg		76	70 - 130	17	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	76		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-54131-A-1-E MS
Matrix: Solid
Analysis Batch: 102154

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 102119

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	668.6	F1	mg/Kg		67	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	659.9	F1	mg/Kg		66	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*67*	*S1-*	*70 - 130*
o-Terphenyl	*68*	*S1-*	*70 - 130*

Lab Sample ID: 880-54131-A-1-F MSD
Matrix: Solid
Analysis Batch: 102154

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 102119

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	693.7	F1	mg/Kg		69	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	648.8	F1	mg/Kg		65	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*69*	*S1-*	*70 - 130*
o-Terphenyl	*67*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-102179/1-A
Matrix: Solid
Analysis Batch: 102205

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/06/25 15:52	1

Lab Sample ID: LCS 880-102179/2-A
Matrix: Solid
Analysis Batch: 102205

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	270.0		mg/Kg		108	90 - 110

Lab Sample ID: LCSD 880-102179/3-A
Matrix: Solid
Analysis Batch: 102205

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	270.4		mg/Kg		108	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-7631-A-1-H MS
Matrix: Solid
Analysis Batch: 102205

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.3		251	240.6		mg/Kg		92	90 - 110

Lab Sample ID: 890-7631-A-1-I MSD
Matrix: Solid
Analysis Batch: 102205

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.3		251	241.9		mg/Kg		92	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

GC VOA

Analysis Batch: 101988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Total/NA	Solid	8021B	102178
890-7632-2	SS02	Total/NA	Solid	8021B	102178
890-7632-3	SS03	Total/NA	Solid	8021B	102178
MB 880-102178/5-A	Method Blank	Total/NA	Solid	8021B	102178
LCS 880-102178/1-A	Lab Control Sample	Total/NA	Solid	8021B	102178
LCSD 880-102178/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	102178
880-54141-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	102178
880-54141-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	102178

Analysis Batch: 102138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-102164/5-A	Method Blank	Total/NA	Solid	8021B	102164
LCS 880-102164/1-A	Lab Control Sample	Total/NA	Solid	8021B	102164
LCSD 880-102164/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	102164
880-54102-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	102164
880-54102-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	102164

Prep Batch: 102164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-102164/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-102164/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-102164/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-54102-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-54102-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 102178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Total/NA	Solid	5035	
890-7632-2	SS02	Total/NA	Solid	5035	
890-7632-3	SS03	Total/NA	Solid	5035	
MB 880-102178/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-102178/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-102178/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-54141-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-54141-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 102288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Total/NA	Solid	Total BTEX	
890-7632-2	SS02	Total/NA	Solid	Total BTEX	
890-7632-3	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 102119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Total/NA	Solid	8015NM Prep	
890-7632-2	SS02	Total/NA	Solid	8015NM Prep	
890-7632-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-102119/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-102119/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

GC Semi VOA (Continued)

Prep Batch: 102119 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-102119/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-54131-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-54131-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 102154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Total/NA	Solid	8015B NM	102119
890-7632-2	SS02	Total/NA	Solid	8015B NM	102119
890-7632-3	SS03	Total/NA	Solid	8015B NM	102119
MB 880-102119/1-A	Method Blank	Total/NA	Solid	8015B NM	102119
LCS 880-102119/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	102119
LCSD 880-102119/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	102119
880-54131-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	102119
880-54131-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	102119

Analysis Batch: 102279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Total/NA	Solid	8015 NM	
890-7632-2	SS02	Total/NA	Solid	8015 NM	
890-7632-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 102179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Soluble	Solid	DI Leach	
890-7632-2	SS02	Soluble	Solid	DI Leach	
890-7632-3	SS03	Soluble	Solid	DI Leach	
MB 880-102179/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-102179/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-102179/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-7631-A-1-H MS	Matrix Spike	Soluble	Solid	DI Leach	
890-7631-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 102205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7632-1	SS01	Soluble	Solid	300.0	102179
890-7632-2	SS02	Soluble	Solid	300.0	102179
890-7632-3	SS03	Soluble	Solid	300.0	102179
MB 880-102179/1-A	Method Blank	Soluble	Solid	300.0	102179
LCS 880-102179/2-A	Lab Control Sample	Soluble	Solid	300.0	102179
LCSD 880-102179/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	102179
890-7631-A-1-H MS	Matrix Spike	Soluble	Solid	300.0	102179
890-7631-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	102179

Lab Chronicle

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Client Sample ID: SS01

Date Collected: 02/04/25 14:02
Date Received: 02/05/25 08:39

Lab Sample ID: 890-7632-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	102178	02/06/25 15:31	MNR	EET MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	101988	02/06/25 19:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			102288	02/06/25 19:42	AJ	EET MID
Total/NA	Analysis	8015 NM		1			102279	02/06/25 12:27	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	102119	02/05/25 20:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	102154	02/06/25 12:27	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	102179	02/06/25 11:21	SI	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	102205	02/06/25 20:17	CH	EET MID

Client Sample ID: SS02

Date Collected: 02/04/25 13:58
Date Received: 02/05/25 08:39

Lab Sample ID: 890-7632-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	102178	02/06/25 15:31	MNR	EET MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	101988	02/06/25 20:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			102288	02/06/25 20:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			102279	02/06/25 12:43	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	102119	02/05/25 20:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	102154	02/06/25 12:43	TKC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	102179	02/06/25 11:21	SI	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	102205	02/06/25 20:23	CH	EET MID

Client Sample ID: SS03

Date Collected: 02/04/25 13:52
Date Received: 02/05/25 08:39

Lab Sample ID: 890-7632-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	102178	02/06/25 15:31	MNR	EET MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	101988	02/06/25 20:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			102288	02/06/25 20:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			102279	02/06/25 12:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	102119	02/05/25 20:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	102154	02/06/25 12:59	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	102179	02/06/25 11:21	SI	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	102205	02/06/25 20:29	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: NEDU164

Job ID: 890-7632-1
SDG: 07A1988168

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-7632-1	SS01	Solid	02/04/25 14:02	02/05/25 08:39	0.5
890-7632-2	SS02	Solid	02/04/25 13:58	02/05/25 08:39	0.5
890-7632-3	SS03	Solid	02/04/25 13:52	02/05/25 08:39	1.5

eurofins | Environment Testing

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199
Little Rock, AR (501) 224-5060

890-7632 Chain of Custody

Project Manager:	Devin Henemann	Bill to: (if different)	Billy Crum
Company Name:	Ensolum	Company Name:	Hilcorp
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	505-798-2608	Email:	dhenemann@ensolum.com fsmith@ensolum.com

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

Project Name:	NEDU 164	Turn Around	☐ Routine ☐ Rush
Project Number:	07A1988168	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Even Rea		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR0007
~~Cooler Custody Seals:~~	~~Yes No (N/A)~~	Correction Factor:	-0.2
~~Sample Custody Seals:~~	~~Yes No (N/A)~~	Temperature Reading:	6.2
Total Containers:		Corrected Temperature:	6.0

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides (EPA 300)	TPH 8015	BTEX 8021
SSC1	Soil	2/4/25	1402	0.5'	G	1		X	X	X
SSC2	Soil	2/4/25	1358	0.5'	G	1		↓	↓	↓
SSC3	Soil	2/4/25	1352	1.5'	G	1		↓	↓	↓

ANALYSIS REQUEST

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3
H_2S0_4: H_2 — NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
~~Zn Acetate+NaOH: Zn~~
NaOH+Ascorbic Acid: SAPC

Sample Comments

~~Total 200.7 / 6010 200.8 / 6020:~~ 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed — **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U — Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7632-1
SDG Number: 07A1988168

Login Number: 7632
List Number: 1
Creator: Lopez, Abraham

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: 890-7632-1
SDG Number: 07A1988168

Login Number: 7632
List Number: 2
Creator: Laing, Edmundo

List Source: Eurofins Midland
List Creation: 02/05/25 08:55 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devin Hencmann
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 3/12/2025 3:24:12 PM

JOB DESCRIPTION

NEDU 164

JOB NUMBER

890-7791-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

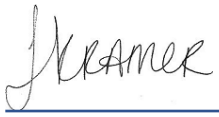
Eurofins Carlsbad

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



Generated
3/12/2025 3:24:12 PM

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

Client: Ensolum
Project/Site: NEDU 164

Laboratory Job ID: 890-7791-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-7791-1
Project/Site: NEDU 164

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: NEDU 164

Job ID: 890-7791-1

Job ID: 890-7791-1 Eurofins Carlsbad

Job Narrative
890-7791-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/10/2025 9:18 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS05 (890-7791-1) and FS06 (890-7791-2).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-104941 and analytical batch 880-104944 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-104954/2-A) and (LCSD 880-104954/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-104954 and analytical batch 880-105003 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-104982 and analytical batch 880-104996 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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: NEDU 164

Job ID: 890-7791-1

Client Sample ID: FS05

Lab Sample ID: 890-7791-1
Matrix: Solid
Date Collected: 03/07/25 10:50
Date Received: 03/10/25 09:18
Sample Depth: 4'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/11/25 12:48	03/11/25 17:22	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/11/25 12:48	03/11/25 17:22	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/11/25 12:48	03/11/25 17:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/11/25 12:48	03/11/25 17:22	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/11/25 12:48	03/11/25 17:22	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/11/25 12:48	03/11/25 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/11/25 12:48*	*03/11/25 17:22*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/11/25 12:48*	*03/11/25 17:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/11/25 17:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/11/25 13:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/10/25 16:44	03/11/25 13:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/10/25 16:44	03/11/25 13:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/10/25 16:44	03/11/25 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*03/10/25 16:44*	*03/11/25 13:32*	*1*
o-Terphenyl	*95*		*70 - 130*	*03/10/25 16:44*	*03/11/25 13:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.1	U	10.1		mg/Kg			03/11/25 13:04	1

Client Sample ID: FS06

Lab Sample ID: 890-7791-2
Matrix: Solid
Date Collected: 03/07/25 09:02
Date Received: 03/10/25 09:18
Sample Depth: 4'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/11/25 12:48	03/11/25 17:43	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/11/25 12:48	03/11/25 17:43	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/11/25 12:48	03/11/25 17:43	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		03/11/25 12:48	03/11/25 17:43	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/11/25 12:48	03/11/25 17:43	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		03/11/25 12:48	03/11/25 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/11/25 12:48*	*03/11/25 17:43*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Client Sample ID: FS06

Date Collected: 03/07/25 09:02
Date Received: 03/10/25 09:18
Sample Depth: 4'

Lab Sample ID: 890-7791-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/11/25 12:48*	*03/11/25 17:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			03/11/25 17:43	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/11/25 13:48	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/10/25 16:44	03/11/25 13:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/10/25 16:44	03/11/25 13:48	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/10/25 16:44	03/11/25 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*03/10/25 16:44*	*03/11/25 13:48*	*1*
o-Terphenyl	*93*		*70 - 130*	*03/10/25 16:44*	*03/11/25 13:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**95.8**		9.96		mg/Kg			03/11/25 13:09	1

Surrogate Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-7791-1	FS05	99	98										
890-7791-2	FS06	99	97										
890-7793-A-13-A MS	Matrix Spike	144 S1+	123										
890-7793-A-13-B MSD	Matrix Spike Duplicate	93	132 S1+										
LCS 880-104941/1-A	Lab Control Sample	99	108										
LCSD 880-104941/2-A	Lab Control Sample Dup	110	101										
MB 880-104941/5-A	Method Blank	92	89										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-7791-1	FS05	109	95										
890-7791-2	FS06	106	93										
890-7793-A-25-E MS	Matrix Spike	110	107										
890-7793-A-25-F MSD	Matrix Spike Duplicate	111	107										
LCS 880-104954/2-A	Lab Control Sample	136 S1+	136 S1+										
LCSD 880-104954/3-A	Lab Control Sample Dup	135 S1+	137 S1+										
MB 880-104954/1-A	Method Blank	145 S1+	136 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-104941/5-A
Matrix: Solid
Analysis Batch: 104944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 104941

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/25 16:03	03/11/25 10:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/25 16:03	03/11/25 10:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/10/25 16:03	03/11/25 10:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/10/25 16:03	03/11/25 10:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/25 16:03	03/11/25 10:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/10/25 16:03	03/11/25 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*03/10/25 16:03*	*03/11/25 10:39*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*03/10/25 16:03*	*03/11/25 10:39*	*1*

Lab Sample ID: LCS 880-104941/1-A
Matrix: Solid
Analysis Batch: 104944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104941

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1172		mg/Kg		117	70 - 130		
Toluene			0.100	0.1219		mg/Kg		122	70 - 130		
Ethylbenzene			0.100	0.1193		mg/Kg		119	70 - 130		
m-Xylene & p-Xylene			0.200	0.2144		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1132		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-104941/2-A
Matrix: Solid
Analysis Batch: 104944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 104941

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1119		mg/Kg		112	70 - 130	5	35
Toluene			0.100	0.1254		mg/Kg		125	70 - 130	3	35
Ethylbenzene			0.100	0.1245		mg/Kg		125	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2246		mg/Kg		112	70 - 130	5	35
o-Xylene			0.100	0.1193		mg/Kg		119	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-7793-A-13-A MS
Matrix: Solid
Analysis Batch: 104944

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 104941

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1 F2	0.100	0.08987		mg/Kg		90	70 - 130		
Toluene	<0.00200	U	0.100	0.08341		mg/Kg		83	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-7793-A-13-A MS
Matrix: Solid
Analysis Batch: 104944

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 104941

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1014		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1 F2	0.200	0.2457		mg/Kg		123	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.07628		mg/Kg		76	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: 890-7793-A-13-B MSD
Matrix: Solid
Analysis Batch: 104944

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 104941

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.100	0.004189	F1 F2	mg/Kg		4	70 - 130	182	35
Toluene	<0.00200	U	0.100	0.07259		mg/Kg		73	70 - 130	14	35
Ethylbenzene	<0.00200	U	0.100	0.07725		mg/Kg		77	70 - 130	27	35
m-Xylene & p-Xylene	<0.00399	U F1 F2	0.200	0.1359	F1 F2	mg/Kg		68	70 - 130	58	35
o-Xylene	<0.00200	U F1	0.100	0.06111	F1	mg/Kg		61	70 - 130	22	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*132*	*S1+*	*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-104954/1-A
Matrix: Solid
Analysis Batch: 105003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 104954

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/10/25 16:39	03/11/25 09:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/10/25 16:39	03/11/25 09:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/10/25 16:39	03/11/25 09:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*03/10/25 16:39*	*03/11/25 09:14*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*03/10/25 16:39*	*03/11/25 09:14*	*1*

Lab Sample ID: LCS 880-104954/2-A
Matrix: Solid
Analysis Batch: 105003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104954

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1294		mg/Kg		129	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1283		mg/Kg		128	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-104954/2-A
Matrix: Solid
Analysis Batch: 105003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104954

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	136	S1+	70 - 130
o-Terphenyl	136	S1+	70 - 130

Lab Sample ID: LCSD 880-104954/3-A
Matrix: Solid
Analysis Batch: 105003

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 104954

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1158		mg/Kg		116	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	1222		mg/Kg		122	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	135	S1+	70 - 130
o-Terphenyl	137	S1+	70 - 130

Lab Sample ID: 890-7793-A-25-E MS
Matrix: Solid
Analysis Batch: 105003

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 104954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	1142		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	999	1128		mg/Kg		109	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: 890-7793-A-25-F MSD
Matrix: Solid
Analysis Batch: 105003

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 104954

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	1142		mg/Kg		114	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	1111		mg/Kg		107	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	107		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-104982/1-A
Matrix: Solid
Analysis Batch: 104996

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			03/11/25 09:47	1

Lab Sample ID: LCS 880-104982/2-A
Matrix: Solid
Analysis Batch: 104996

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.4		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-104982/3-A
Matrix: Solid
Analysis Batch: 104996

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	251.9		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-7793-A-27-D MS
Matrix: Solid
Analysis Batch: 104996

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	50.9	F1	248	329.5	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 890-7793-A-27-E MSD
Matrix: Solid
Analysis Batch: 104996

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.9	F1	248	325.8	F1	mg/Kg		111	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

GC VOA

Prep Batch: 104941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Total/NA	Solid	5035	
890-7791-2	FS06	Total/NA	Solid	5035	
MB 880-104941/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-104941/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-104941/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-7793-A-13-A MS	Matrix Spike	Total/NA	Solid	5035	
890-7793-A-13-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 104944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Total/NA	Solid	8021B	104941
890-7791-2	FS06	Total/NA	Solid	8021B	104941
MB 880-104941/5-A	Method Blank	Total/NA	Solid	8021B	104941
LCS 880-104941/1-A	Lab Control Sample	Total/NA	Solid	8021B	104941
LCSD 880-104941/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	104941
890-7793-A-13-A MS	Matrix Spike	Total/NA	Solid	8021B	104941
890-7793-A-13-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	104941

Analysis Batch: 105142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Total/NA	Solid	Total BTEX	
890-7791-2	FS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 104954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Total/NA	Solid	8015NM Prep	
890-7791-2	FS06	Total/NA	Solid	8015NM Prep	
MB 880-104954/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-104954/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-104954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-7793-A-25-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-7793-A-25-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 105003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Total/NA	Solid	8015B NM	104954
890-7791-2	FS06	Total/NA	Solid	8015B NM	104954
MB 880-104954/1-A	Method Blank	Total/NA	Solid	8015B NM	104954
LCS 880-104954/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	104954
LCSD 880-104954/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	104954
890-7793-A-25-E MS	Matrix Spike	Total/NA	Solid	8015B NM	104954
890-7793-A-25-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	104954

Analysis Batch: 105060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Total/NA	Solid	8015 NM	
890-7791-2	FS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

HPLC/IC

Leach Batch: 104982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Soluble	Solid	DI Leach	
890-7791-2	FS06	Soluble	Solid	DI Leach	
MB 880-104982/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-104982/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-104982/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-7793-A-27-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-7793-A-27-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 104996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7791-1	FS05	Soluble	Solid	300.0	104982
890-7791-2	FS06	Soluble	Solid	300.0	104982
MB 880-104982/1-A	Method Blank	Soluble	Solid	300.0	104982
LCS 880-104982/2-A	Lab Control Sample	Soluble	Solid	300.0	104982
LCSD 880-104982/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	104982
890-7793-A-27-D MS	Matrix Spike	Soluble	Solid	300.0	104982
890-7793-A-27-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	104982

Lab Chronicle

Client: Ensolum
Job ID: 890-7791-1
Project/Site: NEDU 164

Client Sample ID: FS05
Lab Sample ID: 890-7791-1
Date Collected: 03/07/25 10:50
Matrix: Solid
Date Received: 03/10/25 09:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	104941	03/11/25 12:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	104944	03/11/25 17:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105142	03/11/25 17:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105060	03/11/25 13:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	104954	03/10/25 16:44	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105003	03/11/25 13:32	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	104982	03/11/25 08:01	SA	EET MID
Soluble	Analysis	300.0		1			104996	03/11/25 13:04	CH	EET MID

Client Sample ID: FS06
Lab Sample ID: 890-7791-2
Date Collected: 03/07/25 09:02
Matrix: Solid
Date Received: 03/10/25 09:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	104941	03/11/25 12:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	104944	03/11/25 17:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105142	03/11/25 17:43	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105060	03/11/25 13:48	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	104954	03/10/25 16:44	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105003	03/11/25 13:48	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	104982	03/11/25 08:01	SA	EET MID
Soluble	Analysis	300.0		1			104996	03/11/25 13:09	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7791-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Job ID: 890-7791-1
Project/Site: NEDU 164

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-7791-1	FS05	Solid	03/07/25 10:50	03/10/25 09:18	4'
890-7791-2	FS06	Solid	03/07/25 09:02	03/10/25 09:18	4'

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	Devin Hencmann	Bill to: (if different)	Billy Ginn
Company Name:	Ensolum, LLC	Company Name:	Hilcorp
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	805-798-2608	Email:	dhencmann@ensolum.com; fsmith@ensolum.com

Work Order Comments

Program: UST/PST ☐ **PRP** ☐ **Brownfields** ☐ **RRC** ☐ **Superfund** ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	NEDU 164	**Turn Around**	
Project Number:	07A1988168	☑ Routine ☐ Rush	
Project Location:		Due Date:	
~~Sampler's Name:~~	~~Alex Ferrell~~	TAT starts the day received by the lab, if received by 4:30pm	
~~PO #:~~			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	Tnman
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.2
~~Total Containers:~~		Corrected Temperature:	1.0

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool ~~MeOH: Me~~
HCL: HC ~~HNO_3: HN~~
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
~~$Na_2S_2O_3$: $NaSO_3$~~
~~Zn Acetate+NaOH: Zn~~
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	TPH	BTEX	Parameters	Sample Comments
FS05	Soil	3/7/2025	1050	4'	Comp	1		X	X	X		
FS06	Soil	3/7/2025	0902	4'	Comp	1		X	X	X		

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7791-1
SDG Number:

Login Number: 7791
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7791-1
SDG Number:

Login Number: 7791
List Number: 2
Creator: Vasquez, Julisa

List Source: Eurofins Midland
List Creation: 03/11/25 07:26 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devin Hencmann
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 3/20/2025 11:48:29 AM

JOB DESCRIPTION

NEDU 164
07A1988168

JOB NUMBER

890-7811-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

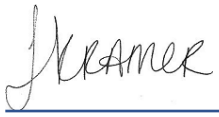
Eurofins Carlsbad

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



Generated
3/20/2025 11:48:29 AM

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

Client: Ensolum
Project/Site: NEDU 164

Laboratory Job ID: 890-7811-1
SDG: 07A1988168

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: NEDU 164

Job ID: 890-7811-1

Job ID: 890-7811-1 Eurofins Carlsbad

Job Narrative
890-7811-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/14/2025 8:37 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS 01 (890-7811-1), FS 02 (890-7811-2), FS 03 (890-7811-3), FS 04 (890-7811-4), FS 07 (890-7811-5), FS 08 (890-7811-6), FS 09 (890-7811-7) and SW 01 (890-7811-8).

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

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS 01 (890-7811-1), FS 02 (890-7811-2), FS 03 (890-7811-3), FS 04 (890-7811-4), FS 07 (890-7811-5), FS 08 (890-7811-6), FS 09 (890-7811-7) and SW 01 (890-7811-8). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-7811-A-1-F MSD). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-105399 and analytical batch 880-105421 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 01
Date Collected: 03/13/25 13:17
Date Received: 03/14/25 08:37
Sample Depth: 5'

Lab Sample ID: 890-7811-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 12:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 12:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 12:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/17/25 07:47	03/17/25 12:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 12:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/17/25 07:47	03/17/25 12:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*03/17/25 07:47*	*03/17/25 12:01*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/17/25 07:47*	*03/17/25 12:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/17/25 12:01	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			03/17/25 12:38	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F2	49.7		mg/Kg		03/17/25 08:14	03/17/25 12:38	1
Diesel Range Organics (Over C10-C28)	<49.7	U F2 F1	49.7		mg/Kg		03/17/25 08:14	03/17/25 12:38	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*156*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 12:38*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 12:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1090**		10.1		mg/Kg			03/18/25 01:30	1

Client Sample ID: FS 02
Date Collected: 03/13/25 13:14
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/17/25 07:47	03/17/25 16:27	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/17/25 07:47	03/17/25 16:27	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/17/25 07:47	03/17/25 16:27	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		03/17/25 07:47	03/17/25 16:27	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/17/25 07:47	03/17/25 16:27	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		03/17/25 07:47	03/17/25 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*03/17/25 07:47*	*03/17/25 16:27*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 02
Date Collected: 03/13/25 13:14
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*03/17/25 07:47*	*03/17/25 16:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			03/17/25 16:27	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/17/25 14:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/17/25 08:14	03/17/25 14:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/17/25 08:14	03/17/25 14:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/17/25 08:14	03/17/25 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 14:32*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 14:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2220**		49.7	mg/Kg			03/18/25 12:42	5

Client Sample ID: FS 03
Date Collected: 03/13/25 13:10
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-3
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		03/17/25 07:47	03/17/25 16:48	1
Toluene	<0.00202	U	0.00202	mg/Kg		03/17/25 07:47	03/17/25 16:48	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		03/17/25 07:47	03/17/25 16:48	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		03/17/25 07:47	03/17/25 16:48	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		03/17/25 07:47	03/17/25 16:48	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		03/17/25 07:47	03/17/25 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/17/25 07:47*	*03/17/25 16:48*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*03/17/25 07:47*	*03/17/25 16:48*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			03/17/25 16:48	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			03/17/25 14:48	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 03

Date Collected: 03/13/25 13:10
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/17/25 08:14	03/17/25 14:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/17/25 08:14	03/17/25 14:48	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/17/25 08:14	03/17/25 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 14:48*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 14:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2170**		49.6		mg/Kg			03/18/25 01:59	5

Client Sample ID: FS 04

Date Collected: 03/13/25 13:07
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/17/25 07:47	03/17/25 17:08	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/17/25 07:47	03/17/25 17:08	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/17/25 07:47	03/17/25 17:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/17/25 07:47	03/17/25 17:08	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/17/25 07:47	03/17/25 17:08	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/17/25 07:47	03/17/25 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*03/17/25 07:47*	*03/17/25 17:08*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/17/25 07:47*	*03/17/25 17:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/17/25 17:08	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			03/17/25 15:04	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 15:04	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 15:04	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:04*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:04*	*1*

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 04
Date Collected: 03/13/25 13:07
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2040		50.1		mg/Kg			03/18/25 02:06	5

Client Sample ID: FS 07
Date Collected: 03/13/25 13:02
Date Received: 03/14/25 08:37
Sample Depth: 6'

Lab Sample ID: 890-7811-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 17:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 17:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 17:29	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/17/25 07:47	03/17/25 17:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 17:29	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/17/25 07:47	03/17/25 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*03/17/25 07:47*	*03/17/25 17:29*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/17/25 07:47*	*03/17/25 17:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/17/25 17:29	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			03/17/25 15:20	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 15:20	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 15:20	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		03/17/25 08:14	03/17/25 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:20*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	664		9.98		mg/Kg			03/18/25 02:14	1

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 08

Date Collected: 03/13/25 12:57
Date Received: 03/14/25 08:37
Sample Depth: 8'

Lab Sample ID: 890-7811-6
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/17/25 07:47	03/17/25 17:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/17/25 07:47	03/17/25 17:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/17/25 07:47	03/17/25 17:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/17/25 07:47	03/17/25 17:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/17/25 07:47	03/17/25 17:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/17/25 07:47	03/17/25 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*03/17/25 07:47*	*03/17/25 17:49*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/17/25 07:47*	*03/17/25 17:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/17/25 17:49	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			03/17/25 15:35	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		03/17/25 08:14	03/17/25 15:35	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		03/17/25 08:14	03/17/25 15:35	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		03/17/25 08:14	03/17/25 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:35*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**296**		10.0		mg/Kg			03/18/25 02:21	1

Client Sample ID: FS 09

Date Collected: 03/13/25 12:52
Date Received: 03/14/25 08:37
Sample Depth: 9'

Lab Sample ID: 890-7811-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/18/25 08:37	03/18/25 14:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/18/25 08:37	03/18/25 14:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/18/25 08:37	03/18/25 14:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/18/25 08:37	03/18/25 14:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/18/25 08:37	03/18/25 14:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/18/25 08:37	03/18/25 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*03/18/25 08:37*	*03/18/25 14:12*	*1*

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 09

Lab Sample ID: 890-7811-7
Matrix: Solid
Date Collected: 03/13/25 12:52
Date Received: 03/14/25 08:37
Sample Depth: 9'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/18/25 08:37*	*03/18/25 14:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/18/25 14:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			03/17/25 15:51	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		03/17/25 08:14	03/17/25 15:51	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		03/17/25 08:14	03/17/25 15:51	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		03/17/25 08:14	03/17/25 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:51*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 15:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**801**		10.0	mg/Kg			03/18/25 02:28	1

Client Sample ID: SW 01

Lab Sample ID: 890-7811-8
Matrix: Solid
Date Collected: 03/13/25 14:05
Date Received: 03/14/25 08:37
Sample Depth: 0-9'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/18/25 08:47	03/18/25 14:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/18/25 08:47	03/18/25 14:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/18/25 08:47	03/18/25 14:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		03/18/25 08:47	03/18/25 14:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/18/25 08:47	03/18/25 14:14	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/18/25 08:47	03/18/25 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/18/25 08:47*	*03/18/25 14:14*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*03/18/25 08:47*	*03/18/25 14:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			03/18/25 14:14	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/17/25 16:06	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: SW 01

Date Collected: 03/13/25 14:05
Date Received: 03/14/25 08:37
Sample Depth: 0-9'

Lab Sample ID: 890-7811-8

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/17/25 08:14	03/17/25 16:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/17/25 08:14	03/17/25 16:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/17/25 08:14	03/17/25 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 16:06*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*03/17/25 08:14*	*03/17/25 16:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**206**		10.0		mg/Kg			03/18/25 02:36	1

Surrogate Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-7811-1	FS 01	119	95
890-7811-1 MS	FS 01	105	102
890-7811-1 MSD	FS 01	103	99
890-7811-2	FS 02	108	89
890-7811-3	FS 03	104	90
890-7811-4	FS 04	108	92
890-7811-5	FS 07	105	92
890-7811-6	FS 08	113	93
890-7811-7	FS 09	97	86
890-7811-8	SW 01	99	87
890-7813-A-8-C MS	Matrix Spike	96	93
890-7813-A-8-D MSD	Matrix Spike Duplicate	99	89
890-7813-A-15-C MS	Matrix Spike	98	89
890-7813-A-15-D MSD	Matrix Spike Duplicate	99	88
LCS 880-105358/1-A	Lab Control Sample	101	101
LCS 880-105456/1-A	Lab Control Sample	96	92
LCS 880-105457/1-A	Lab Control Sample	98	91
LCSD 880-105358/2-A	Lab Control Sample Dup	99	100
LCSD 880-105456/2-A	Lab Control Sample Dup	97	94
LCSD 880-105457/2-A	Lab Control Sample Dup	97	90
MB 880-105358/5-A	Method Blank	109	90
MB 880-105456/5-A	Method Blank	90	83
MB 880-105457/5-A	Method Blank	102	81

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-7811-1	FS 01	156 S1+	154 S1+
890-7811-1 MS	FS 01	117	123
890-7811-1 MSD	FS 01	141 S1+	124
890-7811-2	FS 02	140 S1+	136 S1+
890-7811-3	FS 03	143 S1+	136 S1+
890-7811-4	FS 04	140 S1+	133 S1+
890-7811-5	FS 07	145 S1+	138 S1+
890-7811-6	FS 08	150 S1+	143 S1+
890-7811-7	FS 09	148 S1+	141 S1+
890-7811-8	SW 01	147 S1+	135 S1+
LCS 880-105359/2-A	Lab Control Sample	96	104
LCSD 880-105359/3-A	Lab Control Sample Dup	112	104
MB 880-105359/1-A	Method Blank	104	108

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-105358/5-A
Matrix: Solid
Analysis Batch: 105360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105358

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 11:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 11:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 11:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/17/25 07:47	03/17/25 11:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/17/25 07:47	03/17/25 11:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/17/25 07:47	03/17/25 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/17/25 07:47*	*03/17/25 11:39*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*03/17/25 07:47*	*03/17/25 11:39*	*1*

Lab Sample ID: LCS 880-105358/1-A
Matrix: Solid
Analysis Batch: 105360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105358

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09566		mg/Kg		96	70 - 130		
Toluene			0.100	0.09858		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09257		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1862		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.09375		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-105358/2-A
Matrix: Solid
Analysis Batch: 105360

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 105358

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09438		mg/Kg		94	70 - 130	1	35
Toluene			0.100	0.09616		mg/Kg		96	70 - 130	2	35
Ethylbenzene			0.100	0.08933		mg/Kg		89	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1775		mg/Kg		89	70 - 130	5	35
o-Xylene			0.100	0.09006		mg/Kg		90	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-7811-1 MS
Matrix: Solid
Analysis Batch: 105360

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 105358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.08818		mg/Kg		88	70 - 130		
Toluene	<0.00200	U	0.100	0.09049		mg/Kg		90	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-7811-1 MS
Matrix: Solid
Analysis Batch: 105360

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 105358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08412		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1680		mg/Kg		84	70 - 130
o-Xylene	<0.00200	U	0.100	0.08561		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-7811-1 MSD
Matrix: Solid
Analysis Batch: 105360

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 105358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.08842		mg/Kg		88	70 - 130	0	35
Toluene	<0.00200	U	0.100	0.09007		mg/Kg		90	70 - 130	0	35
Ethylbenzene	<0.00200	U	0.100	0.08384		mg/Kg		84	70 - 130	0	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1674		mg/Kg		84	70 - 130	0	35
o-Xylene	<0.00200	U	0.100	0.08626		mg/Kg		86	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 880-105456/5-A
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105456

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:37	03/18/25 11:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:37	03/18/25 11:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:37	03/18/25 11:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/18/25 08:37	03/18/25 11:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:37	03/18/25 11:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/18/25 08:37	03/18/25 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*03/18/25 08:37*	*03/18/25 11:28*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*03/18/25 08:37*	*03/18/25 11:28*	*1*

Lab Sample ID: LCS 880-105456/1-A
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07528		mg/Kg		75	70 - 130
Toluene	0.100	0.07580		mg/Kg		76	70 - 130
Ethylbenzene	0.100	0.07591		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	0.200	0.1614		mg/Kg		81	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-105456/1-A
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105456

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.08159		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-105456/2-A
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 105456

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08254		mg/Kg		83	70 - 130	9	35
Toluene			0.100	0.08095		mg/Kg		81	70 - 130	7	35
Ethylbenzene			0.100	0.08146		mg/Kg		81	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1723		mg/Kg		86	70 - 130	7	35
o-Xylene			0.100	0.08728		mg/Kg		87	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-7813-A-8-C MS
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 105456

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.07561		mg/Kg		76	70 - 130		
Toluene	<0.00200	U	0.100	0.07417		mg/Kg		74	70 - 130		
Ethylbenzene	<0.00200	U	0.100	0.07467		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1589		mg/Kg		79	70 - 130		
o-Xylene	<0.00200	U	0.100	0.08086		mg/Kg		81	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-7813-A-8-D MSD
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 105456

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07145		mg/Kg		71	70 - 130	6	35
Toluene	<0.00200	U	0.100	0.07142		mg/Kg		71	70 - 130	4	35
Ethylbenzene	<0.00200	U	0.100	0.07116		mg/Kg		71	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1521		mg/Kg		76	70 - 130	4	35
o-Xylene	<0.00200	U	0.100	0.07712		mg/Kg		77	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-7813-A-8-D MSD
Matrix: Solid
Analysis Batch: 105454

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 105456

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: MB 880-105457/5-A
Matrix: Solid
Analysis Batch: 105450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105457

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:47	03/18/25 11:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:47	03/18/25 11:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:47	03/18/25 11:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/18/25 08:47	03/18/25 11:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/18/25 08:47	03/18/25 11:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/18/25 08:47	03/18/25 11:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	03/18/25 08:47	03/18/25 11:29	1
1,4-Difluorobenzene (Surr)	81		70 - 130	03/18/25 08:47	03/18/25 11:29	1

Lab Sample ID: LCS 880-105457/1-A
Matrix: Solid
Analysis Batch: 105450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105457

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08253		mg/Kg		83	70 - 130		
Toluene			0.100	0.07430		mg/Kg		74	70 - 130		
Ethylbenzene			0.100	0.08006		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1641		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.08398		mg/Kg		84	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-105457/2-A
Matrix: Solid
Analysis Batch: 105450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 105457

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08447		mg/Kg		84	70 - 130	2	35
Toluene			0.100	0.07580		mg/Kg		76	70 - 130	2	35
Ethylbenzene			0.100	0.08125		mg/Kg		81	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1668		mg/Kg		83	70 - 130	2	35
o-Xylene			0.100	0.08578		mg/Kg		86	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-105457/2-A
Matrix: Solid
Analysis Batch: 105450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 105457

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: 890-7813-A-15-C MS
Matrix: Solid
Analysis Batch: 105450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 105457

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.100	0.07488		mg/Kg		75	70 - 130
Toluene	<0.00201	U F1	0.100	0.06642	F1	mg/Kg		66	70 - 130
Ethylbenzene	<0.00201	U F1	0.100	0.06983		mg/Kg		70	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1424		mg/Kg		71	70 - 130
o-Xylene	<0.00201	U	0.100	0.07302		mg/Kg		73	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 890-7813-A-15-D MSD
Matrix: Solid
Analysis Batch: 105450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 105457

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.07494		mg/Kg		75	70 - 130	0	35
Toluene	<0.00201	U F1	0.100	0.06549	F1	mg/Kg		65	70 - 130	1	35
Ethylbenzene	<0.00201	U F1	0.100	0.06765	F1	mg/Kg		68	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1378	F1	mg/Kg		69	70 - 130	3	35
o-Xylene	<0.00201	U	0.100	0.07088		mg/Kg		71	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-105359/1-A
Matrix: Solid
Analysis Batch: 105392

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105359

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/17/25 08:14	03/17/25 10:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/17/25 08:14	03/17/25 10:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/17/25 08:14	03/17/25 10:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	03/17/25 08:14	03/17/25 10:21	1
o-Terphenyl	108		70 - 130	03/17/25 08:14	03/17/25 10:21	1

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-105359/2-A
Matrix: Solid
Analysis Batch: 105392

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105359

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	853.8		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	901.7		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: LCSD 880-105359/3-A
Matrix: Solid
Analysis Batch: 105392

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 105359

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	838.0		mg/Kg		84	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	839.3		mg/Kg		84	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 890-7811-1 MS
Matrix: Solid
Analysis Batch: 105392

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 105359

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F2	9.92	8.705		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.7	U F2 F1	9.92	9.575	F1	mg/Kg		-68	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: 890-7811-1 MSD
Matrix: Solid
Analysis Batch: 105392

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 105359

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F2	997	881.7	F2	mg/Kg		88	70 - 130	196	20
Diesel Range Organics (Over C10-C28)	<49.7	U F2 F1	997	907.6	F2	mg/Kg		89	70 - 130	196	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*141*	*S1+*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-7811-1 MSD
Matrix: Solid
Analysis Batch: 105392

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 105359

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	124		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-105399/1-A
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			03/17/25 22:55	1

Lab Sample ID: LCS 880-105399/2-A
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.5		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-105399/3-A
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.0		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 880-55659-A-1-D MS
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	80.1	F1	248	384.5	F1	mg/Kg		123	90 - 110		

Lab Sample ID: 880-55659-A-1-E MSD
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	80.1	F1	248	383.2	F1	mg/Kg		122	90 - 110	0	20

Lab Sample ID: 880-55691-A-8-B MS
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2730	F1	1250	4240	F1	mg/Kg		121	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-55691-A-8-C MSD
Matrix: Solid
Analysis Batch: 105421

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2730	F1	1250	4193	F1	mg/Kg		117	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

GC VOA

Prep Batch: 105358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Total/NA	Solid	5035	
890-7811-2	FS 02	Total/NA	Solid	5035	
890-7811-3	FS 03	Total/NA	Solid	5035	
890-7811-4	FS 04	Total/NA	Solid	5035	
890-7811-5	FS 07	Total/NA	Solid	5035	
890-7811-6	FS 08	Total/NA	Solid	5035	
MB 880-105358/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-105358/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-105358/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-7811-1 MS	FS 01	Total/NA	Solid	5035	
890-7811-1 MSD	FS 01	Total/NA	Solid	5035	

Analysis Batch: 105360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Total/NA	Solid	8021B	105358
890-7811-2	FS 02	Total/NA	Solid	8021B	105358
890-7811-3	FS 03	Total/NA	Solid	8021B	105358
890-7811-4	FS 04	Total/NA	Solid	8021B	105358
890-7811-5	FS 07	Total/NA	Solid	8021B	105358
890-7811-6	FS 08	Total/NA	Solid	8021B	105358
MB 880-105358/5-A	Method Blank	Total/NA	Solid	8021B	105358
LCS 880-105358/1-A	Lab Control Sample	Total/NA	Solid	8021B	105358
LCSD 880-105358/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	105358
890-7811-1 MS	FS 01	Total/NA	Solid	8021B	105358
890-7811-1 MSD	FS 01	Total/NA	Solid	8021B	105358

Analysis Batch: 105426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Total/NA	Solid	Total BTEX	
890-7811-2	FS 02	Total/NA	Solid	Total BTEX	
890-7811-3	FS 03	Total/NA	Solid	Total BTEX	
890-7811-4	FS 04	Total/NA	Solid	Total BTEX	
890-7811-5	FS 07	Total/NA	Solid	Total BTEX	
890-7811-6	FS 08	Total/NA	Solid	Total BTEX	
890-7811-7	FS 09	Total/NA	Solid	Total BTEX	
890-7811-8	SW 01	Total/NA	Solid	Total BTEX	

Analysis Batch: 105450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-8	SW 01	Total/NA	Solid	8021B	105457
MB 880-105457/5-A	Method Blank	Total/NA	Solid	8021B	105457
LCS 880-105457/1-A	Lab Control Sample	Total/NA	Solid	8021B	105457
LCSD 880-105457/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	105457
890-7813-A-15-C MS	Matrix Spike	Total/NA	Solid	8021B	105457
890-7813-A-15-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	105457

Analysis Batch: 105454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-7	FS 09	Total/NA	Solid	8021B	105456
MB 880-105456/5-A	Method Blank	Total/NA	Solid	8021B	105456
LCS 880-105456/1-A	Lab Control Sample	Total/NA	Solid	8021B	105456

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

GC VOA (Continued)

Analysis Batch: 105454 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-105456/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	105456
890-7813-A-8-C MS	Matrix Spike	Total/NA	Solid	8021B	105456
890-7813-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	105456

Prep Batch: 105456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-7	FS 09	Total/NA	Solid	5035	
MB 880-105456/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-105456/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-105456/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-7813-A-8-C MS	Matrix Spike	Total/NA	Solid	5035	
890-7813-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 105457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-8	SW 01	Total/NA	Solid	5035	
MB 880-105457/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-105457/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-105457/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-7813-A-15-C MS	Matrix Spike	Total/NA	Solid	5035	
890-7813-A-15-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 105359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Total/NA	Solid	8015NM Prep	
890-7811-2	FS 02	Total/NA	Solid	8015NM Prep	
890-7811-3	FS 03	Total/NA	Solid	8015NM Prep	
890-7811-4	FS 04	Total/NA	Solid	8015NM Prep	
890-7811-5	FS 07	Total/NA	Solid	8015NM Prep	
890-7811-6	FS 08	Total/NA	Solid	8015NM Prep	
890-7811-7	FS 09	Total/NA	Solid	8015NM Prep	
890-7811-8	SW 01	Total/NA	Solid	8015NM Prep	
MB 880-105359/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-105359/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-105359/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-7811-1 MS	FS 01	Total/NA	Solid	8015NM Prep	
890-7811-1 MSD	FS 01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 105392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Total/NA	Solid	8015B NM	105359
890-7811-2	FS 02	Total/NA	Solid	8015B NM	105359
890-7811-3	FS 03	Total/NA	Solid	8015B NM	105359
890-7811-4	FS 04	Total/NA	Solid	8015B NM	105359
890-7811-5	FS 07	Total/NA	Solid	8015B NM	105359
890-7811-6	FS 08	Total/NA	Solid	8015B NM	105359
890-7811-7	FS 09	Total/NA	Solid	8015B NM	105359
890-7811-8	SW 01	Total/NA	Solid	8015B NM	105359
MB 880-105359/1-A	Method Blank	Total/NA	Solid	8015B NM	105359

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

GC Semi VOA (Continued)

Analysis Batch: 105392 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-105359/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	105359
LCSD 880-105359/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	105359
890-7811-1 MS	FS 01	Total/NA	Solid	8015B NM	105359
890-7811-1 MSD	FS 01	Total/NA	Solid	8015B NM	105359

Analysis Batch: 105511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Total/NA	Solid	8015 NM	
890-7811-2	FS 02	Total/NA	Solid	8015 NM	
890-7811-3	FS 03	Total/NA	Solid	8015 NM	
890-7811-4	FS 04	Total/NA	Solid	8015 NM	
890-7811-5	FS 07	Total/NA	Solid	8015 NM	
890-7811-6	FS 08	Total/NA	Solid	8015 NM	
890-7811-7	FS 09	Total/NA	Solid	8015 NM	
890-7811-8	SW 01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 105399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Soluble	Solid	DI Leach	
890-7811-2	FS 02	Soluble	Solid	DI Leach	
890-7811-3	FS 03	Soluble	Solid	DI Leach	
890-7811-4	FS 04	Soluble	Solid	DI Leach	
890-7811-5	FS 07	Soluble	Solid	DI Leach	
890-7811-6	FS 08	Soluble	Solid	DI Leach	
890-7811-7	FS 09	Soluble	Solid	DI Leach	
890-7811-8	SW 01	Soluble	Solid	DI Leach	
MB 880-105399/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-105399/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-105399/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-55659-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-55659-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-55691-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-55691-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 105421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7811-1	FS 01	Soluble	Solid	300.0	105399
890-7811-2	FS 02	Soluble	Solid	300.0	105399
890-7811-3	FS 03	Soluble	Solid	300.0	105399
890-7811-4	FS 04	Soluble	Solid	300.0	105399
890-7811-5	FS 07	Soluble	Solid	300.0	105399
890-7811-6	FS 08	Soluble	Solid	300.0	105399
890-7811-7	FS 09	Soluble	Solid	300.0	105399
890-7811-8	SW 01	Soluble	Solid	300.0	105399
MB 880-105399/1-A	Method Blank	Soluble	Solid	300.0	105399
LCS 880-105399/2-A	Lab Control Sample	Soluble	Solid	300.0	105399
LCSD 880-105399/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	105399
880-55659-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	105399
880-55659-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	105399

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

HPLC/IC (Continued)

Analysis Batch: 105421 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-55691-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	105399
880-55691-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	105399

Lab Chronicle

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 01
Date Collected: 03/13/25 13:17
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	105358	03/17/25 07:47	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105360	03/17/25 12:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/17/25 12:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 12:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 12:38	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	105421	03/18/25 01:30	CH	EET MID

Client Sample ID: FS 02
Date Collected: 03/13/25 13:14
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	105358	03/17/25 07:47	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105360	03/17/25 16:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/17/25 16:27	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 14:32	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 14:32	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	105421	03/18/25 12:42	CH	EET MID

Client Sample ID: FS 03
Date Collected: 03/13/25 13:10
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	105358	03/17/25 07:47	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105360	03/17/25 16:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/17/25 16:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 14:48	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 14:48	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	105421	03/18/25 01:59	CH	EET MID

Client Sample ID: FS 04
Date Collected: 03/13/25 13:07
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	105358	03/17/25 07:47	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105360	03/17/25 17:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/17/25 17:08	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 04
Date Collected: 03/13/25 13:07
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			105511	03/17/25 15:04	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 15:04	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	105421	03/18/25 02:06	CH	EET MID

Client Sample ID: FS 07
Date Collected: 03/13/25 13:02
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	105358	03/17/25 07:47	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105360	03/17/25 17:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/17/25 17:29	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 15:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 15:20	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	105421	03/18/25 02:14	CH	EET MID

Client Sample ID: FS 08
Date Collected: 03/13/25 12:57
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	105358	03/17/25 07:47	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105360	03/17/25 17:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/17/25 17:49	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 15:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 15:35	TKC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	105421	03/18/25 02:21	CH	EET MID

Client Sample ID: FS 09
Date Collected: 03/13/25 12:52
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	105456	03/18/25 08:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105454	03/18/25 14:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/18/25 14:12	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 15:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 15:51	TKC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Client Sample ID: FS 09
Date Collected: 03/13/25 12:52
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.00 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	105421	03/18/25 02:28	CH	EET MID

Client Sample ID: SW 01
Date Collected: 03/13/25 14:05
Date Received: 03/14/25 08:37

Lab Sample ID: 890-7811-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	105457	03/18/25 08:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	105450	03/18/25 14:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			105426	03/18/25 14:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			105511	03/17/25 16:06	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	105359	03/17/25 08:14	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	105392	03/17/25 16:06	TKC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	105399	03/17/25 12:55	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	105421	03/18/25 02:36	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7811-1
SDG: 07A1988168

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-7811-1	FS 01	Solid	03/13/25 13:17	03/14/25 08:37	5'
890-7811-2	FS 02	Solid	03/13/25 13:14	03/14/25 08:37	6'
890-7811-3	FS 03	Solid	03/13/25 13:10	03/14/25 08:37	6'
890-7811-4	FS 04	Solid	03/13/25 13:07	03/14/25 08:37	6'
890-7811-5	FS 07	Solid	03/13/25 13:02	03/14/25 08:37	6'
890-7811-6	FS 08	Solid	03/13/25 12:57	03/14/25 08:37	8'
890-7811-7	FS 09	Solid	03/13/25 12:52	03/14/25 08:37	9'
890-7811-8	SW 01	Solid	03/13/25 14:05	03/14/25 08:37	0-9'

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	Devin Hencmann	Bill to: (if different)	Billy Ginn
Company Name:	Ensolum, LLC	Company Name:	Hilcorp
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	805-798-2608	Email:	dhencmann@ensolum.com; fsmith@ensolum.com

Work Order Comments

Program: UST/PST ☐ **PRP** ☐ **Brownfields** ☐ **RRC** ☐ **Superfund** ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	NEDU 164	**Turn Around**	
Project Number:	07A1988168	☑ Routine ☐ Rush	
Project Location:	32.518088, -103.144784	Due Date:	
Sampler's Name:	Alex Ferrell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	Tumor7
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: Chlorides	TPH	BTEX	Sample Comments
FS01	Soil	3/13/2025	1317	5'	Comp	1	X	X	X	
FS02	Soil	3/13/2025	1314	6'	Comp	1	X	X	X	
FS03	Soil	3/13/2025	1310	6'	Comp	1	X	X	X	
FS04	Soil	3/13/2025	1307	6'	Comp	1	X	X	X	
FS07	Soil	3/13/2025	1302	6'	Comp	1	X	X	X	
FS08	Soil	3/13/2025	1257	8'	Comp	1	X	X	X	
FS09	Soil	3/13/2025	1252	9'	Comp	1	X	X	X	
SW01	Soil	3/13/2025	1405	0-9'	Comp	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		3/14 8:37	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7811-1
SDG Number: 07A1988168

Login Number: 7811
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: 890-7811-1
SDG Number: 07A1988168

Login Number: 7811
List Number: 2
Creator: Rios, Minerva

List Source: Eurofins Midland
List Creation: 03/17/25 08:15 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.	N/A	
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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devin Hencmann
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 4/18/2025 6:19:05 PM

JOB DESCRIPTION

NEDU 164
07A1988168

JOB NUMBER

890-7934-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

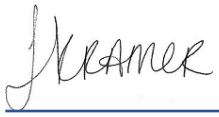
Eurofins Carlsbad

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



Generated
4/18/2025 6:19:05 PM

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

Client: Ensolum
Project/Site: NEDU 164

Laboratory Job ID: 890-7934-1
SDG: 07A1988168

Table of Contents

Eurofins Carlsbad
4/18/2025

Definitions/Glossary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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: NEDU 164

Job ID: 890-7934-1

Job ID: 890-7934-1 Eurofins Carlsbad

Job Narrative
890-7934-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/14/2025 3:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (890-7934-1), SW02 (890-7934-2), SW03 (890-7934-3), SW04 (890-7934-4), SW05 (890-7934-5), SW06 (890-7934-6), SW07 (890-7934-7), SW08 (890-7934-8) and SW09 (890-7934-9).

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

Diesel Range Organics
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-107640 and analytical batch 880-107929 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW01 (890-7934-1), SW02 (890-7934-2), SW03 (890-7934-3), SW04 (890-7934-4), SW05 (890-7934-5), SW06 (890-7934-6), SW07 (890-7934-7), SW08 (890-7934-8), SW09 (890-7934-9), (LCS 880-107640/2-A), (LCSD 880-107640/3-A), (MB 880-107640/1-A), (880-56864-A-25-C), (880-56864-A-25-D MS) and (880-56864-A-25-E MSD). Evidence of matrix interferences is not obvious.

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

HPLC/IC
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: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW01

Lab Sample ID: 890-7934-1
Matrix: Solid
Date Collected: 04/14/25 10:51
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 17:21	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 17:21	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 17:21	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		04/15/25 10:30	04/16/25 17:21	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 17:21	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		04/15/25 10:30	04/16/25 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*04/15/25 10:30*	*04/16/25 17:21*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*04/15/25 10:30*	*04/16/25 17:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			04/16/25 17:21	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			04/18/25 01:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		04/14/25 14:45	04/18/25 01:54	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		04/14/25 14:45	04/18/25 01:54	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		04/14/25 14:45	04/18/25 01:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*163*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 01:54*	*1*
o-Terphenyl	*176*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 01:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**161**		9.90		mg/Kg			04/16/25 09:14	1

Client Sample ID: SW02

Lab Sample ID: 890-7934-2
Matrix: Solid
Date Collected: 04/14/25 10:54
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:42	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/15/25 10:30	04/16/25 17:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:42	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/15/25 10:30	04/16/25 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*04/15/25 10:30*	*04/16/25 17:42*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW02

Lab Sample ID: 890-7934-2
Matrix: Solid
Date Collected: 04/14/25 10:54
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/15/25 10:30*	*04/16/25 17:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/16/25 17:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			04/18/25 02:15	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		04/14/25 14:45	04/18/25 02:15	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		04/14/25 14:45	04/18/25 02:15	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		04/14/25 14:45	04/18/25 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 02:15*	*1*
o-Terphenyl	*162*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 02:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		10.1	mg/Kg			04/16/25 09:21	1

Client Sample ID: SW03

Lab Sample ID: 890-7934-3
Matrix: Solid
Date Collected: 04/14/25 10:56
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 18:02	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 18:02	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 18:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/15/25 10:30	04/16/25 18:02	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 18:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/15/25 10:30	04/16/25 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*04/15/25 10:30*	*04/16/25 18:02*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*04/15/25 10:30*	*04/16/25 18:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/16/25 18:02	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/18/25 02:36	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW03

Lab Sample ID: 890-7934-3
Matrix: Solid
Date Collected: 04/14/25 10:56
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/14/25 14:45	04/18/25 02:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/14/25 14:45	04/18/25 02:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/14/25 14:45	04/18/25 02:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*156*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 02:36*	*1*
o-Terphenyl	*166*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 02:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**152**		9.94		mg/Kg			04/16/25 09:43	1

Client Sample ID: SW04

Lab Sample ID: 890-7934-4
Matrix: Solid
Date Collected: 04/14/25 10:59
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 18:23	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 18:23	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 18:23	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/15/25 10:30	04/16/25 18:23	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 18:23	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/15/25 10:30	04/16/25 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*04/15/25 10:30*	*04/16/25 18:23*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/15/25 10:30*	*04/16/25 18:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			04/16/25 18:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			04/18/25 02:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		04/14/25 14:45	04/18/25 02:56	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		04/14/25 14:45	04/18/25 02:56	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		04/14/25 14:45	04/18/25 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*155*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 02:56*	*1*
o-Terphenyl	*168*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 02:56*	*1*

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW04

Lab Sample ID: 890-7934-4
Matrix: Solid
Date Collected: 04/14/25 10:59
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	122		10.0		mg/Kg			04/16/25 09:50	1

Client Sample ID: SW05

Lab Sample ID: 890-7934-5
Matrix: Solid
Date Collected: 04/14/25 11:02
Date Received: 04/14/25 15:44
Sample Depth: 0-4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 18:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 18:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 18:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/15/25 10:30	04/16/25 18:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 18:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/15/25 10:30	04/16/25 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*04/15/25 10:30*	*04/16/25 18:44*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*04/15/25 10:30*	*04/16/25 18:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			04/16/25 18:44	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			04/18/25 03:17	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		04/14/25 14:45	04/18/25 03:17	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		04/14/25 14:45	04/18/25 03:17	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		04/14/25 14:45	04/18/25 03:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*178*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 03:17*	*1*
o-Terphenyl	*192*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 03:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	109		10.0		mg/Kg			04/16/25 13:48	1

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW06

Lab Sample ID: 890-7934-6
Matrix: Solid
Date Collected: 04/14/25 11:05
Date Received: 04/14/25 15:44
Sample Depth: 4-5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 19:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 19:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 19:04	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/15/25 10:30	04/16/25 19:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 19:04	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/15/25 10:30	04/16/25 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*04/15/25 10:30*	*04/16/25 19:04*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*04/15/25 10:30*	*04/16/25 19:04*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			04/16/25 19:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			04/18/25 03:37	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/14/25 14:45	04/18/25 03:37	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/14/25 14:45	04/18/25 03:37	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/14/25 14:45	04/18/25 03:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*157*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 03:37*	*1*
o-Terphenyl	*171*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 03:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**101**		9.94		mg/Kg			04/16/25 13:55	1

Client Sample ID: SW07

Lab Sample ID: 890-7934-7
Matrix: Solid
Date Collected: 04/14/25 11:07
Date Received: 04/14/25 15:44
Sample Depth: 4-6

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 19:25	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 19:25	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 19:25	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		04/15/25 10:30	04/16/25 19:25	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/15/25 10:30	04/16/25 19:25	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		04/15/25 10:30	04/16/25 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*04/15/25 10:30*	*04/16/25 19:25*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW07

Lab Sample ID: 890-7934-7
Matrix: Solid
Date Collected: 04/14/25 11:07
Date Received: 04/14/25 15:44
Sample Depth: 4-6

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*04/15/25 10:30*	*04/16/25 19:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			04/16/25 19:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/18/25 03:57	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/14/25 14:45	04/18/25 03:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/14/25 14:45	04/18/25 03:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/14/25 14:45	04/18/25 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 03:57*	*1*
o-Terphenyl	*162*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 03:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**104**		9.92	mg/Kg			04/16/25 14:02	1

Client Sample ID: SW08

Lab Sample ID: 890-7934-8
Matrix: Solid
Date Collected: 04/14/25 11:11
Date Received: 04/14/25 15:44
Sample Depth: 4-6

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 19:45	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 19:45	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 19:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/15/25 10:30	04/16/25 19:45	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/15/25 10:30	04/16/25 19:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/15/25 10:30	04/16/25 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*04/15/25 10:30*	*04/16/25 19:45*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*04/15/25 10:30*	*04/16/25 19:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/16/25 19:45	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			04/18/25 04:19	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW08

Lab Sample ID: 890-7934-8
Matrix: Solid
Date Collected: 04/14/25 11:11
Date Received: 04/14/25 15:44
Sample Depth: 4-6

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/14/25 14:45	04/18/25 04:19	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/14/25 14:45	04/18/25 04:19	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/14/25 14:45	04/18/25 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 04:19*	*1*
o-Terphenyl	*165*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 04:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**128**		10.1		mg/Kg			04/16/25 14:09	1

Client Sample ID: SW09

Lab Sample ID: 890-7934-9
Matrix: Solid
Date Collected: 04/14/25 11:58
Date Received: 04/14/25 15:44
Sample Depth: 4-9

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 20:06	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 20:06	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 20:06	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/15/25 10:30	04/16/25 20:06	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/15/25 10:30	04/16/25 20:06	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/15/25 10:30	04/16/25 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*04/15/25 10:30*	*04/16/25 20:06*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*04/15/25 10:30*	*04/16/25 20:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			04/16/25 20:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			04/18/25 04:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		04/14/25 14:45	04/18/25 04:39	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		04/14/25 14:45	04/18/25 04:39	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		04/14/25 14:45	04/18/25 04:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*193*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 04:39*	*1*
o-Terphenyl	*217*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/18/25 04:39*	*1*

Client Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW09
Date Collected: 04/14/25 11:58
Date Received: 04/14/25 15:44
Sample Depth: 4-9

Lab Sample ID: 890-7934-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	674		10.0		mg/Kg			04/16/25 14:16	1

Surrogate Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-7934-1	SW01	80	91
890-7934-1 MS	SW01	102	93
890-7934-1 MSD	SW01	102	98
890-7934-2	SW02	84	97
890-7934-3	SW03	94	81
890-7934-4	SW04	88	97
890-7934-5	SW05	86	98
890-7934-6	SW06	86	100
890-7934-7	SW07	89	94
890-7934-8	SW08	89	80
890-7934-9	SW09	85	97
LCS 880-107721/1-A	Lab Control Sample	103	102
LCSD 880-107721/2-A	Lab Control Sample Dup	102	111
MB 880-107721/5-A	Method Blank	84	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-56864-A-25-D MS	Matrix Spike	174 S1+	186 S1+
880-56864-A-25-E MSD	Matrix Spike Duplicate	153 S1+	161 S1+
890-7934-1	SW01	163 S1+	176 S1+
890-7934-2	SW02	150 S1+	162 S1+
890-7934-3	SW03	156 S1+	166 S1+
890-7934-4	SW04	155 S1+	168 S1+
890-7934-5	SW05	178 S1+	192 S1+
890-7934-6	SW06	157 S1+	171 S1+
890-7934-7	SW07	150 S1+	162 S1+
890-7934-8	SW08	150 S1+	165 S1+
890-7934-9	SW09	193 S1+	217 S1+
LCS 880-107640/2-A	Lab Control Sample	354 S1+	352 S1+
LCSD 880-107640/3-A	Lab Control Sample Dup	473 S1+	498 S1+
MB 880-107640/1-A	Method Blank	154 S1+	170 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-107721/5-A
Matrix: Solid
Analysis Batch: 107890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 107721

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/15/25 10:30	04/16/25 17:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/15/25 10:30	04/16/25 17:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/15/25 10:30	04/16/25 17:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*04/15/25 10:30*	*04/16/25 17:00*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*04/15/25 10:30*	*04/16/25 17:00*	*1*

Lab Sample ID: LCS 880-107721/1-A
Matrix: Solid
Analysis Batch: 107890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107721

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09488		mg/Kg		95	70 - 130		
Toluene			0.100	0.08576		mg/Kg		86	70 - 130		
Ethylbenzene			0.100	0.1031		mg/Kg		103	70 - 130		
m-Xylene & p-Xylene			0.200	0.1931		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09824		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-107721/2-A
Matrix: Solid
Analysis Batch: 107890

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 107721

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09792		mg/Kg		98	70 - 130	3	35
Toluene			0.100	0.08533		mg/Kg		85	70 - 130	1	35
Ethylbenzene			0.100	0.1045		mg/Kg		105	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1924		mg/Kg		96	70 - 130	0	35
o-Xylene			0.100	0.09694		mg/Kg		97	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 890-7934-1 MS
Matrix: Solid
Analysis Batch: 107890

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 107721

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.100	0.09661		mg/Kg		97	70 - 130		
Toluene	<0.00202	U	0.100	0.08928		mg/Kg		89	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-7934-1 MS
Matrix: Solid
Analysis Batch: 107890

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 107721

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.100	0.1085		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1978		mg/Kg		99	70 - 130
o-Xylene	<0.00202	U	0.100	0.1010		mg/Kg		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-7934-1 MSD
Matrix: Solid
Analysis Batch: 107890

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 107721

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.100	0.09748		mg/Kg		97	70 - 130	1	35
Toluene	<0.00202	U	0.100	0.08350		mg/Kg		84	70 - 130	7	35
Ethylbenzene	<0.00202	U	0.100	0.1082		mg/Kg		108	70 - 130	0	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1950		mg/Kg		98	70 - 130	1	35
o-Xylene	<0.00202	U	0.100	0.09979		mg/Kg		100	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-107640/1-A
Matrix: Solid
Analysis Batch: 107929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 107640

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/14/25 14:45	04/17/25 20:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/14/25 14:45	04/17/25 20:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/14/25 14:45	04/17/25 20:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*154*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/17/25 20:06*	*1*
o-Terphenyl	*170*	*S1+*	*70 - 130*	*04/14/25 14:45*	*04/17/25 20:06*	*1*

Lab Sample ID: LCS 880-107640/2-A
Matrix: Solid
Analysis Batch: 107929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107640

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	969.3		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1169		mg/Kg		117	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-107640/2-A
Matrix: Solid
Analysis Batch: 107929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107640

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	354	S1+	70 - 130
o-Terphenyl	352	S1+	70 - 130

Lab Sample ID: LCSD 880-107640/3-A
Matrix: Solid
Analysis Batch: 107929

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 107640

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	936.0		mg/Kg		94	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1161		mg/Kg		116	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	473	S1+	70 - 130
o-Terphenyl	498	S1+	70 - 130

Lab Sample ID: 880-56864-A-25-D MS
Matrix: Solid
Analysis Batch: 107929

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 107640

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	1000	964.8		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	972.8		mg/Kg		95	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	174	S1+	70 - 130
o-Terphenyl	186	S1+	70 - 130

Lab Sample ID: 880-56864-A-25-E MSD
Matrix: Solid
Analysis Batch: 107929

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 107640

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	1000	784.4	F2	mg/Kg		76	70 - 130	21	20
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	843.9		mg/Kg		82	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	153	S1+	70 - 130
o-Terphenyl	161	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-107778/1-A
Matrix: Solid
Analysis Batch: 107784

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			04/16/25 06:10	1

Lab Sample ID: LCS 880-107778/2-A
Matrix: Solid
Analysis Batch: 107784

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	258.2		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-107778/3-A
Matrix: Solid
Analysis Batch: 107784

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	256.6		mg/Kg		103	90 - 110	1	20

Lab Sample ID: 890-7934-2 MS
Matrix: Solid
Analysis Batch: 107784

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	110		253	361.1		mg/Kg		100	90 - 110		

Lab Sample ID: 890-7934-2 MSD
Matrix: Solid
Analysis Batch: 107784

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	110		253	361.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

GC VOA

Prep Batch: 107721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Total/NA	Solid	5035	
890-7934-2	SW02	Total/NA	Solid	5035	
890-7934-3	SW03	Total/NA	Solid	5035	
890-7934-4	SW04	Total/NA	Solid	5035	
890-7934-5	SW05	Total/NA	Solid	5035	
890-7934-6	SW06	Total/NA	Solid	5035	
890-7934-7	SW07	Total/NA	Solid	5035	
890-7934-8	SW08	Total/NA	Solid	5035	
890-7934-9	SW09	Total/NA	Solid	5035	
MB 880-107721/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-107721/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-107721/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-7934-1 MS	SW01	Total/NA	Solid	5035	
890-7934-1 MSD	SW01	Total/NA	Solid	5035	

Analysis Batch: 107890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Total/NA	Solid	8021B	107721
890-7934-2	SW02	Total/NA	Solid	8021B	107721
890-7934-3	SW03	Total/NA	Solid	8021B	107721
890-7934-4	SW04	Total/NA	Solid	8021B	107721
890-7934-5	SW05	Total/NA	Solid	8021B	107721
890-7934-6	SW06	Total/NA	Solid	8021B	107721
890-7934-7	SW07	Total/NA	Solid	8021B	107721
890-7934-8	SW08	Total/NA	Solid	8021B	107721
890-7934-9	SW09	Total/NA	Solid	8021B	107721
MB 880-107721/5-A	Method Blank	Total/NA	Solid	8021B	107721
LCS 880-107721/1-A	Lab Control Sample	Total/NA	Solid	8021B	107721
LCSD 880-107721/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	107721
890-7934-1 MS	SW01	Total/NA	Solid	8021B	107721
890-7934-1 MSD	SW01	Total/NA	Solid	8021B	107721

Analysis Batch: 107992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Total/NA	Solid	Total BTEX	
890-7934-2	SW02	Total/NA	Solid	Total BTEX	
890-7934-3	SW03	Total/NA	Solid	Total BTEX	
890-7934-4	SW04	Total/NA	Solid	Total BTEX	
890-7934-5	SW05	Total/NA	Solid	Total BTEX	
890-7934-6	SW06	Total/NA	Solid	Total BTEX	
890-7934-7	SW07	Total/NA	Solid	Total BTEX	
890-7934-8	SW08	Total/NA	Solid	Total BTEX	
890-7934-9	SW09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 107640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Total/NA	Solid	8015NM Prep	
890-7934-2	SW02	Total/NA	Solid	8015NM Prep	
890-7934-3	SW03	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

GC Semi VOA (Continued)

Prep Batch: 107640 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-4	SW04	Total/NA	Solid	8015NM Prep	
890-7934-5	SW05	Total/NA	Solid	8015NM Prep	
890-7934-6	SW06	Total/NA	Solid	8015NM Prep	
890-7934-7	SW07	Total/NA	Solid	8015NM Prep	
890-7934-8	SW08	Total/NA	Solid	8015NM Prep	
890-7934-9	SW09	Total/NA	Solid	8015NM Prep	
MB 880-107640/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-107640/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-107640/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-56864-A-25-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-56864-A-25-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 107929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Total/NA	Solid	8015B NM	107640
890-7934-2	SW02	Total/NA	Solid	8015B NM	107640
890-7934-3	SW03	Total/NA	Solid	8015B NM	107640
890-7934-4	SW04	Total/NA	Solid	8015B NM	107640
890-7934-5	SW05	Total/NA	Solid	8015B NM	107640
890-7934-6	SW06	Total/NA	Solid	8015B NM	107640
890-7934-7	SW07	Total/NA	Solid	8015B NM	107640
890-7934-8	SW08	Total/NA	Solid	8015B NM	107640
890-7934-9	SW09	Total/NA	Solid	8015B NM	107640
MB 880-107640/1-A	Method Blank	Total/NA	Solid	8015B NM	107640
LCS 880-107640/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	107640
LCSD 880-107640/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	107640
880-56864-A-25-D MS	Matrix Spike	Total/NA	Solid	8015B NM	107640
880-56864-A-25-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	107640

Analysis Batch: 108143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Total/NA	Solid	8015 NM	
890-7934-2	SW02	Total/NA	Solid	8015 NM	
890-7934-3	SW03	Total/NA	Solid	8015 NM	
890-7934-4	SW04	Total/NA	Solid	8015 NM	
890-7934-5	SW05	Total/NA	Solid	8015 NM	
890-7934-6	SW06	Total/NA	Solid	8015 NM	
890-7934-7	SW07	Total/NA	Solid	8015 NM	
890-7934-8	SW08	Total/NA	Solid	8015 NM	
890-7934-9	SW09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 107778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Soluble	Solid	DI Leach	
890-7934-2	SW02	Soluble	Solid	DI Leach	
890-7934-3	SW03	Soluble	Solid	DI Leach	
890-7934-4	SW04	Soluble	Solid	DI Leach	
890-7934-5	SW05	Soluble	Solid	DI Leach	
890-7934-6	SW06	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

HPLC/IC (Continued)

Leach Batch: 107778 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-7	SW07	Soluble	Solid	DI Leach	
890-7934-8	SW08	Soluble	Solid	DI Leach	
890-7934-9	SW09	Soluble	Solid	DI Leach	
MB 880-107778/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-107778/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-107778/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-7934-2 MS	SW02	Soluble	Solid	DI Leach	
890-7934-2 MSD	SW02	Soluble	Solid	DI Leach	

Analysis Batch: 107784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7934-1	SW01	Soluble	Solid	300.0	107778
890-7934-2	SW02	Soluble	Solid	300.0	107778
890-7934-3	SW03	Soluble	Solid	300.0	107778
890-7934-4	SW04	Soluble	Solid	300.0	107778
890-7934-5	SW05	Soluble	Solid	300.0	107778
890-7934-6	SW06	Soluble	Solid	300.0	107778
890-7934-7	SW07	Soluble	Solid	300.0	107778
890-7934-8	SW08	Soluble	Solid	300.0	107778
890-7934-9	SW09	Soluble	Solid	300.0	107778
MB 880-107778/1-A	Method Blank	Soluble	Solid	300.0	107778
LCS 880-107778/2-A	Lab Control Sample	Soluble	Solid	300.0	107778
LCSD 880-107778/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	107778
890-7934-2 MS	SW02	Soluble	Solid	300.0	107778
890-7934-2 MSD	SW02	Soluble	Solid	300.0	107778

Lab Chronicle

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW01

Lab Sample ID: 890-7934-1
Matrix: Solid
Date Collected: 04/14/25 10:51
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 17:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 17:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 01:54	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 01:54	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 09:14	CH	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-7934-2
Matrix: Solid
Date Collected: 04/14/25 10:54
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 17:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 17:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 02:15	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 02:15	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 09:21	CH	EET MID

Client Sample ID: SW03

Lab Sample ID: 890-7934-3
Matrix: Solid
Date Collected: 04/14/25 10:56
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 18:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 18:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 02:36	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 02:36	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 09:43	CH	EET MID

Client Sample ID: SW04

Lab Sample ID: 890-7934-4
Matrix: Solid
Date Collected: 04/14/25 10:59
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 18:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 18:23	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW04

Lab Sample ID: 890-7934-4
Matrix: Solid
Date Collected: 04/14/25 10:59
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			108143	04/18/25 02:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 02:56	AJ	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 09:50	CH	EET MID

Client Sample ID: SW05

Lab Sample ID: 890-7934-5
Matrix: Solid
Date Collected: 04/14/25 11:02
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 18:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 18:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 03:17	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 03:17	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 13:48	CH	EET MID

Client Sample ID: SW06

Lab Sample ID: 890-7934-6
Matrix: Solid
Date Collected: 04/14/25 11:05
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 19:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 19:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 03:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 03:37	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 13:55	CH	EET MID

Client Sample ID: SW07

Lab Sample ID: 890-7934-7
Matrix: Solid
Date Collected: 04/14/25 11:07
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 19:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 19:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 03:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 03:57	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Client Sample ID: SW07

Lab Sample ID: 890-7934-7
Matrix: Solid
Date Collected: 04/14/25 11:07
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 14:02	CH	EET MID

Client Sample ID: SW08

Lab Sample ID: 890-7934-8
Matrix: Solid
Date Collected: 04/14/25 11:11
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 19:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 19:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 04:19	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 04:19	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 14:09	CH	EET MID

Client Sample ID: SW09

Lab Sample ID: 890-7934-9
Matrix: Solid
Date Collected: 04/14/25 11:58
Date Received: 04/14/25 15:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	107721	04/15/25 10:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	107890	04/16/25 20:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			107992	04/16/25 20:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			108143	04/18/25 04:39	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	107640	04/14/25 14:45	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	107929	04/18/25 04:39	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	107778	04/15/25 14:22	SA	EET MID
Soluble	Analysis	300.0		1			107784	04/16/25 14:16	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: NEDU 164

Job ID: 890-7934-1
SDG: 07A1988168

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-7934-1	SW01	Solid	04/14/25 10:51	04/14/25 15:44	0-4
890-7934-2	SW02	Solid	04/14/25 10:54	04/14/25 15:44	0-4
890-7934-3	SW03	Solid	04/14/25 10:56	04/14/25 15:44	0-4
890-7934-4	SW04	Solid	04/14/25 10:59	04/14/25 15:44	0-4
890-7934-5	SW05	Solid	04/14/25 11:02	04/14/25 15:44	0-4
890-7934-6	SW06	Solid	04/14/25 11:05	04/14/25 15:44	4-5
890-7934-7	SW07	Solid	04/14/25 11:07	04/14/25 15:44	4-6
890-7934-8	SW08	Solid	04/14/25 11:11	04/14/25 15:44	4-6
890-7934-9	SW09	Solid	04/14/25 11:58	04/14/25 15:44	4-9

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Wo

890-7934 Chain of Custody

Project Manager:	Devin Hencmann	Bill to: (if different)	Billy Ginn
Company Name:	Ensolum, LLC	Company Name:	Hilcorp
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	805-798-2608	Email:	dhencmann@ensolum.com; fsmith@ensolum.com

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

Project Name:	NEDU 164	Turn Around	
Project Number:	07A1988168	☑ Routine ☐ Rush	
Project Location:	32.518088, -103.144784	Due Date:	5-DAY
Sampler's Name:	Alex Ferrell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#7
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.8
Total Containers:		Corrected Temperature:	3.6

ANALYSIS REQUEST

Preservative Codes
None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	TPH	BTEX	Sample Comments
SW01	Soil	4/14/2025	1051	0-4'	Comp	1		X	X	X	
SW02	Soil	4/14/2025	1054	0-4'	Comp	1		X	X	X	
SW03	Soil	4/14/2025	1056	0-4'	Comp	1		X	X	X	
SW04	Soil	4/14/2025	1059	0-4'	Comp	1		X	X	X	
SW05	Soil	4/14/2025	1102	0-4'	Comp	1		X	X	X	
SW06	Soil	4/14/2025	1105	4-5'	Comp	1		X	X	X	
SW07	Soil	4/14/2025	1107	4-6'	Comp	1		X	X	X	
SW08	Soil	4/14/2025	1111	4-6'	Comp	1		X	X	X	
SW09	Soil	4/14/2025	1158	4-9'	Comp	2		X	X	X	

AF

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		3:44 4/14	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7934-1
SDG Number: 07A1988168

Login Number: 7934
List Number: 1
Creator: Lopez, Abraham

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: 890-7934-1
SDG Number: 07A1988168

Login Number: 7934
List Number: 2
Creator: Rios, Minerva

List Source: Eurofins Midland
List Creation: 04/15/25 08:41 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	

ENSOLUM

APPENDIX E

NMOCD Sample Notifications

From: OCDOnline@state.nm.us
To: Fatima Smith
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 433234
Date: Tuesday, February 18, 2025 2:48:05 PM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Fatima Smith for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2503455200.

The sampling event is expected to take place:

When: 02/21/2025 @ 12:00
Where: A-03-21S-37E Lot: 1 0 FNL 0 FEL (32.518719,-103.14431)

Additional Information: Contact PM Fatima Smith, 575-725-1196

Sampling will occur on Friday February 21, 2025.

Additional Instructions: NEDU 164 Flowline, coordinates 32.518088, -103.144784

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

From: OCDOnline@state.nm.us
To: Fatima Smith
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 438640
Date: Tuesday, March 4, 2025 9:42:32 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Fatima Smith for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2503455200.

The sampling event is expected to take place:

When: 03/06/2025 @ 09:00
Where: A-03-21S-37E Lot: 1 0 FNL 0 FEL (32.518719,-103.14431)

Additional Information: Contact PM Fatima Smith, 575-725-1196

Additional Instructions: NEDU 164 Flowline, coordinates 32.518088, -103.144784

This notification is to alert OCD of sampling that will occur Thursday March 6, 2025

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

From: OCDOnline@state.nm.us
To: Fatima Smith
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 440542
Date: Monday, March 10, 2025 6:59:41 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Fatima Smith for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2503455200.

The sampling event is expected to take place:

When: 03/10/2025 @ 09:00
Where: A-03-21S-37E Lot: 1 0 FNL 0 FEL (32.518719,-103.14431)

Additional Information: Contact PM Fatima Smith, 575-725-1196

Additional Instructions: NEDU 164 Flowline, coordinates 32.518088, -103.144784

This notification is to alert OCD of sampling that will occur on Monday March 10, 2025 through Wednesday March 12, 2025.

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

From: OCDOnline@state.nm.us
To: Fatima Smith
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 440690
Date: Monday, March 10, 2025 10:15:51 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Fatima Smith for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2503455200.

The sampling event is expected to take place:

When: 03/13/2025 @ 09:00
Where: A-03-21S-37E Lot: 1 0 FNL 0 FEL (32.518088,-103.144784)

Additional Information: Contact PM Fatima Smith, 575-725-1196

Additional Instructions: NEDU 164 Flowline, coordinates 32.518088, -103.144784

This notification is to alert OCD of sampling that will occur on Thursday March 13, 2025 through Friday March 14, 2025

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

From: OCDOnline@state.nm.us
To: Fatima Smith
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 450266
Date: Wednesday, April 9, 2025 10:06:23 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Fatima Smith for HILCORP ENERGY COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2503455200.

The sampling event is expected to take place:

When: 04/14/2025 @ 09:00
Where: A-03-21S-37E Lot: 1 0 FNL 0 FEL (32.518088,-103.144784)

Additional Information: Contact PM Fatima Smith, 575-725-1196

Additional Instructions: NEDU 164 Flowline, coordinates 32.518088, -103.144784

This notification is to alert OCD of sampling that will occur on Monday April 14, 2025, through Wednesday April 16, 2025.

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

From: Billy Ginn
To: Devin Hencmann; Stuart Hyde; Fatima Smith
Subject: FW: [EXTERNAL] nAPP2503455200 - Northeast Drinkard Unit 164 Sampling Notification Variance Request
Date: Monday, March 10, 2025 8:44:21 AM
Attachments: image001.png
image002.png
image003.png

[**EXTERNAL EMAIL**]

See below

Billy Ginn
Environmental Specialist – PW
Office: (346) 237-2073
Cell: (832) 561-4185
william.ginn@hilcorp.com

Hilcorp Energy Company
1111 Travis Street
Houston, TX 77002

From: Mitch Killough <mkillough@hilcorp.com>
Sent: Monday, March 10, 2025 9:43 AM
To: Billy Ginn <William.Ginn@hilcorp.com>
Subject: FW: [EXTERNAL] nAPP2503455200 - Northeast Drinkard Unit 164 Sampling Notification Variance Request

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Sent: Monday, March 10, 2025 8:38 AM
To: Kate Kaufman <kkaufman@hilcorp.com>; Mitch Killough <mkillough@hilcorp.com>; Matt Vicenik <mvicenik@hilcorp.com>
Subject: FW: [EXTERNAL] nAPP2503455200 - Northeast Drinkard Unit 164 Sampling Notification Variance Request

CAUTION: External sender. DO NOT open links or attachments from UNKNOWN senders.

Kate Kaufman,

When submitting the C-141 for this release, there is a statement that requires a Yes or No box to be checked. The statement is: “The concentration of dissolved chloride in the produced water >10,000 mg/l”. Hilcorp checked the box “No”. OCD requests Hilcorp obtain a representative sample of the produced water for this site and have it lab tested for dissolved chloride. Provide OCD two business days’ notice prior to obtaining the sample. Lab analysis data must be submitted to OCD upon receipt by Hilcorp.

Thank you,

Mike Bratcher
Incident Supervisor
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave | Artesia, NM 88210
(575) 626-0857 |
mike.bratcher@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Monday, March 10, 2025 7:16 AM
To: Rodgers, Scott, EMNRD <Scott.Rodgers@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] nAPP2503455200 - Northeast Drinkard Unit 164 Sampling Notification Variance Request

---

From: Fatima Smith <fsmith@ensolum.com>
Sent: Monday, March 10, 2025 7:05 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Devin Hencmann <dhencmann@ensolum.com>; Stuart Hyde <shyde@ensolum.com>
Subject: [EXTERNAL] nAPP2503455200 - Northeast Drinkard Unit 164 Sampling Notification Variance Request

Morning,

On behalf of Hilcorp Energy Company, we are requesting a variance from the 2-business day

sampling notification requirement outlined in 19.15.29.12(D)(1)(a) NMAC to allow soil sampling to begin on Monday March 10, 2025, at the Northeast Dunkard 164 site. Due to the availability of contractors, we are wanting to start digging at the site today in order to expedite the cleanup process.

Please reach out if you have any questions or concerns. Thank you in advance for your help

Fatima Smith
Project Geologist
575-725-1196
Ensolum, LLC

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2503455200**
Incident Name	**NAPP2503455200 NORTHEAST DRINKARD UNIT 164 @ 30-025-40526**
Incident Type	**Release Other**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-40526] NORTHEAST DRINKARD UNIT #164**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	NORTHEAST DRINKARD UNIT 164
Date Release Discovered	01/24/2025
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Release Other
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

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: Corrosion | Flow Line - Production | Crude Oil | Released: 0 BBL | Recovered: 0 BBL | Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 7 BBL | Recovered: 5 BBL | Lost: 2 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
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	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
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: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 06/24/2025

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	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)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	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)	2200
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	10700
GRO+DRO (EPA SW-846 Method 8015M)	10700
BTEX (EPA SW-846 Method 8021B or 8260B)	604
Benzene (EPA SW-846 Method 8021B or 8260B)	25.1
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	04/14/2025
On what date will (or did) the final sampling or liner inspection occur	04/14/2025
On what date will (or was) the remediation complete(d)	04/14/2025
What is the estimated surface area (in square feet) that will be reclaimed	1800
What is the estimated volume (in cubic yards) that will be reclaimed	400
What is the estimated surface area (in square feet) that will be remediated	1800
What is the estimated volume (in cubic yards) that will be remediated	400
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.	

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	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 **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	SUNDANCE SERVICES, INC [fKJ1600527371]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** 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	*Not answered.*
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: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 06/24/2025
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.	

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	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

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**450266**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**04/14/2025**
What was the (estimated) number of samples that were to be gathered	**14**
What was the sampling surface area in square feet	**1603**

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	1800
What was the total volume (cubic yards) remediated	400
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	1800
What was the total volume (in cubic yards) reclaimed	400
Summarize any additional remediation activities not included by answers (above)	N/A

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: Stuart Hyde Title: Senior Geologist Email: shyde@ensolum.com Date: 06/24/2025

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 478520
	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

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 478520
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	8/4/2025